

**IN FAVOUR OF  
THE RAISING ANALYSIS OF PASSIVISATION**

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## Abstract

This paper presents arguments from Polish in support of the raising analysis of passivisation. It shows that it is preferable to the current mainstream analysis where the passivised verb is treated as the main verb. Arguments for the raising analysis are based on the interaction of passivisation and negation, as well as on coordination facts involving predicative constructions.

## 1 Introduction

In Polish it is possible to coordinate a passive form with a predicative adjective, as in the example below taken from the National Corpus of Polish (NKJP; <http://nkjp.pl/>; Przepiórkowski et al. 2010, 2012):

- (1) Nasz pas                                    jest dobrze zrobiony,                    bezpieczny  
our runway.NOM.SG.M3 is well made.NOM.SG.M3 safe.NOM.SG.M3  
i zarejestrowany                    przez Urząd                    Lotnictwa                    Cywilnego.  
and registered.NOM.SG.M3 by Office.ACC Aviation.GEN Civil.GEN  
'Our runway is well made, safe and registered by the Civil Aviation Office.'  
(NKJP)

In (1) *zrobiony* is a passive form of ZROBIĆ 'make', *bezpieczny* 'safe' is an unambiguous adjective and *zarejestrowany* is a passive form of ZAREJESTROWAĆ 'register', accompanied by a *by*-phrase<sup>1</sup> – *przez Urząd Lotnictwa Cywilnego*.

Sentences such as (1) pose a problem for analyses which treat passive and predicative items in a different way, which seems to be a widely adopted approach to these phenomena at the moment. According to such approaches, sentences such as (1) should not be acceptable, counter to fact.

Currently the standard LFG analysis of the passive seems to be the one which treats the passive form as the main verb (see § 2 for discussion), while the form of BE is a co-head which can contribute some features, but does not have a PRED attribute of its own (see the f-structure in (4), which corresponds to example (2)). By contrast, with predicative items, BE is treated as the main predicate, a raising verb

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<sup>†</sup>We heartily thank both reviewers for their detailed comments. Some of them, especially those of the external reviewer, suggested new important research avenues to follow, as well as indicated some omissions. Unfortunately, given spatial and temporal constraints, we could not satisfactorily respond to some of these comments, but we hope to be able to do so in future work. The research reported here was partially financed by the projects NEKST (<http://nekst.ipipan.waw.pl/>) and CLARIN-PL (<http://www.clarin-pl.eu/en/>).

<sup>1</sup>Note that (1) features a coordination of a passive form without a *by*-phrase (*zrobiony*) and another passive form where the *by*-phrase is present (*zarejestrowany*). Such forms are sometimes referred to as short and long passives, respectively, as in the discussion of Mandarin Chinese passives, e.g. Huang 1999 (thanks are due to Paul Kroeger for drawing our attention to this issue). However, since these two forms can be coordinated in Polish, a unified account of passive is necessary.

which takes a predicative complement,<sup>2</sup> as in (5), the f-structure representation of (3).

(2) Nasz pas jest zarejestrowany przez Urząd Lotnictwa Cywilnego.  
 our runway is registered by Office Aviation Civil  
 ‘Our runway is registered by the Civil Aviation Office.’

(3) Nasz pas jest bezpieczny.  
 our runway is safe  
 ‘Our runway is safe.’

$$(4) \left[ \begin{array}{l} \text{PRED} \quad \text{'REGISTER}(\langle \underline{1}, \underline{2} \rangle) \\ \text{SUBJ} \quad \underline{1} \left[ \text{PRED} \text{'RUNWAY'} \right] \\ \text{OBL}_{ag} \quad \underline{2} \left[ \text{PRED} \text{'CAO'} \right] \\ \text{PASSIVE} \quad + \end{array} \right] \quad (5) \left[ \begin{array}{l} \text{PRED} \quad \text{'BE}(\langle \underline{2} \rangle) \underline{1} \\ \text{SUBJ} \quad \underline{1} \left[ \text{PRED} \text{'RUNWAY'} \right] \\ \text{XCOMP} \quad \underline{2} \left[ \begin{array}{l} \text{PRED} \text{'SAFE}(\langle \underline{1} \rangle) \\ \text{SUBJ} \quad \underline{1} \end{array} \right] \end{array} \right]$$

As these f-structures show, if passive and predicative complements have different analyses, it is not possible to account for (1) which involves a coordination of these phenomena. In order to fill this gap, a unified analysis must be adopted.

The following sections present LFG analyses of passive (§ 2) as well as of predicative items (§ 3). These are followed by a discussion of arguments showing which of the analyses of passive (§ 4) is appropriate to account for Polish data. The next section (§ 5) aims to establish which analysis of predicative items should be adopted, taking into account the possibility of a unified analysis of the passive and all kinds of predicative complements. The last section (§ 6) concludes this paper.

## 2 LFG Analyses of Passive

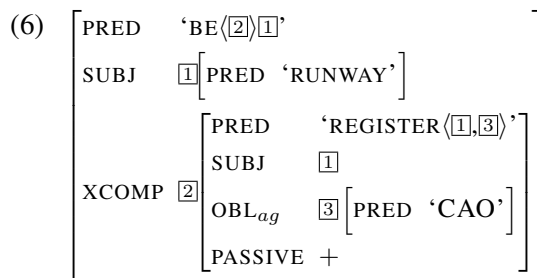
There are two analyses of passive in LFG; they differ considerably with respect to the f-structure representation they provide.

One analysis treats the passive verb form as the main verb, while the form of BE is a co-head which can contribute features such as tense, aspect, etc., but does not have a PRED value of its own. As it involves one clause, it can be referred to as the monoclausal or flat analysis – see the f-structure in (4). This analysis was used in Bresnan 1982b for Malayalam (see Figure 1.3b on page 13 there); it is widely used nowadays in the analyses of other languages, including English (e.g. Bresnan 2000, p. 78, ex. (12), Dalrymple 2001, p. 209, ex. (33)).

The other analysis, used in Bresnan 1982b for English (see Figure 1.4b on page 15 there), treats BE as the main verb which takes the passive verb form as

<sup>2</sup>In (5) the predicative adjective corresponds to an open grammatical function, XCOMP, as this seems to be the dominating analysis of such complements. It is not, however, the only possibility – see § 3 for discussion of alternative analyses.

a complement (currently open, XCOMP; VCOMP in Bresnan 1982b). Since this analysis involves two clauses, main (headed by BE) and embedded (headed by the passive form), it is sometimes referred to as a biclausal analysis of the passive: see the f-structure in (6), which provides a representation of example (2) using this analysis.



### 3 LFG Analyses of Predicative Items

Dalrymple et al. 2004 provides an overview of possible analyses of predicative items in LFG, discussing three different analyses: one where the predicative item acts as the main predicate and two where the copula takes the predicative item as a complement, open (XCOMP) or closed (PREDLINK).

The analysis where the predicative item is the main predicate (this possibility was suggested in LFG in Andrews 1982) can be applied in languages where the copula is not obligatory – in this way, unless there is some independent motivation, there is no need to introduce an f-structure representation of the covert copula. Polish belongs to such languages – the f-structure in (10) would correspond to (7) with the copula omitted (*Nasz pas bezpieczny*). However, there are restrictions on when the copula can be omitted – utterances without a copula can only be interpreted as referring to present tense. In (7), the presence of the copula does not affect the meaning of the utterance. By contrast, in (8)–(9) the copula is obligatory to express future and past tense – when removed, the meaning of these examples changes to present tense, as in (7).<sup>3</sup>

<sup>3</sup>Since adjectives seem to uniformly agree with their subjects in gender and number, the presence of the attributes NUM and GEND on the adjective (and not just within its SUBJ value) is probably redundant. On the other hand, there are various constructions (also some types of copular constructions) where adjectives do not agree in case with the corresponding nominal, so the separate CASE attribute on the adjective is motivated.

- (7) Nasz pas (jest) bezpieczny.  
our runway is safe  
'Our runway is safe.'
- (8) Nasz pas #(będzie) bezpieczny.  
our runway will be safe  
'Our runway will be safe.'
- (9) Nasz pas #(był) bezpieczny.  
our runway was safe  
'Our runway was safe.'
- (10) 
$$\left[ \begin{array}{l} \text{PRED 'SAFE'} \langle \underline{1} \rangle \\ \text{SUBJ } \langle \underline{1} \rangle \left[ \begin{array}{l} \text{PRED 'RUNWAY'} \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right] \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right]$$

The remaining analyses assume an f-structure representation of the copula; if the copula is absent on the surface, its f-structure representation may be introduced constructionally, by equations attached to an appropriate c-structure rule. Prototypically it is the raising verb BE, which takes a complement which can be open or closed. The use of an open predicative complement XCOMP makes it possible to conveniently account for agreement between the predicative complement and the item predicated of. This is because the latter is structure-shared with the subject of the open complement, making it possible to handle agreement locally: the predicative complement agrees in relevant features with its own subject. See (11), an extended version of the f-structure (5) (corresponding to example (3)) with agreement features represented explicitly.

- (11) 
$$\left[ \begin{array}{l} \text{PRED 'BE'} \langle \underline{2} \rangle \langle \underline{1} \rangle \\ \text{SUBJ } \langle \underline{1} \rangle \left[ \begin{array}{l} \text{PRED 'RUNWAY'} \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right] \\ \text{XCOMP } \langle \underline{2} \rangle \left[ \begin{array}{l} \text{PRED 'SAFE'} \langle \underline{1} \rangle \\ \text{SUBJ } \langle \underline{1} \rangle \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right] \end{array} \right]$$
- (12) 
$$\left[ \begin{array}{l} \text{PRED 'BE'} \langle \underline{2} \rangle \langle \underline{1} \rangle \\ \text{SUBJ } \langle \underline{1} \rangle \left[ \begin{array}{l} \text{PRED 'RUNWAY'} \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right] \\ \text{PREDLINK } \langle \underline{2} \rangle \left[ \begin{array}{l} \text{PRED 'SAFE'} \\ \text{CASE NOM} \\ \text{NUM SG} \\ \text{GEND M3} \end{array} \right] \end{array} \right]$$

The last analysis involves PREDLINK, a closed predicative complement proposed in Butt et al. 1999. Accounting for agreement under this analysis is considerably more difficult; this is because agreement is not local, as the item predicated of is not the subject of the predicative item. On the other hand, such agreement may be handled using more complicated constraints or additional attributes, as shown in § 5.4.2. However, this PREDLINK analysis has a significant advantage over the XCOMP analysis – it can account for cases where the predicative complement has a subject of its own, as with clauses (as in (13)) or gerunds (see (14)).

- (13) The problem is that they appear. (Dalrymple et al. 2004, p. 189, ex. (1d))

(14) The problem is their appearing. (Dalrymple et al. 2004, p. 189, ex. (1e))

Under the XCOMP analysis malformed f-structures are produced for such complements: the predicative complement has its own subject, while the control equation structure-shares the item predicated of with the subject of the predicative item, which results in a violation of the consistency condition (clash of PRED values). By contrast, the analysis which involves the closed complement PREDLINK does not suffer from such problems. See § 5.1 for a discussion of an example from Polish.

## 4 Which Analysis of Passive for Polish?

On the basis of Polish negation phenomena, this section argues that passive should be analysed as consisting of two clauses: the main clause, where a form of BE is the main verb, and the embedded clause, which contains the passive verb form.

### 4.1 Negation in Polish

In Polish, verbal negation is arguably a prefix on the verb, despite the fact that it is orthographically separated from verbal forms by a space; various arguments for such a stance are given in Kupść and Przepiórkowski 2002. This prefix is syntactically and semantically active: it spurs the genitive of negation (Przepiórkowski 2000) and licences *n*-words. The phenomenon of licensing such words is often referred to as negative concord – this is because while *n*-words themselves have a negative meaning, they are normally licensed only in the presence of negation.<sup>4</sup> An LFG analysis of genitive of negation is provided in Patejuk and Przepiórkowski 2014b; the same mechanism can be used for the licensing of *n*-words.

### 4.2 Two Places to Host Negation

In Polish, there are two places where negation can be hosted in passive constructions: on the form of the verb BE and on the passive form, as in the example below:

(15) Ani jedno spotkanie nie było nieobsadzone przez sędziego.  
not even one meeting NEG be NEG.supervised by referee  
'Not even one meeting was not unsupervised by a referee.' (NKJP)

Let us consider how a simplified version of this sentence (*spotkanie* 'meeting' instead of *ani jedno spotkanie* 'not even one meeting') would be represented assuming different analyses of passive presented in § 2:

<sup>4</sup>See Przepiórkowski and Kupść 1999 and Richter and Sailer 1999 for more details and for HPSG analyses of negative concord in Polish.

- (16) 
$$\left[ \begin{array}{l} \text{PRED} \quad \text{'SUPERVISE}\langle\boxed{1},\boxed{2}\rangle\text{' } \\ \text{SUBJ} \quad \boxed{1}\left[ \text{PRED 'MEETING'} \right] \\ \text{OBL}_{ag} \quad \boxed{2}\left[ \text{PRED 'REFEREE'} \right] \\ \text{NEG} \quad + \\ \text{PASSIVE} \quad + \end{array} \right]$$
- (17) 
$$\left[ \begin{array}{l} \text{PRED} \quad \text{'BE}\langle\boxed{2}\rangle\boxed{1}\text{' } \\ \text{SUBJ} \quad \boxed{1}\left[ \text{PRED 'MEETING'} \right] \\ \text{XCOMP} \quad \boxed{2} \left[ \begin{array}{l} \text{PRED} \quad \text{'SUPERVISE}\langle\boxed{1},\boxed{2}\rangle\text{' } \\ \text{SUBJ} \quad \boxed{1} \\ \text{OBL}_{ag} \quad \boxed{2}\left[ \text{PRED 'REFEREE'} \right] \\ \text{NEG} \quad + \\ \text{PASSIVE} \quad + \end{array} \right] \\ \text{NEG} \quad + \end{array} \right]$$

While (17) is capable of representing negation in two different places (main clause and embedded clause), this is not possible in (16). As a result, under the flat analysis, where the passive form is the main verb, the f-structure representation of the following sentences would be identical to the f-structure of (15) provided in (16):

- (18) Ani jedno spotkanie nie było obsadzone przez sędziego.  
not even one meeting NEG be supervised by referee  
'Not even one meeting was not supervised by a referee.'
- (19)\*Ani jedno spotkanie było nieobsadzone przez sędziego.  
not even one meeting be NEG.supervised by referee  
'Not even one meeting was unsupervised by a referee.'

Clearly, the meaning of (15) is different from (18) and (19) – the difference is fundamental as (15) (which implies that all meetings were supervised by a referee) is the opposite of (18) (which implies that no meeting was supervised by a referee). While (19) is ungrammatical because of the presence of *ani*, an *n*-word which is not licensed in this syntactic context (see § 4.3 for discussion), its meaning would be equivalent to that of (18) if *ani* were removed from both sentences.

However, under the raising analysis of the passive, where BE is the main predicate which takes the passive form as an argument (open, XCOMP), the difference between sentences (15), (18) and (19) is reflected in their f-structures (17), (20) and (21), respectively.

(20)	<table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">PRED</td> <td style="padding-left: 10px;">‘BE&lt;2&gt;1’</td> </tr> <tr> <td style="padding-right: 10px;">SUBJ</td> <td style="padding-left: 10px;">1 [PRED ‘MEETING’]</td> </tr> <tr> <td style="padding-right: 10px;">XCOMP</td> <td style="padding-left: 10px;">2 [ <table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">PRED</td> <td style="padding-left: 10px;">‘SUPERVISE&lt;1,2&gt;’</td> </tr> <tr> <td style="padding-right: 10px;">SUBJ</td> <td style="padding-left: 10px;">1</td> </tr> <tr> <td style="padding-right: 10px;">OBL<sub>ag</sub></td> <td style="padding-left: 10px;">2 [PRED ‘REFEREE’]</td> </tr> <tr> <td style="padding-right: 10px;">PASSIVE</td> <td style="padding-left: 10px;">+</td> </tr> </table> </td> </tr> <tr> <td style="padding-right: 10px;">NEG</td> <td style="padding-left: 10px;">+</td> </tr> </table>	PRED	‘BE<2>1’	SUBJ	1 [PRED ‘MEETING’]	XCOMP	2 [ <table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">PRED</td> <td style="padding-left: 10px;">‘SUPERVISE&lt;1,2&gt;’</td> </tr> <tr> <td style="padding-right: 10px;">SUBJ</td> <td style="padding-left: 10px;">1</td> </tr> <tr> <td style="padding-right: 10px;">OBL<sub>ag</sub></td> <td style="padding-left: 10px;">2 [PRED ‘REFEREE’]</td> </tr> <tr> <td style="padding-right: 10px;">PASSIVE</td> <td style="padding-left: 10px;">+</td> </tr> </table>	PRED	‘SUPERVISE<1,2>’	SUBJ	1	OBL <sub>ag</sub>	2 [PRED ‘REFEREE’]	PASSIVE	+	NEG	+
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In (15) there are two instances of negation: on BE and on the passive form – this is reflected in its f-structure provided in (17), where negation is present in the main clause headed by BE as well as in its passive complement. By contrast, in (18) and (19) negation is present in only one place, either on BE, as shown in the f-structure in (20) (negation in the main clause), or on the passive verb form, as in (21) (negation in the embedded clause). Such a representation, unlike the flat one, not only makes it possible to reflect the difference in semantics of these sentences ((15), where negation occurs in two places, is the opposite of (18) and (19), where negation is used only once), but also to account for the differences in *n*-word licensing, which is the topic of the next subsection.

### 4.3 Licensing of *n*-words

#### 4.3.1 Negative Concord in Polish

In Polish there are words which can only occur when negation is available in the relevant domain – such words are known as *n*-words. These include NIKT ‘nobody’, NIC ‘nothing’, NIGDY ‘never’, NIGDZIE ‘nowhere’, NICZYJ ‘nobody’s’ (an adjective, as in *niczyja książka* ‘nobody’s book’), ŻADEN ‘no’ (an adjective, as in *żadna książka* ‘no book’) and ANI ‘neither/nor’ (a conjunction, as in *ani Antek, ani Eryk* ‘neither Antek nor Eryk’) or ‘not even’ (as in (15): *ani jedno* ‘not even one’).

Consider the following examples:

- |      |                       |        |         |         |        |
|------|-----------------------|--------|---------|---------|--------|
| (22) | Nikt                  | *(nie) | odszedł | głodny. |        |
|      | nobody.NOM            | NEG    | left    | hungry  |        |
|      | ‘Nobody left hungry.’ |        |         |         | (NKJP) |



- (23) \*(Nie) chcemy robić nikomu trudności.  
 NEG want make.INF nobody.DAT trouble  
 ‘We do not want to make any trouble for anybody’. (NKJP)

While (22)–(23) show that negation must be present for a sentence containing an *n*-word to be grammatical, (23) additionally demonstrates that negation does not have to be local to the predicate which has an *n*-word as a dependent: in (23) negation is present on the main verb (the control verb *chcemy* ‘want’), while the *n*-word *nikomu* is a dependent of *robić* – see the f-structure in (25).

$$(24) \left[ \begin{array}{l} \text{PRED 'LEAVE(1)'} \\ \text{SUBJ 1 [PRED 'NOBODY']} \\ \text{XADJ } \left\{ \begin{array}{l} \text{[PRED 'HUNGRY(1)']} \\ \text{SUBJ 1} \end{array} \right\} \\ \text{NEG +} \end{array} \right]$$

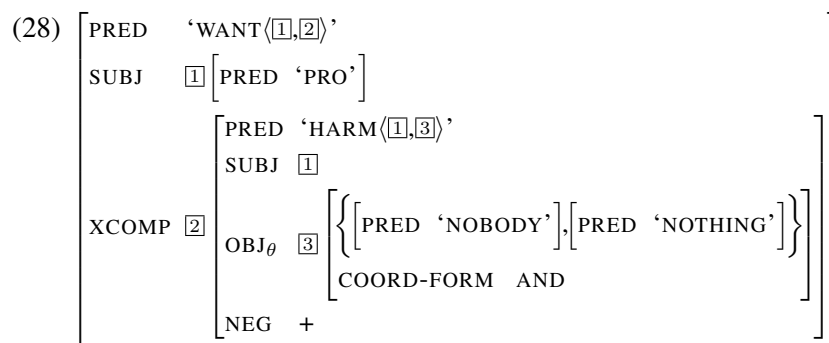
$$(25) \left[ \begin{array}{l} \text{PRED 'WANT(1,2)'} \\ \text{SUBJ 1 [PRED 'PRO']} \\ \text{XCOMP 2 } \left[ \begin{array}{l} \text{PRED 'MAKE(1,3,4)'} \\ \text{SUBJ 1} \\ \text{OBJ 3 [PRED 'TROUBLE']} \\ \text{OBJ}_\theta \text{ 4 [PRED 'NOBODY']} \end{array} \right] \\ \text{NEG +} \end{array} \right]$$

While *n*-words are negative in the sense that they express negation as standalone answers to questions (*Kto przyszedł? Nikt.* ‘Who came? Nobody.’), they do not contribute additional negation when occurring in the scope of negation. So the following sentence containing sentential negation (*nie*) and three *n*-words (*nikt*, *nigdy*, *niczego*) has a single-negation (not double- or quadruple-negation) meaning.

- (26) Nikt nigdy niczego mi nie dał.  
 nobody.NOM never nothing.GEN me NEG gave  
 ‘Nobody has ever given me anything.’ (NKJP)

So far it has been demonstrated that the *n*-word must be in scope of negation – negation must be local (as in (24), which corresponds to (22)) or higher in the structure than the *n*-word (see (25) for (23)). To illustrate this, consider another example, (27), where negation is local to the infinitival argument:

- (27) (\*Nigdy) chcemy nie szkodzić niczemu i nikomu.  
 never want NEG harm nothing.DAT and nobody.DAT  
 ‘We want to do no harm to anything or anybody.’ (NKJP)



In (27), the coordinate phrase consisting of *n*-words, *niczemu i nikomu*, is licensed because it is in the scope of the sentential negation (which is local to the verb on which this phrase depends; see (28)). However, when the *n*-word *Nigdy* is present in (27), the sentence is ungrammatical. This is because *Nigdy* is not in the scope of sentential negation (it would be a dependent of *chcemy*, so it would be in a higher clause than *nie*, which belongs to *szkodzić*) – it cannot be licensed in this environment.

### 4.3.2 Negative Concord in Passives

Let us now proceed to the issue of how the licensing of *n*-words is affected by the choice of the analysis of the passive. Consider example (29) repeated from (15):

- (29) Ani jedno spotkanie nie było nieobsadzone przez sędziego.  
 not even one meeting NEG be NEG.supervised by referee  
 ‘Not even one meeting was not unsupervised by a referee.’ (NKJP)

Two variants of f-structures corresponding to (29) are provided in (16) (flat analysis where the passive form is treated as the main verb) and (17) (analysis where BE is the main verb taking the passive form as an open complement). As discussed in § 4.2, under the flat analysis sentences (29), (18) and (19) would have an identical f-structure representation, shown in (16). As a result, the flat analysis of the passive does not account for the contrast in semantics between these sentences and it is incapable of licensing *n*-words appropriately – according to the f-structure in (16), (19) should be as grammatical as the remaining two sentences. This is not the case, however, because in (19) negation is placed only on the passive form, so the *n*-word *ani* remains outside of its scope (it belongs to the f-structure of *spotkanie*), as shown in (21), the f-structure which uses the raising analysis of the passive.

Let us consider another example, (30), where negation is present only on the passive form, not on the form of BE. In this context *nikogo*, the *n*-word which is the dependent of the passive form, is licensed, while the other *n*-word, *Nigdy*, which is a dependent of *był*, is not licensed – its presence results in ungrammaticality.

- (30) (\*Nigdy) obiekt był niekontrolowany przez nikogo.  
 never site was NEG.controlled by nobody  
 ‘The site was uncontrolled by anybody.’ (NKJP)

Again, this contrast cannot be accounted for under the flat analysis, see the f-structure in (31): according to this f-structure both *n*-words are in the scope of negation (locally) and therefore should be licensed, counter to fact.

However, the raising analysis produces the f-structure in (32) for (30), which makes it possible to distinguish between the two varieties of negation and correctly decide which *n*-word is licensed. According to (32) *Nigdy* is outside of the scope of negation as it belongs to the main clause while negation is placed in the open complement containing the passive form. In this context only *nikogo* is licensed as the dependent of the passive form which is negated, as indicated in (30).

$$(31) \left[ \begin{array}{l} \text{PRED} \quad \text{'CONTROL} \langle \underline{1}, \underline{2} \rangle \text{' } \\ \text{SUBJ} \quad \underline{1} \left[ \text{PRED} \quad \text{'OBJECT'} \right] \\ \text{OBL}_{ag} \quad \underline{2} \left[ \text{PRED} \quad \text{'NOBODY'} \right] \\ \text{NEG} \quad + \\ \text{PASSIVE} \quad + \end{array} \right]$$

$$(32) \left[ \begin{array}{l} \text{PRED} \quad \text{'BE} \langle \underline{2} \rangle \underline{1} \text{' } \\ \text{SUBJ} \quad \underline{1} \left[ \text{PRED} \quad \text{'OBJECT'} \right] \\ \text{XCOMP} \quad \underline{2} \left[ \begin{array}{l} \text{PRED} \quad \text{'CONTROL} \langle \underline{1}, \underline{3} \rangle \text{' } \\ \text{SUBJ} \quad \underline{1} \\ \text{OBL}_{ag} \quad \underline{3} \left[ \text{PRED} \quad \text{'NOBODY'} \right] \\ \text{NEG} \quad + \\ \text{PASSIVE} \quad + \end{array} \right] \end{array} \right]$$

## 5 A Unified Raising Analysis?

In order to account for coordination of a predicative adjective and a passive form such as shown in (1), a common analysis of these phenomena must be adopted.

The previous section, § 4, demonstrated on the basis of arguments from negation (semantics, *n*-word licensing) that a raising analysis of the passive should be adopted instead of the flat analysis where the passive form is treated as the main verb. For this reason, the analysis which treats the predicative item as the main predicate is not taken into consideration as it is incompatible with the raising analysis.

As discussed in § 3, there are two analyses of predicative complements which use a raising verb as the main verb: one involves an open complement (XCOMP, as in (11), the f-structure corresponding to (3)), while the other involves a closed complement (PREDLINK, see (12) for comparison). The aim of this section is to decide which of these analyses should be adopted for Polish.

## 5.1 Gerunds as Predicative Complements

(33) is an attested example from Polish which uses a gerund as a predicative item. As mentioned in § 3, such sentences cannot be accounted for under the analysis which treats predicative items as open (such as the XCOMP one). This is because gerunds have their own subject, as shown in the f-structure in (34), which corresponds to the following fragment of (33): *zrozumieniem cudzych przeżyć*.

(33) Empatia jest zrozumieniem cudzych przeżyć.  
 empathy.NOM.SG.F is understanding.INST.SG.N others' experiences  
 'Empathy is understanding others' experiences.' (NKJP)

(34) 
$$\left[ \begin{array}{l} \text{PRED 'UNDERSTAND'} \langle \text{1}, \text{2} \rangle \\ \text{SUBJ } \text{1} \left[ \begin{array}{l} \text{PRED 'PRO'} \end{array} \right] \\ \text{OBJ } \text{2} \left[ \begin{array}{l} \text{PRED 'EXPERIENCE'} \\ \text{ADJ } \left\{ \left[ \text{PRED 'OTHER'} \right] \right\} \end{array} \right] \end{array} \right]$$

The f-structure in (35) uses the open complement analysis, which results in inconsistency due to the fact that the item predicated of (*Empatia*) is structure-shared with the subject of the predicative item, which, as shown in (34), has its own subject (filled by an implicit argument) – there is a clash of values of PRED of the gerund (PRO and EMPATHY at the same time).

(35)\* 
$$\left[ \begin{array}{l} \text{PRED 'BE'} \langle \text{2} \rangle \text{1} \\ \text{SUBJ } \text{1} \\ \text{XCOMP } \text{2} \left[ \begin{array}{l} \text{PRED 'UNDERSTAND'} \langle \text{1}, \text{3} \rangle \\ \text{SUBJ } \text{1} \left[ \begin{array}{l} \text{PRED 'PRO' / 'EMPATHY'} \end{array} \right] \\ \text{OBJ } \text{3} \left[ \begin{array}{l} \text{PRED 'EXPERIENCE'} \\ \text{ADJ } \left\{ \left[ \text{PRED 'OTHER'} \right] \right\} \end{array} \right] \end{array} \right] \end{array} \right]$$

However, there is no such problem under the closed complement analysis of predicative items, where they are assigned the PREDLINK grammatical function – there is no structure-sharing, unlike in the open complement analysis discussed above, so there is no consistency violation, as shown in the f-structure in (36):

(36) 
$$\left[ \begin{array}{l} \text{PRED 'BE'} \langle \text{2} \rangle \text{1} \\ \text{SUBJ } \text{1} \left[ \begin{array}{l} \text{PRED 'EMPATHY'} \end{array} \right] \\ \text{PREDLINK } \text{2} \left[ \begin{array}{l} \text{PRED 'UNDERSTAND'} \langle \text{3}, \text{4} \rangle \\ \text{SUBJ } \text{3} \left[ \begin{array}{l} \text{PRED 'PRO'} \end{array} \right] \\ \text{OBJ } \text{4} \left[ \begin{array}{l} \text{PRED 'EXPERIENCE'} \end{array} \right] \end{array} \right] \end{array} \right]$$

## 5.2 Agreement

In Polish, predicative adjectives and passive forms such as in (1) agree in number and gender with the item they are predicated of (which serves as the controller of agreement) – in (37) the predicative adjective *trudniejsza* agrees with the subject *empatia* in relevant features (singular number, feminine gender):

- (37) *Empatia*                    *jest trudniejsza*                    *od współczucia.*  
empathy.NOM.SG.F is    more difficult.NOM.SG.F than compassion  
'Empathy is more difficult than compassion.'                    (NKJP)

This is not the case, however, when the predicative complement is a nominal (as in (38)–(39)) or a gerund (see (33)) – there is no requirement of number or gender agreement with the item predicated of:

- (38) *Empatia*                    *jest warunkiem*                    *rozwoju.*  
empathy.NOM.SG.F is    condition.INST.SG.M3 development  
'Empathy is a prerequisite for development.'                    (NKJP)

- (39) *Wadliwe kominki*                    *są przyczyną*                    *wielu pożarów.*  
faulty    fireplace.NOM.PL.M3 are cause.INST.SG.F many fire  
'Faulty fireplaces are the cause of many fires.'                    (NKJP)

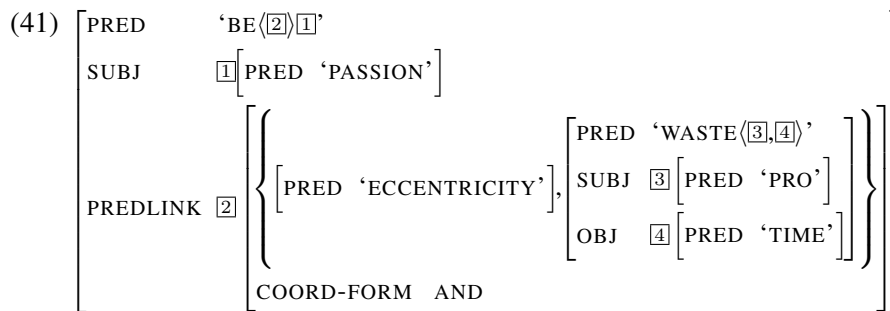
This difference between adjectives and passive participles on the one hand and nouns and gerunds on the other could be taken as an argument for analysing these two groups of predicative arguments differently; such an analysis is provided in § 5.4.1.

## 5.3 Coordination

As shown in (1), it is possible to coordinate an adjective with a passive form. It is also possible to find attested instances of coordination of a nominal and a gerund:

- (40) *Moje pasje*                    *są fanaberiami*                    *i marnowaniem*  
my    passion.NOM.PL.F are eccentricity.INST.PL.F and waste.INST.SG.N  
czasu.  
time.GEN  
'My passions are eccentricities and wasting time.'                    (NKJP)

In (40) a predicative noun (*fanaberiami*) is coordinated with a predicative gerund (*marnowaniem*). As explained in § 5.1, a closed complement analysis must be adopted for predicative gerunds to avoid violations of consistency. Since coordination with a nominal is possible, a unified PREDLINK analysis should be adopted for such sentences – see (41) for the corresponding f-structure.



However, it is hard to find examples of coordination across elements of these two groups (adjectives and passive forms vs. nouns and gerunds). Sag et al. 1985 provide examples showing that in English it is possible to coordinate an adjective with a nominal which serve together as the predicative complement – see (42)–(43):

(42) Pat is either stupid or a liar. (Sag et al. 1985, p. 117, ex. (2a))

(43) Pat is a republican and proud of it. (Sag et al. 1985, p. 117, ex. (2b))

Similar examples can be found in Polish, though not without difficulty:

(44) W szkole stwierdzono, iż jestem zdolny, ale leń.  
 at school stated that am talented.NOM.SG.M1 but idler.NOM.SG.M1  
 ‘They said at school that I’m talented but an idler.’ (NKJP)

(45) Ciagle twierdzą, że jesteś inteligentny ale cham.  
 still claim that are intelligent.NOM.SG.M1 but lout.NOM.SG.M1  
 ‘I still claim that you’re intelligent but a lout.’ (Google)

(46) Twierdzi, że oponent jest głupi i cham.  
 claims that opponent.NOM.SG.M1 is stupid.NOM.SG.M1 and  
 lout.NOM.SG.M1  
 ‘He claims that the opponent is stupid and a lout.’ (Google)

## 5.4 Which Analysis?

So far, it has been demonstrated using attested examples that the following can be coordinated as a predicative complement:

- adjective and passive form (see (1)),
- nominal and gerund (shown in (40)),
- adjective and nominal (as in (44)–(46)).



- (50) Ja także jestem laureatem ale z geografii.  
 I also am prizewinner but of geography  
 ‘I am also a prizewinner, but in geography.’ (Google)
- (51) Był prezesem, ale tylko na papierze.  
 was chairman but only on paper  
 ‘He a chairman but only nominally so.’ (Google)

The PPs in these two examples would make no sense (or at least a very different sense) as the sole complements of the copula, i.e., in: *Jestem z geografii* ‘I am from/in geography’ and *Jest na papierze* ‘He is on paper’, but they do make sense as constituents of NPs containing also the nominal: *(Jestem) laureatem z geografii* ‘(I am) a prizewinner in geography’ and *(Jest) prezesem na papierze* ‘(He is) a nominal chairman (i.e., a front man)’.

Similarly, while the non-agreeing instrumental case on the predicative adjective is a very restricted option in contemporary Polish, the following example is fully acceptable, in stark contrast to the bare *Jest powszechnie lubianym* ‘He is generally liked.INST’:

- (52) Jest powszechnie lubianym, ale (jednak) łobuzem.  
 is commonly liked.INST.SG.M1 but still rascal.INST.SG.M1  
 ‘He is generally liked but (still) a rascal.’

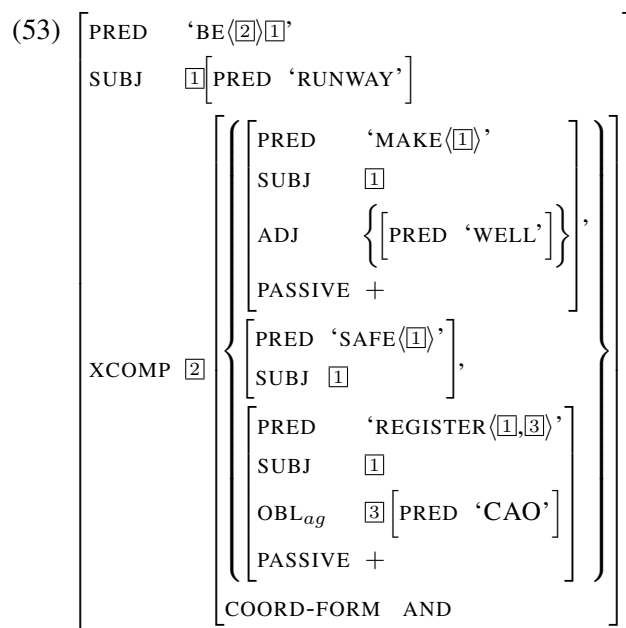
Again, one explanation is that this is because the sentence *Jest powszechnie lubianym łobuzem* ‘He is a generally liked rascal’, with the instrumental NP, is acceptable, and the apparent conjunction *ale (jednak)* ‘but (still)’ is placed within the NP in a construction-specific way.

Excluding examples such as (44)–(47), the two types of predicative complements mentioned above could be assigned different grammatical functions. The first group, which consists of adjectives and passive forms, would correspond to the open grammatical function XCOMP, which would make it possible to account easily for agreement with the item predicated of – since it is a subject of the predicative complement, agreement can be handled locally using simple equations. The f-structure in (53) would correspond to (1)<sup>5</sup> under this analysis:

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<sup>5</sup>In order to enhance readability, agreement features are not represented in (53) and (54). These are, however, represented in the partial f-structure in (11).





By contrast, the second group, which contains nominals and gerunds, would be assigned the closed grammatical function PREDLINK, which makes it possible to avoid problems with consistency in sentences such as (33) and (40), where the predicative complement contains a gerund which has its own subject – see (36) and (41) for f-structures of respective examples under this representation.

### 5.4.2 Unified Closed Analysis

Unlike the split analysis presented in § 5.4.1, the unified closed analysis treats all predicative complements as closed, assigning them the PREDLINK grammatical function. For this reason, it is capable of representing sentences which are rejected under the split analysis: these include the coordination of adjectives and nominals (as in (44)–(46)) and passive forms coordinated with nominals (see (47)).

As discussed in § 5.4, there are categories whose coordination is not attested in Polish: these include the coordination of a nominal and a passive form (but see the constructed (47)) and the coordination of an adjective and a gerund, which does not seem to be possible at all. The latter could be eliminated under this analysis at the level of c-structure rules by not allowing the coordination of adjectives and gerunds. If need be, the former could be blocked in the same way.<sup>6</sup>

The perhaps more important issue is supplying the passive form with a subject – while this would be handled under the open complement (XCOMP) analysis using structure-sharing, this device cannot be used here, as it would result in a consistency violation with predicative gerunds (as explained in § 5.1). If the subject of the passive form is not filled, the f-structure will be incomplete.

<sup>6</sup>Admittedly, such a c-structure-level blocking is not very explanatory and deeper reasons for excluding such coordination should be sought.

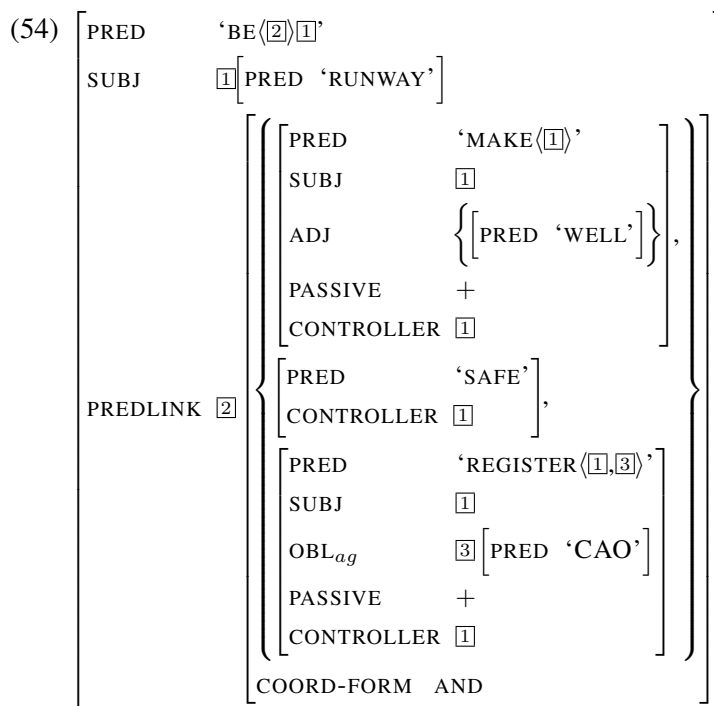
This problem could be solved by introducing a new attribute to host the item predicated of in the f-structure of the passive form or the predicative item. The value of this dedicated attribute would be structure-shared with the item predicated of. This way, the f-structure of the item predicated of would be available locally to the complement, be it a passive form or a predicative item. In fact, such an attribute, CONTROLLER, is independently proposed in Patejuk and Przepiórkowski 2014a.

There are two gains from adopting this solution: the subject of the passive form could be filled by structure-sharing the value of CONTROLLER with the SUBJ attribute of this form. Additionally, this approach makes it considerably easier to ensure agreement between predicative items which obligatorily agree with the item predicated of – as discussed in § 5.2, this applies to adjectives and passive forms.

As mentioned in § 3, since under the closed complement (PREDLINK) analysis there is no structure-sharing of the item predicated of (the controller of agreement) with the subject of the predicative item (as it is not required to have a subject), agreement must be handled in a different way.

However, once the CONTROLLER attribute is introduced, it hosts the item predicated of, which makes it possible to handle agreement similarly to the way in which it is handled by the open complement (XCOMP) analysis. When the agreement controller is available inside the f-structure of the item which requires agreement (in the CONTROLLER attribute), agreement can be handled locally by requiring that the relevant values of the CONTROLLER and the complement are equal.

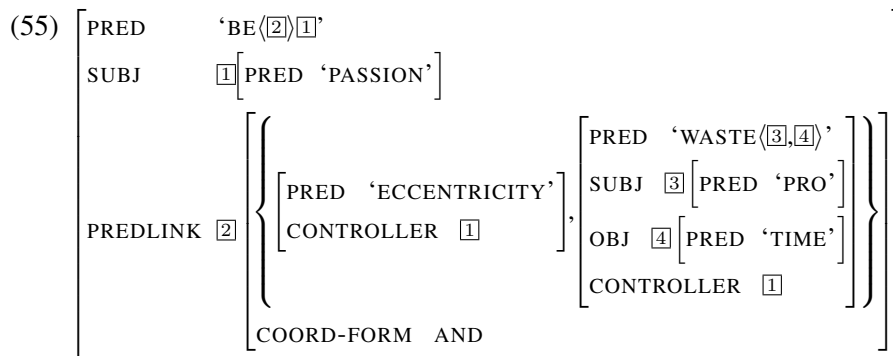
The f-structure in (54) provides a representation of (1) using this analysis:



Note that the presence of the CONTROLLER attribute is crucial in case of two of the

conjuncts in (54), namely, in case of the two passive forms, which equate the value of their SUBJ with that of their CONTROLLER. In case of the third conjunct there, corresponding to the adjective *bezpieczny* ‘safe’, the presence of CONTROLLER is useful for the purposes of handling agreement between the predicative adjective and the item predicated of.

The f-structure in (55) is a modified version of (41) (corresponding to example (40) where a nominal is coordinated with a gerund) with the CONTROLLER attribute added:



Unlike in (54), in (55) the CONTROLLER attribute is spurious on both conjuncts, as one of them has no SUBJ attribute at all, and the other one has a subject whose value is set independently of the value of CONTROLLER. It is also not needed for handling agreement since, as explained in § 5.2, it is not required with predicative nominals. As far as we can see, while such spurious occurrences of CONTROLLER, noted also in Patejuk and Przepiórkowski 2014a, may be seen as aesthetically disturbing, they have no practical negative impact.

## 6 Conclusion

In this paper we looked at the predicative argument of the copula in Polish and considered cases where different predicative elements may be coordinated, especially where one of the conjuncts is a passive participle. Such facts show that passive and predicative constructions must be analysed alike. On the basis of the behaviour of negation in passive constructions, we decided that – at least in Polish – only one of two approaches to passivisation in LFG is viable: the biclausal approach, where the copula is treated as a raising verb, and not the monoclausal approach, where it is treated as a co-head of the passive participle. Hence, also in predicative constructions the copula must be analysed as a raising verb. This excludes the analysis which treats the predicative element as the head of such copular predicative constructions.

The other two LFG analyses of predicative constructions treat the copula as a raising verb and differ in whether the predicative argument is closed (PREDLINK) or open (XCOMP). We showed that at least in some cases, where the predicative

argument is a gerund which introduces its own subject, only the former analysis (with PREDLINK arguments) is correct. On the other hand, it is much less clear whether this PREDLINK analysis should be extended to all kinds of predicative arguments, or whether some predicative constructions should involve open XCOMP predicative arguments: the latter (split PREDLINK/XCOMP) analysis may be considered to be too restrictive, while the former (unified PREDLINK) analysis seems to be too permissive. While we currently favour the split PREDLINK/XCOMP analysis, further detailed investigation into copular constructions and their semantics is needed to resolve this issue more decisively.

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