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Distinguishing argument structure, syntactic dependents and valence in HPSG

We discuss an alternative to the recently proposed HPSG analyses of binding by [Manning and Sag 1998] and causatives by [Manning et al. 1998] that is consistent with the lexicalist analysis of extraction proposed in [Bouma et al. 1998, 1999], and, in addition, creatively incorporates basic linguistic insights from the long-standing dependency grammar tradition. We promote the view that various phenomena that have traditionally been described in terms of surface configurations, surface grammatical relations, valence lists or even argument structure configurations are better described in terms of constrained mappings between the inherent lexical argument structure (ARG-ST) of a predicate, its actual syntactic dependents (DEPS) and its local combinatorial potential (VALENCE).

Furthermore, we show that the standard HPSG division among the arguments of a verb into core and oblique, whereby 'term' is used as a synonym of 'core', is unsatisfactory for Slavic. This assumption has to be refined by distinguishing (at least) two orthogonal dimensions in the taxonomy of arguments: core vs. non-core and term vs. oblique. We sketch this in Figure 1. As a corollary, the following cross-linguistic generalisations can now be stated as constraints on types in a multiple-inheritance hierarchy:

- grammatical case is assigned to *core* arguments;
- head-marking "agreement morphology" involves *core* arguments;
- only *core* arguments may be linked to the EXPERIENCER thematic role;
- only *core* arguments may control the unexpressed subject (the a-subject) of infinitival complements;
- negation affects the case assignment to *term* arguments;
- nominalisations affect *term* arguments;
- voice and diathesis affect *term* arguments only if they are not linked to the EXPERIENCER thematic role.

The advantage of distinguishing three-level organisation of syntactically relevant dependencies is illustrated from a cross-Slavic viewpoint, and with respect to several major phenomena areas.

⇒ *Slavic verb diathesis* is considered from this perspective, incorporating ideas originally proposed in [Avgustinova et al. 1999].

⇒ *Structural case assignment to adjuncts* is formulated in a straightforward way, based on the list of syntactic dependents of a predicate (DEPS).

⇒ *Binding of reflexive anaphors* in constructions where the most prominent argument does not coincide with the most prominent dependent also gets an elegant solution. As the examples in ex. 1 trivially show, the traditional view that anaphoric binding is subject-oriented in Slavic languages is an over-simplification.

⇒ *Clitic replication* (or 'clitic doubling') in Bulgarian[1] – cf. ex. 2 – is analysed as involving non-canonical arguments of type *clitic-ss* in the ARG-ST list. These clitic arguments are co-indexed with elements of the DEPS list that are canonical nominal syntactic dependents (NPs) with a matching syntactic function.

⇒ *Pronominal resumption* can also be accommodated under the approach we are arguing for here. Note that clitic replication is different from pronominal resumption which may but need not be realised by a clitic pronoun, as the sentences in ex. 3 illustrate. The resumptive element in (a) is a clitic, while in (b) and (c) it is a full pronoun. (Both the NP and the pronoun resuming it are given in bold.) Replication can be observed only in (c), where the replicated nominal material and the co-referent clitic replicant are underlined.

⇒ The so-called *'possessor raising'* in Bulgarian – cf. ex. 4 – is ungrammatical only out of an indirect object. In (a,b) the NP out of which the possessive clitic has been 'raised' is the subject, in (c) the direct object, in (d) the prepositional object and in (e) an adjunct. So, our treatment is based on the DEPS list where also (post-verbal) adjuncts occur as syntactic dependents.

⇒ Furthermore, we show that *raising phenomena* in general are more adequately treated based on the DEPS list, in accord with the traceless account of extraction.

⇒ Finally, the *"pro-drop" effects* observable in Slavic are modelled as constraints on the interaction between the DEPS list and the actual VALENCE.

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[1] All observations and generalisations about Bulgarian, on which our analysis is based, hold in full extent for the closely related standard Macedonian language.
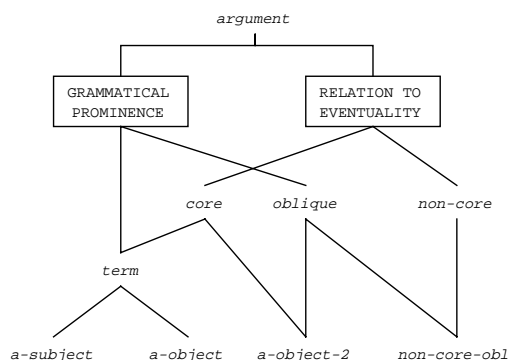
Figure 1

ex. 1

a) *Иван*(**1**) *был приглашен Борисом*(**2**) *из-за себя*(**1/2**) *же.*
b) *Иван*(**1**) *был приглашен Борисом*(**2**) *в свою*(**1/2**) *честь.*
c) *Иван*(**1**) *был введен Борисом*(**2**) *к себе*(**1/2**) *в комнату.*
d) *Иван*(**1**) *был введен Борисом*(**2**) *в свою*(**1/2**) *комнату.*
e) *Эта книга*(**1**) *куплена Борисом*(**2**) *для себя*(**2/*1** animacy restriction).
f) *Иван*(**1**) *был представлен Борисом*(**2**) *себе*(**1/2**) *самому.*
g) *Иван*(**1**) *был представлен Борисом*(**2**) *своему*(**1/2**) *новому начальнику.*
h) *Иван*(**1**) *был расспрошен Борисом*(**2**) *о себе*(**1/?2**).
i) *Иван*(**1**) *был расспрошен Борисом*(**2**) *о своих*(**1/?2**) *рукописях.*

ex. 2

a) <u>*На нас*</u> *Елена* <u>*ни*</u> *ги донесе цветята.*
b) <u>*Книгата*</u> *я нямаше никъде.*
c) <u>*На вас*</u> *домъчня ли* <u>*ви*</u> *вече за България?*

ex. 3

a) *Колкото до* **Иван**, *не съм* **го** *капила.*
b) *Колкото до* **Иван**, **него** *не съм капила.*
c) *Колкото до* **Иван**, **него** *не съм* <u>*го*</u> *капила.*

ex. 4

a) *<Паднаха* **ви**> **очилата**.
b) *В тях <***ми е***> **надеждата**.
c) *<Плета* **ти**> *от два месеца* **пуловера**.
d) *<Слагам* **ти ги**> *в* **джоба**.
e) *Кой <***ми е спал***> **в леглото**?*

References

Tania Avgustinova, Wojciech Skut and Hans Uszkoreit: Typological similarities in HPSG: a case study on Slavic verb diathesis. In: Adam Przepiorkowski and Robert Borsley (ed.) *Slavic in HPSG*. CSLI 1999: 1-28

Gosse Bouma, Rob Malouf and Ivan Sag: A unified theory of complement, adjunct, and subject extraction. In: Gosse Bouma, Geert-Jan M. Kruijff and Richard T. Oerle (ed.) *Proceedings of the Joint Conference on Formal Grammar, Head-driven Phrase Structure Grammar and Categorial Grammar*. Saarbrücken, August 1998: 83-97

Gosse Bouma, Rob Malouf and Ivan Sag: Satisfying Constraints on Extraction and Adjunction, Manuscript of April 1999 (to appear)

Christopher D. Manning and Ivan A. Sag: Argument structure, valence and binding. *Nordic Journal of Linguistics*. 1998

Christopher D. Manning, Ivan A. Sag and Masayo Iida: The lexical integrity of Japanese causatives. Manuscript of June 1998 (to appear)