# Unlike coordination in Polish

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### Introduction

This abstract provides a brief overview of the PhD dissertation entitled "Unlike coordination in Polish". It focuses on coordination which is non-standard: conjuncts are not identical categorially (§ 1) or they do not correspond to the same grammatical function (§ 2). The dissertation is based on rich attested data taken from the National Corpus of Polish (NKJP) or retrieved using Google. Furthermore, the dissertation is accompanied by an XLE implementation of a grammar of Polish which takes such coordination phenomena into account.

### 1 Unlike category coordination

The issue of coordination of unlike categories was noticed in constraint-based theories of grammar as early as 1985, see the discussion in Sag et al. 1985. In LFG such coordination was mentioned in the so-called COMP vs OBJ debate (e.g. Alsina et al. 2005), but since this discussion focused on how particular grammatical functions should be defined, no formalised account of coordination of unlike categories was offered, no constraints necessary to handle this phenomenon were provided. As a result, this debate did not touch upon the issue of imposing different constraints on particular conjuncts under coordination, which turns out to be problematic in LFG due to the fact that statements are distributive.

This dissertation aims to fill this gap by discussing how unlike category coordination can be modelled in LFG, showing in detail how the lexicon should be designed to account for the coordination of unlike categories.

Consider the following examples from Polish:

(1) Doradził mu [wyjazd] i [żeby nie wracał]. advised him departure.ACC and that NEG come back 'He advised him to leave and not to come back.'

- (Kallas 1993, p. 92, ex. (48a))
- (2) (Wcale) nie doradził mu [wyjazdu] ani [żeby nie wracał]. not at all NEG advised him departure.GEN nor that NEG come back 'He did not advise him to leave nor not to come back.'

In both examples provided above the object is a coordinate phrase which consists of a nominal (a form of the noun WYJAZD, 'departure') and a clause (*żeby nie wracał*, 'not to come back'). However, these examples differ consistently depending on whether negation (the negation marker NIE) is present – in (1) the nominal conjunct takes accusative case, while in (2) the object is marked for genitive case. Such variation is attributable to the fact that the verb DORADZIĆ ('advise') may take a structurally case-marked object: its case marking depends on the syntactic environment, namely on the availability of sentential negation.

When plain disjunctive LFG constraints are used, one of the disjuncts is selected and it is distributed to all elements of the coordinate structure. As a result, all conjuncts must satisfy the same constraint, which is not the desired effect for unlike category coordination where different conjuncts may satisfy different constraints.

An alternative is to convert plain constraints into off-path constraints so that each conjunct can satisfy a different constraint – the disjunctive statement is evaluated for each element of the coordinate phrase separately. Furthermore, it is demonstrated how complex phenomena such as structural case assignment to the nominal conjunct can be modelled successfully using this formal device.

This solution assumes that all elements of the coordinate structure correspond to the same grammatical function. However, since sometimes the choice of the common grammatical function is problematic and controversial, issues related to its choice are discussed.

## 2 Coordination of different grammatical functions

On the other hand, sometimes it is the case that different grammatical functions are coordinated – this phenomenon is known under a wide range of names, including hybrid coordination, lexico-semantic coordination and – more narrowly – coordinated wh-questions.

This dissertation provides evidence that real coordination is involved in this phenomenon. It shows that conjuncts must belong to the same semantic type and that the range of possible types is restricted to wh-words and items which express various quantifiers. Different types of dependents may be coordinated: arguments, modifiers and even particles. Furthermore, conjuncts do not have to be dependents of the same head, they may belong to different substructures of the relevant f-structure. The dissertation offers a formalised analysis which takes into account main (most frequent) classes of conjuncts taking part in such coordination.

Let us take a closer look at a few relevant examples from Polish, focusing on wh-words:

(3) Co, komu i z czym się kojarzy, to jego prywatna sprawa.
what.NOM who.DAT and with what.INST REFL associate is SELF.GEN own business
'Who associates what with what is their own business.'

(NKJP)

- (4) Kontrola w firmie jakie i kto może ponieść konsekwencje?

  audit in company what.ACC and who.NOM can bear consequences.ACC

  'Company audit who can suffer what consequences?' (Google)
- (5) Tytuł brzmiał prosto i uczciwie: "Czy \*(i) jaki jest Bóg"
  title sounded simply and honestly PART and what.NOM is God.NOM
  'The title sounded simple and honest: "Does God exist and what is he like?"'
  (NKJP)

In (3) all three conjuncts are arguments of the verb KOJARZYĆ ('associate'): the first one (Co) is the subject, the second one (komu) is the object, while the last one (z czym) is the oblique object. In (4) particular conjuncts also belong to the class of question words, but they depend on different heads: the first conjunct (jakie) is the modifier of the object of the verb PONIEŚĆ ('bear') which is the infinitival complement of the main verb MóC ('can') whose dependent is the second conjunct, kto, which acts as its subject. In (5) the yes/no question particle CZY is coordinated with the predicative complement of the verb BYĆ ('be'). Unlike in previous examples, the conjunction cannot be removed from (5) – this results in ungrammaticality, as indicated in the relevant example. This is attributable to the fact that CZY cannot co-occur with other question words in the same clause. For this reason, coordination of different grammatical functions involving the question particle is analysed differently.

The formal account of this phenomenon involves two types of f-structure representation: monoclausal where all conjuncts belong to the same clause and multiclausal where particular conjuncts belong to different clauses. Though both representations are possible in theory, a wide range of tests arguing in favour or against particular representation is discussed, and their validity and conclusiveness when applied to Polish data is assessed. As a result of the overview of these arguments, monoclausal representation is adopted for all instances of coordination of different grammatical functions. There is, however, one notable exception: when one of the conjuncts is the question particle, multiclausal representation is used instead – see (5) and related discussion above.

The issue of representing the conjunction which is used under this variety of coordination is given a considerable amount of attention: the issue of where it should be placed in the f-structure is discussed, taking into account the possibility of embedding of such coordination, as well as potential problems related to the interaction of coordination of different grammatical functions with verbal coordination.

Finally, less frequent types of conjuncts taking part in such coordination are discussed. The issue of how conjuncts under such coordination can be modified is also given due attention. See the selected examples below:

(6) Nie wszyscy i nie każdemu mogą sprzedać broń.

NEG all.NOM and NEG everybody.DAT can sell arms
'It is not the case that everyone can sell arms to everybody.'

(Google)

(7) W pracy mało kto i mało kogo tak naprawdę lubi. at work few someone.NOM and few someone.ACC really likes 'Hardly anybody really likes hardly anyone at work.'

(Google)

- (8) Podobno mężczyźni wiele obiecują, ale tylko niektórzy (i tylko niektóre obietnice) spełniają. supposedly men much promise but only some.NOM and only some.ACC promises.ACC keep 'Supposedly men promise a lot, but only some keep some promises.' (Google)
- (9) Każde dziecko musi dostać tyle samo i takich samych cukierków w tym samym czasie. every child must get the same amount and the same candies at the same time 'Every child must get the same amount of identical candy at the same time.' (Google)

In (6) conjuncts have the semantics of the universal quantifier under the scope of negation (roughly, 'not every'). In (7) mato ('few') is used as the modifier of words which are identical in shape to corresponding wh-words but have the semantics of existential pronouns. In (8) each conjunct is accompanied by tylko ('only') – it does not change the semantics of the pronouns involved, though when it is used, the meaning of the entire phrase is not neutral, it suggests that only a few elements of the set satisfy the relevant condition. In (9) both conjuncts, tyle ('that many') and takich ('such'), are modified by elements which express identity in comparison to some point of reference (the same amount of candy, the same type of candy for each child), samo and samych, respectively.

### Conclusion

This dissertation aims to extend the range of formal LFG analyses of coordination by providing analyses for unlike category coordination and coordination of different grammatical functions which are relatively widely used in Polish – the material on which this dissertation is based is almost exclusively attested data. Apart from providing an analysis of basic instances of such coordination, complex interactions with phenomena such as structural case assignment are also taken into account. Finally, the analyses developed in this work were implemented and tested as a part of a large LFG grammar of Polish implemented in XLE.

#### References

\* Alsina, A., Mohanan, T., and Mohanan, K. (2005). How to get rid of the COMP. In M. Butt and T. H. King, editors, *The Proceedings of the LFG'05 Conference*, University of Bergen, Norway. CSLI Publications. ★ Kallas, K. (1993). *Składnia współczesnych polskich konstrukcji współrzędnych*. Wydawnictwo Uniwersytetu Mikołaja Kopernika, Toruń. ★ Sag, I. A., Gazdar, G., Wasow, T., and Weisler, S. (1985). Coordination and how to distinguish categories. *Natural Language and Linguistic Theory*, **3**, 117−171.