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Reconsidering the relations in constructions with non-verbal predicates

1 Introduction

A well-known challenge to any grammatical description is posed by predicative constructions in which there is no overt copular verb interpretable as a syntactic head. Empty categories used to be designed for one or several types of copula. In order to describe the constructions with non-verbal predication in a systematic way we will consider not only the linguistic entities that are involved, but also the syntagmatic relations holding between them. The HPSG formalisation sketched in this contribution allows for encoding the significant distinctions as well as for capturing the linguistic generalisations without postulating any empty categories.

1.1 Relevant linguistic data

In Slavic language family, Russian offers the broadest spectrum of copula-less constructions, comprising not only ascriptive and identificational predication, but also existential, locative and possessive constructions. Representative examples of Russian copula-less predication are given in (ex. 1).

ex. 1 (Russian)

- (a) *On gord rezul'tatami.*
he.NOM.SG.M proud.PRD-ADJ.SG.M results.INST.PL
He is proud of the results.
- (b) *On durak / tolstij / vysokogo rosta.*
he.NOM.SG.M fool.NOM.SG.M / fat.NOM.SG.M / high height.GEN.SG.M
He is a fool / fat / of a high height (i.e. tall).
- (c) *On – brat Ivana.*
he.NOM.SG.M brother.NOM.SG.M Ivan.GEN
He is Ivan's brother.
- (d) *On na sobranii.*
he.NOM at meeting.LOC
He is at a meeting.
- (e) *Za uglom (est') magazin.*
Behind corner.SG.M.INST (is) store.NOM.SG.M
There is a store around the corner.
- (f) *U Kati (est') samovar.*
at Katia.GEN (is) samovar.NOM.SG.M
Katia has a samovar.

While verbs are inherent predicators (ex. 2a), with non-verbal categories this is a *derived* property. Only in certain cases, however, the process of predicate formation is morphologically anchored – as with Russian short adjectives that are exclusively used as predicates (ex. 1a). As (ex. 2b) shows, their attributive use is ungrammatical. Moreover, in present tense indicative mood they can never occur with an overt copula – cf. the ungrammaticality of (ex. 2c) vs. the past tense example containing an overt copula (ex. 2d).

ex. 2 (Russian)

- (a) *On gorditsja / gordilsja rezul'tatami.*
he.NOM.SG.M pride.3SG.PRES/PAST results.INST.PL
He prides / prided himself upon the results.
- (b)* *gord otec*
proud.PRD-ADJ.SG.M father.NOM.SG.M
- (c)* *On est' gord rezul'tatami.*
he.NOM.SG.M is proud.PRD-ADJ.SG.M results.INST.PL
- (d) *On byl gord rezul'tatami.*
he.NOM.SG.M was proud.PRD-ADJ.SG.M results.INST.PL
He was proud of the results.

1.2 Key syntagmatic relations

Following the ontological approach of (Avgustinova and Uszkoreit 2000), we have developed a fine-grained taxonomy of syntagmatic relations holding between the subject (or topic of predication) and the non-verbal predicate in terms of an HPSG-style multiple-inheritance type hierarchy (Figure 1).

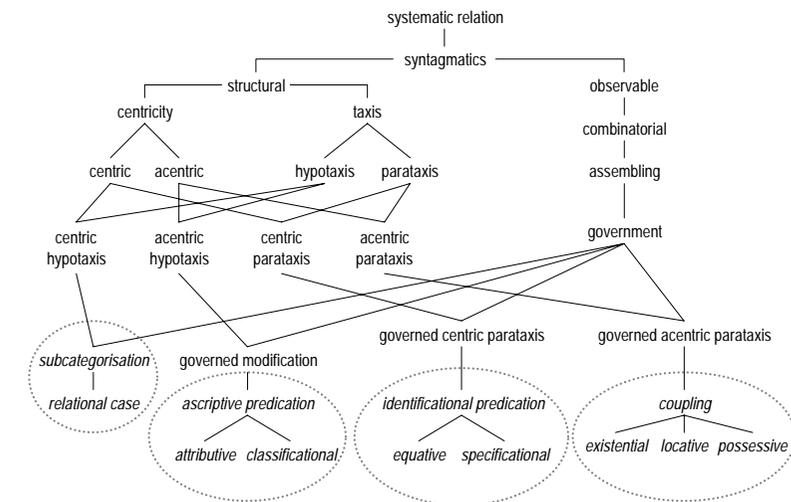


Figure 1: Relevant systematic relations

2 Lexically predicative non-verbal categories

Russian non-verbal predicative categories – i.e. [PRD+] items – are naturally accommodated by the relation of *subcategorisation*, more specifically, relational case (nominative). In (ex. 1a) and (ex. 2d) it holds between the adjectival predicate (*gord* 'proud') and the subject (*on* 'he'). The "copula-less" (ex. 1a) presents the default situation in Russian, which is interpreted as present tense and indicative mood. In fact, the overt copular item (*byl* 'was') in (ex. 2d) is a

functional syntactic category with raising-verb behaviour. On the one hand, it stands in a relation of *inflectional marking* to the adjectival predicate (*gord* 'proud'), supplying the grammatical information on tense (past) and mood (indicative). As for negation, it is realised by the standard negative particle *ne* (ex. 3).

ex. 3 (Russian)

- (a) *On ne gord rezul'tatami.*
he.NOM.SG.M NEG proud.PRD-ADJ.SG.M results.INST.PL
He isn't proud of the results.
- (b) *On ne byl gord rezul'tatami.*
he.NOM.SG.M NEG be.PAST.SG.M proud.PRD-ADJ.SG.M results.INST.PL
He wasn't proud of the results.
- (c) *On ne budet gord rezul'tatami.*
he.NOM.SG.M NEG be.FUT.3SG proud.PRD-ADJ.SG.M results.INST.PL
He won't be proud of the results.

It seems justified, therefore, to assume that the predicative short adjective (*gord* 'proud') is the legitimate syntactic head selecting, on the one hand, a subject (nominative NP) as well as complement(s) (e.g., *rezul'tatami* 'results') and, on the other hand, a specifier in the form of a 'be'-copular item realising the verbal inflection if it is different from present tense and indicative mood. In other words, we are confronted with what can be dubbed *inflectional copula*.

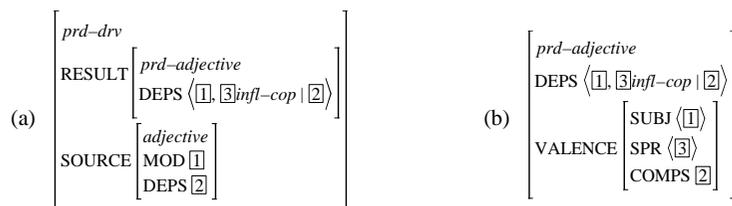


Figure 2: Russian predicative derivation

Being morphologically signalled, the outlined combinatorial potential of Russian short adjectives is derived lexically as a *diathesis alternation* in the sense of (Avgustinova 2001a, b), which is illustrated in (Figure 2a). The initial element $\boxed{1}$ on the DEPS list of the resulting predicative adjective is identified with the MOD value of the source adjective. This encodes the linguistic generalisation that the subject of a *predicatively* used adjective corresponds to the nominal category modified by this adjective when it is used *attributively*. The inflectional copula is introduced as a new dependent $\boxed{3}$ of the predicative adjective. Finally, the dependents list $\boxed{2}$ of the source adjective is appended to the DEPS value of the predicative adjective. (Note that the value of the ARG-ST feature is not mentioned in the constraint because nothing changes on this level.) In accord with the Argument Realisation constraint of (Bouma, et al. 2001), the valence of a predicative adjective is then organised as in (Figure 2b).

3 Copula as assembling operator

The *lexical* derivation of Russian predicative short adjectives presented above contrast in a principled way with the *constructional* treatment of non-verbal predicates if there is no

morphological signalling of the predicative status as in (ex. 1b-f). Here the contingent copular item not only marks verbal inflection but functions as an *assembling operator* putting together two categories that are prototypically non-verbal.

3.1 Ascription

In case of *ascriptive predication* relating in (ex. 1b, ex. 4) a nominal subject (*on* 'he') with a nominal (*durak* 'fool') or adjectival (*tolstyj* 'fat') predicative, the copular item functions as a functor of ascription. In present tense indicative mood, an overt copula seems to be possible, even though the result might need special contextual motivation. This potentially problematic acceptability is indicated by a question mark in (ex. 4b). As (ex. 4c) further shows, semantically loaded verbs like *javljat'sja* ('to appear') or *predstavljat'sja* ('to present oneself as') can be used in the ascriptive construction even in present tense and indicative mood.

ex. 4 (Russian)

- (a) *On durak / tolstyj.*
he.NOM.SG.M fool.NOM.SG.M / fat.NOM.SG.M
He is a fool / fat.
- (b)? *On est' durak / tolstyj.*
he.NOM.SG.M is.PRES.IND fool.NOM.SG.M / fat.NOM.SG.M
- (c) *On javljaetsja / predstavljaetsja durakom / tolstym.*
he.NOM.SG.M appears.3.SG.PRES.RFL fool.INST.SG.M / fat.INST.SG.M
He is/appears a fool / fat.
- (d) *On byl durak / tolstyj.*
he.NOM.SG.M was fool.NOM.SG.M / fat.NOM.SG.M
He was a fool / fat. (~ "individual-level")
- (e) *On byl durakom / tolstym.*
he.NOM.SG.M was fool.INST.SG.M / fat.INST.SG.M
He was a fool / fat. (~ "stage-level")

A *classificational* type of ascriptive predication typically indicates class membership. In (ex. 4) an individual (*on* 'he') is specified as being of a particular type (*durak* 'fool'), i.e. as belonging to a set of individuals with a given property. In contrast, an *attributive* type of ascriptive predication typically indicates quality. In (ex. 4) the relevant property with respect to which the individual (*on* 'he') is specified corresponds to a particular quality (*tolstyj* 'fat'). Intuitively, as soon as a given non-predicative category occurs in the predicate, it acquires the property of subcategorising for a subject (broadly understood as the topic of the predication). Note that the predicative case alternation can be captured in a straightforward way – the copular item (*byl* 'was') assigns either nominative (ex. 4d) or instrumental (ex. 4e) relational case to the predicative noun. It also assigns nominative relational case to the subject (*on* 'he').

The controversial distinction between "stage-level" and "individual-level" predicates seems to be appropriate only for ascriptive predication. In Russian, for instance, "individual-level" can be assumed for constructions with an overt copular item if the case of the nominal or adjectival predicative is nominative (ex. 4d). If it is instrumental, as in (ex. 4e), a "stage-level" interpretation is more suitable.

A step towards grammaticalisation can be observed in Polish ascriptive constructions where the case of predication depends on the category of the predicative. A predicative

adjective is assigned the instrumental case (ex. 5a) while a predicative nominal occurs in nominative (ex. 5c).

ex. 5 (Polish)

- | | | | |
|------|--|----------------------------|-------------------|
| (a) | <i>Kowalski</i> | <i>jest / był / będzie</i> | <i>chory.</i> |
| | Kowalski.NOM.SG.M | is / was / will-be | ill.NOM.SG.M |
| | Kowalski is / was / will be ill. | | |
| (b)* | <i>Kowalski</i> | <i>jest / był / będzie</i> | <i>chorym.</i> |
| | Kowalski.NOM.SG.M | is / was / will-be | ill.INST.SG.M |
| (c) | <i>Kowalski</i> | <i>jest / był / będzie</i> | <i>studentem.</i> |
| | Kowalski.NOM.SG.M | is / was / will-be | student.INST.SG.M |
| | Kowalski is / was / will be a student. | | |
| (d)* | <i>Kowalski</i> | <i>jest / był / będzie</i> | <i>student.</i> |
| | Kowalski.NOM.SG.M | is / was / will-be | student.NOM.SG.M |

A rather under-specified instance of ascriptive predication is observed in constructions relating two adverbials as in (ex. 6)

ex. 6 (Russian)

- | | | | |
|-----|--------------------|-----|--------------------------|
| (a) | <i>Tam tixo.</i> | (b) | <i>Tam bylo tixo.</i> |
| | there quietly | | there was.IMPERS quietly |
| | It is quiet there. | | It was quiet there. |

Semantically, the assembling operator in ascriptive predication (Figure 3) identifies (the INDEX value in) its content with that of the non-verbal (predicative) complement.¹

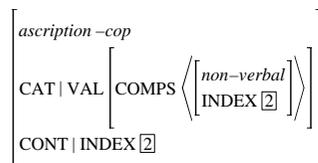


Figure 3: Copula in ascriptive construction

3.2 Identification

In case of *identificational predication* (ex. 1c), a nominal subject is related with a nominal predicative, with the overt copular item functioning as a functor of correspondence. Semantically loaded verbs like *ravnjat'sja* ('to equal'), *značit'* ('to mean'), *sootvetstvovat'* ('to correspond') or *predstavljat' soboj* ('to represent') are possible even in present tense and indicative mood, are illustrated in (ex. 7b,d-f).

¹ Following (Copestake, et al. 1999), the CONTENT value encodes the central predication of a phrase as its KEY, the semantic INDEX of a phrase, and a list of relevant semantic relations RELS.

ex. 7 (Russian)

- | | |
|-----|---|
| (a) | <i>Dva plus dva – četyre.</i> |
| | two.NOM plus two.NOM four.NOM |
| | Two plus two is four. |
| (b) | <i>Dva plus dva ravnjaetsja četyrëm.</i> |
| | two.NOM plus two.NOM equals.RLF four.DAT |
| | Two plus two equals four. |
| (c) | <i>Uspex – den'gi.</i> |
| | success.NOM.SG.M money.PL |
| | Success is money. |
| (d) | <i>Uspex značit den'gi.</i> |
| | success.NOM.SG.M mean3.SG money.PL |
| | Success means money. |
| (e) | <i>Boris predstavljaet soboj brata Ivana.</i> |
| | Boris.NOM.SG.M represent.3.SG self.INST brother.ACC.SG.M Ivan.GEN |
| | Boris represents himself Ivan's brother. |
| (f) | <i>Boris sootvetstvuet bratu Ivana.</i> |
| | Boris.NOM.SG.M correspond.3.SG brother.DAT.SG.M Ivan.GEN |
| | Boris corresponds to Ivan's brother. |

The identificational predication is of type *equative* if it indicates an exclusive identity, as in (ex. 8) between the subject (*Boris* 'Boris') and the nominal predicative (*brat Ivana* 'Ivan's brother'). Note that an overt 'be'-copula may occur in present tense indicative mood, as (ex. 8b) illustrates. Unlike the situation we saw in ascriptive constructions, here the case of predication remains nominative with all overt forms of the copula (ex. 8c).

ex. 8 (Russian)

- | | |
|-----|--|
| (a) | <i>Boris – brat Ivana.</i> |
| | Boris.NOM.SG.M brother.NOM.SG.M Ivan.GEN |
| | Boris is Ivan's brother. |
| (b) | <i>Boris est' brat Ivana.</i> |
| | Boris.NOM.SG.M is brother.NOM.SG.M Ivan.GEN |
| | Boris is Ivan's brother. |
| (c) | <i>Boris byl brat Ivana.</i> |
| | Boris.NOM.SG.M was brother.NOM.SG.M Ivan.GEN |
| | Boris was Ivan's brother. |

In contrast, the *specificational* type of identificational indicates non-exclusive, situational identity (ex. 9). It holds between the subject (*čuvstvo jumora* 'sense of humour') and the respective nominal predicative (*prekrasnym kačestvom* 'great asset').

ex. 9 (Russian)

- | |
|--|
| <i>Čuvstvo jumora bylo prekrasnym kačestvom.</i> |
| sense.NOM.SG.N humour.GEN was.SG.N great.INST.SG.N attribute.INST.SG.N |

The sense of humour was a great asset.

Characteristic of Russian identificational predicative constructions is that even in the “copula-less” variants there is an overt marking of the border between the “topic part” and the “predicative part”. In present tense indicative mood the border between the topic of predication (the subject) and the predicative is typically indicated both intonationally (by a pause) and in orthography by a dash (ex. 1c / ex. 8a, ex. 7a,c). In addition, the demonstrative element *eto* ‘this’ may occur immediately following a dash with or without an overt ‘be’-copula (ex. 10).

ex. 10 (Russian)

- (a) *Boris* – *eto* *brat* *Ivana*.
 Boris.NOM.SG.M DEM brother.NOM.SG.M Ivan.GEN
 Boris (this) is Ivan's brother.
- (b) *Boris* – *eto est' brat* *Ivana*.
 Boris.NOM.SG.M DEM is brother.NOM.SG.M Ivan.GEN
 Boris (this) is Ivan's brother.
- (c) *Boris* – *eto byl brat* *Ivana*.
 Boris.NOM.SG.M DEM was brother.NOM.SG.M Ivan.GEN
 Boris (this) was Ivan's brother.

Therefore, it is justified to regard the dash as a marker that delimits the *right periphery* of the “topic part” in this construction, i.e. to assume a marking relation between the dash and the topic which corresponds here to the subject (*Boris* ‘Boris’). Such an interpretation is supported by the parallel present-tense indicative-mood variant in (ex. 10b) where a copular demonstrative item (*eto* ‘this’) delimits the *left periphery* of the “predication part” in this construction and immediately follows the dash. With the overt copular item (*byl* ‘was’) in the past-tense indicative-mood variant (ex. 8c), the dash is not needed due to a re-arranged assembling. Interestingly, it is also possible to have a “dashed” copular demonstrative item and an overt ‘be’-copular item in the same sentence, as (ex. 10c) illustrates.

Note that the identificational construction in Polish always employs a demonstrative element (*to* ‘this’). The “topic part” in Polish equative identificational constructions (ex. 11) is not delimited by any explicit marker. Therefore, the left periphery of the “predication part” is always marked by the copular demonstrative item (*to* ‘this’). The copular ‘be’ may co-occur with the latter, as illustrated in (ex. 11b).

ex. 11 (Polish)

- (a) *Kowalski to nasz profesor*.
 Kowalski.NOM.SG.M DEM our professor.NOM.SG.M
 Kowalski is our professor.
- (b) *Kowalski to jest nasz profesor*.
 Kowalski.NOM.SG.M DEM is our professor.NOM.SG.M
 Kowalski is our professor.
- (c) *Kowalski to byl nasz profesor*.
 Kowalski.NOM.SG.M DEM was our professor.NOM.SG.M
 Kowalski was our professor.

Semantically, the assembling operator in identificational predication (Figure 4) introduces a key relation of correspondence [5] (supplying an event variable [4]) whose first argument is identified with the index of the subject [3] and its second argument with the index of the non-verbal (predicative) complement [2].

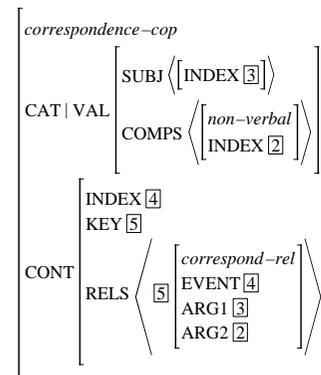


Figure 4: Copula in identificational construction

3.3 Localisation

In *localisation predication* (ex. 1d) / (ex. 12), a nominal subject is related with a predicative in the form of a special or temporal adverbial. The overt copular item functions as a functor of localisation. However, as the double question marks in (ex. 12b) indicate, the overt form of the ‘be’-copula cannot be used in present tense and indicative mood in with the intended localisational interpretation.

ex. 12 (Russian)

- (a) *Magazin rjadom. | Koncert segodnja*.
 store.NOM.SG.M nearby | concert.NOM.SG.M today
 The store is nearby. | The concert is today.
- (b)?? *Magazin est' rjadom. |?? Koncert est' segodnja*.
 store.NOM.SG.M is nearby | concert.NOM.SG.M is today
- (c) *Magazin byl rjadom. | Koncert byl segodnja*.
 store.NOM.SG.M byl nearby | concert.NOM.SG.M byl today
 The store was nearby. | The concert was today.

Semantically loaded verbs like *naxodit'sja* (‘to be located’), *sostojat'sja* (‘to take place’) or *prisutstvovat'* (‘to be present’) are again possible in present tense and indicative mood (ex. 13).

ex. 13 (Russian)

- (a) *Magazin naxoditsja rjadom*.
 store.NOM.SG.M find.3.SG.RFL nearby
 The store is (located) nearby.

- (b) *Koncert sostoitsja segodnja.*
 concert.NOM.SG.M take-place.3.SG.RFL today
 The concert takes place today.
- (c) *On prisutstvuet na sobranii.*
 on.NOM.SG.M be-present.3.SG at meeting
 He is (present) at the meeting.

Semantically, the assembling operator in localisational predication (Figure 5) introduces a key relation of localisation [5] (supplying an event variable [4]) whose first argument is identified with the index of the subject [3] and its second argument with the index of the non-verbal (predicative) complement [2].

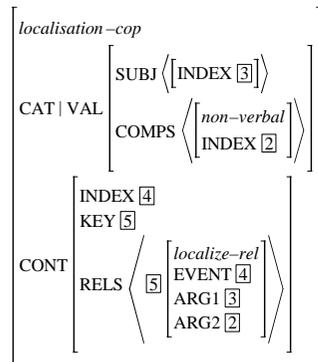


Figure 5: Copula in localisation construction

3.4 Existence

In non-verbal *existential predication* (ex. 1e) / (ex. 14a) the nominal subject referring to the existing entity is again related with a predicative in the form of a localisation adverbial. However, the status of the overt 'be'-item is more substantial, namely, it functions as an existential predicator, which is reflected in the negated present-indicative variant in (ex. 14d). The negation is realised by *net* ('there is not') and the subject acquires the genitive case. The semantically loaded verbal equivalent is the verb *suščestvovat'* ('to exist'), as illustrated in (ex. 14e).

ex. 14 (Russian)

- (a) *Rjadom magazin.*
 nearby store.NOM.SG.M
 There is a store nearby.
- (b) *(Rjadom) est' magazin.*
 (nearby) is store.NOM.SG.M
 There is a store (nearby).
- (c) *(Rjadom) byl magazin.*
 (nearby) was store.NOM.SG.M
 There was a store (nearby).

- (d) *(Rjadom) net magazina.*
 (nearby) is-not store.GEN.SG.M
 There is no store (nearby).
- (e) *(Rjadom) suščestvuet magazin.*
 (nearby) exist.3.SG store.NOM.SG.M
 A store exists (nearby).

Note that when the existential predicator is overt, the localisation adverbial is no longer needed for the well-formedness of the construction, which supports its adjunct status. This optionality is marked by the parenthesis in (ex. 14b-d).

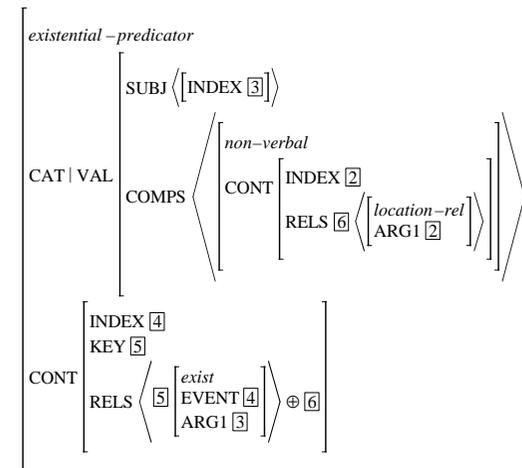


Figure 6: Copula in existential construction

Semantically, the assembling operator in existential predication (Figure 6) introduces a key relation of existence [5] (supplying an event variable [4]) with only one argument the existence of which is actually predicated. This argument is identified with the index of the subject [3]. The semantic contribution [6] of the non-verbal (predicative) complement – i.e. of the locative adverbial [2] – is integrated in (the RELS list of) the content.

3.5 Possession

In non-verbal *possessive predication* (ex. 1d) / (ex. 15a) the nominal subject referring to the possessed entity is related with a predicative in the form of a prepositionally (*u* 'at') marked nominal referring to the possessor. The overt 'be'-item is functioning here as a possessivity predicator, which is reflected in the negated present-indicative variant in (ex. 15d). Again, the negation in present tense and indicative mood is realised by *net* ('there is not') and the subject acquires the genitive case. The semantically loaded verbal equivalent is the verb *imet'sja* ('to be possessed'), as illustrated in (ex. 15e). Unlike the situation in the existential construction, however, the predicative '*u*-marked phrase is obligatory with overt possessivity predicators (ex. 15b-e), which supports its complement status.

ex. 15 (Russian)

- (a) U Kati magazin.
at Katia.GEN store.NOM.SG.M
Katia has a store.
- (b) U Kati est' magazin.
at Katia.GEN is store.NOM.SG.M
Katia has a store.
- (c) U Kati byl magazin.
at Katia.GEN was store.NOM.SG.M
Katia had a store.
- (d) U Kati net magazina.
at Katia.GEN is-not store.GEN.SG.M
Katia doesn't have a store.
- (e) U Kati imeetsja magazin.
at Katia.GEN be-possessed.3.SG.RFL store.NOM.SG.M
Katia owns a store.

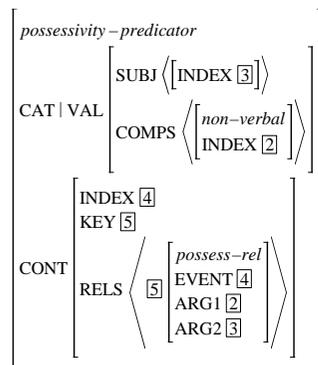


Figure 7: Copula in possessive construction

Semantically, the assembling operator in possessive predication (Figure 7) introduces a key relation of possession [5] (supplying an event variable [4]) whose first argument is identified with the index of the non-verbal (predicative) complement [2] – the possessor – and its second argument with the index of the subject [3] – the possessed entity.

3.6 Functional typology of the copula

To sum up, Russian overt *copula* functions either as a mere *inflectional* (tense-mood) marker² or as an *assembling operator* (Figure 8). The former is typical for constructions involving short adjectives or other lexical predicatives. A crucial difference within the latter has to be made between a *copular functor*, on the one hand, and a *copular predictor*, on the other

² In general, "... a marker is a word that is 'functional' or 'grammatical' as opposed to substantive, in the sense that its semantic content is purely logical in nature (perhaps even vacuous)." (Pollard and Sag 1994), p. 44-45.

hand. In Bulgarian, for instance, the equivalent of the copular functor is 'to be', while the equivalent to the copular predictor is 'to have'.

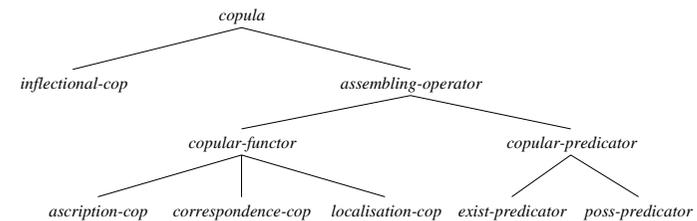


Figure 8: Copula types

The copular functor is negated by the standard negation particle *ne*, and can further be partitioned into *ascription copula*, *correspondence copula* and *localisation copula*. As to the copular predictor, it has two sub-types, namely, *existential predictor* and *possessive predictor*. The negation of the copular predictor has the form *net* in present tense and indicative mood, and presupposes genitive of negation inducing impersonal form of the overt 'be' in (ex. 16).

ex. 16 (Russian)

- (a) (Rjadom) ne bylo magazina.
(nearby) NEG be.IMPERS store.GEN.SG.M
There was no store (nearby).
- (b) U Kati ne bylo magazina.
at Katia.GEN NEG be.IMPERS store.GEN.SG.M
Katia didn't have a store.

Finally, Russian infinitival existential predicates (Avgustinova 2001c) can naturally be accommodated in the proposed type hierarchy, and namely, as more specific instances of the type *exist(ential)-predictor*.

4 The syntactic structure

For the sake of linguistically adequate formalisation, we have distinguished two principally different instances of non-verbal predication. Morphologically signalled predicative categories (e.g., Russian short adjectives) are heads selecting the copula as a specifier (Section 4.1). Otherwise, the copula is the head (Section 4.2) – when it is overt, this trivially results in a *headed phrase*; if there is no overt copula, the result is a special type of *non-headed phrase*.

4.1 Constructions headed by lexically predicative non-verbal categories

In HPSG terms, Russian constructions with an overt *inflectional copula* are headed phrases which can be built as instances of the type *head-all-valence-phrase* (Figure 9). The head daughter is of type *prd-adjective*, as derived lexically in (Figure 2).

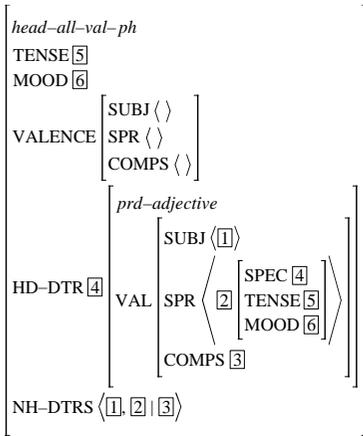


Figure 9: Overt inflectional copula

Alternatively, for a language like Russian, a language-specific constraint on type *clause* has to ensure a *default* present-tense indicative-mood interpretation in the copula-less variant whenever the specifier valence is not discharged, i.e. the VAL|SPR value is a non-empty list.

4.2 Silent vs. overt assembling operator

With prototypical adjectives, nominals or adverbials in predicative use no morphological signalling of the predicative status is available. Therefore, a constructional analysis inspired by the "silent-copula-phrase" approach of (Sag and Wasow 1999) appears to be more adequate than yet another lexical derivation with no observable formal manifestation (Figure 10).

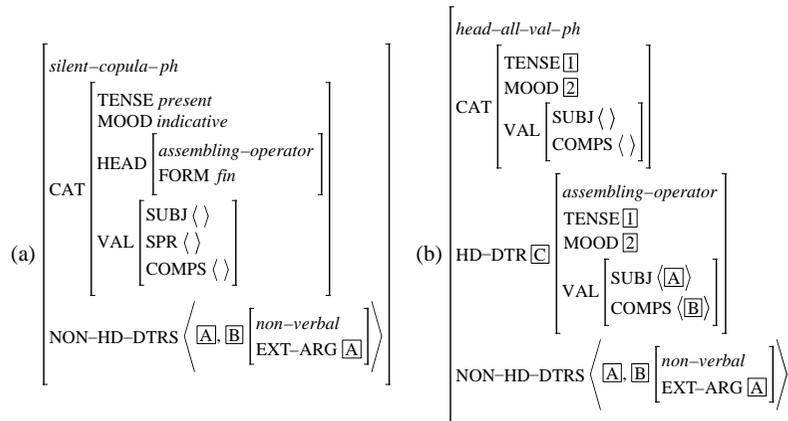


Figure 10: Headless vs. headed construction (silent vs. overt copular operator)

Introducing an *externalised argument* for non-verbal categories to be identified with the subject (Figure 11a) models the intuition of "opening a slot" when these categories are used predicatively. With adjectival and adverbial categories, which are specified for the head feature MOD, the external argument is the modified category (Figure 11b). With nominal categories, however, the external argument has to be explicitly introduced (Figure 11c).

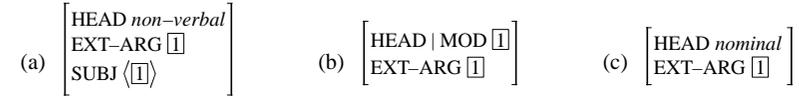


Figure 11: Generalised external argument

5 Conclusions and outlook

The analysis of predicative constructions sketched in this article has three important aspects.

- *Systematicity*: An existing ontology of grammatical dependencies (Avgustinova and Uszkoreit 2000) is exploited for systematically relating variants of predication with and without copula.
- *Concreteness*: The analysis does not need empty categories; neither does it have to stipulate categories, category changes or constituents that are not morphologically signalled.
- *Foundation*: The analysis is embedded in a new version of HPSG, a theoretical model that seeks to combine advantages of unification grammar, dependency grammar and construction grammar. Related future research has to concentrate on drawing more connections to other Slavic languages, inasmuch as the approach presented here certainly allows linguistically adequate modelling of commonalities and minimal differences between related languages. From a more general perspective, it is crucial to consider other languages with non-verbal predicative constructions, e.g., Hebrew. And finally, further development of the "generalised external argument" approach within the theoretical model of HPSG is called for.

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