

Predicative constructions with infinitival and clausal subjects

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Introduction This paper offers a formal syntactic and semantic analysis of those predicative copular constructions in Polish which involve verbal subjects, i.e., subjects having the form of an infinitival phrase (InfP, as in (1)) or a complementiser phrase (CP, see (2)), while the predicative item may be nominal, adjectival (as in (1)–(2)) or adverbial.¹

- (1) Ciekawe jest odpowiadać na znane sobie pytania?
interesting.NOM.SG.N is.3.SG answer.INF on known self.DAT questions
'Is answering questions known to oneself interesting?' (NKJP)
- (2) Że musi ich być na to stać wydaje się być oczywiste.
that must.3.SG them.ACC be.INF on this afford.INF seem.3.SG RM be.INF obvious.NOM.SG.N
'It seems to be obvious that they must be able to afford it.' (NKJP)

Among about 10 different lexemes BYĆ 'be' postulated in Polish structuralist tradition (Saloni and Świdziński 1985, Kallas 1993), there are three 2-argument lexemes with the first argument realised by an InfP and the second by an adverbial phrase (AdvP), an instrumental nominal phrase (NP), or another InfP. The fact that BYĆ may combine with an InfP and an adjectival phrase (AP), as in (1), or with a CP and some other phrase, for instance AP in (2), has apparently not been recorded so far. In generative linguistic works on Polish copular constructions, cases of BYĆ combining with an InfP or a CP are either not mentioned at all (Citko 2004) or mentioned in passing (Bondaruk 2013: 125) but not analysed. The issue of control into an InfP which is the subject of a copular clause has also not been discussed previously.

Data and analysis One reason for treating such verbal arguments of the copula as subjects is the similarity to synonymous constructions with uncontroversial (nominative, agreeing) subjects; compare (1) with (3). Furthermore, the CP in (2) undergoes raising and Polish features only instances of raising to subject. While the existence of clausal subjects in Polish is uncontroversial (these can be coordinated with nominal subjects), an argument from analogy could be ruled out by a stronger argument against treating the InfP as the subject, but we are not aware of such counterarguments.²

- (3) Ciekawe jest odpowiadanie na znane sobie pytania?
interesting.NOM.SG.N is.3.SG answering.NOM.SG.N on known self.DAT questions
'Is answering questions known to oneself interesting?'

Though in all three examples above the predicative complement is an AP (*ciekawe* 'interesting', *oczywiste* 'obvious'), it could also be an instrumental NP (as in (4)–(5)) or – interestingly, given occasional claims that adverbs are never predicates (e.g., Rothstein 2001: 129) – an AdvP (see (6)–(7)) in any degree (positive, comparative, superlative):

- (4) Wtedy odwagą było mówić prawdę. 'At that time to tell the truth was courage.' (NKJP)
then courage.INST.SG.F was.3.SG.N tell.INF truth.ACC
- (5) Moją pierwszą myślą było, że nie powinienem tego podpisać.
my.INST.SG.F first.INST.SG.F thought.INST.SG.F was.3.SG.N that NEG should.1.SG.M this.GEN sign.INF
'My first thought was that I should not sign this.' (NKJP)
- (6) Oczywiście autorowi najtrudniej było uzyskać szczegóły tego ostatniego rozdziału.
obviously author.DAT difficult.ADV.SUP was.3.SG.N get.INF details.ACC this.GEN last.GEN chapter.GEN
'Obviously, to get the details of the last chapter was the most difficult for the author.' (NKJP)
- (7) Maciusiowi bardzo przyjemnie było, że królewski poseł nie mówił w zagranicznym języku.
Maciuś.DAT very pleasant.ADV was.3.SG.N that royal.NOM envoy.NOM NEG spoke in foreign language
'That the royal envoy did not speak in foreign language was very pleasant to Maciuś.' (NKJP)

Just as in standard copular constructions in Polish (involving a nominal subject), the copula in constructions involving a verbal subject is optional and it may be dropped:

- (8) najważniejsze być dobrym premierem 'To be a good PM [is] the most important.' (Google)
important.NOM.SG.N.SUP be.INF good.INST PM.INST
- (9) Najważniejsze, że dojedzie się do celu.
important.NOM.SG.N.SUP that reach.3.SG REFL to destination
'That one will reach the destination [is] the most important.' (NKJP)
- (10) Najtrudniej pogodzić się z tym ludziami młodym.
difficult.ADV.SUP reconcile.INF REFL with this people.DAT young.DAT
'To reconcile with this [is] most difficult for young people.' (NKJP)
- (11) Przykro, że nie udało się uratować sosen. 'That we did not manage to save the pines [is] sad.' (NKJP)
sadly.ADV that NEG managed REFL save.INF pines.GEN

¹'NKJP' and 'Google' mark attested examples from the National Corpus of Polish or found in the Internet.

²The only one that we found in the literature is given in Bondaruk and Szymanek 2007: 75–76 and it is based on the fact that a constituent may be extracted from within such an InfP subject, contrary to the general ban on extraction from subjects. However, in Polish it is possible to extract from uncontroversial subjects (given appropriate information structure and prosody), as in the following example, so this argument is void.

(i) Czyje przyszły dzisiaj zakupy? 'Whose shopping order arrived today?'
whose arrived.3.PL.M today shopping.NOM.PL.M

Moreover, it is increasingly clear that apparently syntactic island constraints are largely a matter of cognition and processing (see, e.g., Hofmeister and Sag 2010 and further work by Hofmeister and colleagues).

The basic syntactic analysis of the above examples as involving an InfP/CP subject, a copula, and an AP/NP/AdvP predicate is complicated by the fact that, as in (6), adverbial predicates may occur with a dative experiencer acting as the controller of the subject InfP. It is worth noting that adverbial predicates differ in their propensity to occur with dative experiencers – for example, CIEKAWIE ‘interesting.ADV’ combines with dative experiencers perhaps marginally, but see the attested (12):

(12) Jako że mieszkam nad samą Odrą, ciekawie mi było o niej poczytać ;)
 as that live.1.SG over self Oder interesting.ADV me.DAT was.3.SG.N about her read.INF
 ‘As I live over the Oder river itself, it was interesting for me to read about it.’ (Google)

Since the dative experiencer acts as a controller of the subject of the InfP, it is an instance of control into a subject – while rare, it was discussed for Balinese in Arka and Simpson 1998. Polish provides independent evidence supporting the need for control into the subject – it also occurs with the verb UDAĆ SIĘ in (11), see the entry in (17) and the f-structure in (27).

Finally, let us consider the agreement patterns displayed in predicative constructions involving a verbal subject. In Polish, it is the subject that drives verbal agreement. When the subject is not nominative (for instance, it is an accusative numeral phrase), the verb displays default agreement – regardless of the number and gender of the subject, the verb appears in the third person singular neuter form (gender is only visible in past tense forms). Such agreement behaviour is also known for clausal subjects attested in Polish (with predicates other than the copula) and it also occurs in predicative constructions – see (1)–(2) (present tense) and (4)–(7) (past tense). It is interesting to note that default agreement, discussed so far only in the context of subject-verb agreement, also affects predicative agreement with adjectives controlled by a verbal subject – they must be in singular number and neuter gender (see (1)–(2)) – other forms result in ungrammaticality.

Syntax The formalisation (verified in an XLE implementation) requires minimal modifications of the IP rules, to allow for CP/InfP as the subject, and AdvP as the predicative complement. The lexicon must be modified by introducing predicative entries for adverbs which also allow dative experiencers (OBJ_{θ} , see (18)). The lexical entry of the copula, (16), is standard – it structure-shares its subject with the subject of the predicative complement ($xCOMP-PRED$ – an NP, AP or AdvP). Since the equation stating that the dative experiencer is the controller of the infinitival subject of the predicative adverb is placed in the adverb’s entry (see (18)), the copula has one two-argument entry (see (16)) and the analysis of control with predicative adverbs is the same regardless of whether the copula is present (as in (6)) or not (see (10)).

Finally, since agreement with predicative adjectives is handled using templates (called inside the adjective), (19) imposes appropriate agreement with verbal agreement targets (clause or infinitive).

The resulting f-structures (sometimes simplified for brevity) are in: (20) for (1), (21) for (2), (22) for (4), (23) for (5), (24) for (6), (25) for (7), (26) for (10), (27) for (11).

Semantics Let us consider semantic representation on the basis of the following constructed example:

(13) Jankowi trudno było wstać. ‘It was difficult for Janek to get up.’
 Janek.DAT difficult.ADV was.3.SG.N get up.INF

We claim that such sentences are ambiguous between episodic (‘stage-level’) and generic (‘individual-level’) readings, in parallel to copular sentences in Polish in general.³ In fact, generic uses are dominant in corpora: various kinds of events are described as *generally* interesting (as in (1), (3)–(4)), difficult (as in (10), (13)), easy, fascinating, important (as in (8), (9)), etc. We assume the following (neo-Davidsonian; Parsons 1990) simplified representations for the two readings:

(14) $\exists s \text{ exp}(s) \wedge \text{exper}(s, j) \wedge \text{prop}(s, \text{difficult}) \wedge \text{theme}(s, \lambda e. \text{getup}(e) \wedge \text{agent}(e, j))$

(15) $Gn \ s [C(j, s)] [\text{exp}(s) \wedge \text{exper}(s, j) \wedge \text{prop}(s, \text{difficult}) \wedge \text{theme}(s, \lambda e. \text{getup}(e) \wedge \text{agent}(e, j))]$

The episodic representation (14) is saying that there was a state s (although tense information is omitted here) being of the *experiencing* kind, with j as the *experiencer*, and the ‘getting-up-by- j ’ event kind (note the λ operator turning properties into kinds; Chierchia 1998: 348–349) being experienced by him as having the *property* of being difficult. Note that it – rightly – does not follow from this representation that getting-up-by- j really occurred or even was attempted. (15) uses Chierchia’s 1995, 1998 generic operator Gn, which may be understood as an intensional version of a universal quantifier with exceptions, and the contextually-provided variable C whose effect is constraining the scope of Gn to relevant situations involving j . In the full paper we present lexical items which give rise to formulae such as (14)–(15), as well as provide compositional derivations of such formulae in Glue Semantics.

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³Consider *Psy są mądre* ‘Dogs are wise’ (with prominent generic interpretation) vs. *Psy są nakarmione* ‘Dogs are fed’ (only episodic).

- (16) $(\uparrow \text{PRED}) = \text{'BE} \langle \uparrow \text{XCOMP-PRED} \rangle \langle \uparrow \text{SUBJ} \rangle$
 $(\uparrow \text{SUBJ}) = \langle \uparrow \text{XCOMP-PRED SUBJ} \rangle$
- (17) $(\uparrow \text{PRED}) = \text{'MANAGE} \langle \uparrow \text{SUBJ} \rangle \langle \uparrow \text{OBJ}_\theta \rangle$
 $(\uparrow \text{OBJ}_\theta) = \langle \uparrow \text{SUBJ SUBJ} \rangle$

- (18) $(\uparrow \text{PRED}) = \text{'DIFFICULT} \langle \uparrow \text{SUBJ} \rangle \langle \uparrow \text{OBJ}_\theta \rangle$
 $[[\langle \uparrow \text{SUBJ CAT} \rangle =_c \text{INF} \wedge \langle \uparrow \text{OBJ}_\theta \rangle = \langle \uparrow \text{SUBJ SUBJ} \rangle] \vee$
 $\langle \uparrow \text{SUBJ COMP-FORM} \rangle]$
 $(\uparrow \text{OBJ}_\theta \text{ CASE}) =_c \text{DAT}$

- (19) PRIPRED-ADJ-CLAUSAL \equiv
 $[(\downarrow \text{SUBJ CAT}) =_c \text{INF} \vee (\downarrow \text{SUBJ COMP-FORM})] \quad (\downarrow \text{CASE}) \in_c \{\text{NOM, INST}\} \quad (\downarrow \text{NUM}) =_c \text{SG} \quad (\downarrow \text{GEND}) =_c \text{N}$

Note: in the f-structures below xc-p is an abbreviation for xcomp-pred

