

WHAT THE CLITIC *JE* IN CROATIAN TELLS US ABOUT MULTIDOMINANCE

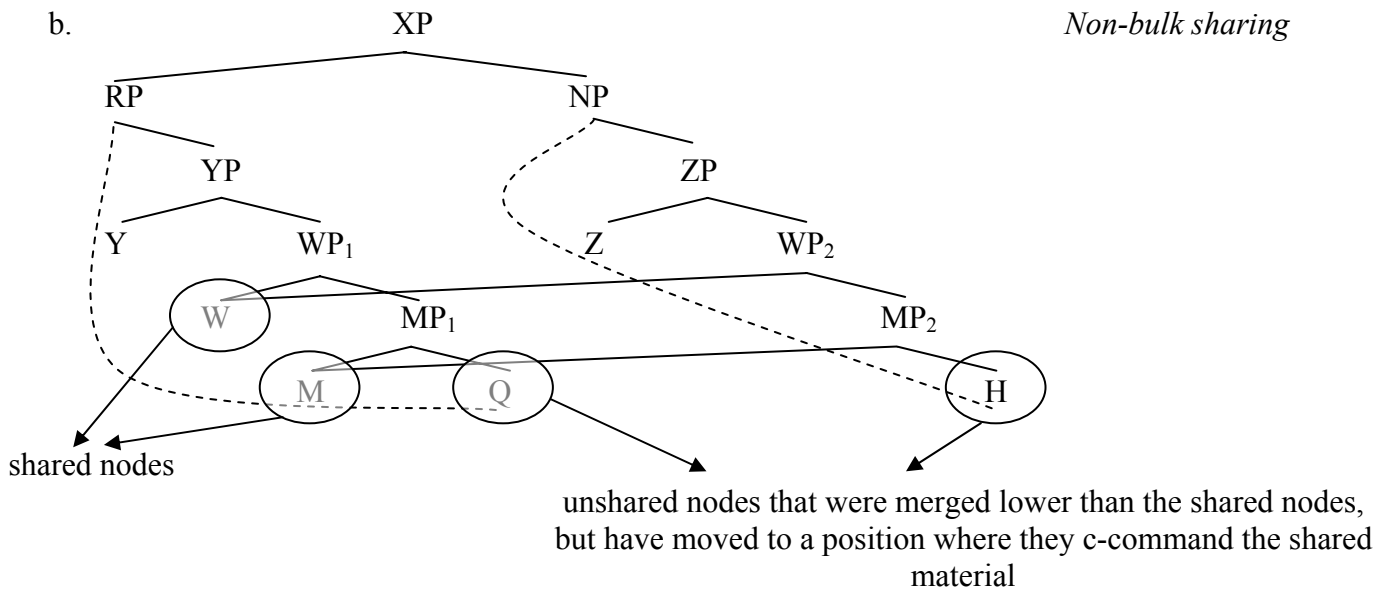
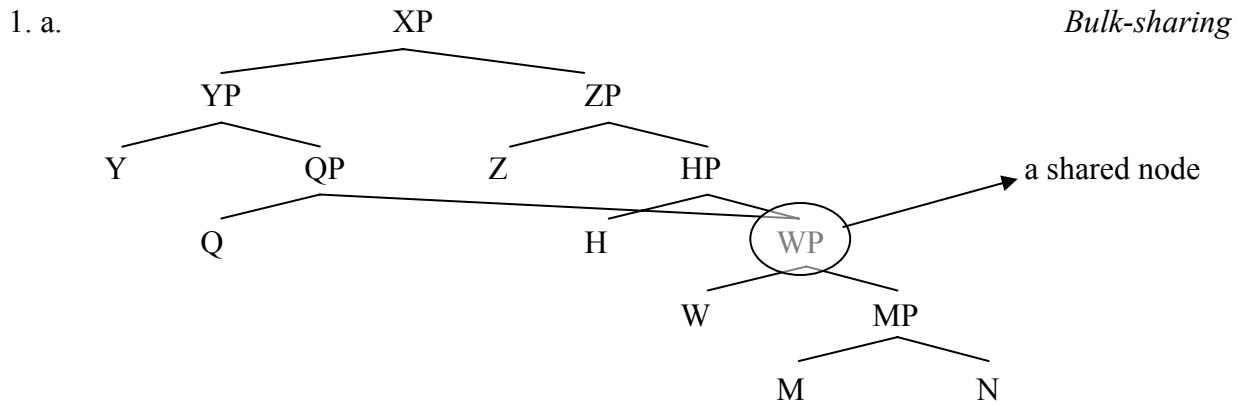
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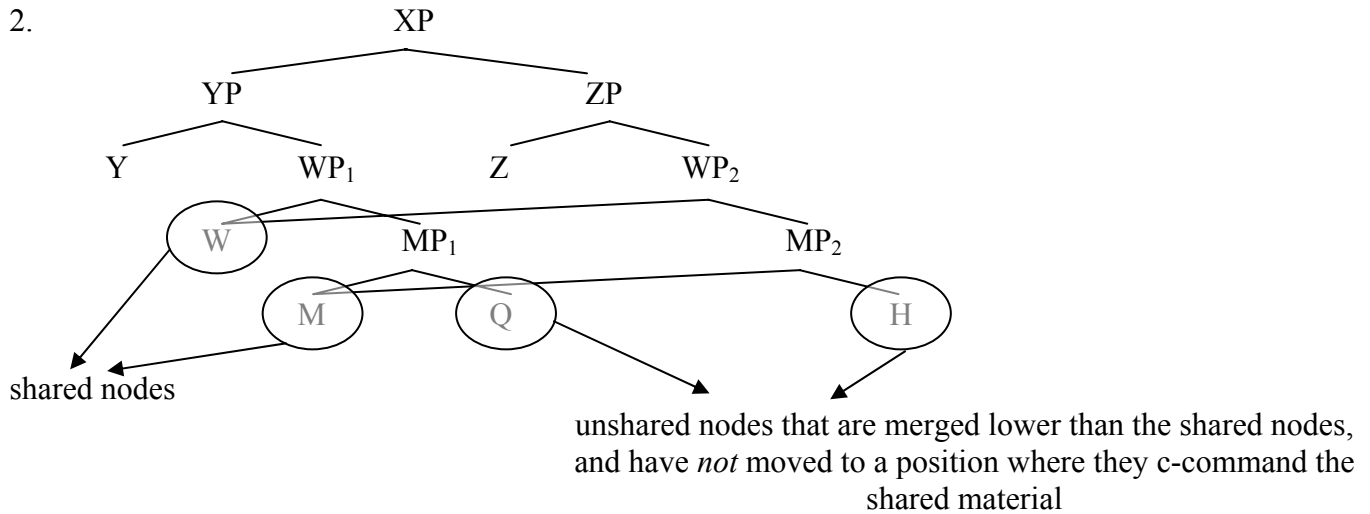
I. INTRODUCTION

Suppose we have a theory of multidominance (MD) that says the following:

1. Sharing of nodes across conjuncts in a coordination structure is free – as long as:
 - Both (all) conjuncts are well-formed (no violation of subcategorization requirements, etc.),
 - The structure is linearizable.
2. An MD structure is linearizable if by the end of the derivation there are no unshared nodes that occupy structurally lower positions than the shared nodes.

Thus, (1a) and (1b) are well-formed structures, while (2) is not.





Representation in (2) differs from the one in (1b) only in that unshared nodes, Q and H in (1b) have moved to a position where they c-command the shared nodes, W and M, while in (2) they have not.

Our supposed theory of MD says that (2) is not linearizable, but (1b) is.

It follows that the moved nodes, Q and H can only be linearized/pronounced in their derived positions, NOT in their base positions.

Consequently, we should not find cases with the following characteristics:

- The base position of an unshared node X is lower than the position of a shared node Y,
- X moves to a position where it c-commands Y, and
- X is pronounced such that it *follows* Y.

Our hypothetical theory of MD is actually outlined in my dissertation (Gracanin-Yukse, 2007).

Yet, the Croatian clitic *je* in multiple wh-questions with coordinated wh-phrases behaves exactly like X.

Question: What does the clitic *je* in Croatian tell us about multidominance (MD)?

Answer (I'm afraid): It tells us that the well-formedness conditions on MD are not reducible to linearization.

ROADMAP OF THE TALK

Background (Gracanin-Yuksek, 2007)

- Introduce multiple wh-questions introduced by two coordinated wh-phrases (**Q&Q**),
- Present evidence which argues that Croatian Q&Qs with repeated clitics involve coordinated clauses, i.e. that they are **Bi**-clausal **M**ultiple **W**h-questions (**BMW**s):
 - The *it*-reading vs. the *at-all*-reading in a BMW,
 - Obligatory vs. optionally transitive verbs in a BMW,
- Propose a multidominance (MD) structure for a BMW.

Step 1 of the argument

- An empirical observation: in a BMW, shared material must be lower than unshared material.
- Introduce Constraint On Sharing (COSH).
- Attempt to reduce COSH to linearization.

Step 2 of the argument

- Introduce BMWs with *partially* repeated clitics,
- Show that they support the claim that *je* is syntactically as high as other auxiliaries, but that it is pronounced in a lower position,
- Show that this argues against the theory on which MD is constrained by linearization alone.

II. GRACANIN-YUKSEK (2007)

2.1. BMWs

In my dissertation I examined (English and Croatian) multiple wh-questions in which wh-phrases seem to be coordinated at the left periphery of the clause. I showed evidence that these questions in English must be and in Croatian may be bi-clausal. I call these, **Bi**-clausal **M**ultiple **W**h-questions (BMWs):

3. a. What and where did Sally eat?

English


b. Što i gdje Ivan jede?

Croatian

What and where Ivan eats

'What and where does Ivan eat / is Ivan eating?'

In other words, (3a) has the underlying structure in (4a), and not that in (4b).

4. a. [What_i did Sally eat t_i] and [where_j did Sally eat t_j]?


b. [What_i and where_j did Sally eat t_i t_j]?


One of the pieces of evidence that argue for a bi-clausal analysis of BMWs is the interpretation. For example, (3a) can only have the reading in (5b), which I call the *at-all*-reading, but it cannot have the reading in (5a), which I call the *it*-reading.

5. a. #What did Sally eat and where did Sally eat it? The it-reading
b. What did Sally eat and where did Sally eat (at all)? The at-all-reading

This is expected, since on the bi-clausal analysis, the CP introduced by *where* in (3a) does not contain a wh-object, and therefore the wh-object cannot figure in the interpretation of the CP.

Interestingly, Croatian (3b) is ambiguous between the two readings in (5). This argues for the claim that in Croatian a question like that in (3b) can be underlyingly *mono-clausal* or it can be underlyingly *bi-clausal*.

However, there is a way to distinguish between the two analyses by looking at Q&Qs that contain clitics.

2.1.1. Croatian clitics as diagnostics for BMWs

Croatian displays a clitic-second phenomenon: clitics appear in the second position in their clause, as illustrated by (6).

In Croatian, auxiliaries are second-position clitics. Here, I give examples that involve the third person future auxiliary *će* 'will'.

6. a. Petar će kupiti auto.
Petar will buy car
'Petar will buy a car.'
b. *Petar kupiti će auto.
Petar buy will car
c. *Petar kupiti auto će.
Petar buy car will
d. *će Petar kupiti auto.
will Petar buy car

If a Q&Q contains clitics, it is possible for *each wh-phrase* to be followed by a (set of) clitic(s):

7. Što će i gdje će Ivan jesti?
What will and where will Ivan eat
'What and where will Ivan eat?'

A clitic in Croatian must be in a second position in its clause. Consequently, *što* 'what' must count as the first position of the clause that contains the first *će* 'will', and *gdje* 'where' must count as the first position of the clause that contains the second *će* 'will'.

Thus, what is coordinated in (7) is in fact two interrogative clauses:

8. [Što će Ivan jesti] i [gdje će Ivan jesti]?
What will Ivan eat and where will Ivan eat

Example (7) is not ambiguous – it only has the *at-all*-reading, as expected. (The wh-object, *što* ‘what’ is absent from the second conjunct, and therefore the second conjunct cannot be interpreted as ‘Where will Ivan eat *it*?’.)

Additional evidence for the bi-clausal analysis of Croatian BMWs with repeated clitics comes from the contrasts that result from the choice of the verb.¹

9. a. Što će i gdje će Ivan jesti? *Optionally transitive verb, eat*
 What will and where will Ivan eat
 ‘What and where will Ivan eat?’
- b. *Što će i gdje će Ivan kupiti? *Obligatorily transitive verb, buy*
 What will and where will Ivan buy
 ‘What and where will Ivan buy?’

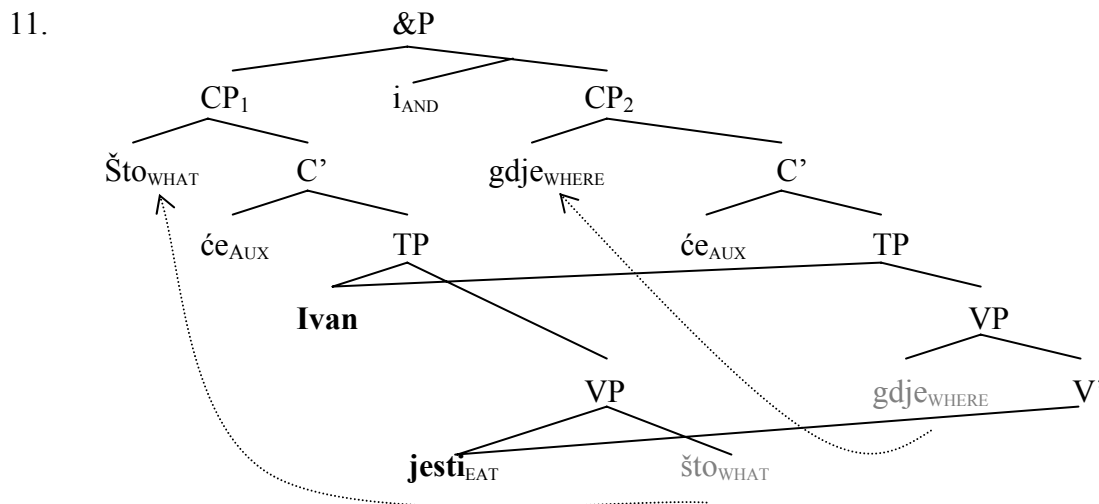
10. *Clitic repetition generalization*

If a Croatian Q&Q contains repeated (sets of) clitics, it is bi-clausal, i.e., it is a BMW.

2.1.2. *Structure of a BMW*

The question that has to be answered next is how we derive the surface structure of a BMW, i.e. how the TP in the first conjunct goes unpronounced.

I proposed that BMWs involve an MD structure, which we already saw in the abstract in (1b). Thus, the structure of (9a) is that in (11).



¹ The contrast in (9) does not hold if the clitics are not repeated:

- (i) a. Što i gdje će Ivan kupiti?
 What and where will Ivan buy
 b. Što će i gdje Ivan kupiti?
 What will and where Ivan buy

Representation in (11) is an example of *non-bulk sharing* – sharing in which the string of shared material (boldfaced) does not form a constituent, i.e. there is no shared node in the structure that exhaustively dominates the string of shared stuff.

Do we really need non-bulk sharing to account for the properties of BMWs? Could we not derive them by employing other (less complicated?) analyses?

Obvious candidates are:

1. Deletion of the material in the first conjunct
2. Bulk-sharing

Perhaps, but I am not sure how to do it. There seem to be problems with both of these alternatives. For arguments against them, see Appendix.

III. LINEARIZING A BMW

ASSUMPTION: Linearization is based on c-command.

The algorithm I propose follows in spirit Kayne's (1994) Linear Correspondence Axiom (LCA), more precisely Wilder's (1999) version of it.

12. *Linear Correspondence Axiom* (as modified by Wilder, 1999)

$d(A)$ is a linear ordering of T ,

(where T is the set of all terminal elements, A is the set of ordered pairs of nonterminals, where the first member asymmetrically c-commands the second, and $d(A)$ is the set of terminals completely dominated by (A)).

Thus, in ordering two complex objects, A and B , where A asymmetrically c-commands B , the LCA orders only those terminals that are *completely* dominated by A before those terminals that are *completely* dominated by B .

13. *Complete dominance*

α completely dominates β if every path from α upwards to the root includes β .

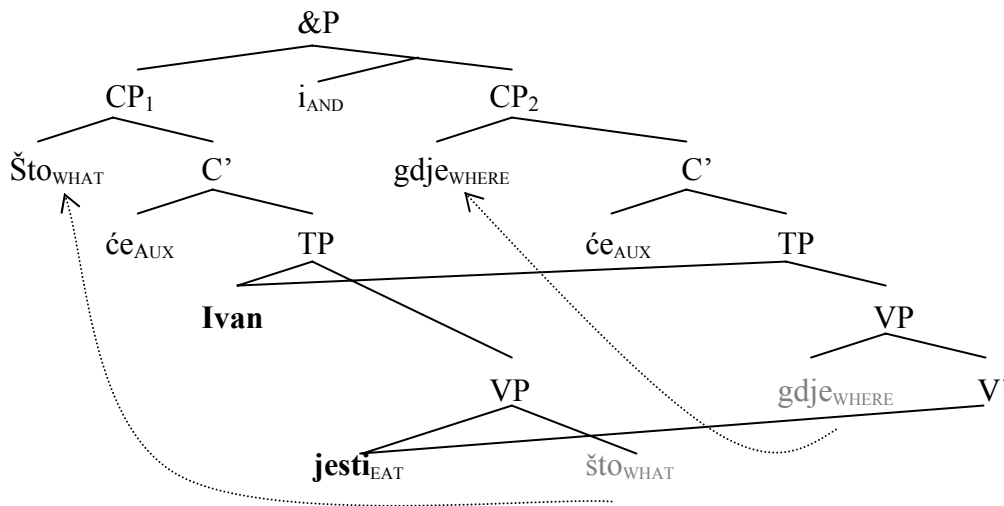
Crucially, the order delivered by the LCA must be *total*.

I proposed in my dissertation that MD structures where there is an unshared node which is lower than a shared node are not linearizable.

This is because in such structures, there is *no c-command relation* between the shared and unshared nodes, and therefore they cannot be ordered w.r.t. one another. This leads to a violation of the totality condition.

Let's consider the ordering statements for the representation in (11), repeated below for convenience:

14.



15. a. CP₁: što_{WHAT} < će_{WILL} < Ivan < jesti_{EAT} Ivan c-commands *jesti* because both are shared
 b. CP₂: gdje_{WHERE} < će_{WILL} < Ivan < jesti_{EAT}
 c. &': i_{AND} < gdje_{WHERE} < će_{WILL} < Ivan < jesti_{EAT}
 d. &P: što_{WHAT} će_{WILL} < i_{AND}
 što_{WHAT} će_{WILL} < gdje_{WHERE} će_{WILL}

CP₁ completely dominates only *što* 'what' and *će* 'will', and CP₂ completely dominates only *gdje* 'where' and *će* 'will'. This is reflected in (15d).

Can we linearize &P so that we get a total and uncontradictory ordering of all terminals? Yes!

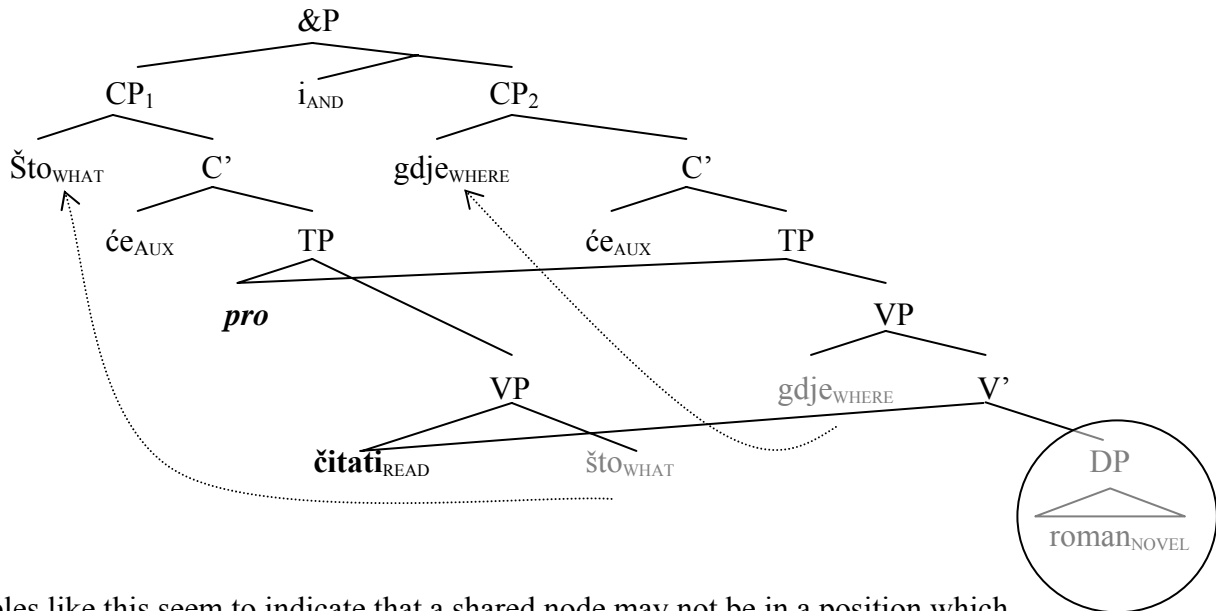
- The shared nodes, *Ivan* and *jesti* 'eat' must follow *što* 'what' and *će* 'will' in the first conjunct. (By 15a)
- They also have to follow *gdje* 'where' and *će* 'will' in the second conjunct. (By 15b)
- The conjunction *i* 'and' has to precede everything in the second conjunct. (By 15c)
- The unshared part of the first conjunct (*što* 'what' and *će* 'will') must precede the conjunction *i* 'and', as well as the unshared part of the second conjunct (*gdje* 'where' and *će* 'will') (By 15d)

16. Što ĆE i gdje ĆE Ivan jesti?
 What will and where will Ivan eat
 'What and where will Ivan eat?'

The order in (16) satisfies all the above requirements.

The proposed linearization algorithm operates so that it linearizes all the shared material after all the unshared material, as desired.

22.



Examples like this seem to indicate that a shared node may not be in a position which syntactically lower than a shared node.

In my dissertation, I captured this empirical generalization by positing a stipulated Constraint On Sharing (COSH).

23. *Constraint On Sharing (COSH)*

For any α , M and N, where $M \neq N$ and

- i. M and N immediately share α (both are mothers of α),
- ii. α does not have the highest mother (a mother that dominates all other mothers)

For any terminal node β , M completely dominates β iff N completely dominates β .

Simply put: the mother nodes of a shared node must completely dominate the same sets of terminal nodes.

In order for an MD structure to be well-formed:

- each of the conjuncts must be independently well-formed (to account for the contrast in (17)),
- COSH must be satisfied (to account for the contrast between (19) and (21)).

COSH accounts for the following facts:

The boldfaced terminals in (24a) and (25a) cannot be interpreted as shared. In other words, interpretations in b examples are not available.

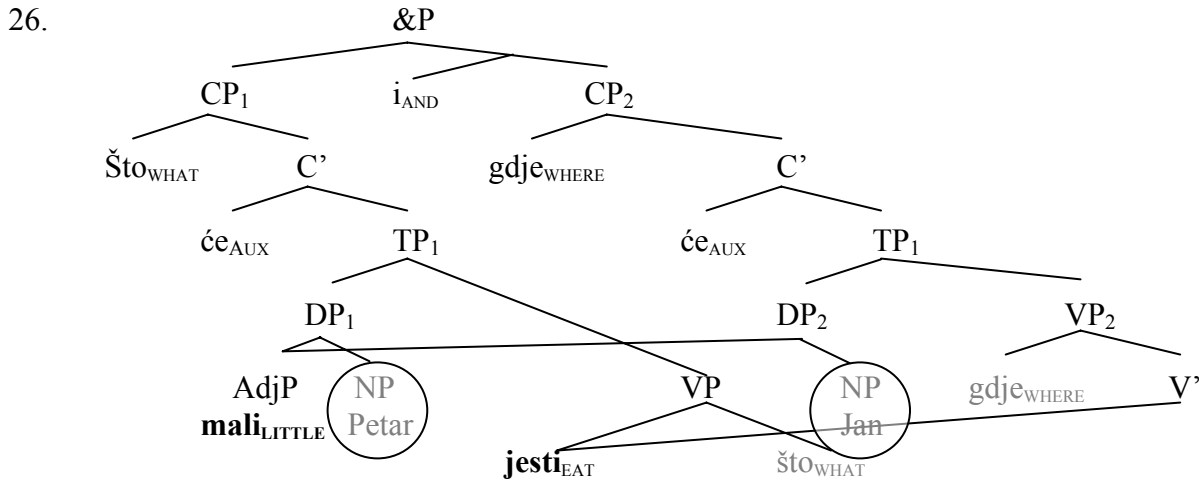
24. a. John loves and Mary **absolutely** hates Bill.

b. #John absolutely loves and Mary absolutely hates Bill.

25. a. Što će Petar i gdje će **mali** Jan jesti?
 What will Petar and where will little Jan eat
 'What will Petar eat and where will little Jan eat?'

b. #What will little Petar and where will little Jan eat?

Let's see what structure (25a) would have to have in order to yield the reading in (25b).



(26) violates COSH in that the mothers of the shared node *mali* 'little', DP1 and DP2 do not completely dominate the same terminal nodes: DP1 completely dominates *Petar* and DP2 completely dominates *Jan*.

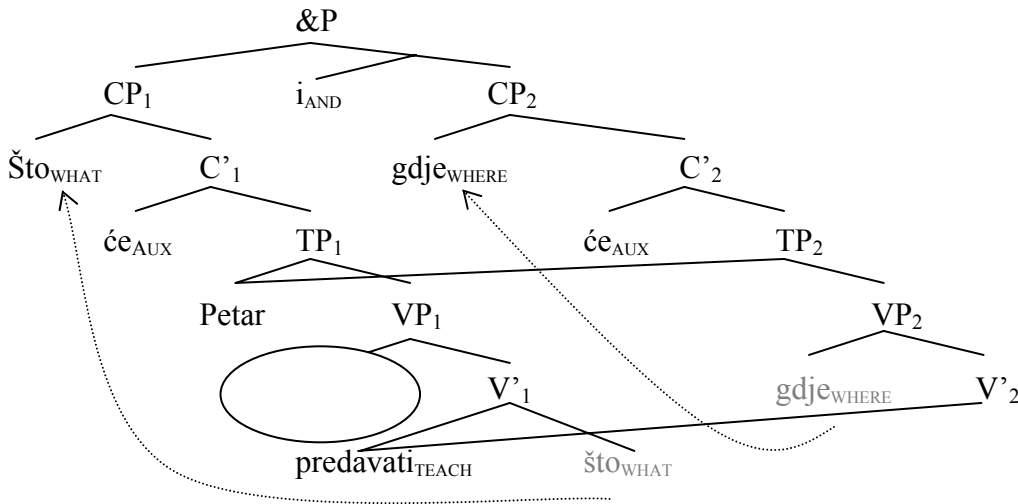
Similarly, in (32a) and (33a), the boldfaced material *must* be interpreted as shared. Again, interpretations in the b examples are not available for the sentences in the a examples.

27. a. What and why does Sally **often** eat?
 b. #What does Sally eat and why does Sally often eat?

28. a. Što će i gdje će Petar **uvijek** predavati?
 What will and where will Petar always teach
 'What and where will Petar always teach?'
 b. #What will Petar always teach and where will Petar teach?

Again, for (33a) to be interpreted as (33b), it would have to have the structure in (34), which violates COSH, since the mothers of the shared subject *Petar* do not completely dominate the same set of nodes: TP1 completely dominates *uvijek* 'always' and TP2 does not.

29.



In the next section, an attempt is made to reduce COSH to linearization. This is desirable since it would make COSH a consequence of an operation that is independently needed in the system. However, even though it is tempting to do so, we will see evidence that it is not correct.

3.2. Mysteriously ill-formed BMWs not so mysterious; rather non-linearizable

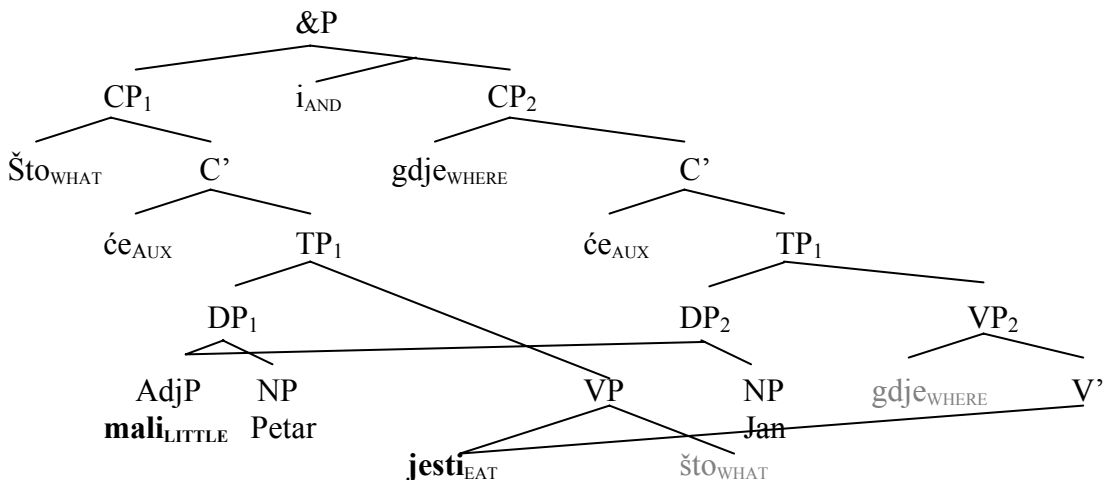
Recall (25a), repeated here as (30a).

30. a. Što će Petar i gdje će mali Jan jesti?
 What will Petar and where will little Jan eat
 'What will Petar eat and where will little Jan eat?'

b. #What will little Petar and where will little Jan eat?

We posited the following COSH violating structure to derive the reading in (30b).

31.



Let's see how (31) can be linearized. We are particularly interested to see whether there is a c-command relationship between the shared AdjP *mali* 'little' and the structurally lower unshared nodes, *Petar*, and/or *Jan*. (The assumption is that in a tree which does not involve MD, the AdjP c-commands the NP within the same DP.)

For AdjP to c-command the noun *Petar*, it would have to be the case that every node that dominates the AdjP also dominates the noun. Let's check:

TP₁ dominates AdjP, and it also dominates the noun. ☺

TP₂ dominates AdjP, but this phrase does not dominate the noun. ☹

Thus, AdjP does not c-command the noun *Petar*. It also doesn't c-command the noun *Jan*.

Does *Petar/Jan* c-command the AdjP *mali* 'little'?

DP₁ dominates *Petar*, but it doesn't dominate the AdjP, so *Petar* doesn't c-command the AdjP. ☹

DP₂ dominates *Jan*, but it doesn't dominate the AdjP, so *Jan* doesn't c-command the AdjP either. ☹

RESULT:

mali 'little' ↔ *Petar* NO C-COMMAND

mali 'little' ↔ *Jan* NO C-COMMAND

No c-command relation → no ordering.

The order between the terminals *mali* and *Petar/Jan* cannot be deduced from any other ordering statement that the LCA computes, which means that the structure is not linearizable.

The situation that seems to create fatal problems for linearization seems to be the one in which a shared node (*mali* 'little') is in a position from where, *IF IT WERE NOT SHARED*, it would c-command an unshared node (*Petar/Jan*).

The same explanation accounts for the fact that in (32a) and (33a), the boldfaced material *must* be interpreted as shared. In other words, interpretations in the b examples are not available for the sentences in the a examples.

32. a. What and why does Sally **often** eat?

b. #What does Sally eat and why does Sally often eat?

33. a. Što će i gdje će Petar **uvijek** predavati?

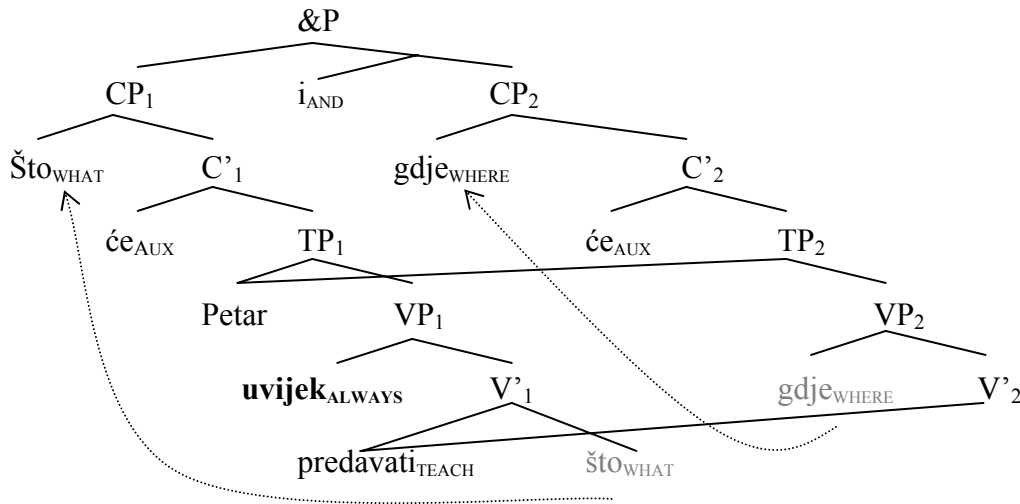
What will and where will Petar always teach

'What and where will Petar always teach?'

b. #What will Petar always teach and where will Petar teach?

Again, for (33a) to be interpreted as (33b), it would have to have the structure in (34).

34.



Again, we are interested in the c-command relations between the following pair:

- *Petar* (shared) ↔ *uvijek* 'always' (unshared)
 - *Petar* is dominated by the CP₁ and by the CP₂. *Uvijek* 'always' is dominated by CP₁, but not by CP₂.
 - *Petar* does not c-command *uvijek* 'always'. ☹
 - *Uvijek* 'always' is dominated by TP₁, but *Petar* is not dominated by TP₁.
 - *Uvijek* 'always' does not c-command *Petar*. ☹

The order between the two pairs cannot be deduced from anything else in the structure (there is no constituent that completely dominates *Petar* which c-commands *uvijek* 'always').

RESULT:

uvijek 'always' ↔ *Petar* NO C-COMMAND

No c-command relation → no ordering → the structure is **NOT LINEARIZABLE**.

IV. INTERIM SUMMARY

So far, we have completed the following:

Background (Gracanin-Yuksek, 2007)

- Introduce multiple wh-questions introduced by two coordinated wh-phrases (**Q&Q**),
- Present evidence which argues that Croatian Q&Qs with repeated clitics involve coordinated clauses, i.e. that they are **Bi**-clausal **M**ultiple **W**h-questions (**BMW**s):
 - The *it*-reading vs. the *at-all*-reading in a BMW,
 - Obligatory vs. optionally transitive verbs in a BMW,
- Propose a multidominance (MD) structure for a BMW.

Step 1 of the argument

- An empirical observation: in a BMW, shared material must be lower than unshared material.
- Introduce Constraint On Sharing (COSH).
- Attempt to reduce COSH to linearization.

We are now proceeding to show that COSH in fact cannot be reduced to linearization, i.e. that there are problems with the view that MD is free up to linearization.

V. CLITIC *JE* IN CROATIAN BMWs

5.1. Clitic ordering in Croatian

So far, we have looked at BMWs that contain a single auxiliary clitic, *će* 'will'. Now we will start looking into other cases.

Croatian has two sets of clitics: pronominal clitics and auxiliary clitics, shown in Table 1.

Table 1

| | | PRONOMINAL CLITICS | | AUXILIARY CLITICS | |
|-----|-----------------|---------------------------------------|-------------------------------------|--------------------------|------------------------------|
| | | Accusative | Dative | Verb <i>biti</i> 'to be' | Verb <i>htjeti</i> 'to want' |
| SG. | 1 st | <i>me</i> | <i>mi</i> | <i>sam</i> | <i>ću</i> |
| | 2 nd | <i>te</i> | <i>ti</i> | <i>si</i> | <i>ćeš</i> |
| | 3 rd | <i>ga</i> (m., n.), <i>ju/je</i> (f.) | <i>mu</i> (m., n.), <i>joj</i> (f.) | <i>je</i> | <i>će</i> |
| PL. | 1 st | <i>nas</i> | <i>nam</i> | <i>smo</i> | <i>ćemo</i> |
| | 2 nd | <i>vas</i> | <i>vam</i> | <i>ste</i> | <i>ćete</i> |
| | 3 rd | <i>ih</i> | <i>im</i> | <i>su</i> | <i>će</i> |

We already know that clitics occupy **the second position** in their (finite) clause.

If a clause contains more than one clitic, they cluster together, obeying a strict order, given in (35).

35. *AUX – DAT – ACC*

For our purposes, it is enough to look at the relative order between auxiliary clitics and a single pronominal clitic.

36. a. Petar ĆE MU pomoći.
 Petar will._{3SG} him._{DAT} help
 'Petar will help him.'

FUTURE AUXILIARY < DATIVE CLITIC

- b. Mi SMO MU pomogli.
We Aux._{1PL.} him._{DAT} helped
'We helped him.'

PAST AUXILIARY < DATIVE CLITIC

A pronominal clitic cannot precede an auxiliary clitic.

37. a. *Petar MU ĆE pomoći.
Petar him._{DAT} will help
b. *Mi MU SMO pomogli.
We him._{DAT} Aux helped

The one exception to the order of clitics in (35) concerns the position of *je*, the third person singular auxiliary clitic of the verb *biti* 'to be' (the shaded cell in Table 1).

In a clitic cluster, *je* must *follow*, and not precede the pronominal clitics. This is illustrated in (38).

38. a. Marija MU JE pomogla.
Marija him._{DAT} Aux helped
'Marija helped him.'
b. *Marija JE MU pomogla.
Marija Aux him._{DAT} helped

The ungrammatical (38b) contrasts with the grammatical (36b), even though in both cases the auxiliary clitic precedes the pronominal clitics.

39. *JE generalization*

The third person singular clitic *je* follows pronominal clitics.

One possible explanation for the position of *je* in a clitic cluster is that in the syntax, it occupies a different (lower) position than other auxiliary clitics (Franks and Progovac, 1994; Franks and King, 2000; Tomic, 1996).

However, based on arguments from VP ellipsis, parenthetical placement and placement of subject-oriented adverbs, Boskovic (2001) argues that *the syntactic position of je is the same as the syntactic position of other auxiliary clitics.*

Here, I present an argument for this claim based on BMWs with partially repeated clitics.

5.2. *Je is syntactically higher than the pronominal clitics – evidence from BMWs*

A BMW may contain both auxiliary and pronominal clitics:

40. Što SI MU i zašto SI MU pjevao?
What Aux.CL.2.S him.DAT and why Aux.CL.2.S him.DAT sung
'What did you sing to him and why did you sing to him?'

However, it is not necessary that both conjuncts contain both clitics. Rather, the clitics may be distributed as follows:

41. a. **FIRST CONJUNCT:** Auxiliary clitic Pattern illustrated in (42)
 SECOND CONJUNCT: Auxiliary clitic + pronominal clitic
- b. **FIRST CONJUNCT:** Auxiliary clitic + pronominal clitic Pattern illustrated in (43)
 SECOND CONJUNCT: Auxiliary clitic

42. Što **SI** i kada **SI** **MU** pjevao?
 What Aux.CL.2.S and when Aux.CL.2.S him.DAT sung
 Reading 1: ‘What did you sing *to him* and when did you sing *to him*?’
 Reading 2: ‘What did you sing and when did you sing *to him*?’

43. Što **SI** **MU** i kada **SI** pjevao?
 What Aux.CL.2.S him.DAT and when Aux.CL.2.S sung
 ‘What did you sing *to him* and when did you sing?’
~~‘What did you sing *to him* and when did you sing *to him*?’~~

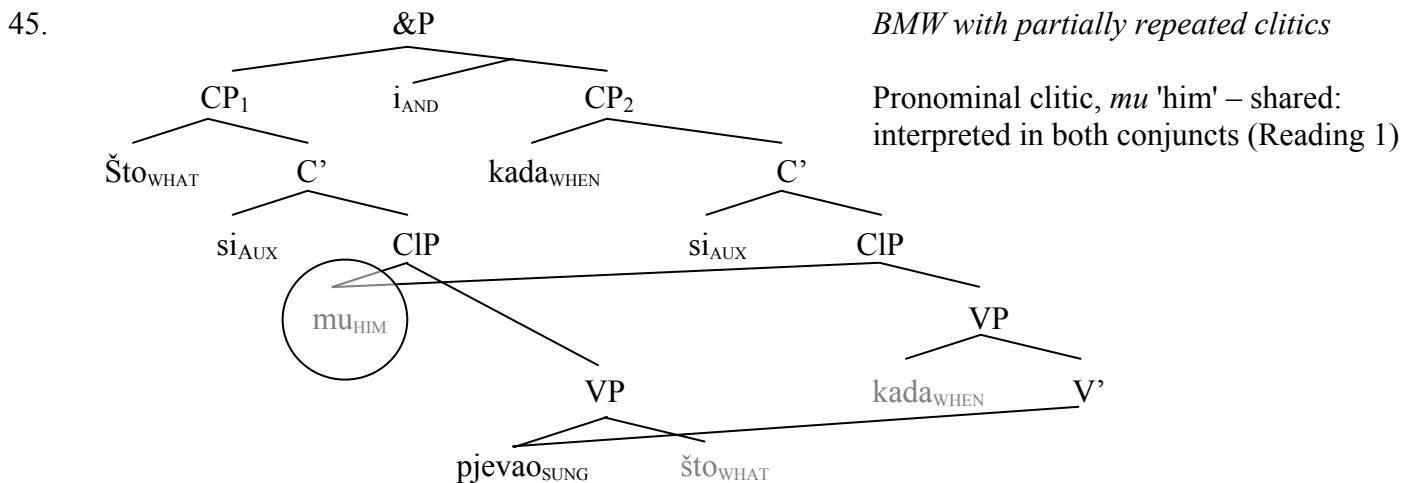
Examples (42) and (43) differ in whether the *pronominal clitic*, in addition to being interpreted in the conjunct where it is pronounced, may be interpreted in the conjunct where it is not pronounced.

44. *Locus of interpretation of the pronominal clitic*

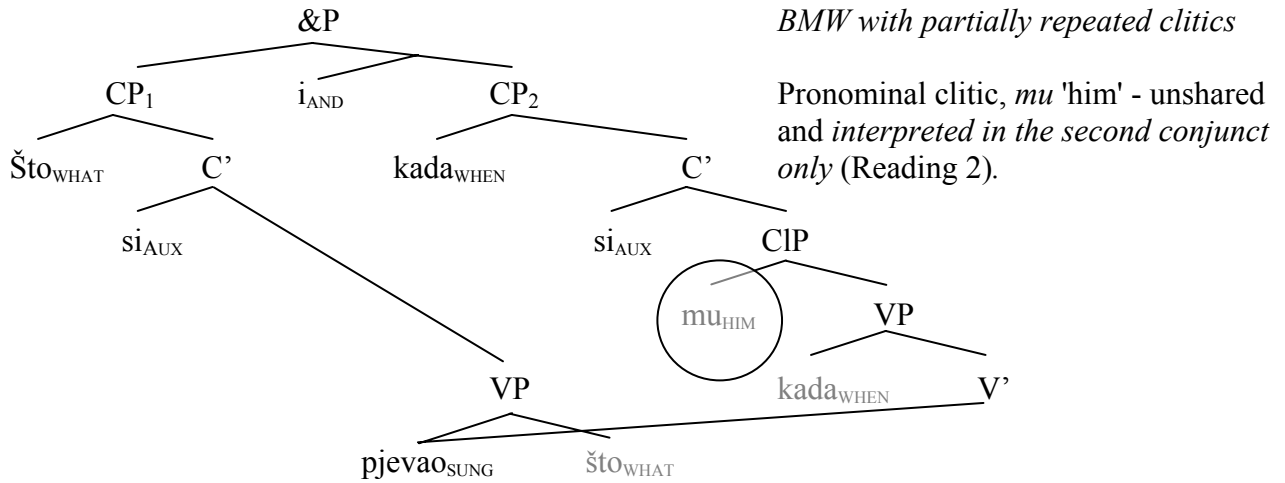
- Example (42): a. [CONJUNCT1 Aux clitic] and [CONJUNCT2 Aux clitic Pronominal clitic]
 b. [CONJUNCT1 Aux clitic **Pronominal clitic**] and [CONJUNCT2 Aux clitic Pronominal clitic]

Example (43): [CONJUNCT1 Aux clitic Pronominal clitic] and [CONJUNCT2 Aux clitic]

The ambiguity of (42) reflects the fact that it can have the structure in (45) or the one in (46).



46.



The fact that the pronominal clitic may be interpreted in the first conjunct, where it is not pronounced, reflects the possibility that it is shared. If it is shared, it must be lower than the unshared auxiliary clitic.

Surprisingly, the same pattern obtains in (47), where the auxiliary clitic is *je*.

47. Što JE i kada MU JE pjevao?
 What Aux.CL.3.S and when him.DAT Aux.CL.3.S sung
 Reading 1: 'What did he sing *to him* and when did he sing *to him*?'
 Reading 2: 'What did he sing and when did he sing *to him*?'

Crucially, Reading 1 is present in (47). This means that the pronominal clitic is shared between the conjuncts. This in turn means that it is lower than the auxiliary clitic, which is pronounced in each conjunct and therefore not shared.

Thus, je, even though it linearly follows pronominal clitics, is syntactically higher than them.

Additional piece of evidence that argues for the high position of *je* comes from the fact that (48) is ungrammatical:

48. *Što MU i kada MU JE pjevao?
 What him.DAT and when him.DAT Aux.CL.3.S sung

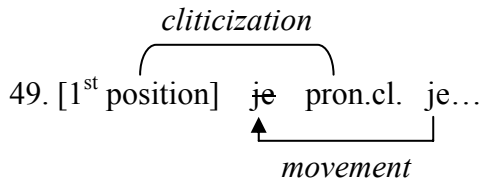
5.3. *Je*, BMWs, and linearization

Boskovic (2001) proposes that all auxiliary clitics in Croatian are generated below pronominal clitics and move to a higher position. *Je* is special in that it is pronounced in the tail rather than in the head of the chain.

Pronouncing the higher copy would lead to a PF violation – presumably for the following reasons:

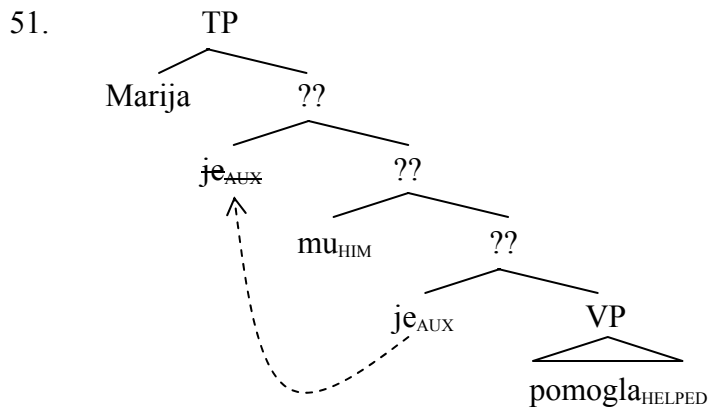
- *je* is in the process of losing its clitichood,
- it blocks cliticization across it,
- but is not capable of providing a host for clitics.

If a lower copy is pronounced, pronominal clitic does not have to cliticize across *je*, and the problem is avoided.



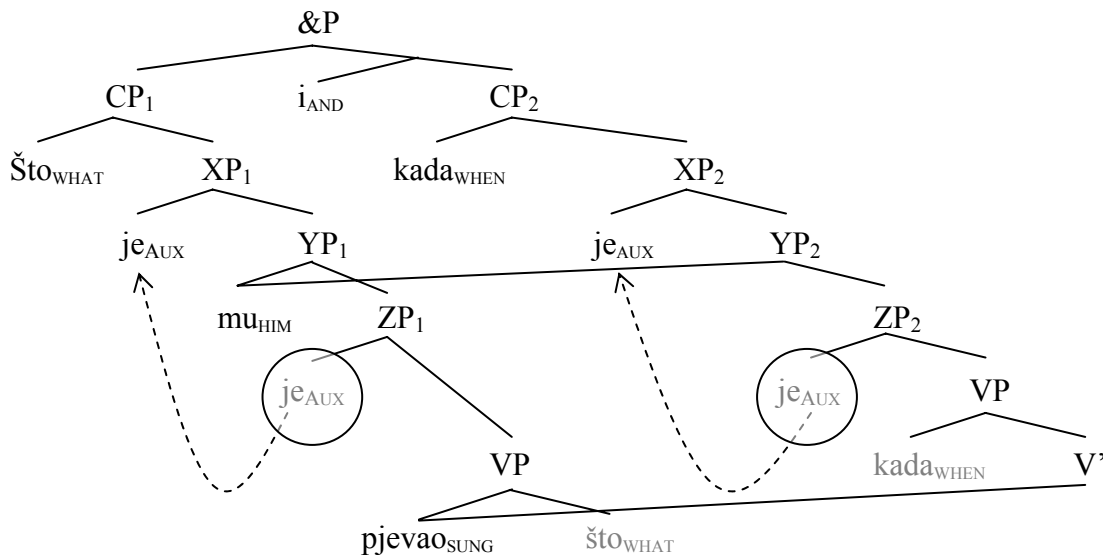
This means that a sentence in (38a), repeated here as (50), has the structure in (51).

50. Marija MU JE pomogla.
 Marija him-DAT Aux helped
 ‘Marija helped him.’



Implication of (51) for (47):

52.



Before the auxiliary moves:

- There is no c-command relationship between the shared node *mu* 'him' and the unshared auxiliary *je*.
- Consequently, the structure is not linearizable.

After the auxiliary moves:

- The structure is linearizable, because now *je* c-commands the pronominal clitic *mu* 'him'.

The only place where the auxiliary *can* be linearized is in the derived position (it is not linearizable in the base position). Therefore it should surface *preceding* the pronominal clitic *mu* 'him', not *following* it.

53. *Što JE i kada JE MU pjevao?
 What Aux.CL.3.S and when Aux.CL.3.S him.DAT sung

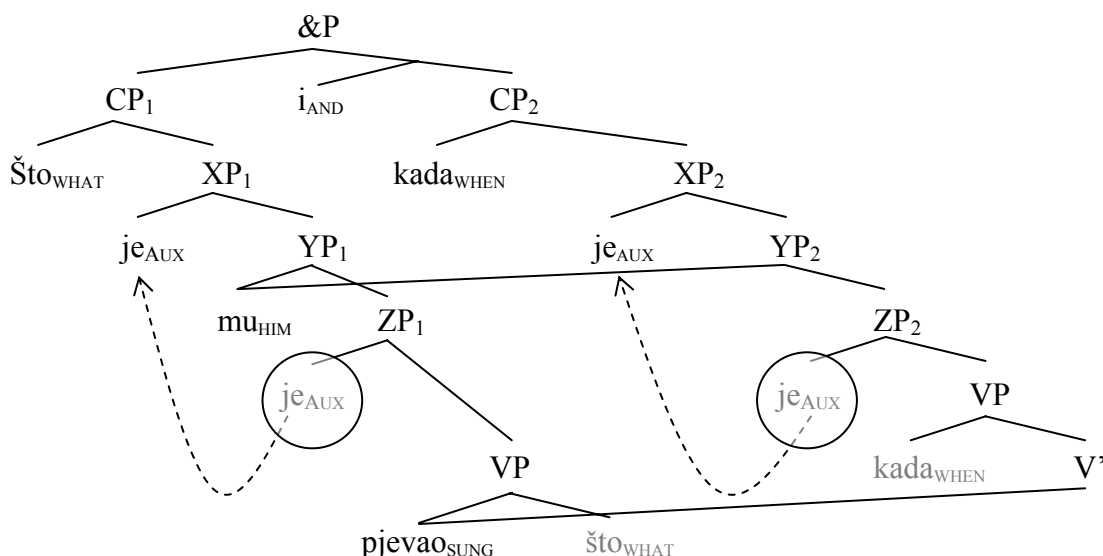
However, (53) is ungrammatical.

54. *Conclusion*

If in simple (non MD) cases, *je* is pronounced in the base position, from which it has syntactically moved, then linearization is not the factor that constrains MD.

Note that (52), repeated below as (55) obeys COSH. YP₁ and YP₂ completely dominate the same set of terminal nodes. The question remains how (55) is linearized.

55.



VI. CONCLUSION

I have argued for the following claims:

- Croatian Q&Qs with repeated clitics are bi-clausal, i.e. they are BMWs.
- A BMW is not well-formed if it violates COSH.
- I showed an attempt to reduce COSH to linearization.
- However, we saw that BMWs with partially repeated clitics, when one of them is *je*, argue against this possibility.
- Thus, a conceptually less desirable COSH seems to be empirically more adequate.

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59. a. Znam da će Ivan nešto jesti, ali ne znam što (*ĆE) <Ivan jesti>. *Forward sl.*
Know.1sg. that will Ivan something eat but not know.1.sg. what will <Ivan eat>
'I know that Ivan will eat something, but I don't know what.'
- b. Ne znam što (*ĆE) <Ivan jesti>, ali znam da će Ivan nešto jesti. *Backward sl.*
Not know.1.sg. what will <Ivan eat> but know.1.sg. that will Ivan something eat
'I don't know what, but I know that Ivan will eat something.'

Yet, in a BMW with repeated clitics, the stranded clitic(s) present(s) no problems:

60. Što ĆE <Ivan jesti> i [gdje ĆE Ivan jesti]?
What will <Ivan eat> and where will Ivan eat

PROBLEM #2: *Antecedentless sluicing (AS)*

Recall that the verb in a (Croatian) BMW with repeated clitics can only be *optionally* transitive, the sluicing that happens in the first conjunct is necessarily antecedentless sluicing (AS).

In (61), the sluiced wh-phrase *što* 'what' in the first conjunct does not have an indefinite correlate *nešto* 'something' in the second conjunct. Instead, the antecedent of the sluiced wh-phrase is an *implicit* argument.

61. Ne znam još što <ée—Iva jesti>, ali znam da će Iva jesti. *Antecedentless sl.*
Not know.1sg. yet what <will Iva eat> but know.1sg. that will Iva eat *Croatian*
'I don't know what, but I know that Iva will eat something.'

62. I don't know what, but I know that John will eat. *Antecedentless sluicing, English*

Chung, Ladusaw and McCloskey (1995), henceforth CLM, show that, unlike 'regular' sluicing, AS is blocked by strong islands.

63. a. It is likely that Tom will win, but it is not clear which race. *CLM, ex. (102d), pg. 279*
b. *That Tom will is likely, but it is not clear which race. *CLM, ex. (102c), pg. 279*

Romero (1998) extends the blocking effect on AS to the intervention of any operator.

64. a. I don't know what few kids ate. *(Romero, 1998, ex. 96c', pg. 60)*
b. *Few kids ate, but I don't know what. *(Romero, 1998, ex. 96c, pg. 60)*

Romero explains the ungrammaticality of (64b) by the requirement on scope parallelism given in (65).

65. *Scope Parallelism*

The focused remnant and its antecedent must have parallel scope.

Implicit arguments always take the narrowest scope relative to other operators in the clause (Fodor and Fodor, 1980). Since in AS, the antecedent of the sluiced wh-phrase is an implicit argument, the scope of the two should be the same relative to other operators in their respective clauses. However, this is impossible, since the wh-phrase takes scope at the CP level, quite a bit higher than the implicit argument.

AS in Croatian is in keeping with Romero's observation.

66. a. Znam što će malo djece jesti.
Know.1sg. what will little kids eat.
'I know what few kids will eat.'
- b. *Znam da će malo djece jesti, ali ne znam što <će malo djece jesti>.
Know.1sg. that will little kids eat but not know.1sg. what will little kids eat
'I know that few kids will eat, but I don't know what.'

PREDICTION: AS in a BMW should be blocked by the intervention of an operator that takes scope higher than the implicit argument, but lower than the wh-phrase.

This prediction is not borne out, as shown by (67), which contrasts in grammaticality with (66b).

67. Što će <malo djece jesti> i gdje će malo djece jesti?
What will little kids eat and where will little kids eat
'What and where will few kids eat?'