

# On the Russian Hybrid Coordination Construction

## 1 Introduction

There is a kind of coordination construction in Russian that allows co-arguments of the same head (that is, arguments with different thematic roles), to be conjoined as seen in (1).

- (1) a. Vsem, vezde i vse do lampochki  
everyone<sub>dat</sub> everywhere and everything<sub>nom</sub> don't care  
'everyone doesn't care about anything anywhere'
- b. Nikto i ni ot kogo ikh ne skryvaet  
nobody and no from body them not conceals  
'nobody conceals them from anyone'
- c. Kto i kogda tebe skazhet pravdu?  
who and when you tell truth  
'who will tell you the truth when?'
- d. Kto-to i kogo-to obidel  
someone<sub>nom</sub> and someone<sub>acc</sub> offended  
'someone offended somebody'

We refer to this phenomenon as *Hybrid Coordination* (HC).<sup>1</sup> In §2 we overview the data and possible accounts, and conclude that HC forms a kind of syntactic constituent, even though no semantic unit is formed. §3 provides an analysis of the syntax and semantics of HC.

## 2 Hybrid Coordination

In many Slavic languages – including Russian – the particle ‘*i*’ can function as a focus marker, meaning ‘*also*’ or ‘*even*’, and in this case it is optional. Consider the equivalent examples in (2):

- (2) a. Petya i Vanyu pobedit                      b. Petya pobedit i Vanyu  
Peter and Vanya win                              Peter win and Vanya  
'Peter can beat Vanya too' / 'Peter can beat even Vanya'

The phrase adjacent to ‘*i*’ is prosodically contrasted, and is interpreted as an unexpected under-goer of the event. The focused phrase can be displaced, as shown in (2b), which shows that no coordinate constituent is formed. If this is what is going on in (1), then one can argue that HC does not exist. However, the examples in (1) can be interpreted without the focus reading. They can occur unfocused, unmarked, and without any particular prosodic contour. Our informants report that there are preferential orderings of conjuncts, but that the reverse orders are usually also acceptable. Moreover, these co-arguments cannot occur discontinuously without the focus reading. This can be seen in HC of *n*-words, which do not allow for the focus-*i* readings:

- (3) a. Nikto i nikogo ne pobedit                      b. \*Nikto ne pobedit i nikogo  
nobody<sub>nom</sub> and nobody<sub>acc</sub> not win                      nobody<sub>nom</sub> not win and nobody<sub>acc</sub>  
'nobody didn't beat anyone'

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<sup>1</sup>Some of the native speakers that we consulted report that coordinations with indefinite conjuncts like (1d) are degraded, while other speakers accept them as grammatical. The remaining cases were generally accepted.

Also, as one would expect from coordination, conjuncts must be at least two, and can be iterated:

- (4) a. Ya dumayu (\*i) kto prishel  
I wonder and who came
- b. Kto, kogo, kogda i začem priglasil?  
who<sub>nom</sub> whom<sub>acc</sub> when and for-what invited<sub>3sg</sub>  
'Who invited whom when and for what purpose?'

Further evidence for HC forming a constituent is that such structures can be fronted:

- (5) Vsem i vseгда etot professor rad pomoch'  
everyone and always, this professor is-eager to-help  
'this professor is always eager to help everyone'

There are also a number of idiosyncrasies which set this construction apart from standard coordinate structures in Russian. First, only the conjunctive coordinator *i* (*and*) is allowed in hybrid coordination. Indeed, disjoining co-arguments would be nonsensical. Second, proper nouns cannot be conjoined in HC. These are obligatorily interpreted with the focus-*i* reading.

Another idiosyncrasy about the nature of HC conjuncts is that conjuncts were lexical in most of the attested cases that we found, although some phrasal conjuncts also occur. But crucially, hybrid conjuncts containing a modifier are ruled out by our informants:

- (6) a. \*Kto-to vysokii i kogo-to obidel?  
someone<sub>nom</sub> tall and someone<sub>acc</sub> offended<sub>3sg</sub>
- b. \*Nikto i nichego interesnogo ne dal  
nobody and nothing interesting not said

This contrasts with conjuncts containing complement structures, which is allowed in HC, albeit rarely, and sometimes in a marked way. This is illustrated in the data in (1b) and (7):

- (7) a. [Kto i [kakoj gorod]] zaxvatil?  
who<sub>nom</sub> and which city<sub>acc</sub> conquered  
'who conquered which city?'
- b. Ne sposoben [nikto i [ni s kem]] pomenyat'sya mestami  
not able nobody and no with body change places  
'nobody is able to change places with anyone'

Another peculiarity is that HC conjuncts must be headed by the same semantic operator:

- (8) a. \*Vse i chto-to vidyat  
everybody and something see
- b. \*Vse i zdes' molyatsya  
everybody and here pray

Now we turn to the possibility of accounting for the phenomena with an ellipsis analysis. For example, it can be argued that a similar phenomenon occurs in English WH-conjuncts:

- (9) a. Who and what did you see?
- b. How many, where, and who are they?

These can be seen as instances of clausal coordination coupled with an ellipsis operation (either

Right-Node Raising or backwards Sluicing): ‘*Who ~~did you see~~ and who did you see?*’. This is consistent with the contrastive intonation that often accompanies the English data, and with the fact that cases that cannot be reduced to clausal coordination are ungrammatical (e.g. conjoining subject and complement NPs: \**Who and what found?*).<sup>2</sup> For the Russian data however, we can rule out an ellipsis account because subject-complement coordination *is* grammatical, and the presumed non-elliptical clausal coordination counterparts are not:

- (10) a. Vsem, i vsyo do lampochki  
 everyone<sub>dat</sub> and everything<sub>nom</sub> don’t care  
 ‘nobody cares about anything’
- b. \*Vsem, do lampochki i vsyo do lampochki  
 everyone<sub>dat</sub> don’t care and everything<sub>nom</sub> don’t care

See Kazenin (2001) for more arguments against an ellipsis analysis of hybrid WH- coordination.

### 3 A Constructional analysis in HPSG

We adopt the MRS framework (Copestake et al. 2006), and take the semantics of any given phrasal node to correspond to the concatenation of the semantic representations contributed by each daughter (Semantic Inheritance Principle). In MRS the feature HOOK is used to single out only the index and label of the semantic head relation, but we reformulate HOOK so that the entire semantic head relation is singled out, as exemplified for the noun *vse* (everything):

$$(11) \left[ \begin{array}{l} \text{GTOP } handle \\ \text{HOOK } [i] \\ \text{RELS } \left\langle [i] \left[ \begin{array}{l} \text{RELN } every\_rel \\ \text{LABEL } handle \\ \text{ARG}_0 [e] \\ \text{RESTR } [h] \end{array} \right], \left[ \begin{array}{l} \text{RELN } thing\_rel \\ \text{LABEL } [h] \\ \text{ARG}_0 [e] \end{array} \right] \right\rangle \end{array} \right]$$

Thus we can rule out cases like ‘*everybody and something*’ in (8a), while allowing for ‘*nobody and not from someone*’ in (1b), by requiring that HC conjuncts have the same HOOK|RELN values: in the former case these are ‘ $\forall$ ’ and ‘ $\exists$ ’ respectively, and in the latter case both relations are ‘ $\neg$ ’.

A second assumption we make is that modifiers are subcategorized as complements in Russian, and that heads containing at least one modifier in their valence lists are specified as [MODIF +], and are specified as [MODIF –] otherwise. The same effect could be achieved in other, perhaps more complex ways, but for lack of space we make this simplifying assumption.

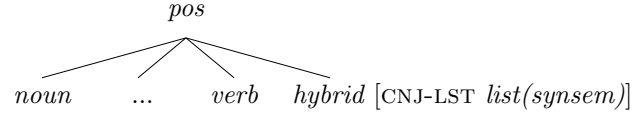
Now, if a HC constituent does not form a standard syntactic and semantic unit, then what category should it have? Note that a hybrid coordination of unlike categories such as [NP i AdvP] does not behave like an NP or an AdvP, e.g. it no longer can be modified by an AP:

- (12) \*[Nikto i nikogda] umnyi étego ne sdelat.  
 nobody<sub>nom</sub> and never intelligent this not do

We propose that HC is best viewed as a hybrid category made up from the categories of the

<sup>2</sup>Whitman (2002, 86) acknowledges that the ellipsis analysis captures all the English data (dubbed ‘mixed-WH interrogatives’), but goes on to argue that a direct coordination analysis is superior on psycholinguistic grounds.

conjuncts. We mirror this intuition by adding a new *pos* that introduces a feature CNJ-LST:



The feature CNJ-LIST collects the synsem values of the conjoined co-arguments. This is done via two non-headed constructions in (13) and (14), over which the idiosyncrasies of HC are specified. In (13) is the base case, where the conjunction marker ‘*i*’ is attached to the rightmost conjunct:

$$(13) \quad \textit{hybr-coord-mark-cx} \rightarrow \left[ \begin{array}{l} \text{SYNS} \left[ \begin{array}{l} \text{CAT} \mid \text{HEAD} \left[ \begin{array}{l} \textit{hybrid} \\ \text{CNJ-LST} \langle \boxed{1} \rangle \end{array} \right] \\ \text{CONT} \mid \text{HOOK} \boxed{2} \\ \text{CRD} + \end{array} \right] \\ \text{DTRS} \left\langle \left[ \begin{array}{l} \text{PHON} \langle i \rangle \\ \text{SYNS} \mid \text{CAT} \mid \text{HEAD} \textit{conj} \end{array} \right], \left[ \begin{array}{l} \text{MODIF} - \\ \text{SYNS} \boxed{1} \mid \text{CONT} \mid \text{HOOK} \boxed{2} \end{array} \right] \right\rangle \end{array} \right]$$

The conjunct’s *synsem* value  $\boxed{1}$  is placed in the list of conjuncts of the hybrid phrase. The conjunct is the semantic daughter of the construction in the sense that the main semantic components are passed on to the mother via HOOK, which is necessary to guarantee that the other conjuncts are headed by the same semantic relation. The boolean feature CRD (Beavers and Sag 2004) identifies if the conjunct is marked with the coordination particle or not, and is used in order to rule out various illegal coordination structures (‘*and X*’, ‘*and X and Y*’, or ‘*and and X*’, for example). By virtue of the Semantic Inheritance Principle, the semantics of the conjuncts always percolate to the mother node.

Regarding coordinators, we also propose that the lexical entry for the conjunction marker ‘*i*’ makes no semantic contribution, and that the possible ranges of interpretation for conjunction are given by the coordination constructions they occur in. Since hybrid coordination does not yield any kind of semantic unit, we do not need to say anything else about it.

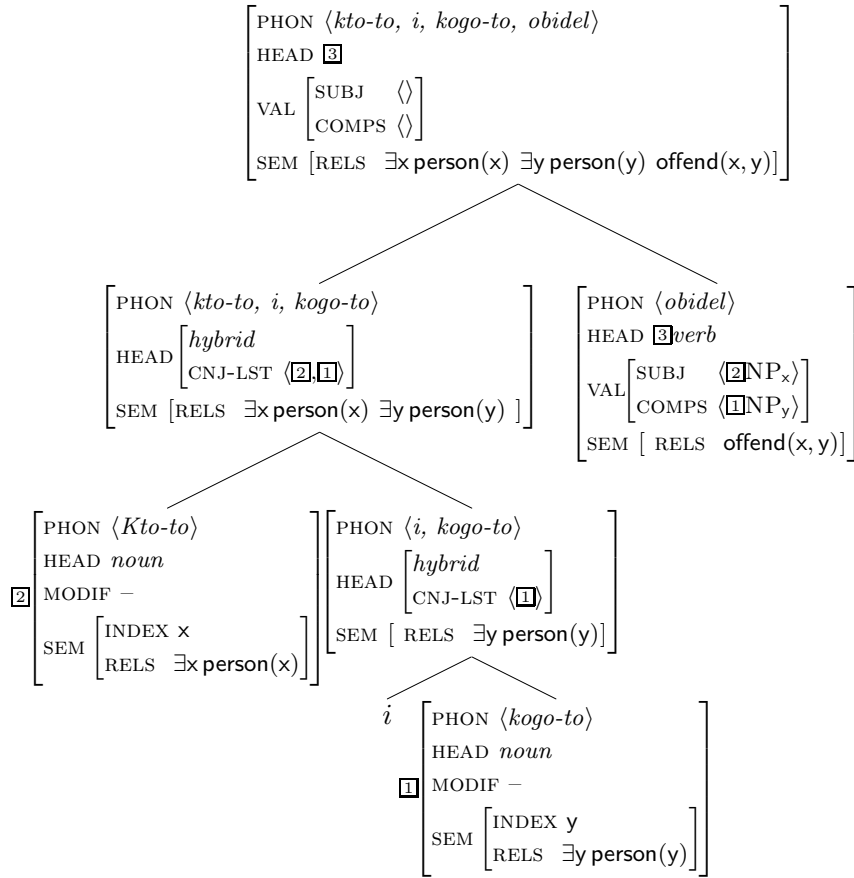
The recursive case for the hybrid coordination construction simply adds more elements to the CNJ-LST. This is formalized in the construction given in (14). Reape’s shuffle ‘ $\circ$ ’ relation allows the occurrence of arguments in any possible order.

$$(14) \quad \textit{hybr-coord-cx} \rightarrow \left[ \begin{array}{l} \text{SYNS} \left[ \begin{array}{l} \text{CAT} \mid \text{HEAD} \left[ \begin{array}{l} \textit{hybrid} \\ \text{CNJ-LST} \langle \boxed{1} \circ \boxed{2} \rangle \end{array} \right] \\ \text{CONT} \mid \text{HOOK} \boxed{4} \end{array} \right] \\ \text{DTRS} \left\langle \left[ \begin{array}{l} \text{MODIF} - \\ \text{SYNS} \boxed{1} \mid \text{CONT} \mid \text{HOOK} \mid \text{RELN} \boxed{3} \\ \text{CRD} - \end{array} \right], \left[ \begin{array}{l} \text{SYNS} \left[ \begin{array}{l} \text{CAT} \mid \text{HEAD} \left[ \begin{array}{l} \textit{hybrid} \\ \text{CNJ-LST} \boxed{2} \end{array} \right] \\ \text{CONT} \mid \text{HOOK} \boxed{4} \mid \text{RELN} \boxed{3} \end{array} \right] \\ \text{CRD} + \end{array} \right] \right\rangle \end{array} \right]$$

The final step is to provide a way by which hybrid coordinate structures can satisfy the valence requirements imposed by subcategorizing heads. This is achieved by a headed construction, typed *hybr-arg-cx*, which maps the elements in CNJ-LST to the members of valence lists:

$$(15) \quad \text{hybr-arg-cx} \rightarrow \left[ \begin{array}{l} \text{SYNS | CAT | VAL} \left[ \begin{array}{l} \text{SUBJ } \langle \rangle \\ \text{COMPS } \langle \rangle \end{array} \right] \\ \text{HEAD-DTR } \boxed{1} \\ \text{DTRS } \left\langle \left[ \begin{array}{l} \text{SYNS | CAT | HEAD} \left[ \begin{array}{l} \textit{hybrid} \\ \text{CNJ-LST } \langle \boxed{2} \oplus \boxed{3} \rangle \end{array} \right] \\ \text{CRD } - \end{array} \right] , \boxed{1} \left[ \text{SYNS | CAT | VAL} \left[ \begin{array}{l} \text{SUBJ } \langle \boxed{2} \rangle \\ \text{COMPS } \langle \boxed{3} \rangle \end{array} \right] \right] \right\rangle \end{array} \right]$$

The feature specification [CRD–] ensures that there must be at least two conjuncts. For illustration of the present account, consider the analysis of (1d), depicted below.



Semantic composition requires no further assumptions because variable binding is done lexically in HPSG, and scope resolution is determined by independent general MRS principles. Both (1d) and the non-coordinate ‘*Kto-to obidel kogo-to*’ obtain the same underspecified representation.

## References

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