Est. 1841 | YORK ST JOHN UNIVERSITY

Panesar, Kulvinder (2015) The design framework of a linguistically centred and BDI enabled conversational software agent. In: Valin, Van and Nolan, Brian, (eds.) Role and Reference Grammar 2015. Heinrich Heine University, Dusseldorf, Germany, Heinrich Heine University, p. 1

Downloaded from: https://ray.yorksj.ac.uk/id/eprint/3404/

The version presented here may differ from the published version or version of record. If you intend to cite from the work you are advised to consult the publisher's version: http://rrg.phil.hhu.de/wp-content/uploads/2015/05/RRG-2015_Book-of-Abstracts_Final-Version.pdf

Research at York St John (RaY) is an institutional repository. It supports the principles of open access by making the research outputs of the University available in digital form. Copyright of the items stored in RaY reside with the authors and/or other copyright owners. Users may access full text items free of charge, and may download a copy for private study or non-commercial research. For further reuse terms, see licence terms governing individual outputs. Institutional Repositories Policy Statement

RaY

Research at the University of York St John

For more information please contact RaY at ray@yorksj.ac.uk

Role and Reference Grammar 2015

Book of Abstracts

SFB 991

HEINRICH HEINE
UNIVERSITÄT DÜSSELDORF

Verb Compounding and Causativity in Ìgbò

Maduabuchi Agbo
University of Benin

There is a robust literature on the linguistics of compounding because of its importance as a word formation process in many languages of the world. These studies indicate that various grammatical categories result from compounding. In these instances, compounding is very productive in the formation of verbs cross-linguistically. The study of verb compounds in Igbo has focused largely on the formation of words that consist of two verb forms. The meaning of these compounds are usually deduced from the structural composition of these verbs. This study argues that the Igbo verb compound is formed from the composition of two lexemes whose meaning is determined by the native speaker's cognitive and cultural perspective on the verbs resulting from the lexemes. Causativity as a feature of grammar is examined in relation to compounding because of the similar morphosyntactic markings of compounding and causativity in Igbo. The objective is to differentiate the two phenomena in Igbo grammar.

The study assumes the theoretical approach of Role and Reference Grammar which seeks to provide a linguistic basis for the description and explanation of cognitive mechanisms in language. The study concludes that the meaning of the verb compound and the causative verb is determined by the inherent temporal properties of the verb and its argument structure; and not by the structural composition of the verb.

The syntax and semantics of Old English motion constructions. An RRG analysis

Javier Martín Arista
Universidad de La Rioja

The aim of this paper is to carry out an initial analysis of the motion constructions of Old English based on Role and Reference Grammar (Van Valin and Lapolla 1997; Van Valin 2005) and, more specifically, on recent developments of the theory as presented in Cortés Rodríguez (2014) and Van Valin (2014). The data include the intransitive construction of activity illustrated by example (1),

(1)
(BT)
Swa swa fixas swimmað on wætere
as fish swimm in water
'As fish swimm in water'

as well as the active accomplishment shown in example (2), both in the intransitive version in (2a) and the transitive version in (2b):

(2) a. <B COALEX><R 293>
...swumman ofer æfter ðære ea to ðæm eglande
...swamm over through that river to the island
'...[they] swam across the river to the island'

b. <Ælfred. Boeth. xxi> (Visser 1963-1973: 116)
...bioð gehwerfde eft to ðam ilcan ryne ðe hie ær urnon
...were thrown often to the same course that they before ran
'...[they] are often thrown back to the same way as they had made before'

Conclusions are expected along three lines. Firstly, a distinction is in point between specific active accomplishments like the ones given in (2) and unspecific ones, which comprise referential adverbials like *there* or *thither*, such as the one presented in (3):

(3) <B COCHROA2><R 755.16>
...ða ðider urnon
...then thither ran
'...[they] ran thither'

Secondly, an explanation is needed for the fact that causative active accomplishments do not occur in Old English. As Visser (1963-1973: 112) remarks, such constructions are first attested in the Modern English period, in instances like the ones following in example (4):

(4) a. [Shall we] Vn-smeare faith Sworne, and on the marriage bed Of smiling peace to march a bloody host (1595; Shakespeare, John III, i, 246)

b. I should be glad to march you to the gate (1896; M. Field, Attila II, 45)

Finally, conclusions must pay attention to the loss of the reflexive construction of motion, which is attested in Old English with both dative and accusative, as can be seen in (5):

(5) (Ogura 2002: 32)
a. ChronD(Classen-Harmer) 1016.1.29
...and syððan wende him suðweard oðres weges
...and then went him-DAT southwards by other way
'...and then [the king] went southwards by another route'

b. ChronD(Classen-Harmer) 894.1.37, 59
...ða wende he hine west wið Exanceastres
...then went he him-ACC west towards Exeter
'...then he went west towards Exeter'

References

Cortés Rodríguez, F. 2014. Aspectual Features in RRG. A layered proposal. *Revista Española de Lingüística Aplicada* 27/1: 23-53.

Ogura, M. 2002. *Verbs of Motion in Medieval English*. Cambridge: Brewer.

Van Valin, R. and R. LaPolla 1997: *Syntax: Structure, Meaning, and Function*. Cambridge: Cambridge University Press.

Van Valin, R. 2005. *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press.

Van Valin, R. 2014. Some Questions Concerning Accomplishments. Lecture delivered at the 2014 VCC Symposium, held at the University of La Rioja.

Visser, F. 1963-1973: *An Historical Syntax of the English Language* (4 vols.). Leiden: Brill.

Monotonicity and the logical structure of result states in RRG

Delia Bentley
University of Manchester

In Role and Reference Grammar, the semantic representation of clauses is based on the semantic representation – or Logical Structure (LS) --- of the predicators contained in them. The LS of a predicate, in turn, is formed on the basis of a theory of lexical decomposition and depends on the lexical aspect or Aktionsart of the predicate. *State* and *activity* are the basic kinds of lexical aspect, while the other types derive from the basic kinds by the addition of operators of change and cause and the combination of basic LSs into more complex LSs (Van Valin & LaPolla 1997:102---113, Van Valin 2005:31---50). The RRG representation of predicate and clause semantics is, therefore, *a priori*, compositional and context--- free. It is compositional because the meaning of an expression is a monotonic function of the meaning of its parts and how they are put together (see Cann 1993:4). It is context---free because, while the meaning of an expression depends on the meanings of its components, it does not depend on how these meanings were formed in previous semantic operations (Dowty 2007:45). Put differently, the RRG theory of lexical and semantic decomposition potentially abides by a principle of monotonic composition (Rappaport Hovav and Levin 1998: 103--- 105), which states that the meaning of an expression is built up incrementally and monotonically in a way that precludes the elimination of any basic component of meaning (see also Koontz---Garboden's 2005, 2007, 2012 *Monotonicity Hypothesis*). Although monotonicity is not a constraint on the formation of RRG LSs, monotonic semantic composition has yielded important results, and engendered debate, in this framework. One needs only think of Van Valin's (2005:44, 2013) analysis of process and active accomplishments or of Van Valin & LaPolla's (1997: 407---418) proposal on clitic reflexives in Romance and Croatian, which was adopted, and called into question, in subsequent work in RRG (see Bentley 2006 and, respectively, Matasović 2012).

In this talk, I offer theoretical and empirical arguments in defence of monotonicity in RRG. In semantics---syntax --- and syntax---semantics --- linking, the LS of the predicators is drawn from the lexicon (Van Valin 2005:128---131, 136, 150). Accordingly, syntactic operations ought not to be able to reduce LSs, while the formation of larger units of meaning on the basis of the composition of smaller units is legitimate. Similarly, word formation ought not to be able to detract from the meaning of roots (assuming, as I do, that roots do have meaning). If the meaning of a derived lexeme derives from the meaning of the root or base from which it is generated, the relative exceptionality of subtractive derivational morphology (Beard 1998: 61) is at odds with the assumption that morphological operations can freely reduce the logical structure of the base.

My empirical evidence in support of monotonicity is drawn from result state participles in Romance. The logical structure of result states (like that of all stage---level states, Carlson 1977) has traditionally received a non---monotonic analysis in RRG. As can be seen in (1b), which is derived from (1a), the standard RRG analysis involves the deletion of the operator of change INGR.

(1) a. The vase shattered --- INGR **shattered'** (vase)

b. The vase is shattered --- **shattered′** (vase)

The proposal in (1a---b) has unquestionable strengths. First, it captures in an economical way the relationship between the change of state predicate *shatter*, and the related result state *shattered*. Secondly, the same analysis allows RRG to differentiate between result states (cf. 1b) and property concepts (see **be′** (x, [**pred′**])), in accordance with Dixon's (1982) seminal work.

I consider two classes of participial pairs in Romance. In one of these classes, the members of each pair differ in their phonological shape, and normally also in terms of their lexical category (verb vs. adjective), but can be said to have synonymous roots (cf. 2a---b). In the other class, while the pairs are phonologically indistinguishable, allowance being made for inflectional morphology, they cannot be said to be entirely synonymous. The same lexical category contrast is found in this as in the former class (cf. 3a---b).

(2) a. Sta grasta s'ha *rumputu* du voti. (Sicilian)
'This vase broke (lit. has broken) twice.'
b. *Rutta* è, a grasta?
'Is it broken, the vase?'

(3) a. Marco ha *fumato* un sigaro. (Italian)
'Mark smoked (lit. has smoked) a cigar.'
b. Marco era completamente *fumato*.
'Mark was completely stoned (lit. completely smoked).'

The logical structure of the result state in (3b) cannot be formed in the same way as that in (1b): by reducing the LS of (3a) (shown in 3a′) we do not obtain (3b), since we are left with a stative predicate that modifies the lower argument of **smoke′** (cf. 4), and not its higher argument, which is the only argument of (3b).

(3) a′. [**do′** (M., [**smoke′** (M., sigaro)]) ∧ PROC **consumed′** (sigaro)] & INGR **consumed′** (s.)
(4) **consumed′** (sigaro)

As for the logical structure of (2b), which exhibits a rhizotonic adjectival participle including the Sicilian root for **break′**, contradiction tests (cf. 5a) suggest that this result state entails an event of change of state. On the basis of contrasts like (5a) vs. (5b), we claim that (2b) and (5a) require an anticausative LS, including an argument position for a suppressed causer (realized by *si* in 5a), in accordance with Van Valin and LaPolla's (1997:410f.) proposal.

(5) a. A grasta è rutta, (# ma un si rumpìu) (Sicilian)
'The vase is broken, (# but it did not break)'.
b. A grasta è rutta, ma nuddu a rumpìu. 'The vase is broken, but nobody broke it'.

I claim that both result---state participial types derive from the roots that they share with the cognate verbal participles, although the type in (3b) derives from a monoargumental active accomplishment reading of its root, which is not lexicalised as a verb (Bentley & Ledgeway 2014). I advance a proposal on the LS of these result states, which, while distinguishing result states from property concepts, in agreement with previous RRG work, satisfies the principle of monotonic compositio

Cosubordination, control, and the Macro-Event Property

Jürgen Bohnemeyer
University at Buffalo – SUNY

I propose a new explanation for the generalization in (1) regarding the distribution of control constructions:

(1) **Juncture, nexus, and control**
- i. Control is restricted to non-subordinate core junctures (Foley & Van Valin 1984: 304);
- ii. Core cosubordination, but not core coordination, necessarily involves control.

The following examples illustrate this distribution with English complementation constructions:

(2) a. Sally$_i$ regretted (her$_{i/j}$) slapping Floyd.
b. Sally$_i$ regretted that (*/she$_{i/j}$) had slapped Floyd.

(3) a. Floyd$_i$ tried $\underline{\varnothing_i}$ to close the door.
b. Floyd$_i$ wished that (*/he$_{i/j}$) was able to close the door.

(4) a. Harriet persuaded Sally$_i$ $\underline{\varnothing_i}$ to leave.
b. Floyd$_i$ persuaded Sally that (*/she) should leave.

(5) a. Floyd seemed to be annoyed.
b. Sally assumed that (*/Floyd) was annoyed.
c. Sally assumed Floyd to be annoyed.

Finite *that*-complements, as in the b examples, exclude control and instantiate clause-layer juncture. Gerundial complements exhibit optional control; in (2a), the gerund is subordinate. Infinitival complements lack overt subjects. Their subjects are either control targets, as in (3a) and (4a), or the corresponding semantic role is linked to a matrix argument, as in (5a) and (5c). The result is a core juncture, which is coordinate in the matrix-coding (or 'raising') cases (5a) and (5c) and in (4a) and cosubordinate in (3a). A key observation underlying (1ii) is that there are instances of core coordination that lack control, such as the matrix coding constructions in (5a) and (5c).

Our account follows the rationale in (6):

(6) **Control and the Macro-Event Property**
- i. Among core and clause junctures, all and only core cosubordinations have the Macro-Event Property (MEP) (Bohnemeyer & Van Valin 2009, ms.);
- ii. Macro-event expressions obey the Referential Uniqueness Constraint (RUC) (Bohnemeyer et al 2007);
- iii. Core cosubordinations satisfy the RUC via control.

The MEP is defined as in (7):

(7) **Macro-Event Property (MEP)**: A construction C that encodes a (Neo-) Davidsonian event description $\exists e.P(e)$ ('There is an event *e* of type/property *P*') has the MEP iff C has no constituent C´ that describes a proper subevent e´ of e such that C´ is compatible with time-positional modifiers that locate the runtime of e´, but not that of the larger event e.

The only example in (2)-(5) that has the MEP is (3a), the sole instance of core

cosubordination in the set:

(2') a. On Monday, Sally regretted her slapping Floyd on Sunday.
b. On Monday, Sally regretted that she had slapped Floyd on Sunday.
(3') a. #On Monday, Floyd tried to close the door on Tuesday.
b. On Monday, Floyd wished he would be able to close the door on Tuesday.
(4') a. On Monday, Harriet persuaded Sally to leave on Tuesday.
b. On Monday, Floyd suggested to Sally that she leave on Tuesday.
(5') a. On Monday, Floyd seemed to have been annoyed on Sunday.
b. On Monday, Sally assumed Floyd to have been annoyed on Sunday.
c. On Monday, Sally assumed that Floyd had been annoyed on Sunday.

In the context of the LSC, the MEP entailment is a consequence of the single periphery that cosubordinate cores share, which modifies the superordinate higher core they form.

Bohnemeyer & Van Valin (ms.) state the RUC as in (8):

(8) **Referential uniqueness constraint (RUC):** For every construction C that encodes a (Neo-) Davidsonian event description $\exists e.P(e)$ ('There is an event *e* of type/property *P*') and has the MEP, the following holds:

$$\forall \mathrm{RP_m}, \mathrm{RP_n}.\ (\mathrm{RP_m} \ll_{\mathrm{ic}} \mathrm{C} \ \&\ \mathrm{RP_n} \ll_{\mathrm{ic}} \mathrm{C} \ \&\ \exists e_m, e_n.\ e_m \ll_{\mathrm{e}} e \ \&\ e_n \ll_{\mathrm{e}} e \ \&\ \exists \theta_m.\theta_m([\![\mathrm{RP_m}]\!]^c, e_m) \ \&\ \exists \theta_n.\theta_n([\![\mathrm{RP_n}]\!]^c, e_n)) \rightarrow [\![\mathrm{RP_m}]\!]^c \neq [\![\mathrm{RP_n}]\!]^c)$$

This requires distinct referring expressions $\mathrm{RP_m}$ and $\mathrm{RP_n}$ to have distinct referents ($[\![\mathrm{RP_m}]\!]^c \neq [\![\mathrm{RP_n}]\!]^c$) provided they are thematically related to subevents of *e*.

As an empirical generalization that holds without known exceptions, cosubordinate cores always involve a coreferential ("shared") argument. It appears that this coreferential argument acts as the "glue" that holds the higher core together. Due to this coreferential argument, core cosubordinations would run afoul of the RUC, which they must adhere to because they have the MEP. Syntactic control avoids this violation, by realizing one of the coreferential arguments, not as an RP, but as a gap with a bound-variable interpretation.

Bohnemeyer & Van Valin (ms.) support (6) with evidence from English infinitival complement constructions, Ewe serial verb constructions, and Japanese converb constructions. Evidence from a larger set of additional languages is currently being collected. An attractive theoretical strength of our proposal is that it promises a unified treatment of control and binding phenomena, as the RUC can account for both.

References

Bohnemeyer, J., Enfield, N., Essegbey, J., Ibarretxe, I., Kita, S., Lüpke, F., and F. K. Ameka (2007). "Principles of event encoding: The case of motion events," *Language 83*(3): 495-532.

Bohnemeyer, J. & R. D. Van Valin, Jr. (2009). The macro-even property and the LCS. Paper presented at the 2009 International Conference on Role and Reference Grammar, University of California, Berkeley.

Bohnemeyer, J. & R. D. Van Valin, Jr. (Ms.). The Macro-Event Property and the Layered Structure of the Clause. Manuscript, University at Buffalo.

Foley W. A. & R. D. Van Valin, Jr. (1984). *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.

An RRG Analysis of the adjective in the Bamunka noun phrase

Ciara Browne
Trinity College Dublin

This presentation will focus on the adjective in the Bamunka noun phrase through the lens of Role and Reference Grammar (RRG). The RRG model will be applied to the various devices used in the expression of the adjective in this GB language. It is expected that a range of morphological patterns will be identified such as class agreement, suffix deletion and use of associative markers. However, as increasing numbers of modifiers are added that there will be a reduction in these morphological changes being replaced with the introduction of an additional descriptive phrase for the purpose of clarification and simplicity.

The Bamunka language is one of 279 indigenous languages spoken in Cameroon. Located in the North West province the Bamunka village is located in the Ndop Plain and comprises just over 30, 000 inhabitants. A part of the Niger-Congo family of the Grassfields Bantu languages, Bamunka was given a completed orthography in 2006 with ongoing work being done on the Noun Phrase, the Verb Phrase and the Clause. The word order of Bamunka is typically SVO. Morphological processes of verbs include tense and aspect marking using auxiliary verbs and grammatical tone (Sorsamo 2008:3). In addition to past present and future tenses further subdivisions have been identified such as Far Past (P4) and One Time Past (P5). One of its distinct features being its clearly defined noun class system which is marked by a range of affixes attached to nouns and noun phrases.

Adjectives commonly follow the noun, though in certain cases such as with regard to size they may precede it. A large number of adjectives in Bamunka are derived from verbs. This is expressed in two ways. They are either reduplicated verb stems or they are verbs with a verbal extension that take the position of an attributive adjective in the noun phrase (Ingle, 2013).

(1) tyʉ-shʉəshʉə-kə
tyʉ́ shʉə-́ shʉə́ kə́
tree.C7 strong-strong C7.AM
"strong tree"

(2) nyii- shʉəshʉə-hə
nyiī́ shʉə-́ shʉə́ hə́
cutlass.C10 strong-strong C10. AM
"strong cutlasses" (Ingle 2013: 67)

In certain situations agreement of adjectives with the class of the noun being modified may occur. If the head noun is from class 6a, 7, 8, 10, 13 or 19 the noun class suffix is deleted and a marker agreeing with the class of the head noun follows the adjective.

(3) Fɔŋ bəlʉʉ kə
Stool:C.7.Root bamboo:Adj Ass.Marker.C.7
Bamboo stool (Browne 2010: 39)

No associative marker is found for adjectives modifying nouns from classes 2 and 9. If the adjective is derived from a verb and verbal extension, an associative marker is used to show agreement and the suffix of the head noun is deleted, as follows.

(4)

ndʉ'-	sʉ'nə-	mə
ndʉ́'	sʉ́'nə́	mə́
wine.C6a	sweet C6a.	AM

"sweet wine" (Ingle 2013: 68)

Where multiple qualifiers are present, a descriptive phrase may be used to avoid ambiguity.

(5)

Mɔ	tənə	mbʉə	mbʉ	kefʉəŋ
Mɔ	tənə	mbʉə	mbʉ	kefʉəŋ
I	stand:V:ST	beside	the:Def	stool:C.7

bəlʉʉ	kwɛ'təŋ	ndə	i	bɛ	kəfʉəŋ
bamboo:Adj	big	that	it	be	black:Adj

LIT: I stand beside the stool bamboo big that it be black
"I stood beside the big black bamboo stool" (Browne 2010:38)

The range of phenomena listed in relation to the Bamunka adjective will be analysed using the RRG model, patterns and devices will be discussed along with suggestions for future research.

References

Browne, Ciara. 2010. The Bamunka Language: Towards a Complexity Analysis. M.Phil Dissertation. TCD.

Ingle, Jane. 2013. The Bamunka Noun Phrase. *SIL, Cameroon.*
Sorsamo, H. 2008. The Phonology of Bamunka. *SIL, Cameroon*.

The types of complex predicates in Lithuanian

Jonė Bruno (Trinity College Dublin) & Viltė Drūlienė (Vytautas Magnus University Kaunas)

Predicates can be classified as simple, which contain only a verb, and complex, which are constructed from several verbs. There are several types of complex predicates in Lithuanian and the aim of this presentation is to overview the types of complex predicates that occur in an online corpus of Lithuanian Language and describe this phenomenon in RRG.

The majority of literature that discusses predicates in Lithuanian, such as Ambrazas (2006), Balkevičius (1968), Labutis (2002), is based on theoretical background and most of the examples are constructed following theoretical rules and descriptions. This presentation aims to outline the complex verbs based on the actual usage of such constructions. As not all verbs can be combined together to form complex predicates, therefore specific verbs were selected including such verbs as *offer, accept, leave, have* etc. as seen in the Example (1):

(1) *Kai Petr-as Vyšniausk-as pradėjo gro-ti saksofon-u,*

When Petras$_{SN.M.NOM.}$ Vyšniauskas $_{SN.M.NOM.}$ start-$_{3.SN.PST.}$ play-$_{INF.}$ saxophone-$_{SN.M.INST.}$

Lietuv-oje buvo labai mažai kūrin-ių š-iam

Lithuania AUX.$_{3.SN.PST.}$ very little piece-$_{PL.M.GEN.}$ this-$_{SN.M.DAT.}$

instrument-ui.

instrument-$_{SN.M.DAT.}$

/When Petras Vyšniauskas started playing saxophone, there were very little pieces for this instrument./

(Adapted from Gruiniūtė 2010)

This example reveals one of the types of complex predicates which, according to Labutis (2002: 93), are classified as complex predicates with phase marking predicates. Such complex predicates are only one type of constructions that combine two verbs describe one event. The main aim of tis presentation is to overview different types of complex predicates that occur in Lithuanian language using the framework of RRG.

References

Ambrazas, V (ed). 2006. *Lithuanian Grammar: Lietuvių Kalbos Gramatika.* Vilnius: Baltos Lankos.

Balkevičius, J. (1968). *Dabartinės Lietuvių Kalbos Sintaksė* [Syntax of Modern Lithuanian Language]. Vilnius: National Press of Political and Scientific Literature.

Gruiniūtė, E. 2010. Gyvenimas džiazo ritmu [Life by the rhythm of jazz]. *DELFI*, 10 August, 2010, http://www.delfi.lt/gyvenimas/istorijos/gyvenimas-dziazo ritmu.d?id=35126115.

Labutis, V. 2002. *Lietuvių Klabos Sintaksė* [Syntax of the Lithuanian Language]. Vilnius: Vilniaus Universiteo Leidykla.

Clause linking in L2 French and English: A Role and Reference Grammar perspective

Manon Buysse
Vrije Universiteit Brussel & University of Helsinki

This contribution aims to apply the extensive framework of Role and Reference Grammar to a field in which it has rarely been used: the description and analysis of learners' second language development.

The acquisition of clause linking mechanisms in a second language has been an important topic in applied linguistics recently, with research mostly focusing on specific categories of complex structures, such as finite complement clauses (Diessel & Tomasello 2001), relative clauses (Giacalone Ramat 1999) or circumstantials (Benazzo 2004). These approaches, while based on the development of different types of subordinate clauses as distinguished by traditional grammar, do not provide a unified view of clause linking as a whole.

This contribution intends to consider all forms of clause linking, including what would traditionally be considered as 'intraclausal' relations between multiple predications and their arguments. For this purpose, it has adopted the theory of Role and Reference Grammar (RRG; Foley & Van Valin 1984, Van Valin & LaPolla 1997, Van Valin 2005) as its framework. This is due, amongst others, to the fact that RRG is a universal, functional, communication-oriented theory, which offers a unified view of propositional complexity, both syntactic and semantic. The hypotheses verified include both earlier suppositions on L2 clause linking acquisition, e.g. the supposed acquisition of parataxis before hypotaxis (Véronique 2009), and specific hypotheses formulated in Van Valin (2001) with respect to the acquisition of clause linking mechanisms in a *first* language. The validity of these ideas in the field of second language acquisition will be verified in this project, by comparing pupils' acquisition of the clause linking system in two different L2s.

Both French and English data have been collected among Belgian adolescents (aged 11 to 18), all secondary school pupils with both languages as an obligatory part of their curriculum. The data consist of semi-spontaneous oral retellings (*frog stories*, Mayer 1969) and were analyzed in terms of their inter- and intraclausal links according to the distinctions made within the RRG framework. Preliminary results confirm the general principles formulated by Van Valin (2001, 2005), such as the match between syntactically and semantically strong clause links, present in both the English and the French data. The two L2s under scrutiny appear to differ, however, in their selection of particular syntactic and/or semantic linkage types for the representation of identical situations, and in the relative increase of sentence complexity found in learners' productions.

References

Benazzo, S. 2004. L'expression de la causalité dans le discours narratif en français L1 et L2. In: *Langages*, 155, pp. 33-50.

Diessel, H. & M. Tomasello. 2001. The acquisition of finite complement clauses in English: A corpus-based analysis. In: *Cognitive Linguistics*, 12, pp. 1-45.

Foley, W. A. & R. D. Van Valin Jr. 1985. *Functional syntax and universal grammar*. Cambridge: Cambridge University Press.

Giacalone Ramat, A. 1999. Functional typology and strategies of clause connection in second-language acquisition. In: *Linguistics*, 37,3, pp. 519-548.

Mayer, M. 1969. *Frog, where are you?* New York: Dial Press.

Van Valin, R. D. Jr. 2001. The acquisition of complex sentences: a case study in the role of theory in the study of language development. In: *Chicago Linguistic Society Parasession*, Boyle, J., Lee, J.-Y. & A. Okrent (eds.), 36, pp. 511-531.

Van Valin, R. D. Jr. 2005. *Exploring the syntax-semantics interface*. Cambridge: Cambridge University Press.

Van Valin, R. D. Jr. & R. J. LaPolla. 1997. *Syntax: Structure, meaning and function*. Cambridge: Cambridge University Press.

Véronique, D. (ed.) 2009. *L'acquisition de la grammaire du français langue étrangère*. Paris: Didier.

Two Themes Constructions and Preposition Assignment in Spanish

Sergio Ibáñez Cerda
Universidad Nacional Autónoma de México

Three-place predicates have been long discussed in RRG (Van Valin and LaPolla 1997; Van Valin 2007, Kailuweit 2008; Haspelmath 2008). Nevertheless, the kind of phenomena which are always analyzed in the literature are relative to either ditransitive, transfer or locative verbs, as the ones shown in (1a), (1c) and (1e), respectively:

(1) a. Pat gave the book to Kim
b. Pat gave Kim the book
c. Maurice presented the book to Elenor
d. Maurice presented Elenor with the book
e. Henry loaded the hay on the truck
f. Henry loaded the truck with the hay

Of particular interest regarding these predicates have been the alternative constructions shown in (1b), (1d) and (1f), which imply the non-default coding of the non-subject or non PSA (Privileged Syntactic Argument) argument-. As the current RRG analysis (Van Valin, 2007) posits, the theme argument in (1a) – *the book*-, (1c) –*the book*- and (1e) – *the hay*- is the undergoer, but in (1b) it is a non-macrorole direct core argument, while in (1d) and (1f) it is an oblique core argument introduced by the preposition *with*.

Both these kind of constructions, the canonical and the alternative ones, are adequately handle by the RRG linking system. On the one hand, starting from the logical structure (LS) in (2), this system specifies, in the default case, that the leftmost argument – *x*- is selected as the actor and as the PSA, the rightmost argument –*z*- is selected as the undergoer, and the *y* argument, in the case of ditransitive and transfer verbs, is assigned dative case, through the preposition *to*, and in the case of locative verbs, as *load* in (1e), is assigned a goal preposition, as *on* or *in*.

(2) [**do'** (x, Ø)] CAUSE [BECOME **predicate'** (y, z)]

On the other hand, in the non-default cases, the *x* argument still is the PSA, but now the *y* argument is selected as the undergoer and the *z* argument is assigned the preposition *with*, which as proposed by Van Valin and LaPolla (1997), marks all the arguments which competing for a macrorole status are not chosen as one, except in the case of ditransitive verbs, whose theme is left unmarked, as in (1b).

So these non-default constructions imply an environment where two distinct arguments are 'competing' for the undergoer status. In these cases, which are the ones always discussed in the literature, the competition takes place between a theme and a goal/recipient kind of argument; this is, the competition takes place between two asymmetrical participants, as in cognitive terms the theme tends to functions as a figure with respect to a locative ground, which usually is instantiated by the goal or the recipient arguments. That is why, the

selection of the theme as undergoer is viewed as the default choice and its coding as non macrorole argument is viewed as marked.

There are, nevertheless, other cases of three argument constructions where the competition for the undergoer status takes place between symmetrical participants, as it is the case of the two theme constructions exemplified in (3) for Spanish:

(3) a. El presidente reunió a los empresarios con los trabajadores
'The president gathered the businessman with the workers.'
a'. El president reunió a los empresarios y a los trabajadores
'the president gathered the businessman and the workers.'
b. Leonor comparó a Leonardo con Miguel Ángel
'Leonor compared Leonardo with Miguel Ángel.'
b'. Leonor comparó a Leonardo y a Miguel Ángel
'Leonor compared Leonardo and Miguel Ángel.'
c. John intercambió los lentes por el sombrero con George
'John exchanged the sunglasses for the hat with George.'
c'. John y George intercambiaron los lentes y el sombrero
'John and George exchanged the sunglasses and the hat.'

The non-prima examples show the three argument projection of this type of verbs. In this cases, the agent is the actor and PSA; one of the themes is the undergoer, while the third argument, another theme, is coded as an oblique complement; the non-undergoer themes in (1a) and (1b) are introduced by the preposition *con* 'with', and the one in (1c) by the preposition *por* 'for'. The prima examples show that the non PSA arguments can be coded as a single complement, through a complex noun phrase (NP) with conjoined head nouns. This proves that both these arguments have the same semantic status, i. e. they both are themes. So the three argument constructions projected by these verbs obligatorily imply the selection of one of the themes as the undergoer and the coding of the other one as an oblique argument, even if both of the themes can be selected as the undergoer.

There are two very interesting things about this kind of constructions in Spanish: first, they exemplified cases of three argument predicates where the non-default preposition assignment rule for the non PSA arguments is obligatory, both in semantic and syntactic terms; that is, these constructions inherently imply an environment of competition between two theme arguments, so the 'competing' rule, or instrumental case assignment rule, as it is called in RRG terms, is the default rule. No dative case or locative prepositions are assigned in any case.

And second, the non-undergoer theme can be introduced by the preposition *con*, which in this respect covers similar ground to that covered by *with* in English, but at the same time can be introduced by other prepositions, as *por* in (3c), showing that the application of this assignment rule is a little more complicated, and suggesting that the rule is not exclusively motivated by syntax. Van Valin (2007) has already pointed out that with removal and dispossession verbs the non-default coding of the theme argument results in an oblique argument introduced by the preposition *of*. The same holds for similar verbs in Spanish, when the alternation is possible, as it is the preposition *de* 'of' and not *con* the one that

appears in those contexts. But the more intriguing thing is that the three prepositions *con*, *de* and *por* can alternate in contexts where the 'competition' rule applies - both in the case where the competition is between two themes (4a) or between a theme and a locative/recipient argument (4b)-, but at the same time this alternation has some restrictions:

(4) a. Clemente sustituyó el vino **por/con/*de** la cerveza
'Clemente substituted the wine for the beer.'
b. María cargo el camion **de/con/*por** manzanas
'María loaded the truck with apples.'

This suggests that the application of the 'instrumental' assignment rule has some semantic basis, in the sense that it interacts with the semantic type of the predicates, allowing the appearance of one or two prepositions with certain predicates and one or two with others.

In summary, this paper has the goal of exploring further the two points sketched above with data of Spanish: 1) the application of the instrumental case assignment rule as the default case with some verbal classes, and 2) the semantic role of the different prepositions that can appear with the application of that rule.

References

Haspelmath, Martin. 2008. Ditransitive Constructions: Towards a New Role and Reference Grammar Account? In Van Valin (ed.) *Investigations of the Syntax-Semantics-Pragmatics Interface*, pp. 75-100. Amsterdam/Philadelphia: John Benjamins.

Kailuweit, Rolf. 2008. A RRG Description of Locative Alternation Verbs in English, French, German and Italian. In Kailuweit, Wiemer, Staudinger and Matasović (eds.) *New Applications of Role and Reference Grammar: Diachrony, Grammaticalization*, *Romance Languages*. pp. 328-355. Cambridge: Cambridge Scholars Publishing.

Van Valin. 2007. The Role and Reference Grammar Analysis of Three-Place Predicates. *Suvremena Lingvistika* 33.1(63).31-64.

Van Valin, R. and R. J. LaPolla, 1997, *Syntax, Structure, Meaning and Function*. Cambridge: Cambridge University Press.

Topicalised Arguments in Two Types of Mandarin Serial Verb Constructions

Ying Fan
University of Manchester

This paper discusses the topicalisation of object arguments in two types of Mandarin Serial Verb Construction (henceforth SVC): the Excessive SVC (or ESVC) and the Cause-Effect SVC (or CE SVC). Despite their superficial similarity in surface form, the topicalised arguments in these two SVCs have split behaviours with respect to topicalisation within an SVC-based relative clause. It is argued that the topicalised argument in an ESVC-based relative clause should be treated as a distinct type of topic, as it does not occupy the *Left-Detached Position* or (arguably) the *Pre-Core Slot* in RRG structure.

It has been argued in Fan (2014) that Mandarin SVCs with the same component verbs may form either at nuclear or at core level. In particular, ESVCs and CE SVCs differ in meaning, telicity, verb classes of V2, and most importantly syntactic structure: the former forms at the core level and the latter at the nuclear level. As a correlate of this syntactic structures, the shared argument undergoes obligatory topicalisation in the ESVC (see also Lu (1990)), as in the ESVC shown in (1) and (2). Contrast the unacceptability of (3).

(1) gongrenmen gou wan qian le.
workers ditch dig be.shallow LE
'The ditch(s), the works have dug it/them too shallow.'

(2) gou gongrenmen wa qian le.
ditch workers dig be.shallow LE
'The ditch(s), the workers have dug it/them too shallow.'

(3) *gongrenmen wa qian le gou.
workers dig be.shallow LE ditch

Contrastively, the topicalisation of the object in a nuclear SVC is optional as shown in (4) and (5). Despite the apparently similar topicalisation (TOP>>S) between the ESVC in (2) and the CE SVC in (4), it is noteworthy that the CE SVC in (6) does not allow the object to be topicalised to the position after the subject as the ESVC does in (1).

(4) cangying wo da si le.
fly I hit die PFV
'The fly, I hit it dead.'

(5) wo da si le cangying.
I hit die PFV fly
'I hit the fly dead.'

(6) *wo cangying da si le
I fly hit die PFV

Furthermore, it is found that the topicalised arguments in ESVC and CE SVC have split

behaviours with respect to the diagnostic of relative clause formation on the subject argument. For the ESVC, (7) is grammatical with the pivot undergoer (or UG) argument *gou* 'ditch' topicalised to the post-subject topic position inside the relative clause. Since this position is unavailable to the UG argument *cangying* 'fly' in a relative clause based on the CE SVC, (8) is ungrammatical.

(7) gou wa qian le de gongrenmen lai le.
ditch dig be.shallow PFV REL workers come PFV
'The workers who have dug the ditch too shallow came.'

(8) *cangying da si (le) de fuwuyuan keyi zou le.
fly hit die PFV REL waiter may go PFV
Intended: 'The waiters who hit the flies/fly dead may go.'

Based on the split behaviours of the topicalised arguments in ESVC- and CE SVC-based relative clauses, I propose that the topicalised argument in an ESVC-based relative clause in fact occurs in a distinct topic position which should be distinguished from the Left Detached Position in RRG structure. Further evidence for this is the fact that a Left Detached sentence topic can be made explicit in (9):

(9) zhe ge gongcheng, gou wa qian le de gongrenmen lai le.
this CLF project ditch dig be.shallow LE REL workers come PFV
'As to this project, the workers who have dug the ditch too shallow came.'

Moreover, the occurrence of a *wh*-word in the topic position renders the resulting sentence ungrammatical as shown in (10), which suggests that the topic *gou* 'ditch' in (7) cannot simply be identified with the Pre-Core Slot either.

(10) *shenme wa qian le de gongrenmen lai le.
what dig be.shallow PFV REL workers come PFV

References

Fan, Y. (2014). *Excessive Construction-A Quasi-Resultative Serial Verb Construction in Mandarin Chinese*. Paper presented at the Asian-European Link 2, Newcastle, UK.

Lu, J. (1990). "VA le" Shubu Jiegou Yuyi Fenxi. *Hanyu Xuexi*(1), 1-6.
Van Valin, R. D., & LaPolla, R. J. (1997). *Syntax : structure, meaning and function*. Cambridge: Cambridge University Press.

Towards the Layered Structure of the Clause of the Actor---Emphatic in Māori

Aoife Finn
Trinity College Dublin

This paper explores the layered structure of the clause, hereafter LSC, of the actor---emphatic in Māori. It also looks at the greater implications of providing a correct account of the actor---emphatic LSC. The actor---emphatic construction is an innovation in Polynesian languages, see Harlow (2007: 175). Māori is a VSO, head first, dependent marking Eastern Polynesian language. Bauer (1997: 501) explains that the actor---emphatic "as its name suggests emphasizes the actor". It is distinct from the passive voice and topicalization constructions. Furthermore, the actor---emphatic construction is only available to certain transitive verbs. The actor---emphatic deviates from the usual clause structure in Māori. A canonical Māori sentence is seen in (1). As expected in a VSO language, in example (1) the tense---marked verb hoko is followed by the actor te matua and the undergoer ngā tīkiti respectively. An example of an actor---emphatic sentence is shown in (2). In contrast to a canonical clause, in an actor---emphatic construction such as (2) the actor te matua is fronted. The actor is also preceded by a particle nā that is ordinarily used to mark possessive predicates. The fronted actor is followed by the undergoer ngā tīkiti and lastly by the verb hoko. Examples (1) and (2) are taken from Harlow (2007: 26---27).

(1) Ka hoko te matua i ngā tīkiti
TNS buy DET parent UND DET ticket
"The parent buys the tickets"

(2) Nā te matua ngā tīkiti i hoko
ACT.POSS DET parent DET tickets TNS buy
"It was the parent who bought the tickets"

Some proposed predicates of the actor emphatic have included;

a) The verb
b) The actor (marked with a possessive particle)
c) The actor (marked with a possessive particle) and the verb
d) A two predicate clause consisting of the verb as a distinct predicate and the actor (marked with a possessive particle) as a distinct predicate

There have been many explanations put forth as to the form, or LSC, of the actor---emphatic construction. That being the case, the identification of the predicate and arguments has proved divisive, for summary see Bauer (1993: 223 --- 229). Very briefly, the verb, the actor and the combination of the verb with the actor have all been suggested as the predicate. A two predicate clause has also been proposed, whereby the verb and the actor are distinct predicates within the clause. These explanations are more clearly summarized in (3).

The ambiguity surrounding the predicate and arguments of the actor---emphatic leads to difficulty in representing correctly the LSC of the actor---emphatic. The correct identification of the predicate, the arguments, the macroroles and their place in the LSC are paramount in identifying the privileged syntactic argument and in assigning case.

Moreover, the completion of the linking algorithm is inhibited by the enigma of the actor---emphatic LSC , see Van Valin (2005: 279 --- 281). The data in this paper is from Māori informants, Māori language media and also from the reference grammars of Bauer (1993, 1997), Biggs (1969) and Harlow (2007) et al. In order to propose a correct LSC, guided by the Role and Reference Grammar framework, this paper explores the delineation between predicates and arguments, in both the semantic and syntactic senses. In doing so, it examines the restrictions on the intra---clausal and inter---clausal behaviour of predicates and arguments.

The results are significant as accounting for the LSC of the actor---emphatic is an essential step in clarifying the case---system of Māori. This contributes towards the larger unresolved issue of the Māori case---system. This paper will present the latest results of providing a satisfactory explanation for the LSC of the actor---emphatic.

List of Abbreviations: 3:third person, ACT:actor, DET:determiner, LSC: layered structure of the clause, POSS:possessive, TNS:tense, UND:undergoer

References

Bauer, Winifred, W. Parker, et al. 1993. Māori. London: Routledge.

Bauer, Winifred. 1997. The Reed Reference Grammar of Māori. Auckland: Reed Publishing.
Biggs, Bruce. 1969. Let's Learn Māori (Revised ed). Auckland: Auckland University Press.

Harlow, R. 2007. Māori: a linguistic introduction. Cambridge, Cambridge University Press.

Van Valin, Robert D. 2005. Exploring the syntax---semantics interface. Cambridge: Cambridge University Press.

The distribution and syntax of quantity and degree expressions

Jens Fleischhauer
Heinrich Heine University Düsseldorf

Many languages can use the same expression for indicating nominal and verbal quantity. This is illustrated by the German examples in (1). *Viel* 'a lot' in (1a) indicates that Peter owns a large quantity of money. In (1b) and (c), *viel* indicates a verbal quantity, which is the frequency of Peter's going to the cinema in (b) and the temporal duration of the past raining event in (c).

(1) a. *Peter* *besitzt* *viel* *Geld.*
Peter owns a lot money
'Peter owns a lot of money.'
b. *Peter* *geht* *viel* *ins* *Kino.*
Peter goes a lot in.the cinema
'Peter goes to the cinema a lot.'
c. *Gestern* *hat* *es* *viel* *geregnet.*
yesterday has it a lot rained
'Yesterday, it rained a lot.'

There is a difference between German *viel* and English *a lot*; whereas both can be used for expressing adnominal and adverbial quantity, only *a lot* but not *viel* can be used for indicating a degree. In (2) the degree of the intensity of Peter's feeling is specified, whereas the English translation can use *a lot*, in German *sehr* 'very' rather than *viel* has to be used. At the same time, *sehr* cannot be used for indicating adnominal quantity (**sehr Geld* 'very money').

(2) *Peter* *vermisst* *seine* *Freundin* *sehr.*
Peter misses his girl friend very
'Peter misses his girlfriend a lot.'

The talk focusses on the distribution of quantity and degree expressions in a sample of 23 languages from Europa and Asia.[1] Within the sample two distributional patterns are found; table 1 illustrates these patterns with the mentioned English and German quantity/degree expressions:

Table 1 Distribution of quantity/degree expressions in English and German.

nominal quantity	**verbal quantity**		**verbal degree**
	frequency	**duration**	
a lot	*a lot*	*a lot*	*a lot*
viel	*viel*	*viel*	*sehr*

[1] Language sample: German, English, French, Morrocan Arabic, Bulgarian, Croatian, Dutch, Estonian, Georgian, Hebrew, Italian, Japanese, Khalka Mongolian, Korean, Mandarin Chinese, Nepali, Polish, Romanian, Spanish, Swedish, Russian, Tatar, Turkish.

The following patterns cannot be found in the sample:

(i) There is no language in the sample that uses the same expression for indicating verbal quantity and degree but a different expression for nominal quantity (the discussion is restricted to neutral high quantity/degree expressions).
(ii) There is no language that uses the same expression for nominal quantity and verbal degree but a different one for verbal quantity.
(iii) There is no language that uses different expressions for expressing the frequency subtype of verbal quantity and the durational one.

In the talk I present a syntactic analysis (in the framework of RRG – e.g. Van Valin 2005) of quantity and degree expressions that explains the distribution of quantity and degree expressions presented above. I will argue that nominal quantity and verbal quantity are expressed at the core layer, whereas verbal degree is realized at the nucleus layer. German makes an explicit distinction between the expression of nominal/verbal quantity at the core layer, for which it uses *viel*, and the expression of verbal degree at the nucleus layer, for which *sehr* is used. Languages like English, but also French, Italian and Spanish, can use the same expression at the different layers. Hence, quantity/degree expressions like English *a lot* or French *beaucoup* 'a lot' are syntactically ambiguous between being a core adjective/adverbial and a nucleus adverbial.

I will demonstrate that degree is realized at the nucleus layer but quantity at the core layer. This is done by pointing out the scope relationships one finds between degree/quantity expressions on the one hand and verbal/nominal operators at the other hand. In (3) it is demonstrated that grammatical aspect has scope over the degree expression. Sentence (3a) allows for a perfective interpretation and in this case *sehr* indicates the total amount of blood emitted in the event. On the other hand, it is merely the amount of blood at a certain stage of the event in the progressive sentence in (b). Both sentences do not entail each other.

(3) a. *Peter hat* ***sehr*** *geblutet.*
Peter has very bled
'Peter bled a lot.'
b. *Peter war* ***sehr*** *am* *Bluten.*
Peter was very at.the bleeding
'Peter was bleeding hard.'

The examples in (4) show that the quantity expression has scope over grammatical aspect. In both sentences, the expression indicates the frequency of bleeding events. This requires a shift in the interpretation of the progressive construction, as it does not anymore denote an ongoing single event but rather has a habitual interpretation.

(4) a. *Peter hat* ***viel*** *geblutet.*
Peter has a lot bled
'Peter bled a lot.'
b. *Peter war* ***viel*** *am* *Bluten.*
Peter was a lot at.the bleeding

'Peter was bleeding a lot.'

In the talk, more data will be presented, which demonstrate the different syntactic configurations for expressing nominal/verbal quantity and verbal degree. Additional data will be presented in order to illustrate that quantity/degree expressions in languages like English and French are syntactically ambiguous.

References

Van Valin, Robert D., Jr. (2005). *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press.

Clause linking and temporal relations in Yaqui

Lilián Guerrero
Universidad Nacional Autónoma de México

This paper offers a corpus-based study of temporal adverbial clauses in Yaqui (Uto-Aztecan, Mexico). In temporal clauses, the event inside the adverbial unit provides a reference point, or ground, for the event described in the main unit. In *after*- and *before*-clauses, the linked events are sequential, meaning the time reference of each situation is predetermined (temporal succession); in *when*-clauses, the two events are temporally overlapping (Cristofaro 2003: 168). Yaqui displays considerable structural variation to express temporal relations. The temporal unit can be marked by two general adverbial subordinators (Lindenfeld 1973; Dedrick & Casad 1999): *-o*, as in (1a), and *-kai* (*-ka* when the clause is non-final), as in (1b).[2]

(1) a. [*Ju-ka Sulumai-ta*$_i$ *omotria-u yepsa-k-**o***] *jaibu* *_$_i$* *kaa enchi tea-k*
DET-ACC Sulumai-ACC brush-DIR arrive-PFV-CLM already NEG 2SG.ACC find-PFV
'When Sulumai got back to the brushes, she couldn't find you.'

b. [*bea sechupti* *_$_i$**pensasaroa-ka***] *ne*$_i$ *aman siika*
MD suddenly think-CLM 1SG.NOM there go.SG.PFV
'And, when I suddenly thought [about it], I went there.'

Anterior (*after*) and posterior (*before*) relations can be optionally marked by the aspectual suffix *-su* 'completive' (2a), and the initial particle *(ketun) kee* 'not yet' (2b), respectively. Juxtaposition is another strategy to encode sequential relations, as depicted in (3).

(2) a. *Naa bea te pakun-bichaa yeu=saja-k [a puntaroa-**su**-k-**o**]*
then MD 1SG.NOM outside-toward out=go.PL-PFV 3SG.ACC suture-CMP-PFV-CLM
'Then, we left [the hospital] after they sutured him.'

b. *Enchi$_j$=ne$_i$ bicha-k **[ketun_kee*** *_$_i$* *kaba'i-ta jinu-**kai**]*
2SG.ACC=1SG.NOM see-PFV CLM horse-ACC buy-CLM
'I saw you before I bought the car.'

(3) *[Apo'ik bwiiti-taite-k] empo junama'a ji'i-bweji-taiti-ne*
3SG.ACC run-start-PFV 2SG.NOM over.there thing-dig-start-POT
'(When) he started to run, you will start digging over there.'

In previous works, I have shown that the analysis of Yaqui temporal clauses turns particularly problematic for the following reasons. First, *-kai/-o* are semantically ambiguous, meaning sequential and simultaneous relations are not formally distinguished. Take for example the *o*-clauses. In (1a), the linked event is anterior to the main event, but in (4a) the linked event is posterior to the main on. In (4b), the two events temporally overlap.

[2] Abbreviations: ACC: accusative, CMP: completive, CLM: clause linkage marker, DIR: directional, DM: discourse marker, NOM: nominative, PASS: passive, POT: potential, PFV: perfective, PL: plural, SG: singular.

(4) a. *[junumpo bea aman eela a weye-**o**] bea nejpo*
over.there MD there almost 3SG.ACC walk.SG-PFV MD 1SG.NOM

yeu=tubukti-ne
out=jump-POT
'Before he [the coyote] arrives there, I will jump.'

b. *[Junak into ji'i-bwei-wa-**o**], junama'a ba'am yeu=siika!*
later DM thing-dig-PASS-CLM later water.PL out=go.SG-PFV
'While they were digging [to bury the dead person], some water came out!'

Hence, one may expect that specific temporal clauses like those in (2) are more frequent in discourse than the general clauses in (1) and (3). This assumption turns to be false, since general temporal clauses (1) are the most frequent in corpus. One may wonder, then, how posterior vs. anterior temporal relations are distinguished in Yaqui. Two valid hypotheses: the relative order between the units, and the TAM information of the verb forms. The first hypothesis is related to iconicity of sequence (Diessel 2008) which predicts that the linear order of the two units will mirror the sequential ordering of the events they describe. Regardless of the temporal relations, however, in Yaqui the temporal unit tends to be sentence initial. We cannot fully rely on TAM information either since *o*-clauses tend to be unmarked for TAM values and IF, while *kai*-clauses demand bare-verb forms. In fact, the two subjects must be identical in *kai*-clauses, and it must be omitted inside the linked unit (subjectless clause).

In terms of the nexus-juncture relations (Van Valin 2005), I show that all temporal clauses -including juxtaposition- show features of structural dependency, but there are some internal differences among these syntactic expressions. *Kai*-clauses show the tightest syntactic linkage in terms of TAM operators, argument sharing and coding (core junctures); in comparison, *o*-clauses are less tight (clausal junctures). Furthermore, the general temporal clauses in (1), as a group, show a higher degree of syntactic dependency (ad-core subordination) when compared to specific temporal clauses (2) (potentially, ad-clausal subordination). In fact, specific temporal clauses are the less tight syntactic linkage expressing temporal relations in Yaqui.

Selected references

Cristofaro, S. 2003. *Subordination.* New York: OUP.

Dedrick, J. & E. Casad. 1999. *Sonora Yaqui language structure*. Tucson: University of Arizona Press.

Diessel, H. 2008. Iconicity of sequence: a corpus-based analysis of the positioning of temporal adverbs in English. *Cognitive Linguistics* 19-3: 465-490

Lindenfeld, J. 1973. *Yaqui Syntax*. Berkeley: University of California Press.

Van Valin, R. 2005. *Exploring the syntax-semantic interface*. Cambridge: CUP.

An RRG approach to Spanish temporal adjuncts

Lilián Guerrero (Universidad Nacional Autónoma de México)
Valeria A. Belloro (Universidad Autónoma de Querétaro)
Carmen Conti Jiménez (Universidad de Jaén)

Temporal adjuncts provide time specification for the state of affairs described in the clause indirectly, in relation to some other event or situation (Heinämäki 1978, Declerck 1997). In Spanish, this specification may be expressed through a clause (1a), a phrase (1b) or a bare adverbial (1c). Temporal clauses, phrases, and adverbials can occur to the left or to the right of the core they modify, as shown in the examples. In RRG, these adjuncts are introduced by predicative prepositions and occupy the core periphery of the LSC (Van Valin 2005: 194).

(1) a. *Sam besó a Pat antes de acostarse.*
a'. *Antes de que se acostara, Sam besó a Pat.*
be-before´ ([ING **lay down´** (*Sam*)], [**do´** *Sam*, [**kiss´** (*Sam, Pat*)]])
b. *Sam besó a Pat antes de la película.*
b' *Antes de la película, Sam besó a Pat.*
be-before´ (movie, [**do´** *Sam*, [**kiss´** (*Sam, Pat*)]])
c. *Sam la besó antes.*
c'. *Antes, Sam la besó.*
c'. **be-before´** (Ø, [**do´** *Sam*, [**kiss´** (*Sam,* 3sg)]])

In this paper, we explore the extent to which semantic, structural, and pragmatic principles account for the preferred order in discourse of *antes* (before) and *después* (after) adjunct modifiers. A direct antecedent is Gerardo Tavira's (2015) work on temporal subordination in Spanish. In her sample, clausal temporal adjuncts precede the main clause in 55% of the cases; this preference is stronger in spoken data (76%) than in written texts (48%). In the current study, we complement the corpus with temporal adjuncts like those in (1b-c).

With regards to semantic motivations, we explore the predictions made by the principle of iconicity of sequence (Diessel 2008). According to this principle, the linear order of the two units should mirror the sequential ordering of the events they describe. Thus, *before*-clauses will follow the main clause, since they refer to an event that occurs after the main one. According to this principle, the sequence in (1a) is iconic, but the one in (1a') is not. The opposite is predicted with respect to *after*-clauses below, since they refer to an event that precedes the main event. For these, the constructions in (2b-c) are iconic, but (2a) is not. In our sample, iconicity holds for 66% of *after*-clauses but only for 45% of the *before*-clauses. This distribution indicates that iconicity of sequence can only partially explain the preferred order of the temporal adjuncts at the level of the clause. Further, it is unclear how this principle can be invoked to motivate the preferred order of temporal phrases (1b-c).

(2) a. *Sam se durmió después de besar a Pat.*
be-after´ ([**do´** *Sam*, [**kiss´** (*Sam, Pat*)])], [**do´** (*Sam*, [**sleep´** (*Sam*)]])
b. *Después de dormirse Sam, Pat vio la película.*
be-after´ ([**do´** (*Sam*, [**sleep´** (*Sam*)]], [**see´** (*Pat, movie*)])
c. *Después de que Sam se durmió / se durmiera, Pat vio la película*
be-after´ ([**do´** (*Sam*, [**sleep´** (*Sam*)]], [**see´** (*Pat, movie*)])

With regards to structural motivations, we examine whether the position of the temporal adjunct is influenced by the type of unit it introduces (adverb, phrase, core or clause). For instance, the object of *antes (de)* in (1a) and *después (de)* in (2a) is a subjectless infinitival unit. Infinitival dependents are a type of core; thus, the privileged syntactic argument of the main core (*Sam*) is interpreted as the actor of the linked core. In Spanish, this requirement is not obligatory, and infinitival units can take a different (and overt) subject as in (2b) (García 2000). This suggests that the linked unit in (2b) is not a core, but a clause. In (1a') and (2c), the linked unit is also a clause, with each unit expressing their core arguments. With finite verbs, a*ntes (de)* only takes subjunctive clauses (1a'), while *después (de)* can take subjunctive and indicative clauses (2c). In our sample, 68% of the linked units correspond to infinitival dependents and 32% to finite ones. So far, the level of the juncture does not seem relevant for the relative order of the main and adverbial units: out of 238 infinitival adjuncts (both core and clausal), 56% present the order temporal-main clause and 46% the order main-temporal.

Finally, we are examining to what extent the order of the units is determined by information structure. Given the unmarked focus structure of Spanish, we would expect that the temporal-main order will occur in those cases where the temporal specification serves the pragmatic function of an overt "stage topic" (Erteschik-Shir 2007) with respect to which the (main) sentence is to be evaluated (3a). On the contrary, the main-temporal order is expected when the temporal serves as (part of the) focus (3b).

(3) a. *Hace muchos años, vivía una linda princesita…*
'Many years ago, there lived a beautiful little princess…'

b. *¿A qué hora llegó Pat? Pat llegó después de las 12.*
'What time did Pat arrived? Pat arrived after 12'

Given that we are analyzing natural discourse, specific parameters have to be established to determine the topical / focal status of the temporal adjuncts within the discourse context, among which are central the relative activation (Chafe 1987) and relative persistence (Givón 1983) of the referents they contain. Preliminary evidence shows that focus structure is a best predictor of word order in these constructions, suggesting the relative rigidity of focus structure in Spanish with respect to Van Valin's (1999) typology.

Selected references

Chafe, W. 1987. Cognitive constraints on information flow. In Tomlin, R.S. (ed.), *Coherence and Grounding in Discourse*. Amsterdam: John Benjamins, 21-52.

Givón, T. 1983. *Topic continuity in discourse*. Amsterdam: John Benjamins.

Declerck, R. 1997. *When-Clauses and Temporal Structure*. London: Routledge.

Diessel, H. 2008. Iconicity of sequence: a corpus-based analysis of the positioning of temporal adverbs in English. *Cognitive Linguistics* 19-3: 465-490.

Erteschik-Shir, N. 2007. Information structure: the syntax-discourse interface. Oxford: OUP.

García, L. 2000. *La gramática de los complementos temporales*. Madrid: Visor.

Gerardo-Tavira, R. 2015. Construcciones subordinadas temporales: orden, iconicidad y relaciones entre eventos. Ph.D. project.

Heinämäki, O. 1978. *Semantics of English Temporal Connections*. Universidad de Helsinki.
Van Valin, R. 1999. A typology of the interaction of focus structure and syntax. In E. V. Rachilina, & J. G. Testelec (eds.), *Typology and linguistic theory from description to explanation*. Moscow: Languages of Russian Culture, 511-524.

Van Valin, R. 2005. *Exploring the syntax-semantic interface*. Cambridge: CUP.

The role of space in MSL (Mexican Sign Language) relative clauses

Antoinette Hawayek
Universidad Autónoma Metropolitana-Iztapalapa

The goal of this presentation is to analyze the linguistic means Mexican Sign Language uses to express what restrictive RCs (relative clauses) express in English. Although there is some previous work on relative clauses in signed languages (Italian, Turkish, German, Catalan, American) the function of space has been understudied. I intend to show that space is the main strategy in the construction of the equivalent in MSL of RCs in English. MSL RCs will be explored from an RRG perspective; consequently, my aim will be to achieve a representation of the structure of these clauses which correspond to the actual form of MSL restrictive RCs *(cf.* Van Valin 2005). In RCs, one element functions simultaneously in the matrix and relative clauses, so the first task is determining whether the head noun appears inside the relative clause or outside of it.

Our data attest the presence of a biclausal structure that includes a sentence-initial clause (which I will call RC) containing a specific sign (that I label REL), and a sentence-final clause (the matrix clause). MSL RCs are internally-headed [IHRC], as shown in (1). MSL does not have tense or number inflection, nor a plural affix, so verbs will be represented in the English translation by the non-finite form and plural nouns by their singular form.

(1) early [*child all go_to_bed REL] school well work*
Children who go to bed early do well in school.

As it will be shown, REL sign functions as a relativizer, it sits at the rightmost end of the initial clause and its presence is obligatory. It is manually realized (as the demonstrative sign), with the index finger stretched out, pointing at a specific location in space. However, I argue that it is not a demonstrative morpheme, its syntactic behavior is different from that of demonstratives.

To demonstrate that in MSL, space is the main strategy in the construction of the functional equivalent of the RC in English, I'll start this presentation, describing the syntactic structure of transitive relative clauses, like those shown in (2a-b). No matter which of the two NPs of a transitive sentence is relativized, the unmarked Mexical Sign language order (SOV) is used, and REL is signed at the end of the initial clause.

(2) a. *past woman boy spank REL now laugh*
The woman who spanked the boy is now laughing.
b. *past woman boy spank REL boy now laugh*
The boy whom the woman spanked is now laughing.

As shown by translations in (2a-b), although REL is not adjacent to the relativized NP, there is no ambiguity, in contrast to what is observed in Navajo sentences, like those shown in (3).

(3) a. *[Ashkii at'é éd yiyii-ltsá-née] yałti'* (18b in Andrews, 2007)
boy girl 3SG(OBJ) PERF.3SG(SUBJ)-REL.PAST IMPERF.3SG.speak

The boy who saw the girl is speaking' 'The girl who the boy saw is speaking' (ambiguous)

Languages with IHRCs have developed different strategies for indicating the head noun within the IHRC (Van Valin 2012:12). In MSL, space is the strategy employed to identify the head noun within the IHRC. The relative clauses in (2a-b) are identical before REL is signed, but in (2a), REL is signed in one location in space (location "a") and in (2b), REL is signed in another location ("location b"). I will also explain why in (2b) (but not in (2 a)) the relativized NP has to be signed again after REL.

It might seem that ambiguity is avoided by one simple rule: one location in space indicates that the subject of the initial clause is the relativized NP and another location indicates that the direct object is the relativized NP. I will demonstrate that it is not so, there are constraints and not all subjects are marked by REL signed in "location a". I will also show that the function of the head noun within the matrix clause determines the location in space in which REL is signed. In (4a-b), the head noun man is the subject in both REL clauses, but due to the fact that it has different functions in the matrix clause, REL is signed in different locations:

(4) a. *tonight man come eat REL Puebla car sell*
The man who is coming for dinner tonight sells cars in Puebla.
b. *tonight man come eat REL man I know not*
I do not know the man who is coming for dinner tonight.

To further illustrate the role space carries out in the construction of relative clauses, I will show how MSL relativizes the so called 'non-macrorole direct core argument' in a ditransitive predication (*cf.* Van Valin 2007:39). I will present examples of three place predicators (known in signed languages as 'agreement verbs') that denote the transfer of an entity (concrete or abstract) from a former to a future possessor. There are no PPs in MSL so I intend to show how space is used to fulfill the function the preposition *to* fulfills in English when assigned to a non-macrorole argument. I will finish this presentation with examples of the 'layered structure' of MSL relative clauses to show that the RRG approach to clause structure can capture MSL specific space strategies.

References

Andrews, Avery D. 2007. Relative clauses. In *Language typology and syntactic description. Vol. II: Complex constructions,* T. Shopen, ed., 206-236. Cambridge: Cambridge University Press.

Van Valin, R.D., Jr. 2005. *Exploring the syntax-semantics interface. Cambridge: Cambridge University Press.*

_____ 2007. *The Role and Reference Grammar analysis of three-place predicates. http:*linguistics.buffalo.edu/people/faculty/vanvalin/rrg.html.

_____ 2010. Role and Reference Grammar as a framework for linguistic analysis. In *The handbook of Linguistic Analysis,* Bernd, Heine & Heiko Narrod eds.: 703-738. Oxford:

Oxford University Press.

_____ 2012. Some issues on the linking between syntax and semantics in relative clauses. http://linguistics.buffalo.edu/people/faculty/vanvalin/rrg.html.

_____ 2013. Lexical representation, co-composition, and linking syntax and semantics. In *Advances in Generative Lexicon theory,* J. Pustejovsky, P. Bouillon, H. Isahara, K. Kanzaki & C. Lee eds. 67-107. Dordrecht: Springer.

_____ and LaPolla, R. 1997. Syntax: Structure, meaning and function. Cambridge: Cambridge University Press.

Romance intransitive Subject-EXPERIENCER Verbs – Pragmatical Impact on Macrorole Assignment

Rolf Kailuweit
University of Freiburg

Since Belletti & Rizzi (1988), psych-verbs (or precisely verbs of emotion) have been a central piece of evidence for theories dealing with mismatches in the linking system. While activity- verbs always realize the AGENT as the subject of the unmarked active construction, verbs of emotion show surprising variation. The EXPERIENCER appears as the subject of verbs denoting love, hate or fear, but as the object of verbs of several other semantic classes ranging from anger to disgust, grief and fright, but also to pleasure, joy and happiness. The last three decades witnessed an intense discussion about the different classes of Object-EXPERIENCER verbs (OE- verbs). On the contrary, Subject-EXPERIENCER verbs (SE-verbs) have not triggered the same interest. Belletti & Rizzi (1988) only account for transitive SE-verbs of the *temere* ('fear') type, which do not show any anomalies at the syntax-semantics interface. However, there is a well- documented second class of SE-verbs realizing the non-EXPERIENCER argument as an oblique. This class was mentioned for English by Pesetsky (1995) (*worry about*), for French by Ruwet (1993) (*enrager de*) and for Spanish by Whitley (1995) (*gozar de*), but, as far as I can see, the linking properties have not been taken in consideration in a systematic way.

Starting from the RRG's macrorole assignment principles, an intransitive predicate receives only one macrorole. While intransitive activities assign the actor macrorole to the most active argument, intransitive states realize the most passive argument as the undergoer. Hence, intransitive stative OE-verbs, such as *appeal to* assign the undergoer macrorole to the non- EXPERIENCER argument. The linking of the class follows straightforwardly. The undergoer functions as PSA; the non macrorole EXPERIENCER is realized as an oblique. Why could this be the opposite for the *worry about* class? The class is only indirectly dealt with in standard RRG. Van Valin & LaPolla (1997: 156) discuss the copula construction *Pat is angry at Kelly*. Starting from the LS [**feel'**(Pat, [**angry.at'** (Kelly)])], they argue that these predicates are macrorole intransitives having an embedded predicate (i.e. **angry.at'**) as their second argument. The argument of this predicate ('Kelly' in our example) "will always be outranked for undergoer by the matrix argument" (ibid.). At first glance, the problematic macrorole assignment of the *worry about* class could be solved in the same way. However, there is a non-episodic subclass of intransitive SE-verbs for which the embedded predicate approach does not seem to be appropriate: *trust in, suffer from, fear for* etc.

In *author* (2005), I argued that the linking of this group could only be explained as a pragmatic effect. The EXPERIENCER of a non episodic verb of emotion is prototypically topical. As topics show affinity to the subject function, in some cases the affinity is lexicalized. The general principles of undergoer assignment are overridden and the undergoer function is assigned to the EXPERIENCER argument at the lexical level. The present paper will work out these considerations with a more detailed look into the different subclasses. In addition, the theoretical implications will be reviewed in the light of the "radical" RRG-approach (author 2013).

References

Belletti, A. and Rizzi, L. (1988) 'Psych Verbs and Theta Theory', *Natural Language and Linguistic Theory*, no. 6. 291-352.

Kailuweit, R. (2005) *Linking: Syntax und Semantik französischer und italienischer Gefühlsverben*, Tübingen: Niemeyer.

Kailuweit, R. (2013) 'Radical Role and Reference Grammar (RRRG): A sketch for remodelling the Syntax-Semantics-Interface"', in Nolan, B. and Diedrichsen, E. (eds.) *Linking Constructions into Functional Linguistics. The role of constructions in grammar*, Amsterdam: John Benjamins, pp. 103-141

Pesetsky, D. (1995) *Zero Syntax: Experiencers and Cascades*, Cambrigde, MA / London: MIT Press.

Ruwet, N. (1993): „Les verbes dits »psychologiques«. Trois théories et quelques questions", in: *Recherches Linguistiques de Vincennes* 22: 95–124.

Van Valin, R.D.J. and LaPolla, R.J. (1997) *Syntax. Structure, meaning and function*, Cambridge: Cambridge University Press

Whitley, S.M. (1995) 'Gustar and other Psych Verbs. A problem in transitivity', *Hispania*, no. 78, p. 573–585.

Argument linking in RRG: A constraint-based implementation

Laura Kallmeyer, Timm Lichte & Rainer Osswald
Heinrich-Heine-Universität Düsseldorf[3]

We report on an ongoing project that aims at a thorough formalization and a computational implementation of Role and Reference Grammar (RRG) which gives full consideration to the universal and language-specific grammatical constraints proposed by RRG as a theory of grammar. The main focus of the present paper is on argument linking in simple cores. This includes also nuclear junctures such as the English resultative construction, since linking works in this case like for simple clauses.

The described approach makes use of the following formal and computational elements (along the lines of Osswald & Kallmeyer, to appear): (1) A formal characterization of syntactic composition consisting of three basic operations: (simple) substitution, (sister) adjunction, and wrapping (substitution). These operations build on concepts from the formalism of Tree Adjoining Grammars. Since the present paper is primarily concerned with argument linking in simple cores, the relevant mode of composition is simple substitution. (The main purpose of the adjunction operation is the handling of peripheral elements while wrapping copes with extraction phenomena and control constructions, among others.) (2) A formal specification of the elementary syntactic templates to which the general modes of com- position in (1) are applied. The specifications are given in terms of a "metagrammar", which is basically a modular system of tree descriptions. The elementary templates generated by the metagrammar are often more complex than the syntactic templates assumed in informal presentations of RRG. For instance, we adopt the "full clause projec- tion assumption" that argument structure templates are clause templates and have slots for each of the arguments occurring in the clause. The smaller syntactic components show then up as modular classes in the metagrammar.
(3) A formalization of the logical structure in terms of decompositional frames, which are defined as base-labeled feature structures with types and relations (cf. Kallmeyer & Osswald, 2013).

Decompositional frames preserve the key properties of RRG's decompositional system in that they are able to represent the internal build-up of actions and events and thus the aspectual classes, and they have a clear logical and modeltheoretic foundation. Using frames has the consequence that the semantic verb classes (perception, motion, consumption, etc.) and the corresponding semantic relations (PERCEIVER, STIMULUS, MOVER, etc.) are treated as primitives of the representation. (4) Linking constraints that capture the way syntactic arguments and semantic roles are systematically related. These constraints are part of the metagrammar, together with syntactic tree fragments and fragments of semantic frames. This yields a constraint-based formulation of the principles underlying the linking algorithm from Van Valin (2005) instead of a procedural specification in the form of an algorithm. The advantage is that we can separate between the linguistic gen- eralizations to

[3] The research presented here has been supported by the Collaborative Research Center 991 funded by the German Research Foundation (DFG). We thank Simon Petitjean for helping us with the XMG compiler.

be captured and algorithmic considerations. The latter are encapsulated in the metagrammar compiler. The linguist using RRG does not need to worry about them.

We will use the XMG grammar development system (Lichte & Petitjean, to appear) for the implementation of (2)–(4) and a parser performing the composition operations described in (1). In this paper, we focus on how to implement (2)–(4), with a particular emphasis on (4), within XMG. Before going into details concerning linking principles in the metagrammar, let us consider an example of syntactic and semantic composition as described in (1). In Fig. 1, the

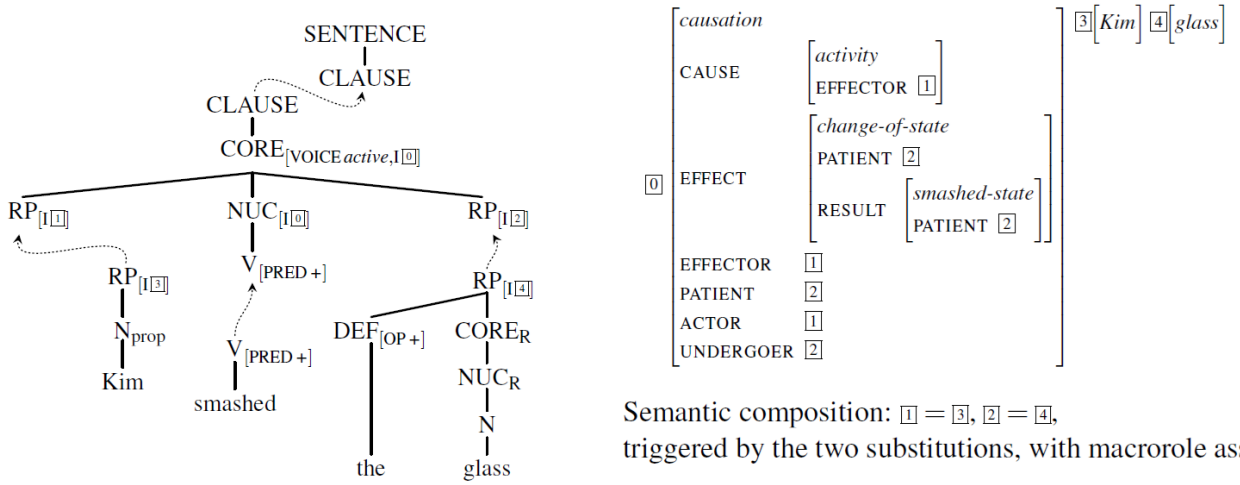


Figure 1: Syntactic and semantic composition

predicate node of the clausal template is filled by smashed and the two argument trees Kim and the glass are added by substitution. The predicate tree is paired with the semantic frame labeled 0. As a consequence of the two substitutions

MOVER : $\top \preceq$ MOVER $\doteq$ EFFECTOR	(a mover is always an effector)
CAUSE EFFECTOR : $\top \preceq$ EFFECTOR $\doteq$ CAUSE EFFECTOR	(the effector of a causing activity is the effector of the causation)
EFFECTOR : $\top \preceq$ EFFECTOR $\doteq$ ACTOR	(if an effector is given, then the effector is also the actor)
PATIENT : $\top \preceq$ PATIENT $\doteq$ UNDERGOER	(a patient is always an undergoer)

Figure 2: Some universal constraints on semantic roles and macrorole assignment

(due to the interface features I on the RP nodes), unifications of 1 and 3 (the label of the *Kim* frame) and 2 and 4 (the *Glass* frame) are triggered. In the following, we concentrate on the decomposition of the syntactic core structure and the event frame of Fig. 1. The first element of our linking system is a set of general constraints on types and features in semantic frames. These constraints express relations between different semantic roles and types, formulated as implications. They hold universally. Fig. 2 gives some of these constraints.

We furthermore define metagrammar classes ArgRank1, ArgRank2, ArgRank3 and ArgRank4 (see Fig. 3) for rank positions on the actor-undergoer hierarchy, which correspond to the groups of semantic roles in (Van Valin, 2005, Fig. 2.3, p. 58). Due to the

universal constraints in Fig. 2, a rank 1 argument has always macrorole actor while a rank 4 argument is always the undergoer. Further macrorole assignments along the principles in Van Valin (2005, p. 63) depend on the specific combination of arguments. These are characterized in the Pred ... classes. In these classes, we also determine the interface variable ?promi, which gives the argument with the highest rank. This is needed for linking. A class can inherit other classes, which means that it inherits their constraints. The class Pred Rank1 2 for instance inherits ArgRank1 and ArgRank2[4]. If we have exactly this combination (i.e., no further argument), the rank 2 argument becomes the undergoer. The actor information is already present in ArgRank1 due to the universal constraint that an effector is always an actor.

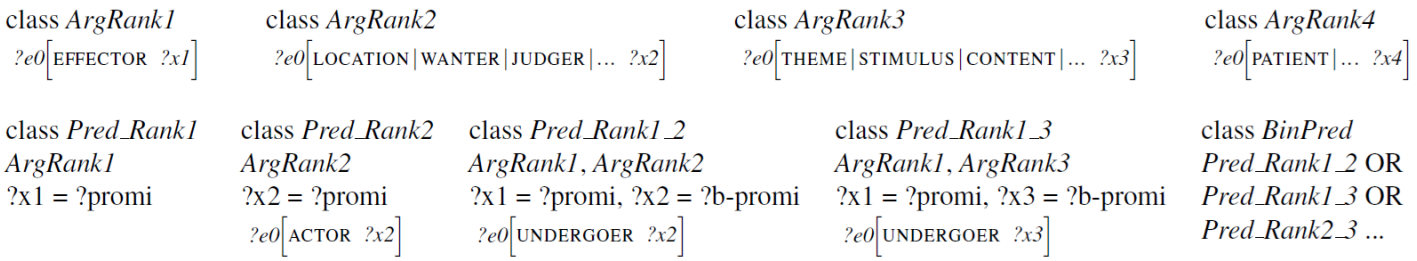


Figure 3: Some of the metagrammar classes for combinations of semantic arguments of different rank

In order to link these classes to syntactic templates, we define language-specific syntactic metagrammar classes for various tree fragments (see Fig. 4): a fragment core-4 template (see Van Valin, 2005, p. 15) that describes the verb and the priviledged syntactic argument to its left. This class expresses that in an active sentence the privi- leged syntactic argument is the ?promi argument, i.e., the highest argument in the actor-undergoer hierarchy. The larger class for the core-3 template combines this class with a fragment for a further argument RP to the right of the verbal predicate, integrating the semantic class BinPred. Compiling core-3 template yields the construc- tional schema for an active voice predication with two arguments, linked with various possible semantic frames.
Combining this with the lexical entry for smashed, we obtain the CORE tree and semantic frame shown in Fig. 1. In the talk, we will extend this to a more complete analysis, and we will present an implementation in XMG.

[4] We omit any details of variable management here, assuming for these examples that all variables are defined globally.

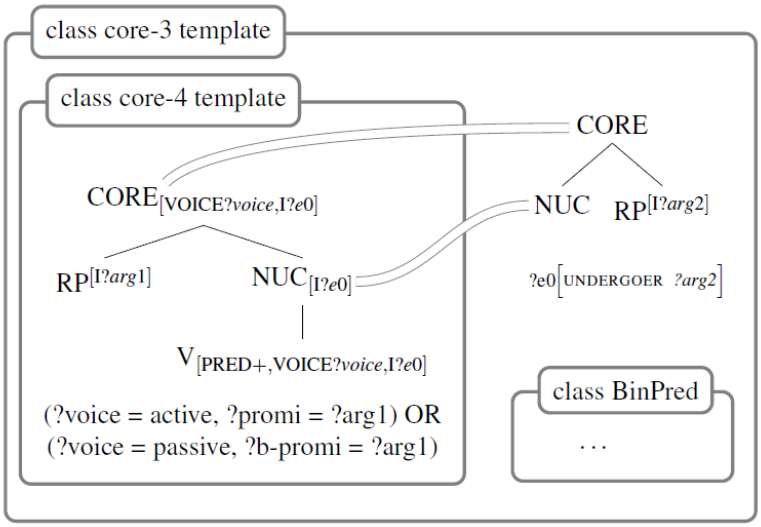


Figure 4: Factorization of the syntactic template for transitive verbs (language-specific, default case)

References

Kallmeyer, Laura & Rainer Osswald. 2013. Syntax-Driven Semantic Frame Composition in Lexicalized Tree Adjoining Grammar. Journal of Lan- guage Modelling 1. 267–330.

Lichte, Timm & Simon Petitjean. to appear. Implementing semantic frames as typed feature structures with XMG. Journal of Language Modelling.

Osswald, Rainer & Laura Kallmeyer. to appear. Towards a formalization of Role and Reference Grammar. In Proceedings of the 2013 Conference on Role and Reference Grammar.

Van Valin, Robert D., Jr. 2005. Exploring the Syntax-Semantics Interface. Cambridge University Press

The Constituent Projection in the Gĩkũyũ Layered Structure of the Clause

Claudius Patrick Kihara
Heinrich-Heine Universität –Düsseldorf

In Head-marking languages, the question of how to analyze the co-occurring independent lexical nominals and the subject/object markers incorporated on the predicate and their functions has attracted the attention of many linguists (cf. Jelinek 1984, Nichols 1986, Bresnan & Mchombo 1987, Van Valin 2013 and others) However, most of them are inconclusive and not all of their proposals are applicable cross-linguistically. The features in Head-marking languages directly impact on the conception of constituent structure representation in languages in the Role and Reference Grammar [RRG] (cf. Foley and Van Valin 1984, Van Valin 1993, Van Valin 2005, Van Valin 2013). This is because the RRG model of constituent representation –the Layered Structure of the Clause [LSC] - was developed in cognizance of such languages' typology. To account for the independent lexical nominals in Head-marking languages, Van Valin (2013) basing argument on Lakhota, proposes the Extra-Core Slot [ECS] - a slot unique to Head-marking languages- as the position for independent lexical nouns. However, this proposal is contradicted by Bohnemeyer et.al (to appear) with data form Yucatec Maya arguing that the ECS is not necessary in Yucatec. Different viewpoints are advanced for other languages such as Persian (cf. Moezzipour, t.a).

The issues at hand pertain to the left periphery. In RRG the left periphery has attracted some attention, such as: Shimojo (2011), Moezzipour (*t.a*), Bohnemeyer et.al (*t.a*). Here we concentrate on the Left Periphery of Gĩkũyũ, a split-marking Bantu language spoken in Kenya.

There are few studies on the Gĩkũyũ left periphery that I am aware of. Bergvall (1987) and Schwarz (2003,) attempted to account for extra-clausal constructions in Gĩkũyũ sentences. Bergvall (ibid.) says it is only the Left Dislocation construction that can account for fronted bare nominals. To her, Topicalization is subsumed in Left Dislocation constructions, a claim we disagree on. Schwartz (2003) admits that the nature of Gĩkũyũ Topic and Left Dislocation structures was not core to him. Both studies assume Generative grammar transformations. As an entry into this discussion, Gĩkũyũ clauses such as those in (1) will be described within the theoretical tenets of Role and Reference Grammar. Previous claims on Gĩkũyũ left dislocations and topicalization will be re-assessed. Emphasis will be on: the Extra-Core Slot [ECS], Left Detached Phrases [LDP], and the Pre Core Slot [PrCS]. We will show that Gĩkũyũ data supports the proposal of the various extra-core slots postulated on the LSC as suggested in Van Valin (2013) and in earlier RRG literature.

(1) a. *Wamboi, mw-ana a- ra- mo- hɛ- ir- ɛ* *ka-ramu.*
Wamboi, 1-child 1-PST-1OM-give-ASP-FV 12-pen
'Wamboi, the child she gave him/her a pen.'

b. *Ne m-wana Wamboi a-ra-hɛ -ir-ɛ* *ka-ramu.*
FM 1-child Wamboi 1-PST-give-ASP-FV 12-pen
'It is the child that Wamboi gave a pen.'

c. *Wamboi ne-ke a- ra- hɛ- ir- ɛ mw-ana*?
Wamboi FM-Q 1-PST-give-ASP-FV 1-child
'What did Wamboi give the child?'

References

Bergvall, V.L.1987. *Focus in Kikuyu and Universal Grammar*. Ph.D dissertation. Harvard University.UMI.

Bohnemeyer, J., Butler, Lindsay K., Jaeger, T. Florian. (to appear)."Head-marking and agreement: Evidence from Yucatec Maya". In J.Fleischhauer, A. Latrouite, & R.Osswald. Eds. (forthcoming). *Further investigations of the Syntax-Semantics-Pragmatics Interface*.Dusseldorf: DUP.

Bresnan, Joan & Mchombo, Sam A .1987. "Topic, pronoun, and agreement in Chichewa". *Language*, 63:741-82.
Foley, William. & Van Valin Jr, R.D.1984. *Functional Grammar and Universal Grammar*. Cambridge: CUP.

Jelinek, Eloise. 1984. "Empty categories, case, and configurationality". *NLLT*.2.39-76.
Moezzipour, Farhad (t.a) "Towards extending the scope of the left periphery in RRG" .To appear in the RRG 2013 Conference Proceedings.

Nichols, Johanna.1986. "Head-marking and dependent-marking grammar". *Language* 62:56 119.

Schwarz, Florian.2003. "Focus marking in Kikuyu". In R.Eckardt. Ed. 2003. *Question and Focus: ZAS papers in linguistics*, 30, 2003. p 41-119. Retrieved from:www.zas.gwz-berlin.de/fileadmin/material/ZAsPIL volltexte/zp 30/zaspil30.pdf .

Shimojo, Mitsuaki.2011.The left periphery and focus structure in Japanese. In W.Nakamura.Ed. 2011.*New Perspectives in Role and Reference Grammar* .pp.266-293.Cambridge Scholars Publishing :Newcastle upon Tyne.

Van Valin, R. D., Jr. 2013.Head-marking languages and linguistic theory. In Bickel B., L.Grenoble, D.Peterson, A. Timberlake.Eds.2013. *Language Typology and Historical Contingency: In Honor of Johanna Nichols*. p.91-124. Amsterdam: John Benjamins.

Van Valin Jr., R.D. 2005. *Exploring the Syntax–Semantic Interphase*. Cambridge: CUP.

Van Valin Jr., R.D. 1993. "A Synopsis of Role and Reference Grammar". In R.D.Van Valin Jr., Ed. 1993. *Advances in Role and Reference Grammar*.p.1-164. Philadelphia/ Amsterdam: John Benjamins.

Dative case and three-place predicates in Japanese

Hideki Kishimoto
Kobe University

Cross-linguistically, it is common to mark goal arguments with dative case, but paradoxically, the same morphological case is often used to mark source arguments (taken by three-place predicates), which are often thought to bear an opposite thematic relation to the goal. Drawing data from Japanese, the present paper provides an RRG account for this puzzling behavior of arguments with dative case. In descriptive studies of Japanese grammar, it is often mentioned (e.g. Martin 1975) that the indirect internal argument of a three-place verb bears dative *ni* marking irrespective of whether it is construed as a goal or a source, as illustrated in (1).

(1) a. Eri-ga tomodati-ni manga-o atae-ta.
Eri-NOM friend-DAT comic-ACC give-PAST
'Eri gave her friend the comics.'

b. Tomodati-ga Eri{-ni/-kara} manga-o morat-ta.
Friend-NOM Eri{-DAT/-from} comic-ACC get-PAST
'Her friends got the comics from Eri.'

In (1a), the verb *ataeru* 'give' expresses transfer of possession from *Eri* to *tomodati* 'friend', so the *ni*-marked argument is construed as a goal. In (1b), the verb *morau* 'get' describes reverse transfer, so the *ni*-marked argument *Eri* is taken as a source, and the subject a goal. The two indirect internal arguments in (1) receive the identical dative *ni* marking, even though they are the participants of events representing different orientations of transfer. (Note that with a predicate like *morau* 'get', the source argument can alternatively be marked with ablative *kara* 'from'.)

This ambivalent *ni* marking is not always available, however, because the source argument of some three-place predicates cannot receive dative case marking, as seen in the paired verbs like *okuru* 'send' and *uketoru* 'receive'.

(2) a. Eri-ga sensei-ni tegami-o okut-ta.
Eri-NOM teacher-LOC letter-ACC send-PAST
'Eri sent the letter to the teacher.'

b. Sensei-ga Eri{*-ni/-kara} tegami-o uketot-ta.
teacher-NOM Eri{-DAT/-from} letter-ACC receive-PAST
'The teacher received the letter from Eri.'

The verb *okuru* permits *ni* marking for its goal argument, whereas the source argument of *okuru* cannot be marked with *ni* (and can only be marked with ablative *kara*). The status of *ni* marking differs between (1a) and (2a), however, as seen from the fact that direct passivization is possible with the *ni*-marked argument of *ataeru*, but not of *okuru*.

(3) a. Kodomo-ga kyonen tukue-o atae-rare-ta.
child-NOM last.year desk-ACC give-PASS-PAST
'The child was given the desk last year.'

b. #Sensei-ga kinoo tegami-o okur-are-ta.
teacher-NOM yesterday letter-ACC send-PASS-PAST
'The teacher was adversely affected by sending the letter yesterday.'

The passive sentence (3a) formed on *ataeru* 'give' can have a neutral direct passive interpretation, whereas the passive clause (3b) with *okuru* 'send' cannot. The fact shows that *ni* is homonymous in Japanese; *ni* in (2a) is a locative marker (or a postposition), but in (1a), *ni* represents dative case, which is a grammatical marker.

The behavior of the two clauses in (1) and (2) might look puzzling, but I argue that the difference is semantically motivated, and can be accounted for in terms of LSs posited for the verbs in (1) and (2). First, (4) is an LS that can be posited for verbs of a change of possession, such as *ataeru* 'get' and *morau* 'get' in (1).

(4) [DO (*w*, [**do'** (*w*)])] CAUSE [BECOME NOT **have'**(x, y) & BECOME **have'**(z, y)]

In (4), the variable *w* is represented in Italics, since it is identified as either *x* or *z* when specifying the directionality of transfer (see Van Valin 2007). When *w* is identified with *y*, the meaning of the source-subject verb *ataeru* 'give' is expressed. When *w* is identified with *z*, the meaning of the goal-subject verb *morau* 'get' is expressed. Here, I propose dative case is assigned by the following rule:

(5) The non-macrorole core argument x in **have'** (x, y) is assigned dative case
if x is not related to any other position in the LS.

With the source-subject verb, the goal argument is not related to any other position in the LS, and hence is marked with dative case. With the goal-subject verb, the source argument gains this status, and hence receives dative case. (NB: ablative *kara* can be assigned to a non-macrorole core argument corresponding to x in BECOME NOT **have**'/**be at**' (x, y).) The present proposal analyzes dative case to be "semantically" motivated, instead of treating it as default case (cf. Van Valin and LaPolla 1997).

This analysis can account for why the verbs in (2) do not allow the indirect internal argument to bear dative case. The verbs in (2) express a change-of-location meaning, so that their LS should include the locative predicate **be-at**' (x, y), as in (6).

(6) [DO (*w*, [**do'** (*w*)])] CAUSE [BECOME NOT **be-at'** (x, y) & BECOME **be-at'** (z, y)]

The indirect internal argument receives locative marking: in (2a), locative/directional case is assigned to the non-macrorole goal argument, for it corresponds to x in BECOME **be-at'** (x, y); in (2b), ablative *kara* is assigned to the non-macrorole source argument x in BECOME NOT **be-at**' (x, y). Since *uketoru* 'receive' in (2b) does not contain **have**' (x, y), its indirect internal argument cannot be marked with dative case, the ablative *kara* being the only

option.

A number of consequences follow from this analysis, and the present analysis, for instance, predicts that dative marking will not be available for indirect internal arguments when transfer of possession is not conceptualized. This can be seen in (7).

(7) Otoko-wa ano sensei-ni {kakunin-o/*saihu-o} tot-ta.
man-TOP that teacher-DAT {confirmation-ACC/purse-ACC} take-PAST
'The man got {a confirmation/a purse} from that teacher.'

The source-subject verb *toru* 'take' carries different meanings depending on the choice of its object. When the object is *kakunin* 'confirmation', transfer of authorization (conceived as a kind of possession) is expressed, so the source can be marked with dative case (alongside ablative *kara*). When the object is *saihu* 'purse', the act of stealing is described, where no transfer of ownership is signified, so the source can only be marked with *kara*. While this is just one piece of evidence, I will look at more data, which empirically justify the LS in (4) and the dative case assignment rule in (5).

References

Martin, S. (1975). *A reference grammar of Japanese*. New Haven: Yale University Press.

Van Valin, R. (2007). A Role and Reference Grammar analysis of three-place predicates. *Suvremena Lingvistika* 33.1(63): 31– 64.

Van Valin, R. and R. LaPolla (1997). *Syntax*. Cambridge: Cambridge University Press.

How can RRG define clausal ellipsis in Polish?

Anna Kurasińska
Trinity College Dublin

Among different types of ellipsis, clausal ones have perhaps been the least approached phenomenon of all. A major reason for the lack of its analysis is the fact that clausal ellipsis does not operate on syntactic level of representation. Its licensing and recoverability conditions rely strictly on different pragmatic issues related to the concept of common ground. However challenging the investigation of clausal ellipsis might be, a great potential to the knowledge and understanding of this phenomenon can, indeed, be provided through functional linguistics, particularly RRG.

This paper will examine two types of clausal ellipsis in the Polish language: ellipsis licensed by conditional environment and ellipsis licensed by structural properties (including ellipsis in embedded *wh*-clauses and ellipsis in *wh*-question clauses). I will demonstrate how they differ by highlighting their lexico-grammatical properties and then explore the in-depth discourse-pragmatics nature and recoverability conditions of given clausal ellipsis. The findings will depend on additional integration of Discourse Representation Theory, which will be integrated into RRG.

A Role and Reference Grammar account of aspects of the Information Structure-Syntax Interface in Tagalog

Anja Latrouite & Robert D. Van Valin, Jr.
Heinrich Heine University

Information Structure (IS) is known to play an important role in Austronesian languages like Tagalog and Kapampangan for syntactic structure (e.g, Katagiri 2006, Kaufmann 2005) and to some degree also to voice and subject selection. Tagalog has a number of fronting structures for focus and topic. Focused arguments of the verb are clefted and require a verb form with an appropriate voice affix, as in (1a). Focused non-arguments occur simply in the pre-core slot and take clitics with them (1b-c).

(1) a. Siya ang t<um>a~tawa. 'He was the one who was laughing.'
3sgNOM NOM <AV>ipfv.laugh

b. Kahapon siya t<um>awa sa kaniya. 'Yesterday he laughed at him.'
yesterday 3sgNOM<AV>laugh DAT 3sgOBL

c. Sa kaniya siya t<um>awa kahapon. 'At him he laughed yesterday.'
DAT 3sgOBL 3sg NOM <AV>laugh yesterday

It is not possible to combine these two fronting strategies, as shown in (2).

(2) *Sa kaniya siya ang t<um>awa. 'At him he was the one who was laughing.'
DAT 3sgOBL 3sgNOM NOM <AV>laugh

Interestingly, if the non-A[ctor] is a semantic argument of the verb, topic fronting of this phrase is rejected in a sentence with a focused A, as shown in (3).

(3) #Kay Lina (ay), siya ang t<um>awa. ?
DAT Lina TOP 3sgNOM NOM <AV>laugh

'(As for) at Lina, he was the one who laughed.'

A's, however, may be frame-setting topics in sentences with focused U[ndergoer]s.

(4) Si Lina (ay), sila ang t<in>awa.
NOM Lina TOP 3plNOM NOM <UV>laugh
'(As for) Lina, they were laughed at (by her).'

A theory of IS should be able to explain these restrictions on syntactic structure. With respect to *ay*-topic-inversion, Kroeger (1993) also notes that the *ay*-inverted s-topic determines voice marking in non-clefted sentences. Latrouite (2011) suggests that the contrast in (3) versus (4) is tightly linked to the voice system and the nature of subject selection in Tagalog. The arguments that are the most prominent on the referential structural [RS], the event-structural [ES] and/or information-structural level turn into the subject and determine voice selection. The levels are assumed to be ordered (IS > ES > RS), so that IS is the most important level. If the A and the U are both prominent on the IS level, the U outranks the A for subjecthood, this is why the U may not be topical in the A-voice sentence, but the A may be topical in the U-voice sentence. Given that IS is often argued to be rather complex and consist of more than one layer

and that different kinds of focus and topic need to be distinguished, a more detailed study is needed to investigate what aspects of IS are relevant for this kind of information-structural prominence. In this talk we develop an analysis within Role and Reference Grammar (Cf. Van Valin 2005) to formalize the notion of IS-prominence and explain the patterns above.

References

Katagiri, M. (2006). Topichood of the Philippine topic: revisited from a cross-linguistic perspective. Paper presentend at the 10th ICAL, Phillipines.

Kaufmann, D. (2005): Aspects of pragmatic focus. In: Arka, I.W. & M. Ross (eds.): The many faces of Austronesian voice systems. Canberra: Pacific Linguistics.

Krifka, M. (2007): Basic notions of information structure. In: Féry, C, G. Fanselow & M. Krifka (eds.): The Notions of Information Structure. Working Papers of the CRC 632, Interdisciplinary Studies on Information Structure 6. Universitätsverlag Potsdam. pp.13-55.

Kroeger, P. (1993). Phrase structure and grammatical relations in Tagalog. Stanford: CSLI.

Latrouite, A. (2011). Voice and Case in Tagalog: the coding of prominence and orientation. PhD Thesis. University of Düsseldorf.

Van Valin, R. (2005). Exploring the syntax-semantics interface. Cambridge: CUP.

Linking Syntax and Semantics in Comparatives of Taiwan Sign Language: A Role and Reference Grammar Account

Chien-hung Lin (National Taiwan Normal University) &
Jung-hsing Chang National Chung Cheng University)

Taiwan Sign Language (henceforth, TSL) is characterized by conveying information through the visual-gestural channel rather than the oral-aural channel used by spoken languages. TSL signers exploit the three-dimensional space, also known as the signing space, in front of them in order to construct messages (Friedman 1975; Padden 1990; Engberg-Pedersen 1993; Liddell 2003; Meir and Sandler 2008). This paper discusses comparatives in TSL within the framework of Role and Reference Grammar (Van Valin & LaPolla 1997, Van Valin 2005), with the goal of finding out how TSL signers exploit the signing space to express comparatives.

Following typological study, a typical comparative construction usually contains two NP arguments. One of the arguments serves as the comparee and the other serves as the standard (Stassen 1985). In TSL, no particular morpheme (e.g., locative morpheme or particle) is recruited to identify the roles the NP arguments play in the comparatives in TSL. For instance, sentence (1) compares IRON and WOOD in terms of their hardness. These two comparing items are encoded as NP arguments. Sentence (1) shows that there is no particular grammatical morpheme recruited to determine the roles that the NP arguments play within this comparative. However, it is worth noting that each lexical sign in sentence (1) is manipulated to be associated with a certain locus in the space in front of the signer. The omission of such manipulation will lead to a different interpretation, such as exemplified in (2). Further, in sentence (3), the NP argument IRON occurs before the NP argument WOOD. Interestingly, such exchange of the syntactic positions does not affect the interpretation of this comparative. The study will explore how the constituents of a comparative construction are manipulated to establish spatial reference.

In addition to the constructions containing one verb (i.e., sentence (1)), the comparative constructions with two verbs such as (4) will be examined as well. Sentence (4) compares Mr. Wang with Mr. Chen in terms of their fatness. The two compared items are presented as NP arguments. The adjectival verb FAT is expressed twice, and they have to be modified as different forms to convey varying degrees of intensity. Furthermore, it is also found that scalar adverbs (i.e., VERY) and negation words (i.e., NOT HAVE) can be employed to derive the same effect, as illustrated in (5).

This paper focuses on the following issues: (a) how the syntactic structures of TSL comparatives are represented in RRG, (b) how the structure of signing space used to represent the TSL comparatives is incorporated into RRG, and (c) how the roles of NP arguments are determined in the logical structure of RRG.

(1) $WOOD_{i\text{-}L}$ $IRON_{j\text{-}R}$ $HARD_{\text{-}R}$.[1]

'Iron is harder than wood.'

(2) $WOOD_{i\text{-}N}$ $IRON_{j\text{-}N}$ $HARD_{\text{-}N}$.[2]

'Iron and wood are hard'

(3) $IRON_{j\text{-}R}$ $WOOD_{i\text{-}L}$ $HARD_{\text{-}R}$.

'Iron is harder than wood.'

(4) MR. $WANG_{i\text{-}L}$ MR. $CHEN_{j\text{-}R}$ $FAT\text{-}_{L(\text{with an elongated movement})}$ $FAT\text{-}_{R(\text{with a shortened movement})}$.

'Mr. Wang is fatter than Mr. Chen.'

(5) MR. $WANG_{i\text{-}L}$ MR. $CHEN_{j\text{-}R}$ $FAT\text{-}_{N}$ VERYi-L NOT HAVEj-R.

'Mr. Wang is fatter than Mr. Chen.'

Notes: 1 The capitalized notations of R and L indicate the loci of the referents. R stands for the right side of the space in front of the signer, and L stands for the left side.

2 The notation N stands for the neutral space which refers to the area in center of the signing space.

The nominal onion and how to make your way from within to the surface

Sebastian Löbner
Heinrich Heine University Düsseldorf & SFB 991

The talk presents a comprehensive general model of the functional-semantic structure of the NP (or RP, in RRG terms), as organized in **functional layers**. It is restricted to non-generic argument NPs and does not include functions that deal with the relation of an NP to its sentential or discourse context, such as case and agreement marking, or marking of the information-structural status. The model of functional layers is similar to, but more detailed and comprehensive than those proposed in Rijkhoff (2002) and Van Valin (2008). Its relationship to syntax will not be discussed.

Starting from the lexical N NUCLEUS, the model distinguishes a hierarchy of seven functional layers:

(1) RELATION – possession, (de)relationalization

(2) QUALITY – qualitative modification (by adjectives, relative clauses, etc.)

(3) UNIT – formation of countable units and of sum referents (plural, numerical classifiers)

(4) QUANTITY – quantity specification

(5) ORDER – elements that locate the referent in an ordering: ordinals, superlatives, *next*, etc.

(6) DEFINITENESS – indefinites, definites, adnominal demonstratives, and adnominal possessives

(7) QUANTIFICATION proper – partitives and genuine quantifiers such as ‚every'.

NP-internal operations are related to these functional layers and ordered relative to each other. The result is a **flow diagram** that integrates all major operations. The flow diagram also displays whether the operations are optional or necessary, and whether they can be covert or not.

Following and extending the approach to determination taken in Löbner (2011), the model distinguishes lexical nouns in terms of three binary **conceptual features**: relationality, inherent uniqueness, and countability. These features propagate from the nucleus level to the NP level. They may be subject to change when certain operations cause a corresponding conceptual shift. The model reflects how the operations affect the three features. Thus the resulting features of the NP can be derived from those of the nucleus and from the operations applied.

References

Löbner, S. (2011). Concept types and determination. *Journal of Semantics* 28: 279-333.

– (2015). The semantics of nominals. In N. Riemer (ed.), *The Routledge Handbook of Semantics*. 293-302.

Rijkhoff, J. (2002). *The Noun Phrase*, Oxford: Oxford University Press.

Van Valin, R. (2008). RPs and the nature of lexical and syntactic categories in Role and Reference Grammar. in R. Van Valin (ed.), *Investigations of the Syntax-Semantics-Pragmatics Interface*, Amsterdam/Philadelphia: John Benjamins, pp. 161–178.

Passivity among Korean light verb constructions

Keith Mannix
Trinity College Dublin

The Korean light verb *hada* and the verbal noun to which it bonds, form a single syntactical unit which is a hugely prevalent feature of everyday Korean vernacular, so much so, it is a class of verb in itself. The majority of *hada* light verb constructions contain verbal nouns of mostly of Chinese origin, and these Sino-Korean verbal nouns express themselves as verbs in this way. The light verb construction may also bear native-Korean words, and, loanwords, adopted from other foreign languages, especially English. It is often said that the light verbs, *toy*-, *pat*-, and *tangha*- act as a passive-like structure to compliment the *hada* light verb construction. This '*subclass* of passive' bears similarity to general passivity in the change of valency observed by its arguments, however, it is very unorthodox around the predicate.

Employing Role and Reference Grammar (RRG) as our functional linguistic model, a representation of the Korean light verb construction's complex predicate using its theory of nexus juncture relations is particularly interesting. To elucidate the functionality of the light verb, following a lexical representation on RRG's logical structure of the clause, the light verb construction shall be projected into RRG's Actor Undergoer Hierarchy, a thematic relations grid based on the arguments position post lexical decomposition using Vendler's aktionsarten. RRG semantics-syntax interface offers us a model which can communicate the behaviour of the clause, especially around the complex predicate, simultaneously noting the nature of argument structure and its valency. This will position us so as to assess the passivity of the other Korean light verbs constructions bearing, *toy*-, *pat*-, and *tangha*-. By comparing these forms with forms and behaviours of passivity in the worlds language, we can observe the justification for their place in the literature as a "subclass of passive".

Defining an RRG Linking System for Irish Sign Language Nouns and Verbs

Irene Murtagh
Institute of Technology Blanchardstown

This paper is concerned with the development of the linking system from the lexicon to spatial morphosyntax for Irish Sign Language (ISL) nouns and verbs. We use Role and Reference Grammar (RRG) (Van Valin and LaPolla 1997) in the development of a lexicon architecture (Nolan 2011b, 2011c) that is sufficiently robust and universal to accommodate information pertinent to ISL and the lexical definition of a Sign Language word (Zenshan 2007). RRG can be characterised as a descriptive framework for the analysis of languages and also an explanatory framework for the analysis of language acquisition (Van Valin 2005).

The morphology of sign languages is concerned with manual and non-manual features (Murtagh 2011a, 2011b, 2011c). The *manual feature* phonemes of ISL encompass various hand-shapes, location and position of the hands in relation to the signer's body, movement of the hands and also palm orientation. The *non-manual feature* phonemes encompass eye movement, eyebrow movement, blowing of cheeks, lip movement, head tilt and position and also upper body and lower body movement (Murtagh 2012).

We propose a new lexical representation level (Pustejovsky 1991), which caters specifically for the linguistic phenomena consistent with signed languages, in order to adequately represent ISL within the RRG lexicon. We use our extended lexical level of representation to provide a detailed lexical description of ISL lexemes and words (Leeson and Saeed 2012). Using our extended model we then describe the definition for the linking system from the lexicon to the spatial morphosyntax in the RRG model for ISL nouns and verbs.

References

Leeson, L. and Saeed J. 2012. *Irish Sign Language*. Edinburgh University Press, Edinburgh, UK.

Murtagh, Irene. 2011a. *Developing a Linguistically Motivated Avatar for ISL Visualisation.* Paper presented at the workshop on Sign Language Translation and Avatar Technology, University of Dundee 2011. Dundee, Scotland.

Murtagh, Irene. 2011b*. Building an Irish Sign Language Conversational Avatar: Linguistic and Human Interface Challenges.* Paper presented at the conference on Irish Human Computer Interaction, Cork institute of Technology. Cork, Ireland.

Murtagh, Irene. 2011c. *Towards an RRG-enabled Irish Sign Language Avatar*. Paper presented at the International Conference on Role and Reference Grammar on "Functional Linguistics: Grammar, Communication & Cognition". Facultad de Letras, at the Pontificia Universidad Católica de Chile, in Santiago de Chile.

Murtagh, I. 2012 *Towards an Irish Sign language Computational Framework.* Paper presented

atß the 45th annual meeting of the Societas Linguistica Europa, Stockholm University. Stockholm, Sweden.

Nolan, Brian. 2011b. *Constructional templates at the morphology-lexicon interface – meaning and the layered structure of the Irish word*. Paper presented at the workshop on Meaning construction at the crossroads of grammar, cognition and communication. Societas Linguistica Europaea, University of La Rioja, Logroño, Spain.

Nolan, Brian. 2011c. *Meaning Construction and Grammatical Inflection in the Layered Structure of the Irish Word: An RRG Account of Morphological Constructions*. In: Wataru Nakamura (ed.). *New perspectives in Role and Reference Grammar*. Newcastle upon Tyne: Cambridge Scholars Publishing. 64–103.

Pustejovsky, J. 1991. *The Generative Lexicon*. Computational Linguistics, Volume 17(4), pp. 209–441.

Van Valin, R. 2005. Exploring the Syntax-Semantics interface. Cambridge: Cambridge University Press.

Zenshan, Ulrike. 2007. *Towards a notion of 'word' in sign languages*. In: Dixon, R.M. W and A. Y. Aikenvald. *Word: A cross-linguistic typology*. Cambridge: Cambridge University Press.

A Neo-Jakobsonian Account of Default Oblique Cases: Instrumental vs. Dative

Wataru Nakamura
Tohoku University

The purpose of this paper is twofold: to adapt Jakobson's (1936/1984) classical case theory to RRG and to define instrumental and dative case as the default oblique cases in such a way as to accommodate their complementary distribution.

Van Valin (1991) proposes to define dative as the default case for non-macrorole core arguments. This macrorole-based definition of dative case allows us to accommodate a wide range of its uses crosslinguistically. The fact that instrumental exhibits as wide a range of uses prompts us to seek for a similar, schematic definition of instrumental case.

An important clue to a unified definition of all uses of instrumental comes from Jakobson (1936/1984), who analyzes the Russian case system in terms of three privative semantic features, [marginal], [directional], and [quantificational], as shown in Table 1:

Table 1: Jakobson's (1936/1984) Definitions of Six Cases in Russian

	Marginal	Directional	Quantificational
Nominative	−	−	−
Genitive	−	±	+
Dative	+	+	−
Accusative	−	+	−
Instrumental	+	−	−
Locative	+	±	+

Marginal cases including dative and instrumental indicate that their referents occupy a peripheral status in the clausal semantics, while directional cases (i.e. accusative and dative) indicate that their referents are affected by the action denoted by a verb. Quantificational cases (i.e. genitive and locative) limit the degree to which their referents are involved in the event, but they do not concern us here.

Two comments are in order about Table 1. First, if we may generalize Jakobson's (1936/1984) asymmetrical definitions of accusative and dative case beyond the realm of dynamic events, we may take the semantic feature [directional] as an indication of a non-actor core argument. This move allows us to draw a parallelism between his featural definitions of accusative ([directional]) and dative ([marginal], [directional]) case and the RRG distinction between an undergoer and a non-macrorole core argument. Second, instrumental serves as the default marginal case, since it is unmarked with respect to both directionality and quantification. The fact that the featural definition of instrumental case is a proper superset of that of dative case suggests that instrumental case should be defined in such a way as to reflect the superset relation between instrumental and dative case. In other words, we should define instrumental case in such a way as to accommodate a certain set of NPs including, but not restricted to, non-macrorole core arguments.

The above discussion leads us to define dative and instrumental case as in (1a,b):

(1) Definitions of Instrumental and Dative Case (Preliminary)
   a. Instrumental case-marks <u>all NPs other than macrorole arguments</u>.
   b. Dative case-marks <u>non-macrorole core arguments</u> (Van Valin 1991).

When both (1a) and (1b) may apply, (1b) applies (since "all NPs other than macrorole arguments" in (1a) have "non-macrorole core arguments" in (1b) as their proper subset). (1a) captures a wide range of uses of instrumental marking in English and other languages in one sweep: it covers all adjunct uses of instrumental marking across the board.

For example, (1a) alone is enough to accommodate (2a)-(2e), a set of adjunct uses of instrumental prepositional phrases in English:

(2) a. Instrument: John cut the pie *with a knife*.
b. Means: John ate the chicken *with fork and knife*.
c. Cause: John was shivering *with fear*.
d. Content: John was angry/happy/excited/satisfied *with the news*.
e. Manner: These boxes should be treated *with an extra care*.

(3) a. John loaded the truck *with hay*. (John loaded hay on the truck.)
b. John presented the boy *with a watch*. (John presented a watch to the boy.)

(3a,b) require an elaboration of (1b), since they contain non-macrorole core arguments that receive instrumental case. Jolly (1991) proposes a rule to the effect that those theme arguments that are assigned a non-macrorole status in violation of the Actor-Undergoer Hierarchy [AUH] receive instrumental case and lets the rule override (1b). In contrast, I propose to modify (1b) (as formulated in (4b)) in such a way as to exclude such non-macrorole core arguments as illustrated in (3a,b) and to let (1a) accommodate them. The above consideration leads to a revision of (1b) as described in (4b):

(4) Definitions of Instrumental and Dative Case (Final)
a. Instrumental case-marks <u>all NPs other than macrorole arguments</u>. (=(1a))
b. Dative case-marks <u>non-macrorole core arguments that don't involve a violation of the AUH</u>.

(4a,b) have a merit of providing a unified account of (2a)-(2e), (3a,b), and non-adjunct uses of instrumental case marking in Russian, illustrated in (5a,b) (Bailyn 2012: 109, 177):

(5) a. On byl soldat/*soldatom*
he.NOM was soldier.NOM/soldier.INSTR
"He was a soldier."
b. Ja sčitaju Sašu *genial'nym* *muzykantom*.
I.NOM consider Sasha.ACC brilliant musician.INSTR
"I consider Sasha a brilliant musician."

The predicate nominals in (5) are theme arguments associated with a non-macrorole status in violation of the AUH (Schwartz 1993) and accordingly receive instrumental case.

Finally, I will conduct a preliminary assessment of the typological validity of (4a,b) against data from non-Indo-European languages such as Japanese and Korean.

References

Bailyn, John Frederick. 2012. *The Syntax of Russian*. Cambridge: Cambridge University Press.

Jakobson, Roman. 1936. "Beitrage zur allgemeinen Kasuslehre: Gesamtbedeutungen der russischen Kasus," *Travaux du Cercle Linguistique de Prague* 6, 240-288. Reprinted in Linda

R. Waugh and Morris Halle (eds.), 1984. *Russian and Slavic Grammar: Studies 1931-1981*, 59-103, Berlin: Mouton.

Jolly, Julia A. 1991. *Prepositional Analysis within the Framework of Role and Reference Grammar*. New York: Peter Lang.

Schwartz, Linda. 1993. "On the Syntactic and Semantic Alignment of Attributive and Identificational Constructions," in Robert D. Van Valin, Jr. (ed.), *Advances in Role and Reference Grammar*, 433-463. Amsterdam and Philadelphia: John Benjamins.

Van Valin, Robert D., Jr. 1991. "Another Look at Icelandic Case Marking and Grammatical Relations," *Natural Language and Linguistic Theory* 9(1), 145-194.

On the grammaticalization continuum: an exercise in representation

Toshio Ohori
University of Tokyo

The present paper explores the usability of the RRG system of representation (e.g. Van Valin 2005) in capturing the grammaticalization process. It is generally a consensus among researchers of grammaticalization that it is a gradual process which typically includes a stage where an expression can be analyzed either as a grammatical morpheme or as an autonomous lexical item. In this paper, some well-attested cases of grammaticalization are (re-)analyzed in RRG terms, and the treatment of grammaticalization continuum is discussed.

The first case is concerned with the development from the concatenation of verbs to auxiliaries. In RRG, the former is represented as nucleus juncture (with varying nexus types). When one of the concatenated verbs has a fairly general meaning, it may add an auxiliary-like meaning, resulting in what Hasegawa (1996) calls "operator constructions". Then, the structural link between this verb and the higher Nuc node gets lost, and the former becomes part of the operator projection. Note that there is no drastic restructuring in this process such as operator movement, and the RRG representation is able to capture auxiliation (cf. Kuteva 2001) via minimal adjustment of projections.

The second case is concerned with the rise of adpositions from verbs via serial verb constructions, which is represented as a subtype of core juncture. When verbs meaning basic activities such 'taking' and 'putting' get grammaticalized, they lose predicative capability and the V+NP / NP+V pattern is restructured as the Prep+NP / NP+Posp periphery. Here again, RRG is able to capture this change by means of the shift in the division of labor among projection systems. One of the theoretically interesting merits of this account is that it provides a natural explanation for what Hopper (1991) calls persistence (e.g. the grammaticalized P is still restricted in its use due to the semantics of the source V). In the transitional phase, the lexically provided thematic role of the V is retained while it loses some other syntactic features associated with predication, i.e. the projection from the Logical Structure is still alive while the same V is reanalyzed as P in the Layered Structure.

There are other cases of grammaticalization which can be systematically and economically captured by the RRG system of representation (including, for example, the changes occurring to complement and adverbial clauses). As a conclusion, RRG, as a parallel-architecture model of grammar with rich semantic and pragmatic components, provides a highly transparent and workable model for the representation of grammaticalization processes.

References

Hasegawa, Y. (1996) *A Study of Japanese Clause Linkage*. Tokyo: Hituzi.

Hopper, P.J. (1991) "On some principles of grammaticalization." In E.C. Traugott & B. Heine (eds.) *Approaches to Grammaticalization*. Vol. 1. Amsterdam: John Benjamins.

Kuteva, T. (2001) *Auxiliation*. Oxford: OUP.

Van Valin, R.D., Jr. (2005) *Exploring the Syntax-Semantics Interface*. Cambridge: CUP.

The Typology of DO- and BECOME-languages revisited

Yoshiko Ono (yoshiko.ono@aoi.uzh.ch)
University of Zürich

The typology of DO- and BECOME-languages as proposed by Ikegami (1981/ 2007) starts from the possibility to describe an event as an activity, typically an action done by an agent, or as a kind of occurrence, as a phenomenon to which an agent may belong performing a certain role, possibly as a cause or even as a place, but not as an acting initiator of the given event. Languages are characterized as to their preference or predominance of either of these options. In Ikegami´s view, Japanese is a typical BECOME language (indeed, even his prototype of a BECOME language) in contrast to the Western languages, which he characterizes as DO languages; his main contrastive object is English, for which this classification may be appropriate, but he likewise assigns, for example, German to the DO languages, though he mentions remarkable differences between English and German, quoting, among others, the dative construction for a possessor or an experiencer and the reflexive constructions which are rather intransitive than transitive. This view corresponds to the typology of basically transitive/causative vs. intransitive languages described by Nichols et al. (2004). According to them, Japanese belongs to the basically intransitive transitivizing/causativizing languages, whereas most European languages are basically transitive/causative intransitivizing/decausativizing ones. On the other hand, Isačenko (1974) claimed that BE-languages like Russian (and likewise Japanese) fundamentally differ in construction principles from HAVE-languages such as German as well as the Western and Southern Slavic languages, where HAVE parallels to DO, even as a kind of DO.

One of the aims of this paper is to examine how the above mentioned typological approaches can be related to each other with reference to RRG. A crucial point is how we identify an expression (or a predicate) as a BECOME or a DO type in a cross-linguistically coherent manner. Even non-derived intransitives denoting a natural phenomenon are not always easy to assign to BECOME expressions. Derived intransitives such as reflexive constructions in Indo-European languages in Continental Europe present a particular problem in this respect, because they do not differ formally as to whether they denote a spontaneous phenomenon (e.g. *spit'sja* „sleep oneself" in Russian, sometimes as reflexiva tantum such as *sich ereignen* „occur" or *sich verlieben* „fall in love" in German), a characteristic (e.g. *sich gut schlafen* „sleep oneself well" or *sich gut verkaufen* „sell oneself well" in German), a caused event (= UNDERGOER pivot, e.g. *predavat'sja* „sell oneself" in Russian or *sich stören* „disturb oneself"), or an action (= ACTOR pivot, e.g. *kusat'sja* „bite oneself" for „eat" in Russian, and real reflexives like *sich waschen* „wash oneself"). One and the same expression may sometimes be used for two or more types (e.g. *sich wiederholen* „repeat oneself" as a spontaneous, a caused and an active event, *sich verkaufen* for a characteristic and an action). Certain types combine a DO and a BECOME component within

one predicate phrase, e.g. *sich gesund schlafen* „sleep oneself fit“, *sich satt essen* „eat oneself full“). Due to the formal markedness of reflexive as well as passive constructions (both are likewise very frequently used as impersonalizing strategies), it is not easy to estimate the basic orientation of these languages, and their characterization as DO-languages seems to stem from the indifferent assignment of formal reflexives as DO-expressions parallel to their basic (non-derived) verbs. Moreover, the view of the Indo-European languages as DO languages seems to be partly due to CAUSE verbs inadquately interpreted as DO verbs. It is necessary to distinguish DO and CAUSE as well as DO and transitivity. A further question is to what extent we may and should posit ***do*** which is different from DO.

References

Ikegami, Yoshihiko 1981/2007 *Sprachwissenschaft des Tuns und des Werdens: Typologie der japanischen Sprache und Kultur* (German Translation of *Suru to naru no gengo-gaku* Tokyo 1981: Taishuukan), Bunka: Tübinger Ostasiatische Forschungen 10, Berlin.

Isačenko, Alexander V. 1974 “On ‘have’ and ‘be’ Languages (A Typological Sketch)” *Slavic Forum* 356: 43-77.

Nichols, Joanna, David A. Peterson & Jonathan Barnes 2004 "Transitivizing and detransitivizing languages”, *Linguistic Typology* Vol. 8: 149-211.

Active accomplishments and resultatives

Rainer Osswald
Heinrich-Heine-Universität Düsseldorf[5]

Introduction. The class of active accomplishments was introduced to the system of Aktionsart classes in Van Valin and LaPolla (1997), based on the insight that expressions of consumption (eat an apple), creation (draw a circle), and motion to goal (walk to the station) denote events which are better characterized as bounded activities than as causations. The main argument is that there are neither conceptual nor morphosyntactic reasons for assuming a causal analysis in these cases. In particular, none of the languages with causative morphology indi- cate causation in the cases under discussion. The non-causative analysis of active accomplishments is reflected in the corresponding logical structure by '&' instead of 'CAUSE', to be read as 'and then'. The resulting structure [**do′** …] & [BECOME …] underwent further revisions in Van Valin (2005) and in Van Valin (to appear). The first revision was triggered by the invalid implication of the construct '& BECOME' that the non-punctual change of state does not start before the activity ends. Hence, 'BECOME' was replaced by the punctual change of state operator 'INGR', in order to capture the fact that the resulting state sets in immediately with the activity's end. This representation, however, does not take into account the incremental change of state (incremental consumption or creation, incremental motion towards a goal) that co-occurs with the activity. For this reason, BECOME was reintroduced in a second revision, but this time, the non-punctual, incremental component of the accomplishment is conflated with the activity. In the logical structure, this is realized by decomposing BECOME into PROC & INGR and by conjoining the PROC component with the activity: [[**do′** …] ∧ [PROC …]] & [INGR …]. But even with this improved analysis, a number of issues remain to be resolved. First, it is not fully clear which predicates the operator PROC applies to and how these predicates are systematically related to the predicates in the INGR component of the BECOME decomposition. For instance, the tentative solution suggested in Van Valin (to appear) for the PROC predicate of motion to goal expressions is **cover.path.distance′**, while the corresponding predicate under INGR is **be-at′**. The second issue is concerned with the compositional operation that turns an activity predicate into an active accomplishment. Due to the interleaved make-up of the second revision, the composed logical structure is not just the result of applying an operator or a connective (such as '&') to the activity and the accomplishment predicate, as it was the case in earlier versions. A good part of these issues can be traced back to the limitations of the Dowty-inspired formalism.
In the talk, we show how a revised representation in terms of decompositional frames can overcome these issues while keeping the basic properties of RRG's logical structures. Moreover, we address the implications of the revised active accomplishment analysis for the distinction between different types of resultative constructions.

Logical structure, event structure, and decompositional frames. The distinction between active and causative accomplishments can be analyzed as a difference of event structures. Causative accomplishments describe complex events consisting of two subevents, the causing event (an activity) and the caused event (a non-punctual telic event).

[5] The research presented here has been supported by the CRC 991 funded by the German Research Foundation (DFG)

The causal relation between the two subevents imposes certain restrictions on how they are temporally related to each other (e.g., the caused event does not start earlier than the causing event) but it does not, in general, determine the exact temporal alignment of the two. For example, the activity component of the causative accomplishment expressed by open the door is highly underspecified and can range from pressing a remote button to giving the door a kick with the foot. In active accomplishments, by contrast, the activity occurs simultaneously with the incremental change, as expressed by the connective '∧' in the [**do'** ...] ∧ [PROC ...] component of the revised logical structure. Moreover, it is not just contiguous simultaneity of two independent events but a conflation of events: the activity of eating is inherently bound to the (more or less) incremental consumption of the thing(s) eaten; likewise, the activity of walking (usually) goes along with an incremental change of location. It seems thus reasonable to regard the activity component and incremental change component of an active accomplishment as conflated into a single event. The remaining '& INGR' part of the logical structure raises further questions. If taken literally, it says that the activity (or process) ends "and then" a punctual change of state happens. Applied to the case of motion to goal, this means that the motion activity stops "and then" a punctual change of state from not being at the goal to being at the goal occurs. But this paraphrase seems inadequate since the mover is at the goal when he or she stops moving; reaching the goal co-occurs with coming to a final halt – it is not something which happens afterwards. The predicate under INGR is hence better seen as a description of the final stage of the motion event. Under this reanalysis, active accomplishments turn out as having a simple event structure, when compared to causative accomplishments. (A similar argument is given by Rappaport Hovav and Levin 2001 in the context of resultative constructions; see below.)

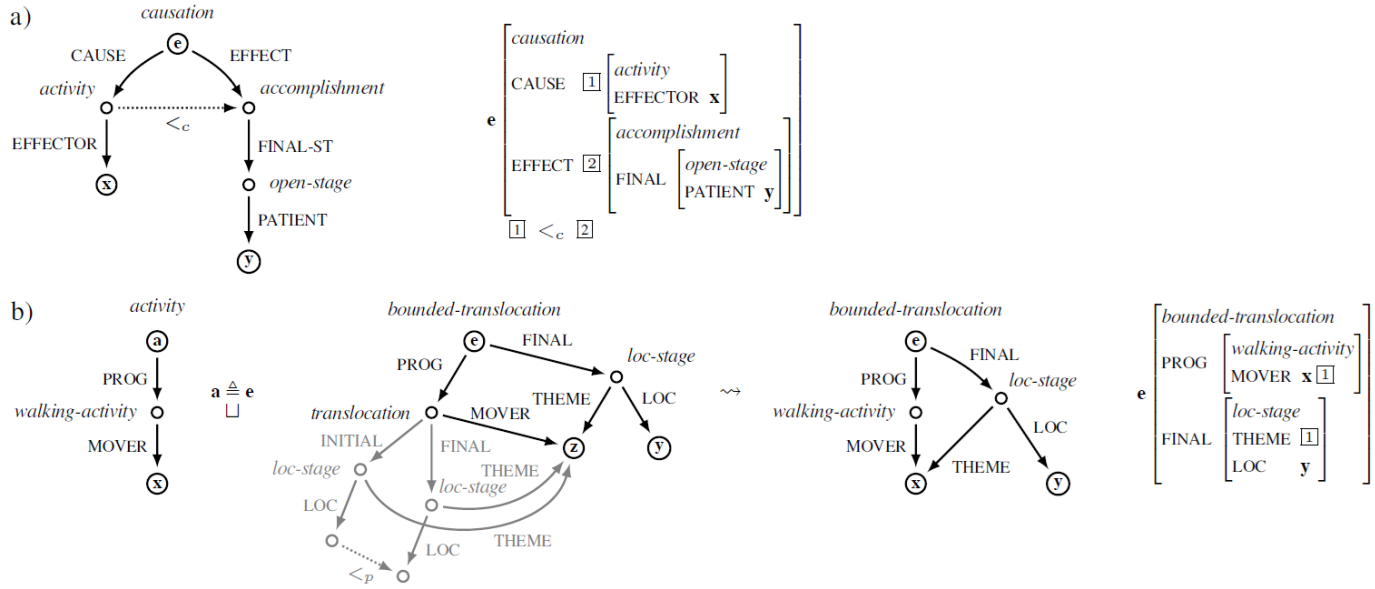


Figure 1: Simplified example frames for causative accomplishment (a) and active accomplishment (b)

In order to account for these insights, we propose to replace the logical structures by decompositional frames, following the outline in Osswald and Van Valin (2014).

Decompositional frames, which are defined as baselabeled feature structures with types and relations (Kallmeyer and Osswald, 2013), allow a more flexible and fine-grained semantic representation than RRG's logical structures while preserving the structural properties relevant for linking generalizations. The examples in Figure 1 illustrate how a frame-based analysis can be applied to the phenomena under discussion. Figure 1a) shows the frame structure of the causative accomplishment open sth, both as a graph model and an attribute-value matrix. The overall structure of this frame basically reflects the result of the CAUSE operator applied to an activity and an accomplishment in the original logical structure. Moreover, the example shows how additional information like the temporal constraint <c between the event components of a causation can be easily added to the frame. The example in b) gives a sketch of the simple event analysis of active accomplishments proposed above, here applied to motion to goal. The activity is characterized by its progression (PROG) component which represents the generic core activity, here, walking, that goes on during the event. The accomplishment component expressed by a directional PP of the form to y is represented by a frame of type bounded-translocation, which consists of a PROG component (similar to PROC above) for capturing the ongoing incremental (directed) change of location, and the specification of a final stage, namely being at y. It is the latter specification which renders the event as bounded and hence as telic (see also Mani and Pustejovsky, 2012).

In the talk, we will point out how such a detailed frame representation can shed light on the well-known typological differences concerning the availability of motion to goal expressions. A further topic to be addressed is the place of caused directed motion expressions (push/pull sth somewhere) with respect to the distinction between active and causative accomplishments.

Active vs. causative resultatives. In their study on the English resultative construction, Rappaport Hovav and Levin (2001) propose a distinction between simple and complex event structures which is in fact closely related to the distinction between active and causative accomplishments. Strong resultatives of the sneeze the napkin off the table type are causative accomplishments for which the causal nexus hinges on language-dependent constructional schemas. Weak resultatives, on the other hand, are active accomplishments where the result expression specifies the final stage of an event that is conflated with the activity component. In the talk, we provide further evidence based on a small corpus study of translations of Suzanne Collins' Hunger Games novels into a variety of languages.

Kallmeyer, L. and R. Osswald. Syntax-driven semantic frame composition in Lexicalized Tree Adjoining Grammars. Journal of Language Modelling, 1(2):267–330, 2013.

References

Mani, I. and J. Pustejovsky. Interpreting Motion. Grounded Representations for Spatial Language. Oxford University Press, 2012.

Osswald, R. and R. D. Van Valin, Jr. FrameNet, frame structure, and the syntax-semantics interface. In T. Gamerschlag et al., eds., Frames and Concept Types, pp. 125–156. Springer, 2014.

Rappaport Hovav, M. and B. Levin. An event structure account of English resultatives.

Language, 77(4):766–797, 2001. Van Valin, R. D., Jr. Exploring the Syntax-Semantics Interface. Cambridge University Press, 2005.

Van Valin, R. D., Jr. Some issues regarding (active) accomplishments. In Proceedings of the 2013 International Conference on Role and Reference Grammar. To appear.

Van Valin, R. D., Jr. and R. J. LaPolla. Syntax. Cambridge University Press, 1997.

The design framework of a linguistically centred and BDI enabled conversational software agent

Kulvinder Panesar
Leeds Beckett University

Natural language is the most easily understood knowledge representation for people, but certainly not the best for computers, because natural language is inherently ambiguous. Role and Reference Grammar (RRG) is a linguistic theory suitable for extracting the meaning from sentences from a computational viewpoint. This language-processing model posits three main representations – syntactic (structure), semantic (meaning) and information structure (communication focus) (Van Valin Jr, 2005). In the last decades, there has been a great evolution in the field of conversational agents (CA), enfolding three emerging trends of more sophisticated Natural Language Processing (NLP) via improved parsing techniques, humanising of agents and their pervasiveness (Perez-Marin, Pascual-Nieto & Global, 2011). However, a long standing issue within NLP conversational agents (CA) systems is refining the accuracy of the interpretation of meaning, to provide a realistic dialogue.

A conversational agent (CA) framework is proposed that takes the form of a NLP, goal-orientated, intelligent agent in a dynamic, knowledge-based environment. This will adopt a model of human rational behaviour, not having a "mind", but mental (cognitive) states, depicted by the *Beliefs, Desires, and Intentions (goals*) (BDI) defined by Rao and Georgeff (1995). Allen (1995) states an "agent is continually updating its beliefs based on perceptions, using its beliefs to reason about possible plans, committing to certain intentions based on beliefs and desires, and realising these intentions by acting". This proposed conversational software agent (CSA) must respond appropriately to the user's utterance via three phases – (1) interpretation (2) dialogue management (framework) to manage the conversation, and generate the next response (3) perform actions replying with text (response generator) in the target human language, for example, English. RRG's bi-directional linking algorithm and discourse-pragmatics interface will be encapsulated into speech acts constructions based on structured grammatical objects Nolan (2013) to supports all three CA phases and internal BDI manipulations and rational interaction.

This conversational software agent (CSA) implementation will involve a user and a single agent. It will feature a syntactic parser but semantically motivated for English (Diedrichsen, 2014); lexicon with RRG Part-of-Speech (POS) tagging; speech act performatives (Searle, 1969; Searle, 1985). It will employ conceptual graphs (Sowa & Way, 1986) for knowledge organisation, representation and reasoning, serialised in XML (Buche, Cucheval, Diattara, Fortin & Gutierrez, 2014) for algorithmic manipulation of the BDI (cognitive aspects) in the construction's workspace. For proof of concept, the CSA will focus on the food and cooking domain. The application of the BDI model of cognitive states to language is explicitly achieved via the act of uttering a sentence, in the form of speech acts (SA) performatives. SA message types are categorised by Searle (1985), and a subset is selected. Here the proposed CSA will identify the properties of illocutionary acts, deduced from the speaker's and hearer's mental states, particularly their beliefs, intentions and the shared knowledge between communicating parties.

References

Allen, J. (1995) **Natural Language Understanding (2nd Ed.)**. Benjamin-Cummings Publishing Co., Inc.

Buche, P., Cucheval, V., Diattara, A., Fortin, J. and Gutierrez, A. (2014) Implementation of a Knowledge Representation and Reasoning Tool Using Default Rules for a Decision Support System in Agronomy Applications. In: **Graph Structures for Knowledge Representation and Reasoning**. Springer, pp.1-12

Diedrichsen, E. (2014) A Role and Reference Grammar Parser for German. In: Nolan, B. and Periñán., C. (Eds.): **Language Processing and Grammars: The Role of Functionally Oriented Computational Models [Studies in Language Companion Series 150]**. Amsterdam and New York, John Benjamins Publishing Company, pp.105-142

Nolan, B. (2013) Constructions as Grammatical Objects : A Case Study of Prepositional Ditransitive Construction in Modern Irish. In: Nolan, B. and Diedrichsen, E. (Eds.): **Linking Constructions into Functional Linguistics: The Role of Constructions in Grammar**. Amsterdam/Philadelphia, John Benjamins Publishing Company, pp.143-178

Perez-Marin, D., Pascual-Nieto, I. and Global, I. (2011) **Conversational Agents and Natural Language Interaction: Techniques and Effective Practices**. Information Science Reference.

Rao, A. S. and Georgeff, M. P. (1995). Bdi Agents - from Theory to Practice. Paper presented at the **ICMAS**.

Searle, J. R. (1969) **Speech Acts: An Essay in the Philosophy of Language**. Cambridge, Cambridge University Press.

Searle, J. R. (1985) **Expression and Meaning: Studies in the Theory of Speech Acts**. Cambridge University Press.

Sowa, J. F. and Way, E. C. (1986) Implementing a Semantic Interpreter Using Conceptual Graphs. **IBM Journal of Research and Development**, 30(1), pp.57-69.

Van Valin Jr, R. D. (2005) **Exploring the Syntax-Semantics Interface**. Cambridge University Press.

An RRG Analysis of English It-cleft and Korean Kes-cleft Constructions

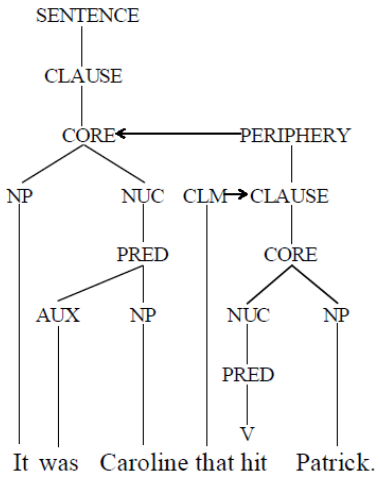
Kiseong Park
Pusan National University

The purpose of this presentation is to claim that we need to modify Pavey's(2004) LSC structures for it-clefts in Role and Reference Grammar[RRG] by following Reeve's(2011) and Hedberg's(2000) suggestions, and that the revised LSC representation could also be applied to the corresponding Korean kes cleft sentences. The approach I follow is the so called "discontinuous constituent" approach in English, in which the cleft pronoun and the cleft clause basically form a single syntactic and semantic unit. My analysis reduces the syntax and semantic of it-clefts to a kind of copular sentences containing so called "definite description" subjects. I will argue that the LSC should be revised to reflect the 'discontinuous constituent' approach, and that double connection is needed between the cleft clause (which is the Periphery) and the other two clausal elements (the cleft pronoun and the clefted constituent). In Korean kes-clefts, on the other hand, the single connection is permitted between the cleft clause and the pronominal element kes.

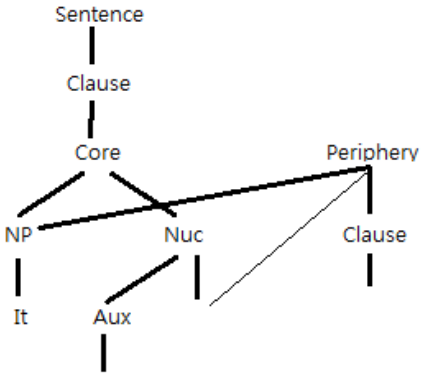
The analyses of English clefts have been controversial over the status of it pronoun and cleft clause. In this chapter I will review two main approaches to English cleft constructions: specificational vs. expletive approaches, and argue that English clefts basically involve specificational structures. First, I will argue for the specificational approaches by arguing against expletive ones. Many expletive accounts support the claim that the clefted constituent is associated with the gap in the cleft clause either directly or indirectly. Hence the analyses assume that the cleft clause is a kind of relative clause. However, we can discern the difference in the clefted constituent between the restrictive relative clauses and cleft clause. Only the cleft clause allows the clefted constituent to be a proper noun. Another evidence in favor of the specificational approach is shown in the following example (Reeve 2011: 149), which shows that clefts and specificational sentences are parallel in grammaticality judgments about existential presupposition. Furthermore, the clefts and specificational sentences have presuppositional effects in common. The first effect is called 'existential presupposition', which says that the property denoted by the cleft clause is true of some individual. The second effect is called 'exhaustivity', which assumes that 'the individual denoted by the clefted XP is the only (or maximal) contextually relevant individual of which the property denoted by the cleft clause holds'. Hence we may conclude from the arguments that the clefts are a kind of specificational sentences with extraposed cleft clause. This position treats the cleft clause as being related to the cleft pronoun it in English. The whole unit consisting of the cleft pronoun and the cleft clause serves as a semantic constituent and the copular equate or identify that unit with the clefted constituent.

Based on the claim for specificational or "discontinuous constituent" analysis, I will investigate the LSC representation for it-cleft in English. First consider the LSC representation which Pavey (2004) proposed.

The LSC representation for an English it-cleft sentence(Pavey 2004: 206)

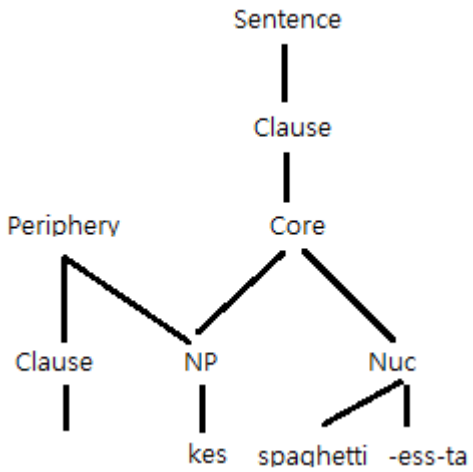


It is argued in this presentation that the revised LSC representation should be based on the following syntactic template for the it-cleft sentence.



According to the revised template, the Periphery should primarily be connected to the subject NP
in the Core, while it is secondarily connected to the constituent after Aux. The potential problem raised by the revised syntactic template might be that the Periphery should be connected to the subject NP by crossing the boundaries, which is not common in RRG accounts. Another problem might be that the double connections for one constituent is not common in RRG accounts, even though the constituent after Aux is adjacent to the Periphery. It may be claimed that the connection between the Periphery and the subject NP is semantically motivated, while that between the Periphery and the constituent after Aux is syntactically motivated given that there is a syntactic agreement between them.

Now let us consider the Korean clefts. I will claim that the Korean clefts should be analysed in favor of the specificational approach. The claim comes from the status of kes in Korean. There are two positions regarding the status of kes in Korean: a complementizer or a nominalizer. As argued by Kim and Kim(2009), Korean kes as complementizer or nominalizer is related to many constructions. I propose the following LSC representation for Korean clefts.



In this presentation I will argue that it-clefts and kes-clefts in English and Korean involve the nexus type of cosubordination, in that both realize the codependency of two clauses involved. The distinction among the concepts of coordination, subordination, and cosubordination is basically based on the concept of dependency. For instance, subordination occurs when two clauses are combined and one of the clauses is grammatically dependent on the other. On the other hand, coordination occurs when neither one clause is embedded in nor dependent on the other (Dik 1968). Cosubordination, however, is based on the concept of co-sharing elements. In this paper I will use the term 'cosubordination' in the sense of so-called 'pseudocoordination', and claim that cosubordination occurs when the clauses has the features of both coordination and subordination. Korean clefts show more clear meanings of codependency than English ones, which means something like 'John ate something, and the thing is spaghetti'. Here the codependency for cosubordination is realized through the element kes, which serves as a kind of resumptive pronoun. In Korean 'kes' clefts the pronominal element 'kes' acts as the sharing element between the first and the second clause. The resumptive pronoun function of the complementizer kes can also be shown in the internally-headed relative clauses in Korean (Park 2014).

References

Adger, D. and G. Ramchand. 2003. Predication and Equation. Linguistic Inquiry 34(3), 325-359. Bolinger, D. 1977. Meaning and Form. London: Longman.

DeClerck, R. 1988. Studies on Copular Sentences, Clefts and Pseudoclefts. Holland: Foris.

Hedberg, N. 2000. The Referential Status of Clefts. Language 76(2), 891-920.

Heycock, C. and A. Kroch. 1999. Pseudocleft Connectedness: Implications for the LF Interface. Linguistic Inquiry 30, 365-397.

Higgins, R. 1979. The Pseudo-cleft Construction in English. New York: Garland.

Huddleston, R. 1984. Introduction to the Grammar of English. Cambridge: Cambridge University Press.

Johansson, M. 2002. Clefts in English and Swedish: A Contrastive Study of It-cleft and Wh-clefts in Original Texts and Translation. Doctoral Dissertation, Lund University.

Kaltenbock, G. 2005. It-Extraposition in English: A Functional View. International Journal of Corpus Linguistics 10(2), 119-159.

Kang, B. 2006. Some Peculiarities of Korean Kes Cleft Constructions. Studia Linguistica 60(3), 251, 281.

Kim, J. 2012. On the Syntax of the It-Cleft Construction: A Construction-based Perspective. Linguistic Research 29(1), 45-68.

Finiteness from a typological perspective

John Peterson, University of Kiel, Germany

Although the concept of "finiteness" has never been adequately defined as a cross-linguistically valid category, it is generally viewed as unproblematic: Verbs are considered to be either finite, i.e., marked for TAM and person, number (etc.), or nonfinite and unmarked for these categories. There are, however, a number of problems with this view. To begin with, it has long been realized that finiteness is a property of the clause, not the predicate, which need not even be verbal, and in fact, the categories which are viewed as marking finiteness in many languages are not even consistently marked in these languages on the predicate but are realized perhaps clause finally or are not obligatorily marked categories. Furthermore, the identity of these categories can vary considerably from one language to another, and no one category or combination of categories has yet been shown to be a universal indicator of finiteness. Traditional terminology is also not consistently used: For example, in some languages such as Ancient Greek and Sanskrit participles can be marked for TAM, although they are not viewed as finite, while supposedly finite categories such as the injunctive in Vedic Sanskrit mark only for person but not TAM.

This issue is further complicated by the fact that even in languages which do require marking for TAM and person and number (etc.), this marking may be found scattered throughout the clause, as in the following examples. As example (1) shows, subject marking in the South Munda language Kharia, here the enclitic form =(e)m, can attach to either the predicate or the negative marker which directly precedes the predicate. Note that this results in a "partially finite" predicate in example (1b), if we follow the traditional view of finiteness as TAM + person/number marking. "=∅" marks where the subject marker would otherwise appear. (act = active, other abbreviations according to the Leipzig Glossing Rules)

KHARIA (SOUTH MUNDA, INDIA)

(1) A. *AM* *UM* *KOŊ=TE=M*
2sg neg KNOW=act.prs=2sg

B. *AM* *UM=EM* *KOŊ=TE=∅*
2sg neg=2sg KNOW=act.prs
'YOU DON'T KNOW.'

Similarly, in many languages of the Amazon basin and bordering areas a sentence-level constituent can be focused by "moving" the marker for person, number and mood from the predicate to this element as in (2b), vs the pragmatically neutral (2a), again resulting in a "partially finite" predicate in (2b). The (verbal) predicate here is in boldface and the "movable" marker (with the two allomorphs txu and tx) is underlined (originally from Jung, 1984, taken here (adapted) from Maas, 2004: 378). (fac = factive, them = theme)

(2) PAEZ (CHIBCHA (?), COLUMBIA)

A. *XUʔNA* *ʧAMB-NA* ***UʔX-UE-TS-TXU*** *JUʔ* *NAVA* *KAR:O* *SUW-KU.*
YESTERDAY VILLAGE-TO GO-ipfv-prog-fac.1sg them BUT CAR BROKEN-fac.3sg
'YESTERDAY I WENT TO THE VILLAGE, BUT THE CAR WAS BROKEN.'

B. *NENGA-SU-TX* ***UʔX-UE-TS=∅*** *JUʔ* *SAʔ* *TJA-XU* *PAʔX* *JAʔ-TX*
BELCAZAR-TRHOUGH-fac.1sg GO-ipfv-prog them AND dem-FROM COME ALREADY-fac.1sg
'I PASSED BELCAZAR AND AM ALREADY BACK FROM THERE.'

This situation is further complicated by the presence of complex predicates in many languages, i.e. predicates consisting of at least two components, both of which may consist of a predicating base, or at least one of which may be of a purely grammatical nature (i.e., an "auxiliary"), such as have gone in example 0, where the nonfinite form gone contains the lexical base while have is of a purely grammatical nature.

(3) They have gone to town.

In many languages, however, the supposed "auxiliary" is entirely unmarked for "finiteness", the markers of which are carried by the main or lexical unit, as in the Maltese example in (4a), where the future marker qed is unmarked for person/number/gender, or this "auxiliary" may be marked for only a subset of the categories marked on the lexical element, as in (4b), with the same meaning, where this element is marked for number and gender but not person. Both units can also mark for all categories (5), with the first element referred to by Maas (2004) as the "coverb", although only the first element can be overtly negated 0.

MALTESE (SEMITIC, NEO-ARABIC, MALTA)
(4) A. *QED* *JI-KTEB*
prog ipfv.3sg.m-WRITE

B. *QIEGHED* *JI-KTEB*
prog.m.sg ipfv.3sg.m-WRITE
'HE IS WRITING'

(5) *I-KUN* *JI-KTEB*
ipfv.3sg.m-BE ipfv.3sg.m-WRITE
'HE WILL BE WRITING'

(6) *MA* *J-KUN=X* *JI-KTEB*
neg ipfv.3sg.m-BE=neg ipfv.3sg.m-WRITE
'HE WILL NOT BE WRITING'

In my talk, I develop a new cross-linguistic typology of "finiteness", based on recent works in this area (e.g., Bisang, 2008; Evans, 2008; Maas, 2004), which paves the way for further typological work as it provides a descriptively adequate methodology for determining the markers of "finiteness" which will also eventually allow us to determine the statistical tendency of these categories to cluster together on different clausal components in the languages of the world. This typology is compatible with the basic tenets of RRG (i.e., the "operators") and is also applicable for describing the various nexus and juncture types found in different languages, such as the Kharia data in 0, all of which have the same English translation, although representing different types of nexus and different levels of juncture,

indicated structurally by the fact that the first predicating lexeme shows a different amount of "finite" marking in each case. (Note: /ʔ/ is realized as [g] when followed by a vowel in the same word). "=∅" is provided on the first predicating element to indicate that the respective category has not been marked. (act = active, irr = irrealis)

KHARIA (SOUTH MUNDA, INDIA)

(7) A. *ɲOʔ=∅tam=∅pers/num* *UĐ=E=KIYAR*
EAT DRINK=act.irr=3du

B. *ɲOG=E=∅pers/num* *UĐ=E=KIYAR*
EAT=act.irr DRINK=act.irr=3du

C. *ɲOG=E=KIYAR* *UĐ=E=KIYAR*
EAT=act.irr=3du DRINK=act.irr=3du
'THEY TWO WILL EAT AND DRINK.'

References

Bisang, Walter. 2008. Categories that make finiteness: discreteness from a functional perspective and some of its repercussions. In Irina Nikolaeva (ed.), Finiteness: Theoretical and Empirical Foundations. Oxford: OUP. 115-138.

Evans, Nicholas. 2008. Insubordination and its uses. In Irina Nikolaeva (ed.), Finiteness: Theoretical and Empirical Foundations. Oxford: OUP. 366-431.

Maas, Utz. 2004. "Finite" and "nonfinite" from a typological perspective. Linguistics, 42(2): 359-385.

Forms taken seriously: Asyndetic linkage in Arabic

Waldfried Premper
University of Cologne

One of the components in RRG is the concept of a construction/constructional schema. The most essential characteristic of it in CxG is the pairing of form and function, and this can be seen as instantiated by its role in linking processes between syntax and semantics in RRG. In practice, however, a certain bias toward form seems to prevail, insofar as the first motive or point of departure for establishing a construction often is a specific formal constellation which is then to be paired/linked with functional aspects (cf., e.g., Goldberg 2006: ch.8; the notion of the signature of a construction, see Nolan & Diedrichsen (eds.) 2013, passim).

Be that as it may: If constructions are seen as knots in hierarchies or networks (another acknowledged essential feature; cf. Croft & Cruse 2004: 274; overview in Ziem & Lasch 2013), implying different degrees of abstraction, one can ask if that can also be used to give expression to typological characteristics of languages, focussing on preferred formal strategies. Cf. Van Valin (2005:197): "… each juncture-nexus type may be realized by more than one grammatical construction type in a language." Thus, "grammatical construction types" can be poly-functional. In my talk, this shall be demonstrated for a language like Arabic, where a general pattern – asyndesis between finite verbal forms – is exploited on a variety of syntactic and semantic levels: adjunct clauses, purposive clauses, resultative clauses, ditransitive clauses, caused motion clauses, and aspectual verb constructions. All these supposedly form sub-prototypes, even if partly relying on the above-mentioned formal common denominator.

(1) lā aẓunnu-ka tuxālifu-nī
neg think:ip.1s-2sm contradict:ip.2sm-1s
"Ich glaube nicht, dass du mir widersprechen kannst." (Wehr 1985, s.v. ẓnn I)
"I don't believe that you can contradict me."

References

Croft, William & Cruse, Alan D. 2004. *Cognitive linguistics.* Cambridge: C.U.P.

Goldberg, Adele E. 2006. *Constructions at Work: The Nature of Generalization in Language.* Oxford University Press.

Nolan, Brian; Diedrichsen, Elke (eds.) 2013. *Linking Constructions into Functional Linguistics: The role of constructions in grammar.* Amsterdam: Benjamins. (Studies in Language Companion Series, 145).

Van Valin, Robert D. 2005. *Exploring the syntax semantics interface.* Cambridge: Cambridge Univ. Press.

Wehr, Hans 1985. *Arabisches Wörterbuch für die Schriftsprache der Gegenwart. 5. Aufl..* Wiesbaden: Otto Harrassowitz.

Ziem, Alexander; Lasch, Alexander 2013. *Konstruktionsgrammatik: Konzepte und Grundlagen gebrauchsbasierter Ansätze.* Berlin: de Gruyter. (Germanistische Arbeitshefte, 44).

Purposive case and semantic arguments in Australian Western Desert dialects

Conor Pyle
Trinity College Dublin

This article looks at the use of the purposive case marking in Pitjantjatjara and Yankunytjatjara (P/Y), two dialects of the Western Desert group of Australia. Using a Role and Reference Grammar (RRG) paradigm, the study analyses the case marking on arguments and the valence consequences for the predicates of which they are dependents.
P/Y has a well-developed case system, with ergative nominals and accusative pronominals. Dixon (2011: 294) divides Australian language cases into three groups, with core, local peripheral and local syntactic functions. This largely overlaps with the RRG concept of core arguments and the periphery (Van Valin & LaPolla 1997). The *–ku* (*-mpa* on all pronouns except 1st person singular) local syntactic case ending in P/Y is prototypically used in purpose and possession. Case polysemy is not unexpected however (Goddard 1991a) and in this article we look at *-ku* and its other functions including allative, goal of place, inalienable non-body part possession and beneficiary. We find that *–ku* is commonly used in P/Y with the stimulus in verbs of emotion: Goddard (1991b) shows its use in the expression of anger, and Myers (1978: 22) generalises this to verbs of loving, hating, fearing and knowing taking purposive goals. Furthermore *-ku* is used with nominalised dependent sub-clauses in switch reference purposive constructions.

RRG distinguishes between syntactic and semantic valence, or required number of arguments in the constituent representation and logical structure respectively. While a semantic argument may be syntactically expressed outside the core, the reverse does not apply. The *–ku* suffix renders the governing predicate syntactically intransitive, and leads to absolutive case marking on the remaining argument.

References

Dixon, R. M. W. (2011). The Languages of Australia. Cambridge: Cambridge University Press.

Goddard, C. (1991a). Testing the Translatability of Semantic Primitives into an Australian Aboriginal Language. Anthropological Linguistics, 33(1), 31–56.

Goddard, C. (1991b). Anger in the Western Desert : A Case Study in the Cross-Cultural Semantics of Emotion. Man, New Series, 26(2), 265–279.

Myers, D. (1978). A Simple Explanation of Pitjantjajara. Education Department of South Australia.

Van Valin, R. D., & LaPolla, R. J. (1997). Syntax- Structure, Meaning and Function. Cambridge: Cambridge University Press.

The Malefactive and Benefactive constructions in Brazilian Portuguese

Mariana Cabral Rolin
Trinity College Dublin

One feature still presented in Portuguese (and similarly in some Romance languages) is the form that surrounds the ethical dative or dative of interest, described by Payne (2006:270) as the fronting of a normally oblique device, with the ultimate effect of attributing a dative role to the particle. In Portuguese, the reflexive pronoun me 'me' could play that role, considered in an informal context. In this case, it attributes a sense of peripheral participation to the speaker. (Rodrigues, 2007:87) Following the typological studies conducted by Zuñiga & Kittilä (2010:2-5), it seems that this feature could be explained in terms of benefactives and malefactives, being the beneficiary (or maleficiary) of a sentence neither the target nor the agentive participant of the action.

This construction certainly has certain semantic implications, and this paper intends to briefly shed light over the syntactic features involved in such sentences through the lens of Role and Reference Grammar, mapping it into Semantics through the identification of prototypical verbs, with the intention to examine its effects.

References

Azevedo, M. M. (2005) Portuguese - A Linguistic Introduction. Cambridge: Cambridge University Press.

Azevedo, M. M. (1989) Vernacular Features in Educated Speech in Brazilian Portuguese. Hispania, Vol. 72, pp. 862-872. Retrieved from: http://www.jstor.org

Cunha, C.;& Cintra, L. (2013) Nova Gramática do Português Contemporâneo. Rio de Janeiro: Lexikon.
Davies, Mark and Michael Ferreira. (2006-) Corpus do Português: 45 million words, 1300s-1900s. Available online at http://www.corpusdoportugues.org.

Nolan, B. (2012) The Structure of Modern Irish - Functional Account. United Kingdom: Equinox.

Payne, T. E. (2006) Exploring Language Structure. Cambridge: Cambridge University Press.

Rodrigues, B. de A. (2007) Estudo descritivo dos usos do clítico lhe na variedade formal do Português. (Master's thesis) Retrived from PUC-RJ Database available online at: http://www.maxwell.vrac.puc-rio.br

Torres-Morais, M. A.; Berlinck, R. de A. (2007) "Eu disse pra ele" ou "disse-lhe a ele": a expressão do dativo nas variedades brasileira e européia do Português. In Castilho, A. T. de; Morais, M. A. T.; Lopes, R. E. V.; Cyrino, S. M. L. (Org.) Descrição, História e Aquisição do Português Brasileiro (pp.61-83). São Paulo: Fapesp, Campinas: Pontes Editores.

Torres-Morais, M. A. (2007) “O dativo de posse no Português”. In Massini-Cagliari, G.; Berlinck, R.A.; Guedes, M.; Oliveira, T. P. (Org.) Trilhas de Mattoso Câmara e outras trilhas: fonologia, morfologia e sintaxe. (pp.211-235). São Paulo: Cultura Acadêmica.
Van Valin Jr., R. D. (2005) Exploring the Syntax-Semantics Interface. Cambridge: Cambridge University Press.

Van Valin Jr., R. D.;& LaPolla, R. J. (1997) Syntax - Structure, Meaning and Function. Cambridge: Cambridge University Press.

Zúñiga, F.;& Kittilä, S. (Ed.) (2010) Benefactives and Malefactives: typological perspectives and case studies. United States: John Benjamins Publishing.

Extraction constraints revisited: a focus and aboutness-based account

Mitsuaki Shimojo
University at Buffalo, The State University of New York

The long known subjacency accounts of islands (Chomsky 1973), which assume movement and bounding nodes, have been challenged by pragmatic accounts (Erteschik-Shir & Lappin 1979, Kuno 1987), performance-based claims (Deane 1991, Hofmeister 2007), as well as recent parsing (expectation-based) claims (Chaves 2013). Among these, RRG combines structural and pragmatic grounds to capture both language-internal and cross-linguistic variations (Van Valin & LaPolla 1997, Van Valin 2005), claiming the general principle that a displaced element (or a wh-word in situ) must function in a clause within the potential focus domain [PFD]. Languages such as English and Lakhota extend PFD to embedded clauses which are a direct daughter of the clause node, therefore allowing "extraction" in or out of those embedded clauses. On the other hand, some Slavic languages (e.g. Polish) limit PFD to matrix clauses; thus, extraction out of embedded clauses is not possible (Van Valin 1996). This paper evaluates the RRG claims by revisiting extraction constraints in Japanese, yet another type of language in which extraction is allowed quite freely.

First, the analysis of major extraction types shows the correlation between expansive PFD and observed extractability. The negation test shows that the PFD includes the relative clause (see (1)), which corresponds with the possible topicalization and relativization out of the relative clause ((2) and (3) respectively). On the other hand, PFD excludes left and right detached positions (outside the IF operator), which typically contain a *wa*-marked topic. As expected, an extraction out of a detached position (or wh-in-situ) is not allowed (e.g. (4)). PFD in Japanese therefore covers the clause including its modifiers, but not detached positions, which predicts the high extractability. Furthermore, the contrastive reading imposed by an extraction out of a detached position supports the RRG claim that a displaced element must function in a focus domain because a contrastive topic represents a (subordinate) focus (Erteschik-Shir 2007).

However, despite the high extractability, Japanese is not free from constraints (e.g. Kuno 1973, Haig 1996, Shimojo 2002), as exemplified by the unacceptable topicalization and relativization given in (5a, b). The restriction is not structurally determined but predicted by the pragmatic-aboutness condition (Van Valin & LaPolla 1997: 627). In these cases, it is difficult to interpret the sentence or the relative clause as being about the topic or the head noun such that the man's arrest by the police is about the car (itself).

Constraints on wh-questions in Japanese are subtle but observed in a particular type of relative clause (e.g. (6)). The pragmatic-aboutness condition does not apply here, contrary to Kuno (1987), because a wh-word does not represent a topic. This type of relative clause is functionally complex because the referential head noun represents what is to be identified by the question and it is separate from what is questioned, i.e. the wh-word itself (Hasegawa 1989). Thus, what is to be identified by the question, as well as the wh-word, must be the actual focus. For this reason, another referential noun in the relative clause ('Hanako' in (6)) makes the relative clause rich in information and shifts the focus away from the head noun ((6) is acceptable without 'Hanako'.). This is a case of lexical semantic factors influencing the PFD and thus affecting extractability, as is the case with a question

such as '*What did Fred *murmur* that Mary had bought?", in which a semantically highlighted verb shifts the focus and blocks the question (Van Valin 1996: 50).

(1) A: seefu-ga [mujinteesatsuki-o sekkeeshita] enjinia-o
government-NOM reconnaissance.drone-ACC designed engineer-ACC

koohyooshita
announced
'The government announced the engineer who designed a reconnaissance drone.'

B: iya, misairu da
no missile COP
'No, a missile.

(2) sono mujinteesatsuki-wa seefu-ga [__ sekkeeshita] enjinia-o
reconnaissance.drone-TOP government-NOM designed engineer-ACC

koohyooshita
announced
'The reconnaissance drone, the government announced the engineer who designed (it).'

(3) [seefu-ga [__ sekkeeshita] enjinia-o koohyooshita]]
government-NOM designed engineer-ACC announced

mujinteesatsuki
reconnaissance.drone
'The reconnaissance drone which the government announced the engineer who designed (it)'

(4) [dare-ga syuppanshita] essee-ga/*wa yoku ureru? [*unless contrastive]
who-NOM published essay-NOM/*TOP well sell
'Do essays that who published sell well?'

(5) a.* sono kuruma$_i$-wa keisatu-ga [__$_j$ __$_i$ nusunda] otoko$_j$-o taihoshita
that car-TOP police-NOM stole man-ACC arrested
'The car, the police arrested the man who stole (it).'

b. * [keisatu-ga [__$_i$ __$_j$ nusunda] otoko$_i$-o taihoshita] kuruma$_j$
police-NOM stole man-ACC arrested car
'a car which the police arrested the man who stole (it)'

(6) ?* [dare-ga Hanako ni __ kureta] inu-ga sindesimatta?
who-NOM to gave dog-NOM ended.up.dying
'The dog that who gave to Hanako died?' (Haig 1979: 91)

References

Chaves, Rui P. 2013. An expectation-based account of subject islands and parasitism. Journal of Linguistics 49: 285-327.

Chomsky, Noam. 1973. Conditions on transformations. In S. R. Anderson and P. Kiparski, eds., A festschrift for Morris Halle, 232-285. New York: Holt, Rinehart, and Winston.

Deane, Paul. 1991. Limits to attention: a cognitive theory of island phenomena. Cognitive Linguistics 2: 1-63.

Erteschik-Shir, Nomi. 2007. Information structure: the syntax-discourse interface. Oxford University Press.

Erteschik-Shir, Nomi & Lappin, Shalom. 1979. Dominance and the functional explanation of island phenomena. Theoretical Linguistics 6: 41-86.

Haig, John. 1979. What relative clauses are about. Papers in Linguistics 12: 57-109.

Haig, John. 1996. Subjacency and Japanese grammar: a functional account. Studies in Language 20: 53-92.

Hasegawa, Yoko. 1989. Questioning vs. identifying: a functionalist analysis of the [a candidate that which professor recommended was hired?] construction in Japanese. In: Proceedings of the 15th annual meeting of the Berkeley Linguistics Society, 138-149. Berkeley: University of California, Berkeley.

Hofmeister, Philip. 2007. Retrievability and gradience in filler-gap dependencies. In M. Elliott et al., eds., Chicago Linguistic Society (CLS) 43.1, 109–123. Chicago, IL: Chicago Linguistic Society.

Kuno, Susumu. 1973. The structure of the Japanese language. Cambridge, MA: The MIT Press.

Kuno, Susumu. 1987. Functional syntax: anaphora, discourse and empathy. Chicago: University of Chicago Press.

Shimojo, Mitsuaki. 2002. Functional theories of island phenomena: the case of Japanese. Studies in Language 26: 67–123.

Van Valin, Robert D., Jr. 1996. Toward a functionalist account of so-called extraction constraints. In B. Devriendt, L. Goossens, and J. van der Auwera, eds., Complex structures: a functionalist perspective, 29-60. Berlin: Mouton de Gruyter.

Van Valin, Robert D., Jr. 2005. Exploring the syntax-semantics interface. Cambridge: Cambridge University Press.

Van Valin, Robert D., Jr., and Randy J. LaPolla. 1997. Syntax: structure, meaning and

function. Cambridge: Cambridge University Press.

Iconicity and syntactic position of sound-symbolic forms in sentence structure

Kiyoko Toratani
York University

There are two unchallenged iconicity-based claims about how sound-symbolic forms (SSFs) (e.g. ideophones) are realized in sentence structure: (i) Siwu SSFs constitute a counterexample of Interclaural Relational Hierarchy (ICRH) (Dingemanse 2009), and (ii) the Lexical Iconicity Hierarchy (LIH) can predict where SSFs appear in sentence structure: e.g. the more iconic the SSF (e.g. *gorogorogorogorooot* 'sound of thunder'), the more likely it will appear in the periphery (Akita 2009). This paper reviews these claims; by drawing on data from Japanese SSFs, it argues neither is tenable.

First, Dingemanse's (2009) claim cannot be maintained because ICRH, which says "the closer the semantic relation between two propositions is, the stronger the syntactic link joining them" (Van Valin 2005: 209), requires the nucleus of each syntactic unit to be predicating, and since the large majority of Siwu SSFs do not predicate (Dingemanse in press: 3), they cannot be used as evidence.

Second, Akita's (2009) proposal is unsustainable because where SSFs appear in the sentence structure is not as restricted as Akita's hypothesis predicts. According to Akita (2009), an element in the LIH (in essence, sound > manner> psyche SSFs) iconically maps onto a unit in another hierarchy termed the Grammatical-Functional Hierarchy (GFH), where 'periphery' (comprising adjuncts and interjections) is located higher than 'core' (comprising predicate and its arguments). This accounts for the realization of a sound SSF [high on LIH] in the periphery [high on GFH] or a psyche SSF [low on LIH] in the core [low on GFH] but cannot account for a sound SSF [high on LIH] appearing as a holophrase where the SSF is the sole constituting element of the predicate (e.g. *Zabun*. 'Splash.') [low on GFH] or a psyche SSF (e.g. *iraira* 'irritated') [low on LIH] appearing as an adverb in the periphery [high on GFH] (e.g. *Iraira-to de-ta.* 'Irritatedly, he left.')

Akita (2009:246) notes adjuncts may be further divided into 'quoted' and 'non-quoted' adjuncts. Expanding on this point, this paper suggests iconicity may be more directly relevant to the status of quotedness, which may serve as a parameter to predict how SSFs are realized in sentence structure: e.g. a highly iconic SSF is likely to occur as the content of a direct quotation (1a), whereas a less iconic one is likely to occur as a regular part of the sentence (1b).

(1) a. "*Gorogorogorogorooot*"*-to* *kaminari-ga* *nat-ta.*
(SSF)-QUOTATIVE thunder-NOM resonate-PAST
'(Going) "*gorogorogorogorooot*", the thunder resonated.'

b. *Kaminari-ga* *gorogoro* *nat-teiru.*
thunder-NOM (SSF) resonate-PROG
'The thunder is rolling.'

Though the paper disagrees with the technical details of Dingemanse (2009) and Akita (2009), it agrees with their underlying understanding that iconicity may play a role in

accounting for how SSFs are realized in sentence structure.

References

Akita, K. 2009. A grammar of sound-symbolic words in Japanese: Theoretical approaches to iconic and lexical properties of mimetics. Unpublished doctoral dissertation, Kobe University;

Dingemanse, M. 2009. The interaction of syntax and expressivity in Siwu ideophones. Paper presented at International Conference on Role and Reference Grammar. University of California, Berkeley;

Dingemanse, M. (in press). Expressiveness and system integration: On the typology of ideophones, with special reference to Siwu. STUF - Language Typology and Universals;

Van Valin, RD. 2005. *Exploring the syntax-semantics interface*. Cambridge: Cambridge University Press.

Verb Morphology of Lohorung

Govinda Bahadur Tumbahang
Tribhuvan University

The Lohorung live in Pangma, Angala, Higuwa, Khorande, Bardeu, Gairiula, Malta, Sitalpati, Dhupu villages of Sankhuwasabha district of eastern Nepal. According to CBS (2012), their total population is 1,153 and the population of Lohorung language speaker is 3,716. In 2001 census, their ethnic name was designated as Lohorung Rai, but in population census (2012) they registered Lohorung as an independent ethnic name and lohorung language as independent language name.

This language is classified as a Sino-Tibetan, Tibeto-Burman, Western Tibeto-Burman, Himalayan, Kiranti and Eastern language. It is closely related to Yamphu and Mewahang languages. Yamphu is spoken in Hedangna, Num, Seduwa, Peppuwa, Mangsimma, Karmarang, Tungkhaling, Uwa, Ala, Uling and Walung villages whereas Mewahang is spoken in Bala, Yamdang, Tamku, Sisuwa of Sangkhuwasabha district.

Lohorung verb inflects for person, number, case, exclusion, negation and tense. In intransitive conjugation subject pronoun is inflected and in transitive conjugation both subject and object pronouns are inflected. The transitive verb inflects for causativization, too. The verb conjugation shows three-number system: singular, dual and plural. First person nonsingular verb inflects for exclusion with inclusive category unmarked. The verb stem conjugates for past and non-past tense. Negation is marked on the verb by prefix and suffix. The third person singular subject is unmarked. The first person subject and second person object are marked by a portmanteau suffix.

So far linguistic study has not been undertaken. Five mother tongue speakers of Lohurung language will be selected and data related to verb paradigm will be elicited from them. This paper will analyze inflectional morphology of the Lohorung verbs. The first part will introduce the language with its genetic affiliation and its geographical situation. The second part will present morphological scenario of intransitive verb, third part will present that of the transitive verb and the fourth part will show the morphological scenario of causative verbs. The last part will end with analysis and conclusion.

Instruments, Causees and the Strength of Causation

Koen Van Hooste
Heinrich-Heine-Universität Düsseldorf

Many theories make a distinction between two types of instruments: *intermediary* and *facilitating instruments* (in RRG: *instruments* and *implements*). The instrument-subject alternation (henceforth: *ISA*) is thereby often used as a diagnostic tool to distinguish between them. When a sentence undergoes ISA, the instrument occupies the position usually occupied by the agent:

(1) John cut the bread with the knife. (2) The knife cut the bread.
(3) Erin ate the soup with the spoon. (4) *The soup ate the spoon.
(5) John burned a hole in the door with the acid. (6) The acid burned a hole in the door.
(7) The praetor destroyed the city with the soldiers. (8) The soldiers destroyed the city.

If ISA is possible then the participant is an instrument (1 & 2 and 5 & 6), if not it is an implement (3 & 4). The motivation for such a distinction is often sought in different degrees of causal dependence (Alexiadou & Schäfer 2006), causal force as a feature of the participant (Webb 2008), the strength of causation (Koenig et al. 2008) or the participant's membership in a causal chain (RRG). Van Valin & Wilkins (1996) argue that instrument is a reading of an effector (x-argument of **do'**) in a causal chain and that the implement is the second argument of …Λ **use'** (x, y). The former is part of a causal chain, whereas the latter is linked to the rest of the logical structure (or: *LS*) with a connective. ISA is analyzed as a morphosyntactic instantiation of a semantic process called *metonymic clipping*, whereby an argument slot in the LS is left unspecified. Metonymic clipping could, however, also be used more broadly to analyze certain discourse pragmatic effects. Van Valin & Wilkins also propose a salience hierarchy of entities with typical instruments occupying a central position on the hierarchy. This approach has two problems: A) Cross-linguistic variation with respect to ISA is not captured without weakening the explanatory force of the LS and B) non-prototypical instruments (7 & 8) are problematic to account for.

Different languages allow ISA to varying degrees and some do not allow it at all. Some seem to place specific limitations on ISA. Portuguese, for example, is very liberal and allows for a very wide range of instrument-effectors to undergo ISA, whereas German is very restricted and would only allow (5 & 6) from the examples above. In Dutch or in Russian, (2) is ungrammatical. Some languages only allow ISA if the instrument is conceptualized under *onset* causation (such as the acid in 5 & 6). This raises a problem for RRG's current conception as it implies discarding the instrument-implement distinction altogether. Rather than discarding the distinction, I argue that ISA is not a suitable diagnostic to distinguish instruments from implements. It should rather be treated as an indicator of the degree of metonymic clipping that the language allows for. I propose to use ISA in combination with a causative paraphrase. Using a causative paraphrase reveals whether or not the participant is part of a causal chain: The statement in (10) is non-sensical and identifies the spoon as an implement. The statement in (9) is true, however, and identifies the knife as an instrument.

(9) The knife is the cause of the bread being cut.
(10) ???The spoon is the cause of the soup being eaten.

Apart from instruments, RRG distinguishes between forces and agents within the class of

effectors. Each of these has specific conditions on its application. This distinction does not capture less prototypical instruments (as in 7), however. Apart from a comitative reading, an instrument-like reading is also possible. The LS of (7) under the instrumental reading is given in (11). Except for the state predicate, it is the same basic LS as with the sentence in (1):

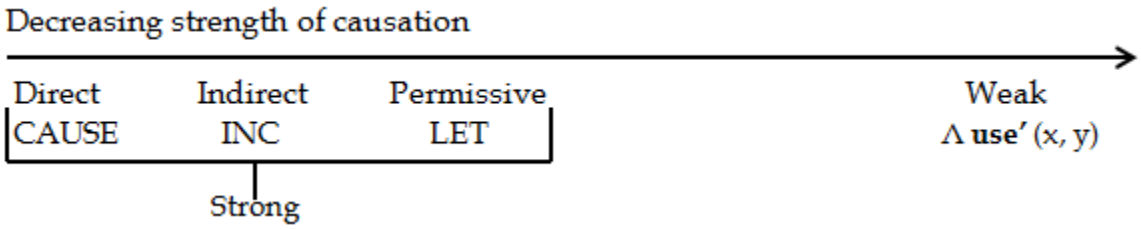
(11) [**do'** (praetor, Ø)] CAUSE [[**do'** (soldiers, Ø)] CAUSE [BECOME **destroyed'** (city)]]

Despite occupying the same position in the LS as 'the knife' in (1), 'soldiers' does not have the same status. Applying ISA would trigger an agent-reading rather than pragmatically focusing on the intermediate effector. This is directly reflected in the LS. Sentence (8) correlates with the structure in (12) and not with the one in (11):

(11) *[**do'** (Ø, Ø)] CAUSE [[**do'** (soldiers, Ø)] CAUSE [BECOME **destroyed'** (city)]]

(12) [**do'** (soldiers, Ø)] CAUSE [BECOME **destroyed'** (city)]

I propose to treat both 'human instruments' and causees as the same, intermediate effectors under the scope of *indirect causation.* As such, they constitute an additional effector subtype. Following a suggestion by Koenig et al. (2008), I also propose to recognize the implement as a participant under the scope of *weak causation* and to subdivide causation into several categories (proposed LS equivalents are inserted underneath):



References

Alexiadou, A., & Schäfer, F. (2006). Instrument Subjects are Agents or Causers. In D. Baumer, D. Montero, & M. Scanlon (Eds.), *Proceedings of the 25th West Coast Conference on Formal Linguistics* (pp. 40–48). Somerville, MA: Cascadilla Proceedings Project.

Koenig, J.-P., Mauner, G., Bienvenue, B., & Conklin, K. (2008). What with? The Anatomy of a (Proto)-Role. *Journal of Semantics*, *25*(2), 175–220.

Van Valin, Jr., R. D., & Wilkins, D. P. (1996). The case for "Effector": Case roles, agents and agency revisited. In M. Shibtani & S. A. Thompson (Eds.), *Grammatical Constructions: Their Form and Meaning* (pp. 289–322). Oxford University Press.

Webb, J. (2008). *Instruments in LFG's Argument-structure*. University of Oxford.

Cosubordination

Robert D. Van Valin, Jr.
Heinrich Heine University & University at Buffalo

Cosubordination is one of the distinctive constructs proposed in RRG, and it has been applied in the analysis of the clause-linkage systems of numerous languages. It was originally proposed in Olson (1981) and further developed in Foley & Van Valin (1984) and Van Valin (2005, 2007). Recently, however, its validity has been questioned in two papers, Foley (2010) and Bickel (2010). The two papers approach the issue from different perspectives, although both restrict their discussion to cosubordination at the clause level. Foley takes an LFG view and argues that what he calls 'peripheral cosubordination' (the terminology from Foley & Van Valin 1984) is just a type of tight coordination and should not be considered a distinct linkage type. Bickel, on the other hand, makes an argument based on multidimensional scaling that a statistical multivariate analysis of parameters of clause linkage does not yield a well-defined category of cosubordination.

The purpose of this talk is to re-examine the notion of cosubordination in light of these critiques and to argue that it is a valid category after all. The discussion will begin with a critical review of Foley's and Bickel's arguments against clausal cosubordination; it will be argued that the contrasts in grammatical behavior that originally motivated the postulation of cosubordination as a distinct linkage type are still valid, even if the data are more complex than assumed in early work. Cosubordination at the core and nuclear levels, not discussed by Foley and Bickel, will be re-examined and argued to strongly support the three-way distinction in nexus relations posited in RRG.

References

Bickel, B. 2010. Capturing particulars and universals in clause linkage: A multivariate analysis. In Bril, ed., 51-104.

Bril, I., ed. 2010. *Clause linking and clause hierarchy*. Amsterdam: John Benjamins.

Foley, W. 2010. Clause linkage and nexus in Papuan languages. In Bril, ed., 27-50.

Foley, W. & R. Van Valin. 1984. *Functional syntax and universal grammar.* Cambridge: Cambridge University Press.

Olson, M. 1981. Barai clause junctures: Towards a functional theory of interclausal relations. Unpublished PhD dissertation, Australian National University.

Van Valin, R. 2005. *Exploring the syntax-semantics interface*. Cambridge: Cambridge University Press.

———-. 2007. Recent developments in the Role and Reference Grammar theory of clause linkage. *Language and Linguistics* 8: 71–93.

Why Eve Shouldn't Eat the Snake: An Intelligent Answer from Corpus-driven Information Structure and Connectivity Analysis of Biblical Hebrew

Nicolai Winther-Nielsen
Fjellhaug International University College Denmark & VU University Amsterdam

This paper will address the challenges encountered in a pilot project trying to explain the function of word order in Biblical Hebrew through a corpus-driven tutoring system. More specifically the aim of this project is to develop a learning technology that will work for a Role of Reference Grammar (RRG) of Biblical Hebrew. It will explore how far an intelligent tutoring system can guide the pairing of conceptual representations of states of affairs with lexico-grammatical structures "in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts" (Lambrecht 1994: 5). The question is ultimately to what extent a corpus application automatically can provide linguistic evidence for Constituent, Predicate and Sentence Focus. Can we calculate how pragmatic states of referents are expressed by speakers calculating whether the hearer is aware of the mental representation of an entity as active, accessible or inactive (1994: 49)?

The task of calculating reference automatically is of course by no means simple, as an amusing example from our research shows. Biblical Hebrew is an ancient closed corpus, which for almost 40 years has been linguistically annotated and stored in a database and maintained by the Eep Talstra Center for Bible and Computer at the VU University in Amsterdam. Founder and former director of the ETCBC, Eep Talstra (ms), is now developing a research tool which calculates all referents in a text and groups them into referent sets. The research program under agile development applies lexical and syntactic rules within clearly delimited domains of narrative and quoted speech. Example (1) illustrates how this is done: in line 11 of the text, the head-marked pivotal syntactic argument is the 27th occurrence of a referent in the texts. The program will track the 2nd person plural to the addressees, which are participant actors no. 10, i. e., Adam and Eve. The 3rd masculine singular suffix governed by the preposition *min* was in this instance determined as the head-marked pronominal referent, i.e., the snake.

(1) Participant tracking in Gen 3:3 (slightly adapted from http://bibleol.3bmoodle.dk/text/show_text/ETCBC4-translit/Genesis/3/3)

L: 11 GEN 03,03 [*lōʾ* <Ng>] [*tō-ʾxl-û* {27} <Pr>] [*mimm-ennû* {28} <Co>]
not IMPF-eat-you (2MPl) from-SUFF-3Msg
PRef: 27 [T>KLW <Pr>] PSet: 13= 2pm= PAct: 10= 2pm"YOUPlmas"
PRef: 28 [MMNW :sfx] PSet: 14= 3sm= PAct: 11= 3sm"HE"

Now the reader may recall that Eve was forbidden to eat from the fruit, not from the snake, but how can our intelligent tutoring system figure this out? At this stage of development the program uses syntactic and lexical linking calculations, but should it also be able to use information structure, and how could we develop an algorithm for information structure for the program?

In order to operationalize information structure we will first need to look at earlier proposals on information structure for Biblical Hebrew based on Lambrecht's approach, now conveniently summarized by Van der Merwe (2013). It will also be helpful to discuss the rules for Hebrew proposed in the dissertation of Pang (2012). Information structure can even be evaluated in the commercial resource *The Lexham Discourse Hebrew Bible* produced for Logos Bible Software by Runge and Westbury (2012-2014). They use tagging labels like Left Detached Position in example (2), preceding example (1), but how can we calculate these entities and their function with our corpus-driven technology?

(2) A preceding Left Detached Position in Gen 3:3

û=mip=pᵊrî hā=ʕēṣ ʔᵃšer bᵊ=tôx-hag=gān

'and=from=fruit[-of] the-tree which in=midst[-of] the=garden'

The pilot project will develop the new corpus-driven participant tracking research to replace Kamp's Discourse Representation Theory which has so far been employed for RRG Information Structure analysis. It will also use new ideas evolving out of contemporary RRG research on headmarking and information structure and on their interaction with referential tracking in complex grammatical constructions (Matić, Van Gijn, and Van Valin 2014).

Through this project it will be possible to move beyond earlier uses of the ETCBC database for syntax-to-semantics mapping of lexical roles (Winther-Nielsen 2009). It is now possible to formulate sophisticated queries for this database through the prize-winning interface, SHEBANQ http://www.godgeleerdheid.vu.nl/en/news-agenda/news-archive/2015/150312-eep-talstra-centrewins-digital-humanities-award.asp. Using this tool, the linguist can retrieve all linguistic data on the Hebrew verb *nātan* (http://shebanq.ancient-data.org/hebrew/query?id=558), and then formulate pseudo-code to distinguish between the verb's two core meanings of 'give' and 'place' (WintherNielsen, ms). Such queries will also be able to retrieve relevant data for information structure analysis as in example (3).

(3) Information Structure of Gen 3:12 with two senses of *nātan* in a complex sentence (slightly adapted from http://bibleol.3bmoodle.dk/text/show_text/ETCBC4-translit/Genesis/3/12

hā=ʔiššāh	ʔᵃšer	nātat-tāʰ	ʕimmād-î	hîʔ	nāṯᵊn-āʰ
DEF=woman	who	**place**-PERF/2MSg	with-1Sg	she	**give**-3FSg

=ll-î	min=hā-ʕēṣ	wā=ʔō-xēl
to-1Sg	from=DEF-tree	and=I-ate
[[LDP]$_{INA}$	[Relative clause]	[[Foc] $_{Constituent\ Focus}$ clause] [clause] S]

The first research task in the pilot project is to explore linguistic means for expressing the activation status of referents on a cline from common ground to focused elements, using RRG categories:

> (1) Active (ACV) direct mention; (2) Accessible (ACS) recognized from world knowledge or environment; (3) Inactive (INA) mentioned earlier; (4) Brand New

Anchored (BNA) not mentioned, but related to mentioned or accessible: (5) Brand New Unanchored (BNU) not previously mentioned nor accessible.

Example (3) reintroduces a topical inactive (INA) referential phrase.

The second task is to explore the role of linkage devices. In example (3) *wā=ʔō-xēl* is expressed as chaining through clause coordination, but it most likely has the rhetorical force of 'and therefore I ate it'. The project uses the Connectivity Model developed by Renkema (2009) to explain unmarked coherence which has a bearing on information structure and referential tracking. Connectivity is explained as either conjunction, adjunction or interjunction.

This corpus-driven referent tracking mechanism is used for analysis of the first 3 chapters of the Book of Genesis. However, we believe that a Hebrew RRG Information Structure 2.0 will evolve from this pilot project focusing on the complex interaction of head-marking, referential tracking and discourse connectivity. The goal of the Global Learning Initiative http://global-learning.org/ is to develop this for other ancient and modern corpora.

References

Lambrecht, Knud. 1994. *Information Structure and Sentence Form: Topic, Focus and the Mental Representations of Discourse Referents*. Cambridge Studies in Linguistics 71. Cambridge: Cambridge University Press.

Pang, Philip K. 2012. *Fulfillment Hermeneutics in The Books Of Kings.* PhD diss., Dallas Theological Seminary, Dallas.

Renkema, Jan. 2009. *The Texture of Discourse. Towards an Outline of Connectivity Theory*.Amsterdam and Philadelphia: John Benjamins.

Runge, Stephen E., & Westbury, Joshua R, eds. 2012–2014. *The Lexham Discourse Hebrew Bible*. Bellingham, WA: Lexham Press.

Talstra, Eep. ms. Participant Analysis. ETCBC March 9, 2015 (cf. recording at http://3bmoodle.dk/pluginfile.php/147/mod_resource/content/1/ETCBC_150309_Talstra_ParticipantReference.mp4).

Van der Merwe, Christo. 2013.Fronting: Biblical Hebrew. In *Encyclopedia of Hebrew Language and Linguistics III (EHLL),* ed G. Khan. New York: Brill, Pp. 931-935

Winther-Nielsen, Nicolai. 2009. Biblical Hebrew Parsing on Display: The Role-Lexical Module (RLM) as a Tool for Role and Reference Grammar. *SEE-J Hiphil* 6:1-51 [http://www.see-j.net/index.php/hiphil/article/view/78). --. MS. Corpus-driven Valence: *Give* and the meaning of **נתן** *nātan* in Genesis.

The Sentence with an Unidentifiable NP Subject and the Relevant Complex YOU(有) Construction of Chinese from the Perspective of Theticity/Categoricality Distinction

Shihong Zhou
Beijing Normal University

Mandarin Chinese has been claimed the definite (or identifiable) NP phrase precedes the predicate and indefinite (or unidentifiable) NP phrase follows the predicate over a century , like Chao 1968，Zhu (1982),Li & Thompson1976, Teng(1975), Huang, Li & Li (2009),just name a few. However, some researches noticed the exceptions. Fan(1985) was one of the first to find that there are a lot of cases, in which the indefinite NP phrase acts as the subjects of the clause. Sentences with indefinite NP subjects are not rare or special, based on a large amount of examples from the real text or discourse corpus. His enlightening findings raised many challenging questions, which are not fully resolved until today, even though many scholars tried so, like Shi (1996), Xu(1997), Tsai(2001).

In this paper, we will analyze this indefinite NP subjects sentences in the framework of Information Structure and theticity/categoricality distinction, proposed by Lambrecht (1988、
1994、2000)，LaPolla 1995. Sasse (2006).We propose that most of indefinite subject sentences are event-central judgment (typically coded as，“一 (one) + classifier +NP+VP”), is a type of thetic judgment. Pragmatically, it is a sentence focus structure/topic-less structure.
This event-central sentence is like the entity-central sentence, which is the other type of thetic judgment and functions to present some new referent to the discourse, in Chinese case, YOU (有，meaning to OWN or EXIST) sentence is exploited. They are both sentence focus structure,
therefore they share the same pragmatic structure and same discourse function. The relevant YOU presentative sentence (coded as “you（有）+一（one）+ classifier +NP+ VP)

is a complex structure (or amalgam) whose pragmatic function is to introduce a new discourse referent in non-initial position of the sentence and express a proposition about this new referent in the same sentential unit. By putting YOU, which could be regarded as an “EXIST” operator, in front of the following relative clause, the original thetic sentence thus could be transformed into a combination of thetic and categorical judgment, pragmatically sharing the newly introduced referent both as a focus in the presentative clasue (S 1)and a topic subsequent clause (S2) which express the proposition about the newly introduced topic referent. In other word, by utilizing “YOU” amalgam, the sentence focus structure and topic-comment structure is coerced into a syntactically minimal construction and at the same time pragmatically optimal structure with a sharing role of newly introduced referent, compared to the solely thetic sentence with unidentifiable NP subject.