CONJOINED PHRASES AS ADJOINED B(OOLEAN) P(HRASES): THE CASE OF ROMANIAN

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Abstract. The aim of this paper is twofold. On the one hand it is meant to provide an overview of Kayne's (1994) antisymmetry theory and of Munn's (1993) Adjoined B(oolean) P(hrases) Theory in regard to conjoined phrases, as to verify the preferable way of approaching asymmetric coordination. The focus point of this section is presenting the advantages of taking conjoined phrases as adjoined BPs (the conjunction and second conjoin seen as part of a maximal projection) and checking if they hold true in the Romanian language. On the other hand, this section discusses the disadvantages brought up in the literature and possible solutions that have been proposed for each.

***Keywords*:** antisymmetry, adjoined BPs, asymmetric coordination, asymmetric Binding, ATB extraction

1. Introduction

The syntactic constituent characterized by its ability to combine language units, the coordinate complex, is, in theory, defined by symmetry in regard to its conjoins, belonging to the same syntactic categories or carrying the same tense. This has throughout time posed several difficulties in regard to its representation in X-bar.

Constructions such as the one in (1) may represent symmetry in regard to conjoins, but at the same time, by making all components of the coordinate constituent equal, it violates endocentricity.

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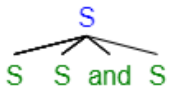
(1) 

Moreover, following Ross (1964), only the conjunction and the second conjoin are taken to be an identifiable subpart of the sentence, able to form a constituent or fact which further encourages a different way of approaching coordinate constructions within the Generative framework.

Given that multiple branching does not suffice in representing coordinate constructions, two main approaches will be discussed, Kayne's (1994) antisymmetry theory and Munn's (1993) adjoined BPs theory, with the purpose of observing their advantages and accounting for their limitations.

Assuming that coordinating conjunctions project to their own maximal projections, this paper addresses the issue of movement rules such as extraction or Across-the-Board movement, which are known to only apply to maximal projections.

Moreover, the question of whether binding and c-command can account for the choice between the antisymmetry and the adjoined BPs theory will be addressed.

Finally, this paper will examine several problems related to the ineffective representation of semantic mismatches and investigate whether these issues also exist in the Romanian language.

2. Kayne's (1994) antisymmetry theory

Kayne's (1994) antisymmetry approach is built on the rejection of the former common assumption that linear order and hierarchical structures are understood as independent from one another.

The antisymmetric configuration assumes that phrase structure dictates linear order and that differences in linear order will always affect hierarchical structuring.

The first step that must be taken by following the Spec/Head hypothesis is to tackle the issue of symmetry within c-command. Kayne (1994) provides an account of asymmetry in c-command by adding the following law:

(2) *X asymmetrically c-commands Y iff X c-commands Y and Y does not c-command X.*

Thus, linear order corresponding to asymmetric c-command relations defines the relation between hierarchical and linear order.

This hypothesis stems from the two fundamental licensing relations of Generative Grammar, argued for in Chomsky (1995): the Spec-to-Head and the Head-to-Head licensing relation enabled by the transformational rule of movement.

In order to prove the fundamental connection between hierarchical and linear ordering in asymmetric constructions, Kayne (1994:17) introduces the Linear Correspondence Axiom.

The Linear Correspondence Axiom states that asymmetric c-command maps onto relations of precedence. For instance, this may show that a head can only have one specifier or adjunct and that specifiers precede their heads.

When considering the non-terminal nodes X and Y, where X c-commands Y but not conversely, and taking x and y as their terminal nodes, it follows that x precedes y, as syntactic structure dictates linear ordering.

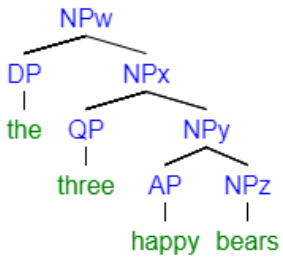
Thus, if d is considered to be the dominance relation between a nonterminal and terminal node, A a set of ordered pairs <Xj, Yj> (where Xj asymmetrically c-commands Yj) and d(A) the set of terminals that A dominates, then d(A) is to be considered a linear ordering of the set of terminals.

Kayne (1994) proceeds by giving a simple example in order to properly observe the syntactic mechanism behind the LCA hypothesis in practice:

> Taking a construction such as the three happy bears represented below in (3), we note that the sets of nonterminal nodes where the first asymmetrically c-commands the second are <DP, QP>, <DP,NP>, <QP,AP>, <QP,NPz>, <QP,AP>, <DP, AP>, <DP, NPz>.

Looking solely at the nonterminals that dominate one terminal element, in this example DP, QP, AP and NPz, the set of terminals that dominate the aforementioned pairs are: <the, three>, <the, happy>, <the, bears>, <three, happy> and <three, bears>.

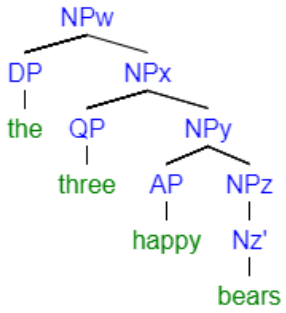
(3)



These pairs properly show a linear ordering of the set <the three happy bears> while accounting for the asymmetric nature of the representation.

However, a problem that arises in this representation is the impossibility to constitute a linear ordering for the pair <happy, bears>. For our example, Kayne (1994) would provide the following representation (4), in which asymmetry is respected, and for each pair of terminals, an ordering is provided.

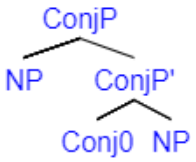
(4)



Kayne's (1994) mapping of asymmetric c-command into the binary relation of precedence in regard to the terminal and nonterminal nodes allowed us to understand the significance of linear order and of the specifier-head-complement configuration.

Applying the Spec/Head configuration to conjoined phrases will result in the following binary branching representation.

(5)



The next section investigates one framework which uses the Spec/Head configuration to account for coordination, namely Munn's (1993) Adjoined BP Theory.

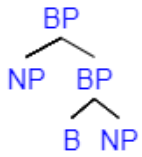
3. Munn's (1993) Adjoined BP Theory

While the Spec/Head configuration allows for the mapping of asymmetric c-command in general into linear precedence, thus being able to point towards the asymmetric nature of coordination, Munn's (1993) approach takes a different turn by attempting to prove that coordinated structures are syntactically adjunction structures.

Disagreeing with the multiple-head approach, which by nature violates the head uniqueness characteristic and the idea that all lexical items project phrases, Munn (1993) proposes that all coordinating conjunctions project to their own maximal projections.

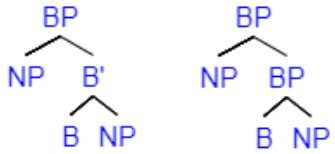
To support this, a new construction, called the Boolean Phrase, labeled BP, has been proposed to accommodate the conjoins and the coordinator. Following the tree representation, we see that the first conjoin is placed in Spec BP and the other in complement position.

(6)



Taking a look at the two approaches side by side, we understand that the notion of maximal phrase is what counts in regard to a proper representation of coordinated constructions.

(7)



Spec/Head Adjoined BP

The conjunction and the second conjoin are taken to be an identifiable subpart of the sentence, able to form a constituent.

This study has so far introduced two potential strategies for addressing the issue of asymmetric coordination. A proposal, put forth by Kayne in 1994, posits that the Spec/Head configuration is the optimal means of representing coordinated constructions, and that coordination should always be viewed as asymmetrical based on the Linear Correspondence Axiom. Similarly, Munn's 1993 approach also views coordination as intrinsically asymmetrical, but differs in projecting both conjoined elements as a maximal projection by means of introducing a Boolean Phrase. The next section of this article will present evidence supportive of the maximal projection approach.

3.1. Accounting for ATB extraction within the Adjoined BP Theory

In this section, we examine how the occurrence of across-the-board extraction, a linguistic phenomenon where a constituent is moved from an embedded clause to a higher clause, promotes the asymmetric representation of coordinated structures and favours the maximal phrase approach proposed by the Adjoined BP Theory.

According to Ross (1964), extraction must be done out of all conjoins, as extraction out of a single conjoin would disobey the Coordinate Structure Constraint:

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

Therefore, the fact that extraction can only occur when the conjunction and the second conjoined element move together indicates that they should be considered a maximal projection. This is because movement rules, like extraction, can only apply to maximal projections.

In the examples below, neither the first nor the second conjoin can be extraposed unless taken with the conjunction as a whole, a fact which further points towards an asymmetric representation of coordinate constructions. Moreover, Romanian seems to be more permissive in regard to extraction given its adjunct flexibility.

(8) A man travelled through Palestine and took pictures.
Un bărbat a călătorit prin toată Palestina și a făcut poze.
a man has travelled through all Palestine and has taken pictures.

(9) *A man took pictures through Palestine, travelled and.
*Un bărbat a făcut poze prin toată Palestina, a călătorit și.
a man has taken pictures through all Palestine, has travelled and.

(10) *A man took pictures and through Palestine travelled.
Un bărbat a făcut poze și prin toată Palestina, a călătorit.
a man has taken pictures and through all Palestine, has travelled.

Following this example, one reaches the conclusion that the first conjoin and the conjunction never form a constituent, allowing for the Boolean phrase to accurately represent this asymmetry.

(11) They closed the kitchen but he
Au închis bucătăria însă el
(They) have closed kitchen.the but he
is still hungry.
tot nu s-a săturat de mâncat.
still not REFL.-has got sick of eating.

(12) They closed the kitchen, he
Au închis bucătăria, el
(They) have closed kitchen.the, he
is but still hungry.
tot nu s-a săturat însă de mâncat.
still not REFL-has got sick but of eating.

(13) They closed but the kitchen, he
*Au închis însă bucătăria, el
(They) have closed but kitchen.the, he
is still hungry.
tot nu s-a săturat de mâncat.
still not REFL-has got sick of eating.

What is also worth mentioning is that Munn's approach to ATB extraction suggests that it is an instance of parasitic gaps.

While in the case of ATB extraction, the coordinate structures contain two gaps coindexed with the same wh-element (see example 14), parasitic gaps occur only in the presence of another gap (15):

(14) What did Samantha cook __ and her family enjoy__?

(15) Which book did you judge as boring__ without even finishing__$_p$?

The parallelism between ATB extraction and parasitic gaps is clear. Firstly, both phenomena postulate the presence of two gaps and share comparable criteria for achieving grammaticality.

Franks (1993) proposes two requirements shared by both phenomena: Morphological case identity must not be violated, as demonstrated in (16-17), and the conjoined constituents must possess the same degree of prominence, as illustrated in (16-17), to ensure grammaticality of both ATB structures and parasitic gaps.

(16) What does John read __and Mary write__?

(17) What book did you buy__ in order to finish__$_p$?

In both cases, all gaps are associated with the same morphological case, the objective case, enabling the formation of grammatical sentences.

Franks (1993: 516) discusses how the degree of prominence relates to the grammaticality of a sentence in both ATB extraction and parasitic gaps. Specifically, if all conjoins in these constructions belong exclusively to either the most prominent or non-most prominent arguments, the sentence is considered grammatically correct.

The scale of thematic prominence presented in (18), taken from Franks (1993: 516), allows us to check this property.

(18) Agent > Experiencer > Theme > Goal/Source/Location > Manner/Time

(19) What topic were you considering __ and discussing __?

(20) Which topic were you considering __ while discussing _P?

The fact that both examples assume the thematic role of Theme and do not exhibit varying degrees of prominence allows for a grammatical reading in both ATB extraction and parasitic gaps.

Thus, according to Munn (1993: 64), allowing movement out of a maximal projection and providing a gap from where ATB extraction can occur represent an argument in favour of the Adjoined BP theory.

3.2. Accounting for Asymmetric Binding within the Adjoined BP Theory

This section discusses whether binding and c-command phenomena can account for the choice between the asymmetry and the Adjoined BP theory.

Binding anaphoric elements to their grammatical antecedent always gives rise to certain asymmetries. This has always been seen as a valid argument in favour of the Adjoined theory.

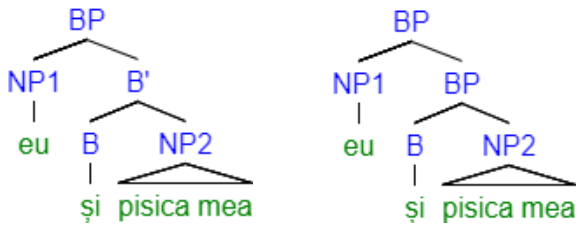
Because of the leftness condition (Chomsky 1976), a pronoun cannot bind an antecedent to its left, as in the example:

(21) Every man and his dog went hunting.

(22) *His dog and every man went hunting.

In this case, while the first conjoin may bind to the first conjoin, the second one cannot. However, this is not enough to demonstrate the asymmetry of binding, as both theories are capable of doing so:

(23)



Spec/Head Adjoined BP

If BP projected NP1 and NP2, then it could be the c-command domain for both if not for the intervening node. Within c-command, we know that the first branching node that dominates A, dominates B as well, but whether it must be a maximal projection or not is not taken into consideration, so both interpretations may as well be chosen to represent asymmetric binding.

However, in the case of m-command, the adjoined projection representation is preferred.

May (1985) gives the example of the following sentence, which displays ambiguity in regard to scope variation, as both what and everyone may take scope over the other.

(24) What did everyone buy for Max?

For instance, if *what* has wider scope, than we would understand the sentence as a single question, asking for the identity of the object such that everyone bought it for Max. (Everyone bought Max a DVD player). If *everyone* has wider scope, than we are dealing with a distributive interpretation, asking of each individual what it is that that person bought for Max (Mary bought Max a tie, Sally a sweater, and Harry a piano.)

However, we understand that *what* should be placed in CP, given the [+WH] feature of CP and the lack of [+WH] of the quantifier everyone. If we assume that we define scope by means of c-command, only the *what* as having wider scope interpretation can surface.

May (1985) approaches this paradox by introducing m-command, where maximal A dominates maximal B if every maximal projection dominating A dominates B as well. In this manner, if what and everyone are part of maximal projections, both what and everyone may dominate each other, giving rise to both interpretations.

Thus, if we assumed the necessity of m-command for asymmetric binding, then the adjoined BP structure will definitely be preferred, ruling out Spec/Head BP, by lack of maximal projection.

4. The Adjoined BP. Some semantic problems

4.1. Distinctions between phrasal and sentential coordination

This section of the paper takes into account several problems posed by the mapping of the semantics to the syntactic representation, as discussed in Munn (1993: 115).

Firstly, it discusses the apparent inability of the adjoined BP to properly convey the properties of coordinate constructions, such as the different representations of phrasal and sentential coordination. It also touches upon the issue of representing various operators within asymmetric coordination.

Secondly, the adjoined BP seemingly fails to acknowledge the semantic symmetry of the conjoins.

Thirdly, all conjoins are supposed to be of the same semantic category, a rule which is not always obeyed in language.

The first issue that arises in regard to the adjoined BP approach is that phrasal coordination may ambiguously get interpreted as being generated as a result of conjunction reduction or not. An example would be that within phrasal coordination, John and Mary baked a cake and John baked a cake and Mary baked a cake seem to have the same truth conditions, despite the obvious lack of object distributivity in the first interpretation.

In order to avoid this ambiguity, within the adjoined BP approach, Munn (1993) adopts a base generated phrasal conjunction representation, rejecting the Conjunction Reduction approach, the mechanism of ellipsis that considers non-constituent conjuncts as complete clauses or phrases.

Choosing a base generated phrasal approach provides some advantages, as it offers solutions to various shortcomings of conjunction reduction, such as the cumulative interpretation of a collective noun.

(25) John and Mary are a couple.
does not entail

(26) John is a couple and Mary is a couple.

The statement "John and Mary are a happy couple" implies that the attribute of happiness in a relationship is being ascribed to the group composed of John and Mary, rather than to the members of the group separately.

(27) John and Mary met yesterday.
does not entail
(28) John met and Mary met yesterday.

(29) John and Mary are similar.
does not entail
(30) John is similar and Mary is similar.

This can have various pragmatic consequences, such as the switch between the cumulative and the distributive interpretation or the ambiguity that arises as its result. In the example:

(31) John and Mary met and drank coffee.
Ion și Maria s-au întâlnit și au băut o cafea.
John and Mary REFL-have met and have drunk a coffee.

We cannot continue with: *Ion și Maria au băut două cafele* (John and Mary drank two cups of coffee), to express distributivity.

Considering the limitations associated with Conjunction Reduction, choosing to always assume a base-generated approach appears to be the most appropriate solution for asymmetric coordination.

4.2. Distinctions between operators

A very important issue that asymmetric theories of coordination as the Adjoined BP Theory face is the inability to property represent semantic meanings between various operators, such as *and* or *or*.

Munn (1993) approaches this problem by assuming that in the case of and a universal quantifier semantically involves the contribution of each element in the domain of discourse. Thus, in the examples given, (32) is a semantic implication of (33)-(35).

(32) Each child received an ice cream.
Fiecare copil a primit câte o înghețată.
each child has received DISTR an ice cream.

(33) John received an ice cream.
Ion a primit o inghetată.
John has received one ice cream.

(34) Mary received an ice cream.
Maria a primit o inghetată.
Mary has received one ice cream.

(35) Joanne received an ice cream.
Ioana a primit o inghetată.
Joanne has received one ice cream.

However, a sentence such as (36) would be harder to represent in asymmetric coordination.

(36) John and Mary or Joanne received an ice cream.

As a solution for the semantic issue of representing various coordinators, Munn (1993) introduces the concept of coordinators as set operators, constructed by means of a 'set union' (the conjunction and) and 'one of' (the conjunction or). By doing so, we understand that the disjunctive coordinator allows for new group formation, whereas and always implies that the plural subject may directly receive the same interpretation as its elements.

By means of set operators, one can approach novel cases of conjoined constructions, such that appear for example in non-assertive sentences. In this context, the set operations allow for the semantic content of group inclusion vs exclusion to surface.

(37) Mary did but John didn't receive ice cream.
Maria dar nu și Ion a primit înghețată.
Mary but not and John has received ice cream.

(38) Mary but not John or Joanne received ice cream.
Maria dar nu Ion sau Ioana au primit înghețată.
Mary but no John or Joanne have received ice cream.

Ultimately, despite the coordinators semantic rendering as set operators, Munn's (1993) asymmetric approach in the Adjoined BP theory appears to face challenges in the syntactic representation of different coordinators.

4.3. Semantic symmetry among conjoins

Another issue that one may identify in regard to the adjoined BP approach is that, despite both conjoins being semantically able to be selected by the head, it implies a stronger relation only between the first constituent and the head.

To meet the criteria of binary branching, the adjoined BP is forced to prioritize the first conjoined element when it comes to head selection. This requirement doesn't stem from the absence of a multiple branching approach, but rather reinforces the inherent asymmetry of language.

One such example of preferential treatment comes for example in regard to possessee pronominalization.

Possessee pronominalization disallows the reordering of the conjoins. In the examples below, the pronominalization of yours by the wife NP is possible only if an anaphoric relation is established, where the NP is the antecedent.

(39) John's wife and yours have become friends.
Soția lui Ion și a ta au devenit prietene.
wife of John and of yours have become friends.

(40) *Yours and John's wife have become friends.
*A ta și soția lui Ion au devenit prietene.
of yours and wife of John have become friends.

However, this is merely an atypical scenario and does not conform to the standard practice of coordination. Typically, the coordinated elements are semantically equal in nature and exhibit a symmetrical relationship. Thus, presenting them in a subordinate fashion might compromise our core understanding of coordination.

(41) Mary and John and eating.

(42) I want either tea or coffee.

(43) You can write with a pen or a pencil.

The examples above represent simple instances of coordination where both conjoins share semantically the same status in the sentence.

4.4. Semantic identity among conjoins

The final concern that arises with respect to the adjoined BP phrase is the apparent inability to establish a semantic identity relationship among the coordinated elements.

The following sentences represent examples of the unlike category, where the conjoins belong to different syntactic categories and project at different semantic levels.

(44) *The boy is sad and at the ice cream shop.
*Băiatul e supărat și la magazinul de înghețată. (AP^PP)
boy.the is upset and at shop.the of ice cream.

(45) *The car is in the garage and new.
*Mașina e în parcare și nouă. (PP^AP)
car.the is in the garage and new.

(46) *Mary is a girl and beautiful.
*Maria e o fată și frumoasă. (NP^AP)
Maria is a girl and beautiful.

As presented, they are ungrammatical due to their semantic mismatches.

Although there may be a semantic mismatch, it is widely known that there are numerous instances where unlike categories are expressed as grammatically correct.

(47) Mary is [a mother] and [proud of her children]. (NP^AP)

One problem with the Adjoined BP theory's asymmetrical approach to coordination is that it cannot offer a syntactic explanation for the grammaticality of coordinated structures that involve unlike categories.

However, according to Munn (1993), the inability mentioned actually relates to a semantic parallelism between the conjunctions that determines whether the sentence is grammatical or not, which cannot, within this model, be distinguished in syntax.

5. Conclusions

In this paper, I provided an overview of how Kayne's (1994) anti-symmetry theory and Munn's (1993) Adjoined BP theory both introduce different representations for the coordinate construction. Kayne's (1994) Spec/Head theory is built on the agreement that linear order and hierarchical structures are interlinked via the Linear Correspondence Axiom and that, as a result of this mechanism, coordinate constructions are also generated by means of asymmetric c-command.

On the other hand, the Adjoined BP theory was presented as allowing both conjoins to be part of a maximal phrases, a fact which has proven useful in understanding its behaviour in regard to Across-the-Board movement and m-command.

In section 3.1., I have taken a closer look at how extraction out of coordinate constructions may favour the Adjoined BP theory, as we have seen that the first conjoin and the second without the conjunction cannot be extraposed.

Following May (1985), I have discussed the necessity of m-command in asymmetric binding which, as a result, rules out the Spec/Head Theory by lack of maximal projection.

The second part of the paper dealt with the problems posed by mapping the adjoined BP structure into the semantics. According to Munn (1993), the first shortcoming that we encounter when attempting to convey the semantics of coordinate constructions within syntax is the system's inability to convey the distinct syntactic representation for phrasal and sentential coordination. Thus, it cannot check for cumulative or

distributive meaning. To solve this issue, we have discussed Munn's (1993) set operations for the conjunctive and disjunctive coordinators.

Lastly, we discussed the inability of syntactic representation to acknowledge the semantic symmetry of the conjoins. Despite the lack of proper evidence of semantic identity in the tree representation which would in theory render sentences such as Mary is a girl and beautiful ungrammatical, we understand that semantic parallelism is most of the times a necessary prerequisite in coordinate constructions, further implying the semantic symmetry of language.

BIBLIOGRAPHY

Chomsky, Noam (1976), Reflections on Language. Pantheon. New York, pg. 46-58.

Chomsky, Noam (1995), "Bare Phrase Structure" in Government and Binding Theory and the Minimalist Program, Blackwell, Oxford UK and Cambridge, pp 10-45.

Franks, Steven (1993), "On parallelism in across-the-board dependencies", in Linguistic inquiry 24, pp. 509-529.

Kayne, Richard (1994), "The Antisymmetry of Syntax", in Linguistic Inquiry Monographs. The MIT Press, pp 3-24.

May, Robert (1985), Logical Form, MIT Press, Massachusetts, pp 1-20.

Munn, Alan (1993), Topics in the Syntax and Semantics of Coordinate Structures, Ph.D. Thesis. University of Maryland College Park, pp. 5-67.

Ross, Robert (1964), Constraints on Variables in Syntax, Ph.D. Thesis, MIT Press, Massachusetts, pp. 110-122.