Instrumental situations: On case marking of copular clauses in Czech

Empirical focus:

- noun phrases in Czech NP-NP copular clauses, similarly to other Slavic languages, can appear either in Nominative (NOM), or in Instrumental (INSTR) case (with one of the noun phrases always being in NOM) (Kopečný, 1958; Uličný, 2000)

(1) Hana byla zpěvačka/zpěvačkou.
Hana was singer.NOM/singer.INSTR
'Hana was a singer.'

Note:

- the distribution of NOM and INSTR varies across Slavic languages[1] and depends on other language differences
- even though the 'compositional' nature of the proposal might be extendable to other Slavic languages as well, we will restrict the analysis to Czech

The goal:

- to provide novel evidence that INSTR is an overt morphological mapping of a complex predicative structure, more precisely of a nominal combined with a situation pronoun (henceforth SP, in the sense of Percus 2000; von Fintel and Heim 2007/2011; Keshet 2008, 2010; Schwarz 2012, among others)
- the proposal follows the intuition previously expressed in the Slavic literature that INSTR contains a secondary-predication-like element (Bailyn and Rubin 1991, Bailyn 2001) which restricts the spatio-temporal property of the primary predication
- but differs from the existing proposals in that it puts the locus of the spatio-temporal restriction into the noun phrase itself instead of tying it to the extended verbal/predicative projection (be it modeled as an aspectual projection of Matushansky 2000, eventive predication of Markman 2008, or a specific topic situation of Geist 2007)
- the shift allows for a combinatorial flexibility in the domain of morphosyntactic representation of copular clauses which yields better empirical coverage
- the core empirical evidence for the proposal comes from copular clauses with overt situation pronouns and case marking of concealed propositions (Heim, 1979; Nathan, 2006; Percus, 2014) and their interaction with SPs overtly realized in the structure

[1] Bailyn (2001); Bailyn and Rubin (1991); Bondaruk (2013); Citko (2008); Geist (2005, 2007); Matushansky (2000, 2009, 2008); Partee (2000); Pereltsvaig (2007); Franks and Pereltsvaig (2004, among others)

Theoretical consequences:

- Slavic morphology: the morphosyntax of INSTR
- beyond Slavic:
  - the semantics of definite descriptions
  - the syntax of copular clauses cross-linguistically

Outline

1. syntactic distribution
2. semantic properties
3. copular clauses with overt SPs
4. proposal
5. predictions
6. conclusions and open questions

Syntactic distribution

- NPs in Czech copular clauses[2] may appear either in NOM, or INSTR (Uličný 2000 and the literature cited there)
- the case 'alternation' is attested in any type of copular clause (contra Rothstein 1986; Bailyn and Rubin 1991; Bailyn and Citko 1999; Pereltsvaig 2001; Matushansky 2008, 2009)
- that is, we find INSTR in predicational, specificational and identity clauses, in the sense of Mikkelsen (2005)'s typology of copular clauses based on semantic types of NPs
- we slightly modify it in that we assume that specificational copular clauses are syntactically reversed identity clauses (Heycock and Kroch 1998, contra Moro 2006)
- crucially, we assume that NPs in identity and specificational clauses are not semantically symmetrical (Percus and Sharvit, 2014): while one may denote an individual (e), the other one denotes an individual concept, i.e., a characteristic function from situations to an individual ($<s, e>$)[3]

(1') *Predicational* (e :: $<e, t>$):

a. Hana byla zpěvačka.
   Hana was singer.NOM

[2]We will not be particularly consistent while using the labels NP and DP. The convention in the syntactic literature on copular clauses is to use NP, while the relevant semantic literature talks about DPs. We will shortly comment on this in the proposal section but in general we will remain mostly agnostic on the internal structure of the nominal phrases.

[3]Though the picture that emerges from the Czech data to be discussed is more complex

b. Hana byla zpěvačkou.
Hana was singer.INSTR
'Hana was a singer.' ✓NOM / ✓INSTR

(2) *Identity* (e :: $<s, e>$):

a. Susana byla vítěz závodu.
Susana.F.NOM was.F winner.M.NOM of-race

b. Susana byla vítězem závodu
Susana.F.NOM was.F winner.M.INSTR of-race
'Susana was the winner of the race.' ✓NOM / ✓INSTR

(3) *Specificational* ($<s, e>$ :: e):

a. Vítěz závodu byla Susana.
winner.M.NOM of-race was.F Susana.F.NOM

b. Vítězem závodu byla Susana
winner.M.INSTR of-race was.F Susana.F.NOM
'The winner of the race was Susana.' ✓NOM / ✓INSTR

- note that in specificational clauses, agreement is with the linearly second NP which is also the NP which must be in NOM
- note also that the reversal – no matter how it is syntactically executed – is inconsequential to the issue of case marking
- for the sake of clarity we will call the NP that must be NOM NP_1 and the NP which may be both NP_2

Interim summary:

- the case alternation is restricted to the NP which does not trigger agreement (NP_2)
- and it is independent of the type of copular clause

Semantic restrictions

- NOM and INSTR are not semantically identical, even though the difference is rather subtle in most contexts[4]
- the difference is reminiscent of the individual-level vs stage-level distinction (Carlson 1977, Kratzer 1995, Geist 1999, Filip 2001, among others), though not exactly [modeled after Geist 1999]

(4) Petra je dcera/ dcerou lékaře.
Petra is daughter.NOM/ INSTR of-doctor
'Petra is a doctor's daughter.' ✓NOM / ✓INSTR

[4]Our understanding is that the difference between NOM and INSTR is sharper in languages like Russian and Polish than it is in Czech. At this point we have only some preliminary thoughts on what the locus of the cross-linguistic difference might be.

- the basic intuition is that while INSTR is more likely to be used as a description of a temporally - more precisely a situationally - restricted property, such as employment, and NOM describes a more general property of NP_1, speakers tend to accept both case forms (Uličný, 2000)

- however, if the context is appropriately restricted, as in (5), we clearly see that INSTR restricts the predicate to a specific temporal interval, here to the play-situation

(5) Scenario: Children role-playing in kindergarten.
   a. #Honzík byl ředitel obchodu.
      Honzík was manager.NOM of-store
   b. Honzík byl ředitelem obchodu.
      Honzík was manager.INSTR of-store
   'Honzík (little Johnny) was the store manager.' #NOM / ✓INSTR

- the examples suggest that the distinction, rather than being of the stage vs. individual level predicate, is more adequately modeled as a restriction on topic time (be it in terms of aspect, eventuality, or a specified topic situation; cf. Matushansky 2000, Filip 2001, Geist 2007, Markman 2008, for Russian)

- this in turn provides insight into the apparent optionality of NOM vs. INSTR in some contexts, as a specified topic situation – or the lack of it – may be accommodated

- the question is how this restriction is realized in the grammar

Towards the analysis:

- in languages like Polish or Russian, INSTR requires an overt copula which seems to suggest that the culprit is the verbal/predicative part of the structure

- we argue that this correlation is a side effect of other properties of the grammar and the real locus of the morphological variation lies elsewhere

Clue: DPs beyond Slavic:

- before we consider more Czech data, notice that a semantically very similar type of distinction is present also in German (and elsewhere)

- the following example from Bavarian (Schwager 2007, see also Kučerová and Hardy 2014), demonstrates the distinction:

(6) Wast du, wea dea/da Redna is?
know you who the$_s$/the$_w$ speaker is
the$_s$: 'Do you know who this speaker is (what's his name/affiliation/...)?'
the$_w$: 'Do you know who is going to speak (e.g. on the next slot)?'

(7) a. Kdo je ten řečník?
who is the speaker.NOM
∼the$_s$: 'Do you know who this speaker is (what's his name/affiliation/...)?'

b. Kdo je tím řečníkem?
who is the speaker.INSTR
∼$\underline{\text{the}_w}$: 'Do you know who is going to speak (e.g. on the next slot)?'

- note that both in Czech and German, the semantic difference is morpho-syntactically localized within the DP, however, in German the semantic distinction affects the morphosyntax of D itself (or its specifier), thus it is not obvious that the morphosyntactic properties are best captured by properties of a Pred or Aspect head

TO-copular clauses:

- if one of the NPs is realized as an anaphoric pronoun TO, literally 'it/that', both NPs must be in NOM

- note: TO is morpho-syntactically invariant, i.e., irrespective of the ϕ-features of its linguistic antecedent, it always surfaces as neuter singular (Kučerová & Bartošová 2014)

WARNING! Czech TO $\neq$ Polish TO

- the Czech pronoun replaces one of the NPs while the Polish TO may cooccur with two NPs in a copular clause (Citko 2008)

(8) Minulé léto Petr chodil s krásnou holkou.
last summer Petr went with beautiful girl
'Last summer Petr dated a beautiful girl.'
a. Byla to zpěvačka.
was.FEM.SG TO singer.NOM
b. *Bylo/a to zpěvačkou.
was.N.SG/FEM.SG TO singer.INSTR
'That/She was a singer.' ✓NOM / *INSTR

- this is surprising because parallel examples with other pronouns or *pro*-drop do not display the same restriction on case

(9) *Personal pronoun:*
a. Ona byla zpěvačka.
she was.FEM.SG singer.NOM
b. Ona byla zpěvačkou.
she was.FEM.SG singer.INSTR
'She was a singer.' ✓NOM / ✓INSTR

(10) Pro-*drop:*
a. Byla zpěvačka.
was.FEM.SG singer.NOM
b. Byla zpěvačkou.
was.FEM.SG singer.INSTR

'She was a singer.' ✓NOM / ✓INSTR

(11) *Demonstrative:*[5]

a. Ta byla zpěvačka.
that.FEM.SG was.FEM.SG singer.NOM

b. Ta byla zpěvačkou.
that.FEM.SG was.FEM.SG singer.INSTR

'She was a singer.' ✓NOM / ✓INSTR

- we argue that the relevant distinction here lies in the semantic properties of the pronouns
- we assume that pronouns, proper names and other definite descriptions can either denote individuals (type e), or individual concepts, i.e., individuals relativized to a situation (type $<s, e>$) (Elbourne, 2005, 2008; Percus and Sharvit, 2014)[6]
- interestingly, in English personal pronouns are systematically ambiguous between these two readings
- the following examples, modeled after Elbourne (2008, 419, (40)), demonstrate the contrast:

(12) a. He [=Francis] is an Italian. INDIVIDUAL
b. He [=whoever the Pope is] is usually an Italian. INDIVIDUAL CONCEPT

- we argue that Czech is not ambiguous in the same way
- instead, personal pronouns, (alone standing) demonstratives and *pro* by default denote individuals
- in contrast, TO denotes an individual concept, i.e., a minimal situation which contains an individual[7]

[5]The examples with demonstratives are somewhat odd without an appropriate contrastive context. For some speakers, adding a relative clause, as in *Ta, na rozdíl od té jeho současné,...* 'That one, in contrast to his current girlfriend,....', improves grammaticality.

[6]Two clarifications are at place: in contrast to Elbourne, we side with Percus and Sharvit (2014) in that both individuals and individual concepts are possible denotations of definite descriptions. Second, for the ease of exposition we use a version of situational semantics in which every argument does not need to combine with a situational characteristic function. In the actual analysis, we will clarify that what we really mean by $<s, e>$ is a DP with a syntactically present situation pronoun, instead of purely having a semantic situational argument.

[7]Since TO is of type $<s, e>$, one might wonder whether these are specificational clauses. If that was the case, then structurally TO would be the NP that might be in INSTR. As the following example show, this is ungrammatical as well.

(i) *Byla tím zpěvačka.
was.FEM.SG TO.INSTR singer.NOM

We are still investigating what the exact structural status of these clauses is but structures with concealed propositions to be discussed later suggest that these are not specificational clauses, and that Mikkelsen's typology either needs to be extended, or fundamentally revised.

- the distinction can be demonstrated on the following examples with 'usually', a quantificational element ranging over (sub)situations:

(13) Petr vždycky chodil s krásnou holkou.
Petr always went with beautiful girl
'Petr always dated beautiful girls.'

a. ✓TO
   (i) Obvykle to byla zpěvačka.
   usually TO was.FEM.SG singer.NOM
   (ii) *Obvykle to byla/o zpěvačkou.
   usually TO was.FEM.SG/N.SG singer.INSTR
   'She was usually a singer.'

b. #*Personal pronoun:*
   (i) #Ona byla obvykle zpěvačka.
   she was.FEM.SG usually singer.NOM
   (ii) #Ona byla obvykle zpěvačkou.
   she was.FEM.SG usually singer.INSTR
   [intended: 'She was usually a singer.']

c. #Pro-*drop:*
   (i) #Obvykle byla zpěvačka.
   usually was.FEM.SG singer.NOM
   (ii) #Obvykle byla zpěvačkou.
   usually was.FEM.SG singer.INSTR
   [intended: 'She was usually a singer.']

d. #*Demonstrative:*
   (i) #Ta byla obvykle zpěvačka.
   that.FEM.SG was.FEM.SG usually singer.NOM
   (ii) #Ta byla obvykle zpěvačkou.
   that.FEM.SG was.FEM.SG usually singer.INSTR
   [intended: 'She was usually a singer.']

(14) **Generalization (v. 1)**

a. if NP_1 is an individual, NP_2 may be INSTR
b. if NP_1 is an individual concept, NP_2 must be in NOM

- interestingly, TO is not restricted to individual concepts but may denote situations or subsituations as well

- the two interpretations correspond to two distinct syntactic positions of TO but crucially neither of them allows NP_2 in INSTR

- note: while the former type of TO is best translated to English as a personal pronoun (*she, he*,...), the latter interpretation always corresponds to 'it'

(15) S Lucií jsme navštívily hrad v New Jersey.
with Lucie are visited castle in New Jersey
'Lucie and I visited a castle in New Jersey.'

a. Byla to katastrofa.
was TO disaster.NOM
b. *Bylo to katastrofou.
was TO disaster.INSTR
c. To byla katastrofa.
TO was disaster.NOM
d. *To bylo katastrofou.
TO was disaster.INSTR
'It[=our visit/that we visited the castle] was a disaster.' ✓NOM / *INSTR

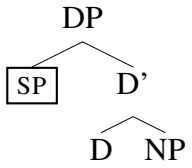
- the common denominator of these two uses of TO is that they are of a situational type[8]
- we argue that it is this very semantic property that underlies the distribution of NOM and INSTR

(16) **Generalization (v. 2)**
If NP_1 is of a situational type, NP_2 must be NOM.

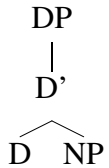
The proposal:

- we argue that INSTR in copular clauses is an overt morphological mapping of a DP that contains a situation pronoun (Percus, 2000; Keshet, 2008, 2010; von Fintel and Heim, 2007/2011; Schwarz, 2012, among others)
- we follow Schwarz (2012) in that there is a difference between semantic situation arguments and syntactically merged situation pronouns
- even though all predicates have a semantic situation argument, a situation pronoun can be merged only in determiners of certain DPs:

(17) a. INSTR:



b. NOM:



NP/DP detour:

- the literature disagrees on the diagnostics that would tease apart DPs from NPs
- the problem is that despite some proposals to the contrary (Winter 2001 etc.), it is not clear what the mapping between the syntactic structure and its semantic interpretation is
- furthermore, not even presence of overt 'determiners' cuts the pie clearly – see, for instance, Partee 1986, Rothstein 2012, and Kučerová 2014 for arguments that in English 'the NPs' – but not proper names – can be semantically predicates

[8] See Bartošová (to appear) for an analysis of TO as being of a flexible semantic type.

- we assume that there is a connection between D and a referential index-like function (Winter, 2001; Borer, 2005) but there might be structural differences between argumental DPs and DPs in copular clauses (for instance, in head-movement properties)
- irrespective of what the exact structure of these phrases turn out to be, proposals such as that of Pereltsvaig (2007) that make a tight connection between the NP/DP distinction and case assignment/interpretation do not seem to be accurate

Back to the future:

- we argue that the crucial difference between the binding of semantic situation arguments and a situation pronoun is that a situation must be bound by 'a situation under discussion', i.e., a contextually restricted (sub)situation (cf. Roberts 2012; von Fintel 1994; Büring 2003, among others)
- in other words, while a semantic argument on a predicate can be enclosed under an existential closure, a situation pronoun requires an anaphoric antecedent[9]
- we argue that the reason TO is always $<s, e>$ is that TO is an overt morphological realization of a structure that contains a situation pronoun (or might even be an overt situation pronoun itself):

(18) TO = $\boxed{\text{SP}}$

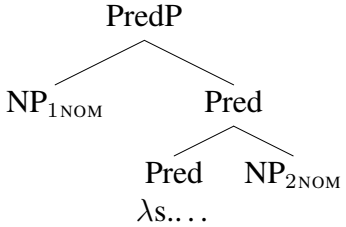
- finally – and here we depart from Schwarz (2012) – we assume that the distribution of situation pronouns is regulated by Situation Economy (Keshet, 2010):[10]

(19) *Situation Economy:*
Rule out a structure α if there is a grammatical alternative to α that has fewer situation pronouns. (Keshet, 2010)

How it works:[11]

1. NOM–NOM:

(20)



✓Situation Economy

[9]We are not sure what the exact denotation of a situation pronoun is. Note that in a system such that of Elbourne (2005, 2008, 2013) or Percus and Sharvit (2014) the work is being done by a (presupposed) referential index. This works well for individual concepts but it does not straightforwardly extend to the other configurations discussed here. For some thoughts on how the denotation of a situation pronoun might relate to Rooth (1992)'s notion of $\sim$ see Chapman (2015).

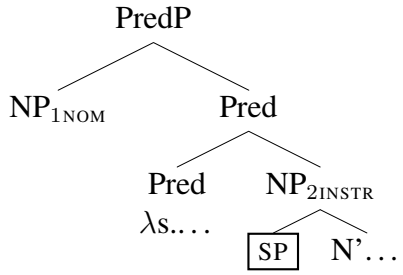
[10]The Situation Economy principle belongs to a larger family of semantic economy principles that operate at the syntax-semantics interface (Heim, 1991; Fox, 1995, 2000; Reinhart, 2006; Kučerová, 2007, among others).

[11]The following trees are for clarity of presentation only, that is, their structure is rather crudely simplified.

- no contextually restricted situation (semantic binding on the predicate only)
- SP excluded by Situation Economy
- ⇒ no INSTR

2. NOM–INSTR:

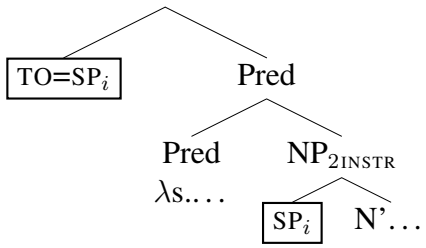
(21) ✓Situation Economy



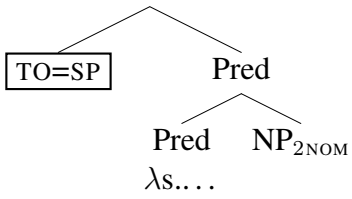
- the matrix predication restricted to a contextually restricted situation
- SP needed
- since a situation pronoun may be merged only within DPs (Schwarz, 2012), an SP is merged in the noun phrase within the predicational part of the structure
- this DP is morphologically realized as INSTR

3. TO–NOM:

(22) a. *Situation Economy



b. ✓Situation Economy



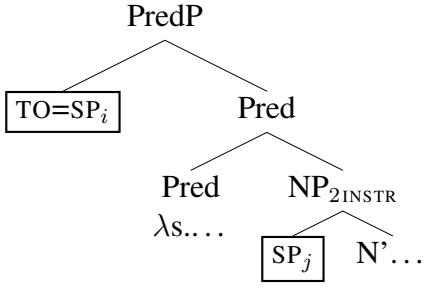
- as in 2., the matrix predication is restricted to a contextually restricted situation
- however, since there is already an SP within TO, the Situation Economy prevents merge of another SP
- ⇒ NP_2 must be in NOM

Predictions:

More than one proposition → more than one SP

- if the distribution of INSTR is restricted by Situation Economy, we expect TO to occur with NP in INSTR if and only if such an NP could have its own SP, independent of the matrix predication:

(23) ✓Situation Economy



- we argue this is possible if such a NP/DP denotes a concealed proposition (Heim, 1979; Nathan, 2006; Percus, 2014)
- that is, if NP_2 corresponds to a complex nominal structure which includes a proposition, this inner proposition can in principle be bound by a contextually restricted situation which is distinct from the contextual restriction on the matrix predicate
- as the following examples with *příčina* 'cause' demonstrate this prediction is borne out:

(24) Petr potkal nádhernou dívku.
Petr met beautiful girl
'Peter met a beautiful girl.'

a. Byla to příčina jeho rozvodu.
was TO cause.NOM his divorce
'It[=the situation involving the girl] was the reason of his divorce.'

b. Bylo to příčinou jeho rozvodu.
was TO cause.INSTR his divorce
'It[=the situation involving the girl] was the reason of his divorce.'

c. To byla příčina jeho rozvodu.
TO was cause.NOM his divorce
'It[=that P. met the girl] was the reason of his divorce.'

d. To bylo příčinou jeho rozvodu.
TO was cause.INSTR his divorce
'It[=that P. met the girl] was the reason of his divorce.' ✓NOM / ✓INSTR

Concealed propositions → INSTR without TO

- since concealed propositions contain a proposition which needs(?) to be situationally bound, if a concealed proposition cannot be parasitic on another SP in the structure, we expect it to combine with SP more often than other types of NPs

- this prediction is confirmed by the Czech National Corpus
- in the Czech National Corpus we found only few dozens of *příčina* in NOM where it could have been in INSTR, while there were 2,519 instances of *příčina* in INSTR
- this distribution sharply contrasts with concealed propositions in TO-copular clauses where only about half of NP_2 denoting concealed propositions is in INSTR

Conclusions and open questions:

Possible extensions to other Slavic languages:

- even though the morpho-syntactic representations may vary, Situation Economy should still hold
- suggestive evidence that this prediction might indeed be correct comes from Polish
- Polish has TO that as far as we know corresponds to a situation argument but syntactically it may cooccur with two NPs in a copular clause
- the prediction is that if there is TO in the structure, NP_2 should be NOM
- without TO, NP_2 can be INSTR
- this is exactly what we find:
- according to Citko (2008) Polish has three types of copular clauses:
  - NP copula NP-INSTR
  - NP TO NP-NOM
  - NP TO copula NP-NOM
- the critical question for us is what the semantic contribution of an overt copula is (see Abelard 1986, Welch 2015, among others, for suggestions that the copula has a definiteness semantic import)

The semantics of definite descriptions

- further evidence against Elbourne (2005, 2008, 2013) that all definite descriptions are individual concepts
- instead we side with Percus and Sharvit (2014); Schwager (2007); Kučerová and Hardy (2014) that only a subset of definite descriptions are individual concepts, while other definite descriptions denote individuals
- open question: does the difference between individuals and individual concepts lie in type flexibility, structural differences, or both?

The structure of copular clauses

- traditionally, scholars believed that there are three or more structurally distinct types of copular clauses (Mikkelsen, Heycock atd.); however, there is a growing body of recent research that suggests that in fact when we look closely at the semantics of the NPs in the structure, it is possible that there are no interesting structural differences at the clausal level; all differences in agreement, case marking and interpretation can be localized as structural of the NPs or their extended functional projections
- our data and proposal provide further evidence for this view but more work is needed, especially in identifying possible and impossible combinations of semantic types and their correlation to the NP/DP distinction

How to assign Case/case?

- some revisions to the existing theories of case assignment might be called for
- that holds for INSTR but also for clauses with two NOMs

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