Verbal Negation and Complex Predicate Formation in Polish

Adam Przepiórkowski
adamp@sfs.nphil.uni-tuebingen.de
Eberhard-Karls-Universität Tübingen
and Polish Academy of Sciences

Anna Kupść
Anna.Kupsc@linguist.jussieu.fr
Polish Academy of Sciences
and Université Paris 7

1 Introduction

The aim of the paper is to provide a formal analysis of two phenomena of Polish related to verbal negation, namely Negative Concord (NC) and Genitive of Negation (GoN), in the context of Verb Clusters (VCs).[1] In particular, we consider apparent breaches of locality constraints exhibited by NC and GoN in VCs and argue that, actually, no locality violation occurs. Instead, we provide an argument raising analysis of Polish VCs postulating that arguments of lower verbs are raised to higher verbs in a cluster. In this set-up, postulating that verbal negation is a barrier to argument raising in Polish accounts for the full range of data.

We consider the Negative Concord and Genitive of Negation data in sections 2 and 3 respectively. Then we provide an argument raising analysis of the data in section 4: after considering an analysis of argument composition in terms of flat constituent structure formation as common in Head-driven Phrase Structure Grammar (HPSG; cf. Pollard and Sag (1987, 1994)), we reject it in favour of an analysis dissociating argument structure from constituent structure. Finally, in section 5 we summarize the results.

2 Negative Concord

Polish exhibits what is sometimes called 'negative doubling': the verb has to be overtly negated in the presence of a clause-mate n-word[2]:[3]

(1) *Marysia *(**nie**) dała **nikomu** książki.*
Mary not gave nobody book
'Mary didn't give anyone a/the book'.

[1]We would like to thank Anke Lüdeling, Paola Monachesi, Frank Richter and Manfred Sailer for discussion and useful comments on the present version. Also acknowledgements made in Przepiórkowski and Kupść (1997) carry over. Of course, all remaining deficiencies should be blamed on us only.

[2]We use the term *n-word* (introduced by Laka (1990)) rather than *Negative Polarity Item* as the NPI status of n-words in various languages is a matter of debate.

[3]We adopt the following typesetting conventions in the examples: **(nie)* means that the example is grammatical with *nie* but ungrammatical without it; negative elements (n-words and the negative marker ***nie***) are in **bold font**.

In Polish, unlike in many other languages described in the literature,[4] NC depends neither on grammatical function, nor on linear position of the n-words; in each case a single negation meaning results:

(2) ***Nikt*** **(**nie**) przyszedł.*
nobody not came
'Nobody came.'

(3) *Marysia* ***niczego*** **(**nie**) dała Jankowi.*
Mary nothing not gave John
'Mary didn't give John anything.'

(4) ***Nigdy*** **(**nie**) prosił o pomoc.*
never not asked-he about help
'He never asked for help.'

Moreover, n-words cannot be licensed by other environments licensing n-words or NPIs in many other languages, e.g., by a preverbal negative phrase (5), a question (6), or most of downward monotone contexts (adversative predicates (7), antecedents of conditionals (8), relative clauses headed by universal quantifiers, comparative constructions introduced by *niż* 'than', *too*-constructions, etc.):[5]

(5) * ***Nikt*** *dał* ***nikomu*** *książki.*
nobody$_{nom}$ gave nobody$_{dat}$ book
'Nobody gave a book to anybody.'

(6) * *Czy* ***nikt*** *dzwonił?*
Q nobody phoned
'Has anybody phoned?'

(7) * *Wątpię, żeby* ***nikt*** *dzwonił.*
doubt-I that$_{subj}$ nobody phoned
'I doubt if anybody phoned.'

[4]See, e.g., Rizzi (1982), Zanuttini (1991) and Aranovich (1993) for Romance, and Labov (1972), den Besten (1986), Bayer (1990) and Haegeman and Zanuttini (1996) for Germanic. On the other hand, Progovac (1993, 1994) provides data from Serbo-Croatian (involving NI-NPIs in her terminology) which parallel the basis facts described here, although she does not consider NC in Verb Clusters.

[5]However, we are aware of two other environments licensing n-words: the preposition *bez* 'without' and the comparative construction introduced by *jak* 'as'. We do not have a principled account of that; licensing by *bez* is taken in Przepiórkowski and Kupść (1996, 1997) to be a lexical idiosyncrasy supporting the lexicalist approach to Polish NC developed there. In view of the fact that 'without' licenses n-words in many NC languages, clearly, more has to be said about this.

(8) * *Jeżeli* ***nikt*** *dzwonił, to...*
if nobody phoned then
'If anybody phoned, then...'

2.1 Locality Constraints

There is a sense in which Polish NC is unbounded: it can cross an arbitrary number of NP and PP projections (cf. Przepiórkowski and Kupść (1996, 1997)). However, it is not unconstrained: maximal verbal projections in general constitute barriers for NC, which results in its clause-boundedness:

(9) a. *Jan sądzi, że Marysia* ***nikogo*** **(**nie**) lubi.*
John believes that$_{ind}$ Mary nobody not likes
'John believes that Mary doesn't like anybody.'

b. * *Jan* ***nie*** *sądzi, żeby Marysia* ***nikogo*** *lubiła.*
John not believes that$_{subj}$ Mary nobody liked$_{past-participle}$

Note that (9b) is unacceptable in spite of the subjunctive complementizer, lack of independent tense on the subordinate clause, and the possibility of the 'neg-raising' construal (as (10) shows) — conditions which allow NC across verbal projections in many languages.

(10) *Jan* ***nie*** *sądzi, żeby Marysia lubiła teatr.*
John not believes that$_{subj}$ Mary liked theater
'John doesn't believe Mary likes theater.'
($\approx$ 'J. believes M. doesn't like theater.')

Thus, the generalization about Polish NC seems to be: if an argument (more generally: a dependent) of a verb is a negative expression, this verb has to be overtly negated.

2.2 Verb Clusters

Pretheoretically, by Verb Clusters we mean chains of verbs, not necessarily linearly contiguous, such that each (apart from the main verb) is subcategorized for by another, and none (again, perhaps apart from the main verb) is modified (introduced) by a complementizer.[6] In the context of Verb Clusters, the generalization that NC cannot cross verbal projections seems to break down: n-word dependent of the lowest verb can be licensed by the negation marker on any of the verbs in the cluster:

[6] Verbs constituting a verb cluster are <u>underlined</u>.

(11) a. *Jan *(**nie**) <u>chciał</u> **niczego** <u>kupować</u>.*
John not wanted nothing buy$_{inf}$
'John didn't want to buy anything.'

b. *Jan <u>chciał</u> **niczego** *(**nie**) <u>kupować</u>.*
'John wanted not to buy anything.'

(12) a. *Jan *(**nie**) <u>chciał</u> <u>próbować</u> **nikogo** <u>pokochać</u>.*
John not wanted try$_{inf}$ nobody love$_{inf}$
'John didn't want to try to love anybody.'

b. *Jan <u>chciał</u> *(**nie**) <u>próbować</u> **nikogo** <u>pokochać</u>.*
'John wanted not to try to love anybody.'

c. *Jan <u>chciał</u> <u>próbować</u> **nikogo** *(**nie**) <u>pokochać</u>.*
'John wanted to try not to love anybody.'

In order to account for the above examples, it does not suffice to assume n-words to be licensed in the scope of negation: clearly, *nikogo* 'nobody' in (9b) can be construed to be in the scope of negation. Moreover, tense or agreement do not seem to be the blocking factors: in (13) (which should be compared to (11a)), although the subordinate clause is not marked for tense or agreement, NC cannot cross the verbal boundary:

(13) * *Jan **nie** chciał, żeby **niczego** kupować.*
John not wanted that nothing buy$_{inf}$
'John didn't want anything to be bought.' (putative)

What rather seems to be happening in (11)–(12) above is some kind of 'clause union' (or 'complex predicate formation'), apparently stopped by an intervening complementizer in (13).

3 Genitive of Negation

Genitive of Negation is a well-known phenomenon having its variants in many languages, including French, Finninsh and Russian. In Polish, it is a fully productive process: whenever a non-negated verb subcategorises for an accusative complement, its negated counterpart requires a genitive NP:

(14) a. *Jan kupuje dom/*domu.*
John buys house$_{acc/*gen}$
'John is buying a house.'

b. *Jan **nie** kupuje domu/*dom.*
John not buys house$_{gen/*acc}$
'John is not buying a house.'

Just as NC, GoN is a clause-bounded phenomenon. Thus, the object of the subordinate verb cannot change its case to genitive even in 'neg-raising' contexts:

(15) *Marysia* ***nie*** *sądzi, żeby Jan kupował dom/*domu.*
Mary not thinks that$_{subj}$ John bought house$_{acc/*gen}$
'Mary doesn't think that John is buying a house.'
(≈ 'M. believes J. is not buying a house.')

So, the relevant generalization seems to be: a normally accusative complement of a verb has to be realized as genitive if and only if the verb is negated.

However, as in the case of NC, GoN seems to be oblivious of verbal projections in Verb Clusters: apart from expected GoN in (16c) and (17d), GoN also happens when a higher verb is negated, as in (16b) and (17b–c).

(16) a. *Jan chciał kupić ten dom.*
John wanted buy$_{inf}$ [this house]$_{acc}$
'John wanted to buy this house.'

b. *Jan* ***nie*** *chciał kupić tego domu.*
not [this house]$_{gen}$

c. *Jan chciał* ***nie*** *kupić tego domu.*

(17) a. *Mogę chcieć to napisać.*
may-I want$_{inf}$ this$_{acc}$ write$_{inf}$
'I might want to write this.'

b. ***Nie*** *mogę chcieć tego napisać.*
not this$_{gen}$ write$_{inf}$

c. *Mogę* ***nie*** *chcieć tego napisać.*

d. *Mogę chcieć tego* ***nie*** *napisać.*

Note that, again, an apparent breach of locality constraints takes place in VCs as morphological case of the complement seems to depend not only on its governing verbs. We take this to be an even stronger argument for a 'clause union' analysis of Polish VCs: the alternative would be to give up the overwhelming generalization that (structural) case assignment (in Polish) is an intimate relation between a lexical item and its immediate dependent.

4 Complex Predicate Formation

In this section, we provide a formal HPSG account of the facts discussed above. In particular, we suggest that what is special about the behaviour of both phenomena in VCs is Verb

Clusters, and not NC or GoN. This way, our analysis maintains the clause-boundedness generalizations concerning these phenomena.

We consider first the standard HPSG approach to complex predicate formation, based on subcategorization properties and resulting in flat constituent structure of VCs. We reject it, however, on the basis of lack of independent constituent structure arguments and, instead, opt for an analysis formulated in terms of an independent level of linguistic representation, namely that of argument structure (ARG-ST).

4.1 Flat Structure

The basic idea of the standard HPSG way of dealing with complex predicate formation, is that complements of lower verbs raise to become complements of higher verbs.[7] The crux of the idea is that a raising verb subcategorises not for a VP or S, but for a lexical verb with unrealized VALENCE properties, and inherits the subcategorisation requirements of this lexical verb. These requirements are then realized on the higher verb (unless it is a complement of another raising verb itself), which results in a flat constituent structure. Formally, this amounts to postulating complex lexical entries for raising verbs such as the one below:

(18)
$$\begin{bmatrix} \textit{word} & \\ \text{PHON} & \langle \textit{chciał} \rangle \\ \text{HEAD} & \text{verb[past]} \\ \text{VALENCE} & \begin{bmatrix} \text{SUBJ} & \langle \boxed{1}\text{NP} \rangle \\ \text{COMPS} & \left\langle \boxed{4} \begin{bmatrix} \text{HEAD} & \text{verb[inf]} \\ \text{LEX} & + \\ \text{VALENCE} & \begin{bmatrix} \text{SUBJ} & \langle \boxed{1} \rangle \\ \text{COMPS} & \boxed{3} \end{bmatrix} \end{bmatrix} \right\rangle \oplus \boxed{3} \end{bmatrix} \end{bmatrix}$$

Thus, *chciał* 'wanted' is a past-tense verb whose VALENCE requirements include an NP SUBJect ($\boxed{1}$) and a list of COMPlementS. The latter consists of an infinitival lexical verb with unrealized VALENCE requirements, and the 'inherited' COMPlementS list of this infinitival verb ($\boxed{3}$).[8]

Assuming that both *chcieć* 'want' and *spróbować* 'try' are raising verbs (i.e., have lexical entries similar to (18)), the constituent structure of (19a) is (19b), i.e., *spróbować*, *pokochać* and *kogoś* are all realised as complements of *chciał*.

(19)	a.	*Jan*	*<u>chciał</u>*	*<u>spróbować</u>*	*kogoś*	*<u>pokochać</u>.*
		John	wanted	try$_{inf}$	somebody	love$_{inf}$

[7] This analysis was first developed in HPSG in Hinrichs and Nakazawa (1990) and it has been subsequently applied to argument raising analyses of Italian (Monachesi, 1993, 1995, 1997), French (Abeillé and Godard, 1994; Godard *et al.*, 1997; Abeillé *et al.*, 1997) and Dutch (van Noord and Bouma, 1994).

[8] As common in HPSG, '$\oplus$' represents the 'append' relation, while tags (boxed numbers, e.g., '$\boxed{2}$') represent structure sharing. LEX+ means here that $\boxed{4}$ is part of a word-level (lexical) sign.

'John wanted to try to love somebody.'

b. [$_S$ Jan [$_{VP}$ chciał spróbować pokochać kogoś]]

However, we postulate that verbal negation is a barrier to complex predication, that is, if there is a negated verb in the cluster, lower complements can raise only to this verb.[9] Thus, the constituent structure of (20a) is (20b).

(20) a. *Jan* *chciał* **(**nie**)* *próbować* ***nikogo*** *pokochać.*
John wanted not try$_{inf}$ nobody$_{gen}$ love$_{inf}$
'John wanted not to try to love anybody.'

b. [$_S$ Jan [$_{VP}$ chciał [$_{VP}$ nie próbować pokochać nikogo]]]

Note that this simple assumption lets us account for the NC and GoN data in a uniform way. For example, in (20a), *nikogo*, the argument of the lowest verb, is realised as an argument of the negated verb *nie próbować*, and as such it is expected to bear the genitive case. Moreover, since *nikogo* is an n-word, its governing verb is expected to be negated. Had *nikogo* risen to the highest verb, *chciał*, both generalizations would be violated: *nikogo* should be in the accusative (which it is not), and *chciał* should be negated (which it is not).[10]

Unfortunately, this analysis has one weakness: since it posits different constituent structures for VCs depending on presence of verbal negation (compare (19b) with (20b)), one would expect different results of various constituency tests when applied to VCs with or without negation.[11] This expectation is not, however, borne out.

Word Order Various preposition tests are sometimes taken to be revealing with respect to constituent structure. Leaving aside the issue of whether it makes sense to apply these tests to Polish, a relatively free word order language, it should be noted that they do not differentiate between VCs with or without negation. Thus, for example, both in (19a) and (20a), all word permutations are acceptable.[12] This does not necessarily prove that constituent structure of Polish VCs is flat (see, e.g., King (1995) for a configurational account of similar 'free' word order in Russian), but it does not provide an argument for constituent structure's dependence on negation either.

Coordination Also coordination facts neither differentiate between VCs with or without negation, nor provide an answer to the question of constituent structure of Polish VCs.

[9] See Przepiórkowski and Kupść (1997) for detailed HPSG formalization of this postulate.

[10] See also discussion in 4.4 below.

[11] This deficiency is also noted in Richter and Sailer (1997), where an account is proposed in terms of relational constraints defining the domains of NPI-licensing.

[12] We assume here that the negation marker *nie* and the immediately following verb form a single morphological unit (Kupść and Przepiórkowski, 1997).

(21) *Janek chciał pójść do kina lub spotkać się ze znajomymi.*
John wanted [go$_{inf}$ to cinema] or [meet$_{inf}$ SELF with colleagues]
'John wanted to go to the cinema or to meet friends.'

The abvious analysis of (21) would be that what is coordinated are two infinitival verbal phrases, which would go against the flat analysis of VCs proposed above. However, we find this conclusion questionable: whatever analysis is given for (22) below, a clear case of non-constituent coordination of different categories, will also account for examples like (21) above.

(22) *Janek zażądał od Ewy wyjaśnień, a od Marii, żeby wyszła z pokoju.*
John demanded from Eve explanations and from Mary that she-left from room
'John asked Eve to explain herself and Mary to leave the room.'

Pronominalization Another family of tests for constituent structure are various pronominalization-like test (pronominalization, VP-ellipsis, clefting, questions, etc.). Under the assumption that only a constituent can be pronominalized (preposed in clefting, asked for, etc.), they seem to suggest a hierarchical structure of Polish VCs: as the examples below show, apparent infinitival VPs can be pronominalized (23b–c), but not, for example, sequences of verbs (23d–e).

(23) a. *Jan <u>chciał</u> <u>spróbować</u> <u>napisać</u> list.*
John wanted try$_{inf}$ write$_{inf}$ letter
'John wanted to try to write a letter.'

b. *Jan tego <u>chciał</u>.*
John this wanted

c. *Jan <u>chciał</u> tego <u>spróbować</u>.*
John wanted this try$_{inf}$

d. * *Jan <u>chciał</u> tego list.*
John wanted this letter

e. * *Jan tego <u>napisać</u> list.*
John this write$_{inf}$ letter

Moreover, in view of the fact that the same judgements hold for sentences with verbal negation, it seems that all VCs in Polish should be analysed as having a hierarchical constituent structure.

However, since a number of other explanations of the contrasts in (23) are available (for example, a semantic condition on pronouns being able to replace a 1-place property as in (23b–c), but not a 2-place relation, as in (23d–c)) we decline to jump to this conclusion and remain agnostic as to the constituent structure of Polish Verb Clusters. On the other hand, whatever the constituent structure of Polish VCs, it does not depend on verbal negation. Thus, we conclude that the idea of argument raising should be rather formalized at a different stratum of the theory.

4.2 Argument Raising

The obvious candidate for a locus of argument raising is argument structure (ARG-ST). In HPSG, a word's ARG-ST is a list of the word's arguments ordered according to their obliqueness. It plays an important role in HPSG, as it is taken to be the locus of Binding Theory (Pollard and Sag, 1992, 1994).[13] ARG-ST is also assumed to be canonically the concatenation of the VALENCE attributes SUBJ and COMPS,[14] so a more articulate description of the word *chciał* (cf. (18) above) is (24).

$$
(24)\quad \begin{bmatrix} \textit{word} \\ \text{PHON } \langle \textit{chciał} \rangle \\ \text{HEAD verb[past]} \\ \text{VALENCE} \begin{bmatrix} \text{SUBJ } \langle \boxed{1}\text{NP}\rangle \\ \text{COMPS } \left\langle \boxed{4}\begin{bmatrix} \text{HEAD verb[inf]} \\ \text{LEX } + \\ \text{VALENCE} \begin{bmatrix}\text{SUBJ } \langle\boxed{1}\rangle \\ \text{COMPS } \boxed{3}\end{bmatrix} \\ \text{ARG-ST } \langle\boxed{1}\rangle\oplus\boxed{3}\end{bmatrix}\right\rangle \oplus \boxed{3} \end{bmatrix} \\ \text{ARG-ST } \langle\boxed{1}\rangle\oplus\langle\boxed{4}\rangle\oplus\boxed{3}\end{bmatrix}
$$

Thus, the analysis of section 4.1, in which elements of valence attributes were raised, implied also raising on ARG-ST.[15]

What we want to suggest here is that, actually, argument raising in the relevant sense happens only on the level of ARG-ST, i.e., we want to further dissociate argument structure from constituent structure in Polish VCs. Thus, whatever the constituent structure of a VC is, verbal negation does not influence it in any way. What it does, though, is stop argument raising on ARG-ST.

Assuming, for the sake of concreteness, a flat structure of Polish VCs, the difference between a cluster with verbal negation and one without is exemplified below.

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[13]Also Case Assignment and Linking have been formulated in terms of ARG-ST; see Przepiórkowski (1996b, 1997) and Davis (1997) respectively.

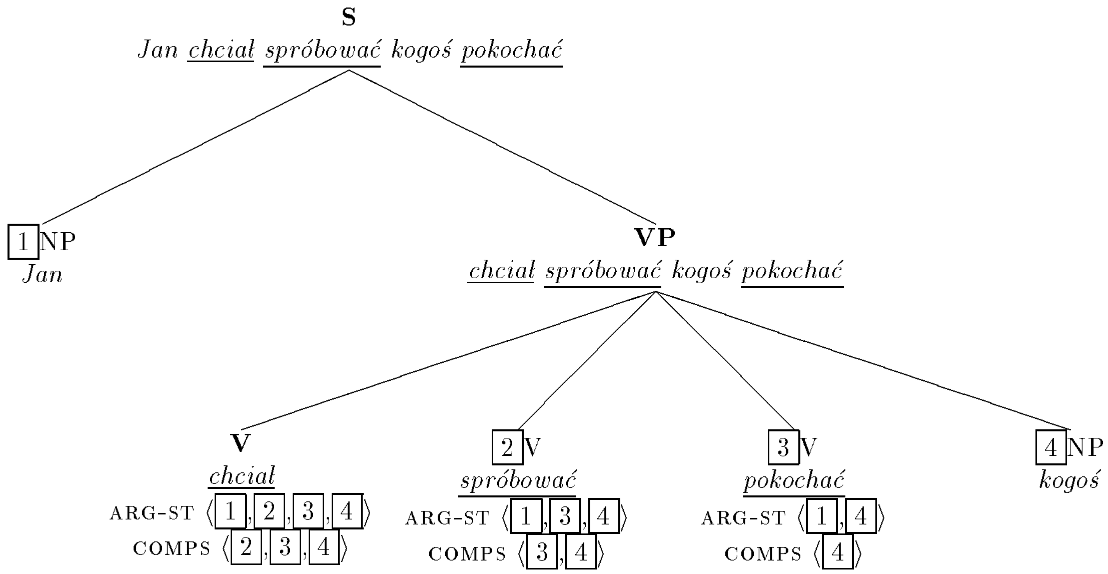
[14]This canonical relation does not hold in extraction cases when a complement is removed from COMPS but retained on ARG-ST, as well as in cases of Romance pronominal clitics, which, although present on ARG-ST, are usually analysed as morphological affixes (hence, absent on VALENCE; cf. e.g. Miller and Sag (1996)). Moreover, in pro-drop languages, an argument is 'dropped' from a VALENCE attribute, but not from ARG-ST. See also Manning and Sag (1995).

[15]This was actually a crucial assumption, since the analyses of both NC and Case Assignment we had in mind throughout this paper rely on ARG-ST (see Przepiórkowski and Kupść (1997) and Przepiórkowski (1996b, 1995) respectively).

Verb Clusters without negation:

(19a) *Jan* *chciał* *spróbować* *kogoś* *pokochać.*
John wanted try$_{inf}$ somebody love$_{inf}$
'John wanted to try to love somebody.'

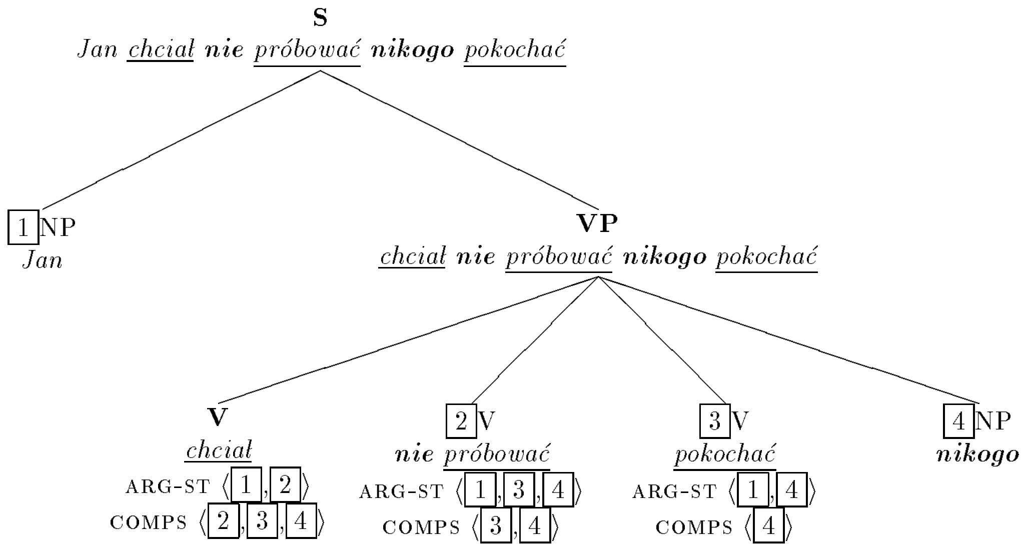
(25)



Verb Clusters with negation:

(20a) *Jan* *chciał* **(**nie**)* *próbować* ***nikogo*** *pokochać.*
John wanted not try$_{inf}$ nobody$_{gen}$ love
'John wanted not to try to love anybody.'

(26)



The crucial difference between (25) and (26) is that in the former, the object *kogoś* ends up on the ARG-ST of the main verb *chciał*, while in the latter, *nikogo* is raised only to the ARG-ST of the negated verb *nie próbować* (although, due to the flat constituent structure analysis tentatively adopted here, it is present on the main verb's COMPS).

4.3 A Note on Binding

Since ARG-ST is most prominently used in HPSG in obliqueness-based Binding Theory (Pollard and Sag, 1992, 1994), the obvious question to ask is whether the complex predicate account given above in terms of argument raising is compatible with HPSG's Binding Theory. The short answer is: no. To see this, consider the examples below.

(27) *Jan*$_i$ *kazał Marii*$_j$ *opowiadać o sobie*$_{i/j}$.
John ordered Mary tell$_{inf}$ about self
'John ordered Mary to talk about herself/himself.'

(28) *Jan*$_i$ *kazał Marii*$_j$ ***nie*** *opowiadać o sobie*$_{i/j}$.
John ordered Mary not tell$_{inf}$ about self
'John ordered Mary not to talk about him/herself.'

In (27), the anaphor can be bound either by *Marii*, which is the subject of the lower verb, or by *Jan*, the subject of the sentence.[16] This is consistent with the analysis of previous section, according to which the anaphor object *o sobie* is present on both ARG-STs, and with the existential formulation of binding theory of Manning and Sag (1995). However, the ambiguity in (28) is unexpected: since negation stops argument raising, *o sobie* is present only on ARG-ST of *opowiadać* and therefore should not be able to have *Jan* as its antecedent.

These facts, however, may be taken as an additional argument against applying the current HPSG's Binding Theory to Polish. A strong independent evidence for this position comes from anaphors embedded in NPs:[17]

(29) *Maria*$_i$ *była dumna z [jego*$_k$ *miłości do siebie*$_{i/k}$*].*
Maria was proud of his love to self
'Mary was proud that he loved her/himself.'

According to the theory of Pollard and Sag (1994), *siebie* should be necessarily coindexed with *jego*: the PP *do siebie*, which shares index with *siebie*, is an anaphor, it is locally o-commanded (by *jego*, which is the subject of the NP[18]), so it must be locally o-bound

[16] In Polish, as in many other languages, an anaphor has to be subject-bound.

[17] On the basis of Willim (1989).

[18] See, e.g., Willim (1995) for an analysis of possessives as subjects of NPs. Even, however, if the possessive *jego* were not a subject, i.e., if *do siebie* were not locally o-commanded, the anaphor arguably

(by *jego*). As the possible indexings show, this is not necessarily the case: *do siebie* can be non-locally bound by *Maria*, in blatant violation of the binding theory of Pollard and Sag (1992, 1994).

We conclude, then, that examples (27)–(28) do not provide an argument against the analysis of section 4.2.

4.4 Alternatives

In this section, we briefly consider two possible alternatives to the account presented above.

Negation Does Not Stop Raising An alternative solution which seems to simplify the analysis above would be to assume that arguments of lower verbs always raise in a step-wise fashion to the highest verb in the cluster, and, hence, are present on ARG-ST of all the intervening verbs. Then NC and Case Assignment in Polish could be formulated in an 'existential' manner. For example, NC could be modelled with the following condition: "if an n-word is present on ARG-ST of several verbs, one of these verbs must be overtly negated. Similarly, "if a structural (case-seeking) NP is present on an ARG-ST of a negated verb, this NP must be genitive."

However, this alternative makes wrong predictions in case of subject-to-subject raising verbs:

(30) * *Nikt wydawał się nie spać.*
Nobody seemed SELF not sleep$_{inf}$
'Nobody seemed to sleep.' (putative)

In (30), the n-word subject is present on ARG-ST of both verbs, the lower of which is negated, hence the 'existential' formulation of NC constraint is satisfied. The sentence is nevertheless ungrammatical.[19] We conclude then that it is not any of the verbs having an n-word in its ARG-ST that should be negated, but the highest such verb. From this follows that negation has to stop argument raising.

should not be exempt from the binding theory, as would be the case according to Pollard and Sag (1994). If it were exempt, the locality constraints paralleling those for prototypical anaphors (e.g., impossibility to be bound across a complementizer) would be unexpected:

(i) *Maria$_i$ chciała, żeby być dumnym z jego$_k$ miłości do siebie$_{k/*i}$.*
Mary wanted that be$_{inf}$ proud of his love to self
'Mary wanted one to be proud of his love to himself/*herself.'

[19]Although this judgement is shared with us by a number of informers, it should be noted that a similar sentence is judged grammatical in Witkoś (1995).

NC and Binding In a series of publications, Liljana Progovac has pursued a binding approach to Negative Polarity Items (see, e.g., Progovac (1993, 1994) and references cited therein). On the basis of striking domain similarities between binding and licensing of NPIs, she concludes that NPIs are best treated as a kind of anaphora, which have to be bound in a certain domain.

Although we are sympathetic with this approach, we could not do it any justice in this paper. Accounting for this parallelism between NC and binding, while maintaining the parallelism between NC and GoN argued for here, should be topic of further research.

5 Summary

In this paper, we argued that complex predicate formation is happening in Polish Verb Clusters. We drew evidence for this position from Negative Concord and Case Assignment facts. After considering the standard HPSG analysis of complex predicate formation based on valence properties, we dropped it in favour of an analysis in terms of argument structure. We decided to remain agnostic as to the constituent structure of Verb Clusters in Polish.

It is useful to view these results from a broader perspective. Most HPSG analyses of complex predicate formation in Romance assume both argument raising on ARG-ST and flat constituent structure; good examples of this strain of research are analyses of Italian restructuring verbs (Monachesi, 1993, 1995, 1997) and of French tense auxiliaries and causatives (Abeillé and Godard, 1994; Godard *et al.*, 1997; Abeillé *et al.*, 1997). This parallelism is to some extent a result of the tight coupling between ARG-ST and VALENCE in HPSG. On the other hand, Manning (1996) defends the hierarchical structure analysis of French auxiliary verbs, arguing that complex predicate formation occurs at a different level of grammatical representation (namely, LFG's f-structure). Other LFG work on complex predicate formation in Romance takes this position as well (Alsina (1996) on Catalan causatives, Frank (1996) on Romance). Also Butt (1995) explicitely argues for argument raising vs. flat constituent structure dissociation on the basis of Urdu permissive and instructive constructions: she argues that, although both should be analysed as having flat constituent structure, only the former is an instance of argument raising. From this perspective, the research presented in this paper, although formalised in HPSG, is in its spirit close to LFG.

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