

Is Unlike Coordination against the Law (of the Coordination of Likes)?

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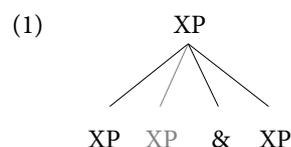
Abstract

The aim of the paper is to explore the possibility of a reconciliation between the existence of a wide range of grammatical instances of unlike coordination and the Law of the Coordination of Likes (henceforth, LCL), which states, in general, that only conjuncts of the same type can be coordinated. The notion of the ‘sameness’ or ‘likeness’ of conjuncts has been variously interpreted in the literature, resulting in a number of proposals put forward in an attempt to account for grammatical instances of unlike coordination while retaining at least a modified version of the LCL. The paper examines some of these proposals with reference to English and Polish data (grammatical and ungrammatical coordination of unlike and ‘like’ coordination), points to their shortcomings, and attempts to establish whether there exists any way to account for unlike coordination that would allow for the retention of the Law of the Coordination of Likes.

Keywords: *unlike coordination, syntactic categories, syntax, Polish*

1. Introduction

Coordination and subordination are two linguistic concepts that denote two of the most prominent types of syntactic and semantic relations which hold between clauses or smaller syntactic units. The relation denoted by subordination is asymmetrical in nature, i.e., there exists a structural hierarchy between the related elements, one of which is invariably subordinate to the other (e.g., Quirk et al. 1985: 988-991). Coordination, on the other hand, denotes a symmetrical relation between two (or more) elements which are hierarchically equal in that neither of the elements is more salient than the other (e.g., Quirk et al. 1985: 918-920; Huddleston, Payne and Peterson 2002: 1275-1277). While in subordination the order of the related elements is fixed with respect to the subordinator, and the superordinate element cannot be freely removed from the structure, in standard coordination, the order of conjuncts can be reversed, and it is possible for one of them to be removed from the structure without affecting its grammaticality. This symmetrical nature of coordination has been reflected in the traditional approach to the syntactic structure of coordination (e.g., Chomsky 1965; Dik 1968, among others), which has been regarded as symmetrical and flat (*n*-ary):



In compliance with the symmetrical nature of coordination indicating the equal status of conjuncts and with the traditional, symmetrical approach to the structure of coordination, it has been assumed that, in order for the conjuncts to be grammatically coordinated, they have to be equal not only in the structure but in other respects as well. In other words, they have to be the so-called ‘like’ conjuncts. This assumption has taken the form of the Law of the Coordination of Likes (LCL; Williams 1981: 646). The basic requirement for the conjuncts to be ‘like’ has been assumed to consist in them having the same syntactic category (Chomsky 1957). However, this requirement not only does not guarantee grammatical coordination (cf. (2a)) but it also cannot account for grammatical instances of unlike coordination¹ (cf. (2b)).

- (2) a. * *John ate* [_{PP} *with his mother*] *and* [_{PP} *with good appetite*].
 b. *Mary remembered* [_{NP} *John*] *and* [_{CP} *that his mother was rude*].

In this paper, we aim to determine whether it is possible to account for the existence and the grammaticality of unlike coordination while retaining the LCL. The research is based on Polish and English data. In section 2, the LCL and its variations will be discussed. It will be examined to what extent the conjuncts have to be alike in order to satisfy the LCL. Section 3 investigates the phenomenon of unlike coordination and reviews several methods proposed in the literature to eliminate the ‘unlikeness’ of conjuncts. Section 4 questions the feasibility of the LCL. Section 5 offers conclusions.

2. What is the Law of the Coordination of Likes and how much alike do the conjuncts have to be?

The term ‘The Law of the Coordination of Likes’ was coined by Williams (1981: 646) but the exact origin of the notion is impossible to trace since its premise, as mentioned above, is based on the traditional approach to the structure of coordination seen as symmetrical and *n*-ary (see (1)). In general, the LCL states that only conjuncts of the same type can be grammatically coordinated. However, the ‘sameness’ of conjuncts has been variously interpreted in the literature. For example, what it meant for Chomsky (1957) was the ‘sameness’ of the syntactic categories of the conjuncts. He proposes the following rule for conjoining constituents:

If S1 and S2 are grammatical sentences, and S1 differs from S2 only in that X appears in S1 where Y appears in S2 (i.e., S1 = ..X.. and S2 = ..Y..), and X and Y are constituents of the same type in S1 and S2, respectively, then S3 is a sentence, where S3 is the result of replacing X by X + and + Y in S1 (i.e., S3 = .. X + and + Y..).

(Chomsky 1957: 36)

To illustrate the rule, Chomsky (1957) offers the following example:

¹ In this paper, the discussion of unlike coordination is confined to unlike constituent coordination and does not include ‘unlikeness’ in terms of ϕ -features and case, nor does it include the coordination of question words of distinct categories. Accounts of unlike coordination proposed within non-transformational grammars are also not included in the paper. For discussion of unlike coordination within the HPSG framework, see, e.g., Daniels (2002); Levy and Pollard (2002); Sag (2003); Yatabe (2004); Chaves (2006). For analyses within the LFG framework, see Peterson (2004) and Przepiórkowski and Patejuk (2012), among others.

- (3) a. *the scene – of the movie – was in Chicago*
 b. *the scene – that I wrote – was in Chicago*

- (4) * *The scene* [_{PP} *of the movie*] *and* [_{CP} *that I wrote*] *was in Chicago.*

(Chomsky 1957: 36)

The two coordinated constituents in (4) have different syntactic categories, i.e., *of the movie* is a PP, while *that I wrote* is a CP. According to Chomsky (1957), the fact that the conjuncts have different categories is the reason why they cannot be grammatically coordinated.

Schachter (1977) also assumes that the ‘sameness’ of the syntactic categories of the conjuncts is essential for the grammaticality of coordination. However, he proposes to extend the rule since the ‘sameness’ of the syntactic categories alone cannot account for certain ungrammatical examples of coordination, like the ones in (5):

- (5) a. * *John ate* [_{PP} *with his mother*] *and* [_{PP} *with good appetite*].
 b. * *John* [_{AdvP} *probably*] *and* [_{AdvP} *unwillingly*] *went to bed.*

(Schachter 1977: 89)

Although the conjuncts in each sentence in (5) have the same syntactic category (in (5a) they are both PPs, and in (5b) they are both adverbs), both sentences are ungrammatical. Schachter (1977) observes that the ungrammaticality of the sentences in (5) results from coordinating conjuncts with different semantic functions. In (5a), the first conjunct, *with his mother*, expresses accompaniment, while the second conjunct, *with good appetite*, expresses manner. Similarly, in (5b), the first conjunct, *probably*, is a modal adverb (referring to the degree of the likelihood of a proposition being true, cf. Ernst 2002: 75), while the second conjunct, *unwillingly*, is a mental-attitude adverb (a subject-oriented adverb describing “a state of mind experienced by the referent of the subject of the verb” (Ernst 2002: 63)). On the basis of this observation, Schachter (1977) formulates the Coordinate Constituent Constraint (henceforth, CCC), which states that “the constituents of a coordinate construction must belong to the same syntactic category and have the same semantic function” (Schachter 1977: 90).

Schachter (1977) motivates the inclusion of both the syntactic and semantic ‘sameness’ of conjuncts in the CCC by emphasizing that neither syntactic ‘sameness’ alone (as illustrated in (5)) nor semantic ‘sameness’ alone is sufficient to cover the data. In (6), the conjuncts differ syntactically (a gerundive construction and an infinitival construction) but have a virtually identical semantic interpretation, as illustrated by the paraphrases in (7).

- (6) * *Running and to overeat may be unhealthy.*

- (7) a. *Running and overeating may be unhealthy.*
 b. *To run and to overeat may be unhealthy.*

(Schachter 1977: 87, 90)

Although appealingly straightforward, the CCC faces serious difficulties, i.e., in many cases it is either too permissive, generating ungrammatical sentences, or not permissive enough, failing to account for grammatical sentences that violate the CCC.

In (8), both conjuncts have the same syntactic category (CP) and both have, in a way, similar semantic functions (each is a declarative clause produced to communicate a certain fact), yet the sentence resulting from conjoining them is clearly unacceptable.

(8) ?* *I read a great book yesterday and elephants are huge animals.*

Schachter (1977) notes that the unacceptability of sentences like the one in (8) has little to do with the CCC but, rather, it is a result of pragmatic ill-formedness. It is suggested that “if two constituents are coordinately conjoined, there must be some pragmatic motivation for the conjunction - some situation to which the conjunction is appropriate” (Schachter 1977: 91). More precisely, Zamparelli (2011) identifies the source of the unacceptability of sentences like the one in (8) as a violation of Grice’s Maxim of Relation. The maxim, being part of the Cooperative Principle,² requires the information conveyed by an utterance to be relevant with respect to the information provided in the discourse that this utterance is a part of (Grice 1989: 26-27). The information conveyed in the *and*-phrase in (8) is not relevant to the information conveyed in the first conjunct, thus the utterance is ill-formed with respect to the Maxim of Relation. In terms of more recent Relevance Theory, the sentence fails to satisfy the hearer’s expectations of relevance, which thwarts (or at least considerably hinders) the comprehension procedure.³

Another problem for the CCC is posed by sentences like the one in (9) below:

(9) * *Mary makes very little money and all her own clothes.*

- (10) a. *Mary makes very little money.*
 b. *Mary makes all her own clothes.*

(Schachter 1977: 92)

Similarly to the sentence in (6), both conjuncts have the same syntactic category (nominals) and the same semantic function (they are semantically and pragmatically appropriate objects of *make*, as illustrated in (10)) but the sentence in (9) is still ungrammatical, although it does not violate the CCC. Schachter (1977: 92) attempts to account for the ungrammaticality of the sentence in (9) by pointing to the necessity of taking into account the dual meaning of *make*. In (10a), *make* means ‘earn’, while in (10b), it means ‘produce’. He notes that “such a dual assignment of meaning is evidently impermissible, perhaps on the grounds of violation of

² The Cooperative Principle, a composite of rules that participants of a discourse, or their contributions to the discourse, should conform to, is formulated by Grice (1989) as follows: “Make your contribution such as it is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged” Grice (1989: 26).

³ According to Wilson and Sperber’s Relevance Theory, the hearer’s comprehension procedure is deemed successful when the hearer’s expectations of relevance are satisfied, i.e., when the hearer arrives at the interpretation that satisfies these expectations. In general, the procedure consists in the hearer processing the message conveyed by an utterance in order to recognize the informative intention of the speaker. Since the informative intention underlying the potential speaker’s use of the coordinated clauses in the sentence in (8) is far from clear, the hearer’s effort expended in processing the utterance is considerable, and, following Wilson and Sperber (2004: 610), “the greater the processing effort expended, the lower the relevance of the input to the individual at that time.”

some type of perceptual conflict principle” (Schachter 1977: 92). Zamparelli (2011) observes that the *make* in (10a) and the *make* in (10b) are, in fact, two lexically different verbs, hence the ungrammaticality of (9) is a result of what we will here refer to as a violation of the lexical uniformity condition. Similarly, Zamparelli (2011) notes that the ungrammaticality of (11b), a sentence with a different constituent configuration than (5a) (ungrammatical due to the different semantic functions of the conjuncts; repeated here as (11a)), might also be a result of the violation of the lexical uniformity condition.

- (11) a. * *John ate* [_{PP} *with his mother*] and [_{PP} *with good appetite*].
 b. * *John ate with* [_{DP} *his mother*] and [_{DP} *good appetite*].
- (12) a. *John ate with his mother*.
 b. *John ate with good appetite*.

In (11b), the two DP conjuncts form a coordinate complex which is a complement to the preposition *with*. Although the two conjuncts can function individually as complements of *with* (as shown in (12)), they cannot do so when coordinated. Zamparelli (2011) suggests that the sentences in (12) contain two lexically different prepositions, i.e., the *with* in (12a) is comitative, having the meaning of ‘accompanied by,’ and the *with* in (12b) denotes manner (Zamparelli 2011), hence the DPs *his mother* and *good appetite* cannot both be complements to only one of these prepositions.

To sum up, in order for the conjuncts to be grammatically coordinated, they need to satisfy the following conditions:

- (13) (i) the conjuncts have to be of the same category and/or
 (ii) the conjuncts have to have the same semantic function,
 (iii) the conjuncts must not violate Grice’s Maxim of Relation, and
 (iv) the conjuncts must not violate the lexical uniformity condition.

As shown above, conditions (13i) and (13ii) can neither individually nor in sum account for the grammaticality of unlike coordination (cf. (5), (8), (9)). These two conditions refer to the potential of the conjuncts to coordinate with each other, that is, they point to the syntactic or semantic similarities that make two conjuncts available for coordination. Let us identify them as coordination-internal conditions. On the other hand, condition (13iii) states that the conjuncts cannot violate Grice’s Maxim of Relation, i.e., not only must there exist some pragmatic correlation or parallelism between the conjuncts themselves but also there must exist some pragmatic motivation for the coordination to appear in a given sentence.⁴ Similarly, condition (13iv) relates the conjuncts to other elements in a sentence. For instance, the sentences in (9) and (11b) are said to be ungrammatical because the individual conjuncts are complements of verbs (as in (9)) or prepositions (as in (11b)) that are lexically different and the coordinate complex as a whole cannot be a complement to only one of them. Hence, let us identify the conditions (13iii) and (13iv) as coordination-external conditions.

⁴ Note that, although the condition in (13iii) must be satisfied by every instance of grammatical coordination, this condition alone does not automatically guarantee the grammaticality of coordination, as illustrated, for example, by the sentences in (6) and (9).

3. What is unlike coordination and how unlike are the conjuncts?

Despite the existence of many interpretations of the LCL, the term ‘unlike coordination’ is used in the literature to refer to the coordination of conjuncts with different syntactic categories:

- (14) a. *Johnny reads* [_{AdvP} *slowly*] *and* [_{PP} *with difficulty*].
 b. *Alice is* [_{DP} *a teacher*] *and* [_{AdjP} *proud of it*].⁵
 c. *His great-grandfather is* [_{AdjP} *healthy*] *and* [_{PP} *of sound mind*].
 d. *That was* [_{DP} *a stupid question*] *and* [_{PP} *in very bad taste*].
- (15) a. *Ewa była* [_{AdjP} *bezrobotna*] *i* [_{PP} *w sytuacji bez wyjścia*].
 Ewa was unemployed and in situation without exit
 ‘Ewa was unemployed and in a hopeless situation.’
 b. *Lubił* [_{NP} *alkohol*] *i* [_{TP} *podrywać różne panie*].⁶
 liked alcohol and pick-up-INF different ladies⁷
 ‘He liked alcohol and picking up different ladies.’
 c. *Pracowała* [_{AdvP} *szybko*] *i* [_{PP} *bez zbędnego gadania*].
 worked fast and without unnecessary talking
 ‘She worked fast and without unnecessary talking.’
 d. *Udawał* [_{AdjP} *naiwnego*] *i* [_{CP} *że nic nie rozumie*].
 pretended gullible and that nothing not understands
 ‘He pretended to be gullible and not to understand anything.’

The Polish *i* is similar to the English *and* in that they are both general coordinators (as opposed to category-specific ones) that can coordinate the conjuncts of any category. It is expected, however, that the conjuncts coordinated with *i* (or with any general coordinator in languages with such coordinators) will be of the same category, which is not always the case, as illustrated in (15).

In order to account for unlike coordination by means compliant with the underlying requirement of the LCL, i.e., that the conjuncts must be of the same category, several proposals have emerged which either treat unlike coordination as ‘like’ coordination in disguise or try to force ‘likeness’ onto unlike conjuncts by unifying their categories.

Perhaps the most intuitive method to approach the analysis of unlike coordination is by employing the mechanism of ellipsis, which makes it possible to view unlike conjuncts as derived from larger units of the same category, as illustrated in (16) and (17):

- (16) a. *Johnny reads* [_{AdvP} *slowly*] *and* [_{PP} *with difficulty*].
 b. *Johnny* [_{VP} *reads slowly*] *and* [_{VP} ~~reads~~ *with difficulty*].

⁵ Interestingly, in (14b) the second conjunct refers back to the first one, as noted by the reviewer. This results from the fact that the second conjunct contains the pronoun *it* anaphoric with the DP *a teacher* and is evidence of a more complex structure within this coordinate complex, an issue excepted from the present paper.

⁶ Following Witkoś (1998) and Bondaruk (2004), we assume that bare infinitival complements in Polish are TPs.

⁷ The following abbreviations have been used in the paper: INF – infinitive, GER – gerund.

- (17) a. *Pracowała [AdvP szybko] i [PP bez zbędnego gadania].*
 worked fast and without unnecessary talking
- b. *[CP Pracowała szybko] i [CP ~~pracowała~~ bez zbędnego gadania].*
 worked fast and worked without unnecessary talking
 ‘She worked fast and without unnecessary talking.’

Since ellipsis is not an uncommon language mechanism, compliant with the premise of the economy principle, it is rather difficult to argue that the sentences in (16a) and (17a) are not derived from the ones in (16b) and (17b), respectively. In fact, one might perhaps safely assume that most instances of unlike coordination are indeed derived via ellipsis. However, this is not always the case.

It has been observed (e.g., Peterson 2004) that a derivation of unlike coordination via ellipsis is sometimes unavailable since the constituent configuration of the base sentence is different from the one of the derived sentence. For example, the sentence in (18a)⁸ cannot possibly be derived from any of the two sentences in (18b) and (18c) since they are ungrammatical.

- (18) a. *You can depend on my assistant and that he will be on time.*
 b. * *You can depend on my assistant and you can depend on that he will be on time.*
 c. * *You can depend on my assistant and you can depend that he will be on time.*

Additionally, the sentence before the application of ellipsis might have a different interpretation than the derived one, as illustrated in (19).

- (19) a. *Ewa napisała dwa wypracowania [AdvP bezbłędnie] i [PP bez pomocy słownika].*
 Ewa wrote two essays correctly and without help dictionary
 ‘Ewa wrote two essays without mistakes and without the help of a dictionary.’
- b. *Ewa napisała dwa wypracowania bezbłędnie i napisała dwa wypracowania bez pomocy słownika.*
 Ewa wrote two essays correctly and wrote two essays without help dictionary
 ‘Ewa wrote two essays without mistakes and she wrote two essays without the help of a dictionary.’

In the sentence in (19a), it is clear that Ewa wrote two essays, both without mistakes and without the use of a dictionary. However, the most natural interpretation of the sentence in (19b) is that Ewa wrote four essays in total, two without mistakes and two without using a dictionary.⁹

It is neither viable nor necessary to claim that no grammatical instances of unlike coordination are derived via ellipsis (cf. (16) and (17)). Nevertheless, the derivation of unlike coordination via ellipsis cannot be the sole explanation for the grammaticality of unlike coordination since ellipsis is not always available (cf. (18)), nor does it seem to be always necessary. The coordinate complex *alkohol i podrywać różne panie* (‘alcohol and picking up different ladies’) in the sentence in (20a) does not have to be treated as a constituent since the

⁸ The example in (18a), repeated in (25a) and (26a), is taken from Munn (1993: 80).

⁹ The reviewer notes that the fact that ellipsis is not possible in (19) seems to be related to the presence of the numeral, which might indicate that LF has a role to play in licensing ellipsis. We do not intend to analyse the factors that constrain ellipsis in Polish, so we leave this problem aside here.

sentence might be derived via ellipsis from the sentence in (20b). However, the same coordinate complex in the sentence in (21) forms a constituent and this sentence could not possibly be derived via ellipsis. If it is possible to coordinate unlike categories without the use of ellipsis, as in (21), the ellipsis analysis is not a satisfactory answer to the unlike coordination puzzle.

- (20) a. *Lubił* [_{NP} *alkohol*] *i* [_{TP} *podrywać różne panie*].
 liked alcohol and pick-up-INF different ladies
- b. [_{CP} *Lubił alkohol*] *i* [_{CP} ~~*lubił*~~ *podrywać różne panie*].
 liked alcohol and liked pick-up-INF different ladies
 ‘He liked alcohol and picking up different ladies.’
- (21) *Alkohol i podrywać różne panie to dwie rzeczy, które lubił najbardziej.*
 alcohol and pick-up-INF different ladies it two things which liked most
 ‘Alcohol and picking up different ladies are two things he liked most.’

Another method of turning unlike coordination into ‘like’ coordination stems from the observation that the most frequent instances of unlike coordination involve predicate complements (Sag et al. 1985), as in (14b-d). For example, Jacobson (1987) proposes that copular verbs, instead of subcategorizing for NPs, AdjPs or PPs, subcategorize for a single category PRED. In other words, it is proposed to rewrite NPs, AdjPs and PPs as PREDPs. The result is that conjuncts with different categories, as in (22a), become conjuncts with the same category PRED, as in (22b).

- (22) a. *Ewa była* [_{AdjP} *bezrobotna*] *i* [_{PP} *w sytuacji bez wyjścia*].
 Ewa was unemployed and in situation without exit
- b. *Ewa była* [_{PREDP} *bezrobotna*] *i* [_{PREDP} *w sytuacji bez wyjścia*].
 Ewa was unemployed and in situation without exit
 ‘Ewa was unemployed and in a hopeless situation.’

Although this solution seems to work for the verb *be*, this is not always the case with other copular verbs (Bayer 1996; Peterson 2004). For example, the copular verb *stawać się* ‘become’ subcategorizes for NPs and AdjPs but not for PPs, as illustrated in (23).

- (23) a. *Ewa stała się* [_{AdjP} *bezrobotna*]/ [_{NP} *ofiarą*].
 Ewa became unemployed/ victim
- b. **Ewa stała się* [_{PP} *w sytuacji bez wyjścia*].
 Ewa became in situation without exit
- c. **Ewa stała się bezrobotna/ ofiarą i w sytuacji bez wyjścia.*
 Ewa became unemployed/ victim and in situation without exit

If the category of both conjuncts in (23c) is the same, i.e., PRED, then the sentence is expected to be grammatical, which is not the case. Consequently, if one were to unify several categories under one label in order to account for unlike coordination, it would be necessary to establish which items can c-select for this particular category. For example, the verbs *be*, *seem*, *appear*, etc., can subcategorize for the category PRED, but the verb *become* would have to

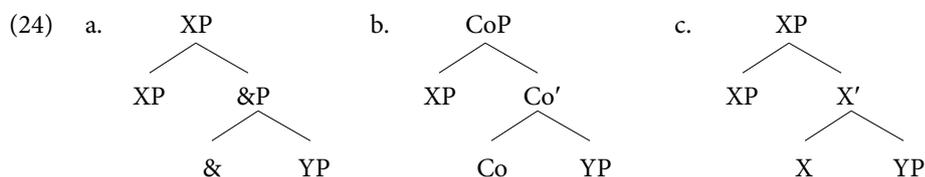
subcategorize for another unifying category, for instance, PREDX, which would encompass only NPs and AdjPs. This solution might have the undesirable effect of creating a new set of syntactic categories with a very particular (coordination-specific) context for application.

The motivation behind the two approaches to the analysis of unlike coordination discussed above, i.e., deriving unlike coordination via ellipsis and unifying the different categories of the conjuncts by means of another category, is the search for the common denominator for unlike conjuncts. An alternative strategy would be to abandon this search.

One possibility of doing so has been made available by the advent of a series of studies (e.g., Munn 1993; Johannessen 1998; Zhang 2010, among others) rejecting the flat structure of coordination in favour of a binary branching one. The binary branching structure of coordination is analysed as having the characteristics of either the structure of adjunction or complementation.

In the adjunction analysis, the first conjunct serves as a host to which the *and*-phrase (the coordinator and the second conjunct) is adjoined, as illustrated in (24a) (Munn 1993). The derivation of this structure is analogous to the derivation of the structure of traditional adjuncts. When an adjunct merges with its host, the category of the host is not influenced in any way and remains the same. Similarly in coordination, it is assumed that when the *and*-phrase merges with the first conjunct (functioning as a host) the category of this conjunct/host does not change. As a result, in the adjunction structure of coordination, the category of the coordinate complex is the same as the category of the first conjunct.

In the complementation analysis, the first conjunct is not a host to an adjunct but a specifier of the coordination phrase ('XP *and* YP') in which the coordinator is the head taking the second conjunct as its complement (e.g., Johannessen 1998; Zhang 2010). In general, the proponents of the complementation structure of coordination offer two ways in which the coordinate complexes are labelled. Johannessen (1998) postulates the introduction of the category Co(njunction). It is assumed that the coordinator (Co) is the head of a coordinate complex which projects its own phrase (CoP), as illustrated in (24b). Zhang (2010), on the other hand, postulates that the category of the coordinate complex is the same as the category of the first conjunct, which is the result of categorial feature percolation from the first conjunct onto the coordinator (i.e., the head of the coordinate complex), and from there onto the whole phrase, as illustrated in (24c).



At first sight, it may seem that all three structures illustrated in (24) can account for both 'like' and 'unlike' coordination. In the structures in (24a) and (24c), the category of the coordinate complex is the same as the category of the first conjunct. Consequently, the category of the second conjunct (whether the same as or different from the category of the first conjunct) plays no role in labelling the whole coordinate complex. The only restriction on

the category of the coordinate complex appears to be the c-selection requirement of the element selecting the coordinate complex as its complement, as illustrated in (25):

- (25) a. *You can depend on* [_{DP} [_{DP} *my assistant*] *and* [_{CP} *that he will be on time*]].
 b. * *You can depend on* [_{CP} *that he will be on time*].
 c. * *You can depend on* [_{CP} [_{CP} *that he will be on time*] *and* [_{DP} *my assistant*]].

According to Zhang's (2010) observation, only the first conjunct is c-selected by the head merging with the coordinate complex. For instance, when prepositions take coordinate complexes as complements (as in (25a)), the category of the first conjunct may be nominal but it cannot be a tensed clause.¹⁰ This restriction does not hold for the second conjunct, which can be a clause. Therefore, Zhang (2010) suggests that first conjuncts "must satisfy the category requirements that are imposed on the whole coordinate complex" (Zhang 2010: 51). At the same time, it is argued that the second conjunct and its categorial features are syntactically invisible and cannot be 'reached' by the c-selection requirements of the head taking the coordinate complex as a complement. Therefore, it would seem that the conjuncts can have different syntactic categories, as long as the first conjunct fulfils the c-selection requirements of the element merging with the whole coordinate complex.

This, however, is not the case in the structure proposed by Johannessen (1998), illustrated in (24b), where the coordinate complex is a coordination-specific CoP. If Co is indeed the category of every coordinate complex, irrespective of the categories of the conjuncts, there is no way to account for the grammaticality of (25a) and the ungrammaticality of (25c), repeated in (26) below.

- (26) a. *You can depend on* [_{CoP} [_{DP} *my assistant*] *and* [_{CP} *that he will be on time*]].
 b. * *You can depend on* [_{CoP} [_{CP} *that he will be on time*] *and* [_{DP} *my assistant*]].

In both sentences in (26), the preposition *on* takes a CoP as its complement, but in (26b) this results in an ungrammatical sentence. Therefore, it seems that the structure proposed by Johannessen (1998) is too permissive to successfully account for 'unlike' coordination.¹¹

The structures in (24a) and (24c) are too permissive as well, since they cannot account for the ungrammaticality of unlike coordination in the sentence in (23c), repeated in (27) below:

- (27) * *Ewa stała się* [_{AdjP} *bezrobotna*]/ [_{NP} *ofiarą*] *i* [_{PP} *w sytuacji bez wyjścia*].
 Ewa became unemployed/ victim and in situation without exit

¹⁰ As the reviewer rightly points out, the grammaticality of the sentence in (25a) might be due to the presence of an unpronounced nominal phrase, e.g., *the assumption*, in the *that*-clause, which surfaces only when the second conjunct is the first or the only element c-selected by the preposition. This solution would result in the coordination being composed of two DPs, as illustrated below:

(i) *You can depend on* [_{DP} [_{DP} *my assistant*] *and* [_{DP} *the assumption* *that he will be on time*]].

¹¹ If we were to assume that every coordinate complex is a CoP, it would mean that predicates also need to c-select for CoPs, which would pose a problem similar to the one faced by the analysis employing a single category PRED. For instance, if *stawać się* 'become' was allowed to c-select for CoPs, then it should be allowed to c-select for any coordinate complex, regardless of the category of its conjuncts, which is not the case, as shown in (23c).

As noted above, the verb *stawać się* ‘become’ can c-select AdjPs and NPs as its complements (cf. (23a)) but not PPs (cf. (23b)). Assuming either the adjunction (Munn 1993) or the complementation (Zhang 2010) structure of coordination, the sentence in (27) should be grammatical. Since only the first conjunct of the coordinate complex is c-selected and it is the one responsible for the label of the whole coordinate complex, while the second conjunct is structurally invisible and plays no role in category assignment, it should be possible to coordinate the combination AdjP/NP & PP with the verb *stawać się* ‘become,’ which is not the case.

In order to account for the ungrammaticality of sentences like the one in (27), we assume that the invisibility of the second conjunct is overridden by Wasow’s Generalization, which states that “[i]f a coordinate structure occurs in some position in a syntactic representation, each of its conjuncts must have syntactic feature values that would allow it individually to occur in that position” (Pullum and Zwicky 1986: 752-753). Being a PP, the second conjunct in (27) cannot be a constituent of a coordinate complex that is c-selected by the verb *stawać się* ‘become’ because it is not allowed to occur individually in that position, i.e., as a complement of *stawać się* ‘become.’ Since the generalization does not refer to the parallelisms between the conjuncts but relates the coordinate complex and its constituents to the external environment in which they occur, we will include the generalization as yet another coordination-external condition on the grammaticality of coordination.

4. Unfeasibility of the Law of the Coordination of Likes

In section 2, it was shown that not only do coordination-internal conditions (syntactic and semantic similarity) have to be included in the LCL but coordination-external conditions (pragmatic motivation and lexical uniformity) have to be taken into consideration in the case of coordination as well (cf. (13)). Section 3 discussed three strategies for analyzing unlike coordination, i.e., derivation via ellipsis, unification of categories, and an attempt to eliminate the issue of mismatched categories altogether. None of them seems to be efficient enough to be deemed superior to the others. The question then is whether the syntactic ‘sameness’ of conjuncts influences in any way their potential to be coordinated with each other.

In order to answer this question, a survey has been conducted to establish which combinations of categories can be coordinated in Polish. A summary of the results of the survey is presented in Table 1 below, where the plus symbols correspond to the attested combinations.

Table 1. *The attested combinations (+) of conjuncts with different categories (based on data extracted from the National Corpus of Polish (NKJP, cf. Przepiórkowski et al. 2012 and Kallas 1993)*

		CATEGORY OF THE SECOND CONJUNCT						
		NP	INF	GER	CP	AdjP	AdvP	PP
CATEGORY OF THE FIRST CONJUNCT	NP		+	+	+	+	+	+
	INF	+		+	+			+
	GER	+	+		+			
	CP	+	+	+		?	?	+
	AdjP	+			+			+
	AdvP	+			+			+
	PP	+	?		+	+	+	

As shown in Table 1, in Polish almost every category can be coordinated with any other category, NPs, CPs and PPs having the highest potential for coordination with each other and the rest of the categories. The empty cells indicate that a given combination is not attested. This may be due to the unavailability of any possible context where the two categories could be coordinated, for instance, there is no context where the coordination of, for example, an adjective and an adverb, would result in a grammatical or at least an acceptable sentence. The question marks in three cells (PP & infinitive, CP & AdjP, CP & AdvP) correspond to unattested combinations whose reverse order (infinitive & PP, AdjP & CP, AdvP & CP¹²) is found in the data. Reversing the order of the three attested combinations renders the sentences ungrammatical, as illustrated in (28)-(30):

- (28) a. *Udawał [AdjP naiwnego] i [CP że nic nie rozumie].*
 pretended gullible and that nothing not understands
 'He pretended to be gullible and not to understand anything.'

¹² The reason why, at least in Polish, a CP cannot be the first conjunct when an adjective is the second conjunct might be due to the fact that CPs block case assignment (cf. Munn 1993), and adjectives in Polish need to be assigned case. However, this should also make the combination CP & NP ungrammatical, which is not the case, as illustrated below:

- (i) *Nauczył go, [CP żeby nie przeszkadzał] i [NP szacunku do starszych od siebie].*
 taught him to not interrupt and respect for older than himself
 'He taught him not to interrupt and to respect people older than himself.'

An alternative reason why CPs as first conjuncts are not attested in combinations with adjectives and adverbs might be weight effects. CPs tend to be longer (heavier) than adjectives and adverbs and, hence, they tend to be placed on the right side of the coordinator. For a discussion of weight effects in coordination, see Lohmann (2014).

- b. * *Udawał* [_{CP} *że nic nie rozumie*] *i* [_{AdjP} *naiwnego*].
 pretended that nothing not understand and gullible
- (29) a. *Kradł* [_{AdvP} *sporadycznie*] *i* [_{CP} *żeby wykarmić rodzinę*].
 stole sporadically and to feed family
 ‘He stole sporadically and to feed the family.’
- b. * *Kradł* [_{CP} *żeby wykarmić rodzinę*] *i* [_{AdvP} *sporadycznie*].
 stole to feed family and sporadically
- (30) a. *Starł się* [_{TP} *wyjechać*] *i* [_{PP} *o pracę*].
 tried leave and about job
 ‘He tried to leave and to get a job.’
- b. * *Starł się* [_{PP} *o pracę*] *i* [_{TP} *wyjechać*].
 tried about job and leave

Although the frequency of ‘like’ coordination is indisputably greater than that of unlike coordination,¹³ the number of possible combinations of categories (at least in Polish) is high enough to start doubting the validity of the Law of the Coordination of Likes. If it is possible to coordinate NPs, CPs and PPs with virtually any other category and with each other, stating that in order for the conjuncts to form a grammatical coordinate complex they have to be of the same category is spurious.

Moreover, the grammaticality judgements of unlike coordination appear to be context-dependent. When in isolation, the two coordinated constituents in (31a) are not syntactically similar, nor do they seem to be semantically related to each other. Additionally, any pragmatic parallelism between the conjuncts can be made available and retrieved only from the context in which the coordination is used. In other words, there is no apparent indication of any parallelisms either within or between the conjuncts themselves that could be employed to produce a grammaticality judgement of the coordination in isolation. Consequently, according to the LCL, they are not supposed to form a grammatical coordinate complex, which is not the case, as seen in (31b).

- (31) a. [_{TP} *spać*] *i* [_{NP} *zapach płynu do płukania tkanin*]
 to-sleep and smell liquid for rinsing fabric

¹³ We would like to tentatively hypothesize that the reason why it is still the case that the majority of coordinate structures contain ‘like’ conjuncts stems from the logic underlying human linguistic expression. The reason why a speaker “decides” to use a coordination relation to relate two entities, situations, etc., is because, at least for him or her, there exists some logical common ground (symmetry) between them that is best captured by this symmetrical relation. Automatically, this common ground corresponds to these entities/situations being similar in many respects, one of them often being their category (for instance, if we want to say that we have two things, we use two nouns to name these things; if we want to say that something has two features, we use two adjectives that best describe these features, etc.). This might be exactly the reason why some categories are never coordinated (e.g., adjectives and adverbs) – there is no context in which it would be logically possible to coordinate them. Expressing these symmetrical entities/situations by means of different categories often seems rather coincidental and optional (e.g., the phrase [_{Adv} *bezbłądnie*] *i* [_{PP} *bez pomocy słownika*] expresses the same concept as the phrase [_{PP} *bez błędów*] *i* [_{PP} *bez pomocy słownika*] ‘without mistakes and without the help of a dictionary’). See Progovac (2010) for a discussion of the place of coordination in the evolution of syntax.

- b. *Wydaje mi się, że lubisz spać i zapach płynu do płukania tkanin.*
 I-think that like-2SG. to-sleep and smell liquid for rinsing fabric
 ‘I think that you like to sleep and the smell of a fabric conditioner.’

(NKJP)

The examples in (31) undermine the validity of the LCL, which in its original form(s) is based only on coordination-internal conditions (i.e., the conjuncts must be syntactically and/or semantically and/or pragmatically similar). These conditions are insufficient to assess the potential for the conjuncts in (31a) to coordinate. What appears essential is the context, not only pragmatic but also syntactic (in the case of the coordination of complements), which roughly corresponds to the coordination-external conditions.

Therefore, in view of the present discussion, which deems the existing Law of the Coordination of Likes impossible to uphold when confronted with the data, we propose to revise the LCL as follows.

(32) **The Revised Law of the Coordination of Likes**

In order for the conjuncts to be grammatically coordinated, they need to satisfy the following conditions:

- (i) they have to be of the same category and/or
- (ii) they have to have the same semantic function,
- (iii) they must not violate Grice’s Maxim of Relation,
- (iv) they must not violate the lexical uniformity condition, and
- (v) they must not violate Wasow’s Generalization.

Although the coordination-internal conditions (cf. (32(i)) and (32(ii))) are not sufficient to guarantee grammatical coordination, most instances of grammatical coordination do involve conjuncts with the same category (and the same semantic functions). However, the conjuncts do not have to be of the same category in order to be grammatically coordinated, as long as the coordination is pragmatically motivated and syntactically licensed by the structure in which it occurs. In fact, as shown in (31), there does not have to be any apparent connection between the conjuncts themselves. What seems to be necessary, though, is the connection, syntactic, pragmatic and lexical, between the coordinate complex and the structure in which it occurs.

5. Conclusions

In this paper, we argued that the phenomenon of unlike coordination is not a linguistic outlaw, but rather it is the Law of the Coordination of Likes that is flawed in presupposing that the existence of parallelisms between the conjuncts is sufficient to ensure the grammaticality of coordination.

It was shown that the attempts mentioned in the literature to circumvent the ‘unlikeness’ of conjuncts cannot successfully account for the data. The ellipsis analysis, despite being capable of covering a substantial amount of data, is not a universal solution as many instances of unlike coordination cannot be derived via ellipsis. Similarly, unifying the mismatched categories of conjuncts by means of introducing additional categories is not an efficient solution. Neither can the existence of grammatical instances of unlike coordination be

justified solely by the binary structure of coordination (in which the second conjunct is structurally invisible), because it lacks a mechanism to block ungrammatical cases of unlike coordination.

We concluded that neither syntactic nor semantic (or even pragmatic) similarities between the conjuncts can invariably guarantee the grammaticality of coordination since the potential of two conjuncts to be grammatically coordinated cannot always be assessed solely on the basis of coordination-internal factors or in isolation. We argued that the key factor might be the syntactic, pragmatic and lexical relation between the whole coordinate complex and the structure in which the coordination occurs, which we attempted to capture by means of the Revised Law of the Coordination of Likes (cf. (32)).

References

- Bayer, Samuel. 1996. The coordination of unlike categories. *Language* 72, 579-616.
- Bondaruk, Anna. 2004. *PRO and Control in English, Irish and Polish - A Minimalist Analysis*. Lublin: Wydawnictwo KUL.
- Chaves, Rui P. 2006. Coordination of unlikes without unlike categories. In *Proceedings of the 13th International Conference on Head-Driven Phrase Structure Grammar, Bulgarian Academy of Sciences, Varna, Bulgaria*, edited by Stefan Müller, 102-122. Stanford: CSLI Publications.
- Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.
- Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- Daniels, Michael W. 2002. On a type-based analysis of feature neutrality and the coordination of unlikes. In *8th international conference on Head-Driven Phrase Structure Grammar*, edited by Frank Van Eynde, Lars Hellan, and Dorothee Beermann, 137-147. Stanford: CSLI Publications.
- Dik, Simon C. 1968. *Coordination: Its Implications for the Theory of General Linguistics*. Amsterdam: North-Holland.
- Ernst, Thomas. 2002. *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Grice, Paul. 1989. *Studies in the Way of Words*. Cambridge: Harvard University Press.
- Huddleston, Rodney, John Payne, and Peter Peterson. 2002. Coordination and supplementation. In *The Cambridge Grammar of the English Language*, edited by Rodney Huddleston, and Geoffrey K. Pullum, 1273-1362. Cambridge: Cambridge University Press.
- Jacobson, Pauline 1987. Review of Gerald Gazdar, Ewan Klein, Geoffrey K. Pullum, and Ivan A. Sag. *Generalized Phrase Structure Grammar*. *Linguistics and Philosophy* 10, 389-426.
- Johannessen, Janne B. 1998. *Coordination*. Oxford: Oxford University Press.
- Kallas, Krystyna. 1993. *Składnia Współczesnych Polskich Konstrukcji Współrzędnych* [The syntax of coordinate structures in contemporary Polish]. Toruń: Wydawnictwo Uniwersytetu Mikołaja Kopernika.
- Levy, Roger, and Carl Pollard. 2002. Coordination and neutralization in HPSG. In *The Proceedings of the HPSG-2002 Conference*, edited by Frank Van Eynde, Lars Hellan, and Dorothee Beermann, 221-234. Stanford: CSLI Publications.
- Lohmann, Arne. 2014. *English Coordinate Constructions - A Processing Perspective on Constituent Order*. Cambridge: Cambridge University Press.
- Munn, Alan. 1993. *Topics in the Syntax and Semantics of Coordinate Structures*. University of Maryland, PhD dissertation.
- Peterson, Peter G. 2004. Coordination: consequences of lexical-functional account. *Natural Language and Linguistic Theory* 22, 643-679.
- Progovac, Ljiljana. 2010. Syntax: its evolution and its representation in the brain. *Biolinguistics* 4.2-3, 305-336.

- Przepiórkowski, Adam, Mirosław Bańko, Rafał Górski, and Barbara Lewandowska-Tomaszczyk. 2012. *Narodowy Korpus Języka Polskiego* [National Corpus of the Polish Language]. Warszawa: Wydawnictwo Naukowe PWN.
- Przepiórkowski, Adam, and Agnieszka Patejuk. 2012. On case assignment and the coordination of unlikes: The limits of distributive features. In *The Proceedings of the LFG'12 Conference*, edited by Miriam Butt, and Tracy H. King, 479-489. Stanford: CSLI Publications.
- Pullum, Geoffrey K., and Arnold M. Zwicky. 1986. Phonological resolution of syntactic feature conflict. *Language* 62 (4), 751-773.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Sag, Ivan. 2003. Coordination and Underspecification. In *Proceedings of the 9th International Conference on Head-Driven Phrase Structure Grammar, Kyung Hee University, Seoul, South Korea*, edited by Jongbok Kim, and Stephen Wechsler, 267-291. Stanford: CSLI Publications.
- Sag, Ivan, Gerald Gazdar, Thomas Wasow, and Steven Weisler. 1985. Coordination and how to distinguish categories. *Natural Language and Linguistic Theory* 3, 117-171.
- Schachter, Paul. 1977. Constraints on coordination. *Language* 53, 86-103.
- Williams, Edwin S. 1981. Transformationless Grammar. *Linguistic Inquiry* 12 (4), 645-653.
- Wilson, Deirdre, and Dan Sperber. 2004. Relevance Theory. In *The Handbook of Pragmatics*, edited by Laurence Horn, and Gergory Ward, 607-632. Oxford: Blackwell.
- Witkoś, Jacek. 1998. *The Syntax of Clitics. Steps towards a Minimalist Account*. Poznań: Motivex.
- Yatabe, Shūichi. 2004. A comprehensive theory of coordination of unlikes. In *Proceedings of the HPSG-2004 conference, Katholieke Universiteit Leuven*, edited by Stefan Müller, 335-355. Stanford: CSLI Publications.
- Zamparelli, Roberto. 2011. Coordination. In *Semantics: An International Handbook of Natural Language Meaning, Volume 1*, edited by Claudia Maienborn, Klaus von Stechow, and Paul Portner, 1713-1741. Berlin and Boston: Mouton de Gruyter.
- Zhang, Niina Ning. 2010. *Coordination in Syntax*. Cambridge: Cambridge University Press.