

VP Ellipsis and Topicalization

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1. Introduction¹

This paper discusses a puzzle concerning two types of VP ellipsis in Polish and Russian. VP ellipsis containing a modal/auxiliary/negation marker (examples 1,2) will be called non bare-VP ellipsis, and ellipsis that does not need any kind of marker (examples 3,4) will be called bare-VP ellipsis:²

- (1) Ja mogę przeczytać książkę w bibliotece a Maria **może** w domu
I can read book in library but Mary can in home
'I can read a book in the library and Mary can at home'
- (2) Ja mogu čitat' knigu v biblioteke no Maša **možet** doma
I can read book in library but Mary can home
'I can read a book in the library but Mary can at home'
- (3) Ja mogę przeczytać książkę w bibliotece a Maria w domu
I can read book in library but Mary in home
'I can read a book in the library but Mary can at home'
- (4) Ja mogu čitat' knigu v biblioteke no Maša doma
I can read book in library but Mary home
'I can read a book in the library but Mary can at home'

¹ I would like to thank participants of NELS 35 for their comments. Also, I would like to give special thanks to Noam Chomsky, David Pesetsky, Danny Fox and Cedric Boeckx.

² In Polish and Russian you can also have examples like below (underlining indicates stress):

- (i) Jan czytał książkę w bibliotece i Maria
Jan read book in library and Mary
'Jan read a book in the library and so did Mary'

The first part of the puzzle is why Polish and Russian allow both types of ellipsis, whereas English disallows bare-VP ellipsis.

- (5) * I can read a book in the library but Mary at home

The second part of the puzzle involves the fact that these two types of ellipsis exhibit different properties. Bare VP ellipsis is more constrained than non bare-VP ellipsis. For example, in Polish and Russian non bare-VP ellipsis can occur in two different types of relative clauses, so called *co/čto*-relatives (examples 6,7) and *który/kotoryj*-relatives (examples 7,8):

- (6) Ja będę czytać każdą książkę **co** ty **będziesz**
I will read every book that you will
'I will read every book that you will'
- (7) Ja budu čitat každuju knigu **čto** ty **budeš**
I will read every book that you will
'I will read every book that you will'
- (8) Ja będę czytać każdą książkę **którą** ty **będziesz**
I will read every book which you will
'I will read every book that you will'
- (9) Ja budu čitat každuju knigu **kotoruju** ty **budeš**
I will read every book which you will
'I will read every book that you will'

Bare VP-ellipsis on the other hand is restricted to only *co/čto*-relatives (compare examples 10 and 11 with 12 and 13):

- (10) Ja przeczytałem każdą książkę **co** ty
I read every book that you
'I read every book that you did'
- (11) Ja pročital každuju knigu **čto** ty
I read every book that you
'I read every book that you did'
- (12) * Ja przeczytałem każdą książkę **którą** ty
I read every book which you
'I read every book which you did'
- (13) * Ja pročital každuju knigu **kotoruju** ty
I read every book which you
'I read every book which you did'

VP Ellipsis and Topicalization

The difference between *co/čto*-relatives and *który/kotoryj*-relatives is not just a difference in what relative markers are being used.³ In Szczegielniak (2005a) I provide evidence for the hypothesis in (14).

- (14) a. *Co/čto*-relative clauses are generated via head noun movement. There are no null operators.
- b. *Który/kotoryj*-relative clauses are generated via operator movement (*Który/kotoryj* being the operator) to Spec-Topic in the Left Periphery (Rizzi 1997) and adjunction of the relative clause to the head noun.

It will be shown that the two types of relative clause formation interact with two types of VP ellipsis formation.

In order to solve both puzzles, I will propose a model of VP ellipsis that requires the establishment of focus or topic in overt syntax. There are two strategies to establish Focus/Topic relations in overt syntax: to focus something and mark it as not to be deleted, or to topicalize something and mark it as to be deleted.⁴ Focus is possible when an overt polarity head Σ (Laka 1994) is present in the numeration. This leads to non bare-VP ellipsis. The subject is in Spec- Σ and the modal/auxiliary/negation is in Σ . In such cases no overt topicalization is needed. Another strategy involves topicalizing the VP to Spec-Topic in the Left Periphery (Rizzi 1997). This takes place when there is no Σ head in the numeration and leads to bare-VP ellipsis.

In order to solve the second puzzle, I will argue bare-VP ellipsis interacts with relative clause formation because it is licensed by VP Topicalization. It will be shown that head noun raising does not block VP Topicalization, but operator movement does. This blocking of VP topicalization by operator movement will be argued to be a more general reflex of restrictions on Remnant Movement (Müller 1998).

As far as the first puzzle - Why does Polish and Russian allow two types of ellipsis, but English does not? I propose that English Tense is an affix and is subject to the Stray Affix Filter (Lasnik 1995). Tense always requires an overt phonological host in English, but not in Polish and Russian. For example, in Polish you can Topicalize the VP stranding just the subject, in English you cannot:

- (15) Kupił jabłka Janek
bought apples John
'John bought apples'
- (16) * Bought apples, John
- (17) ? Buy apples, John did

³ There are speakers who have difficulty in accepting *co/čto*-relatives, and for them these contrasts do not hold.

⁴ There is no need to establish both focus and topic in overt syntax. I assume that this is a reflex of economy.

Bare-VP ellipsis requires VP topicalization. However, this will lead to T having no phonological host. This violates the Stray Affix Filter in English, but not in Polish or Russian. When Σ is in the numeration then the auxiliary can host T, however, this is only possible in non bare-VP ellipsis.

2. Topicalization, De-stressing and Ellipsis

Following Szczegielniak (2005a), I propose that VP ellipsis is licensed by the following mechanisms:

- (18) a. VP ellipsis is carried out on de-stressed structures (Rooth 1992, Tancredi 1992, Chomsky & Lasnik 1993).
- b. De-stressing is licensed via Focus closure (Rooth 1992).
- c. Focus closure requires the establishment of Focus/Topic in the syntax.

Proposals (18b,c) lead me to postulate two mechanisms for VP ellipsis:

- (19) a. Bare VP ellipsis (3,4), where only the subject is not elided, is carried out via Topicalization of the VP to the topmost Spec-Topic in the Left Periphery.
- b. Non-bare VP ellipsis (1,2) is carried out by Focus of non-elided material and is licensed by a Σ head (Laka 1994). The subject is in Spec- Σ and the auxiliary/modal/negation marker is in Σ .

Let us examine evidence supporting that VP Topicalization licenses de-stressing. In Polish and Russian a de-stressed VP must precede the subject (de-stressing is marked by italics).

- (20) Jan kupuję książki częściej niż *kupuję książki* Maria
Jan purchases books often that purchases books Mary
'Jan purchases books more often than Mary *purchases books*'
- (21) ?? Jan kupuję książki częściej niż Maria *kupuję książki*
Jan purchases books often that Mary purchases books
'Jan purchases books more often than Mary *purchases books*'
- (22) Vania pokupaet knigi čašče *čem* *pokupaet knigi* Maria.
Vania purchases books more-often than purchases books Maria.
'Vania purchases books more often than Mary purchases books'
- (23) ?? Vania pokupaet knigi čašče *čem* Maria *pokupaet knigi*.
Vania purchases books more-often than Maria purchases books.
'Vania purchases books more often than Mary purchases books'

The examples above show that in order to be de-stressed a VP has to be fronted above the subject. The only way to salvage examples (21 and 23) is to put heavy focal stress on the subject. This is usually facilitated if we have a modal/auxiliary following the subject. Consider the following construction from Polish (bold indicates focal stress):

- (24) Jan może kupować książki częściej niż **Maria może kupować książki**
Jan can purchase books often than Mary can purchase books
'Jan can purchase books more often than Mary can *purchase books*'

I will argue that constructions like (20), where the VP has undergone overt Topicalization, are input to bare VP ellipsis, and constructions like (24), where the VP is in-situ and the subject is focused in Spec- Σ , are input to non bare-VP ellipsis.

3. Topicalization/Focus and Ellipsis

Let us now examine the relationship between VP Topicalization and VP Ellipsis. The prediction from (18) and (19) is that bare-VP ellipsis involves VP topicalization whereas non bare-VP ellipsis does not.

Polish has auxiliary preterite clitics that have the interesting property that they can be hosted by items that precede the verb phrase (Szczegielniak 2005b, Borseley & Rivero 1994), but not by ones that follow the verb (also when the VP has raised over them).⁵ Consider the following examples (the clitic is in bold):

- (28) Tyś poszedł do kina
you+CL went to cinema
'You went to a cinema'
- (29) * [Poszedł do kina]₁ tyś t₁
went to cinema you+CL
'You went to the cinema'
- (30) [Poszedłeś do kina]₁ ty t₁
went+CL to cinema you
'You went to the cinema'

As can be seen in example (29), the VP cannot raise above anything hosting the clitic. Example (30) shows that VP raising is possible if the clitic is hosted by the verb. In the examples below we see an interaction of cliticization and VP ellipsis. In bare-VP ellipsis the subject cannot host the clitic (31), but in non bare-VP ellipsis it can (32, 33).

- (31) * **Jam** czytał książkę i tyś po powrocie z kina
I+CL read book and you+CL after returning from cinema
'I read a book and so did you after returning from the cinema'

⁵ The exact mechanism why clitics behave in such a way is not relevant here since I am just using these clitics as a diagnostic for VP movement.

- (32) **Jam** czytał książkę a tyś nie po powrocie z kina
 I+CL read book and you+CL not after returning from cinema
 ‘I read a book and you did not after returning from the cinema’
- (33) **Jam** mógł przeczytać książkę i tyś mógł po powrocie z kina
 I+CL could read book and you+CL could after returning from cinema
 ‘I read a book and you did not after returning from the cinema’

I argue that example (31) is ungrammatical for the same reasons that (29) is. Namely the VP has raised over the clitic and its host. It is just that in (31) the VP has further undergone de-stressing and ellipsis. The acceptability of (32) and (33) indicates that there is no VP raising in non bare-VP ellipsis, or at least there is no raising above the subject that hosts the clitic.

Let me now examine the landing site of VP movement in bare-VP ellipsis. I will use constructions involving the same clitic as before. However, this time it will be hosted by XP’s that have undergone Topicalization or wh-movement. Consider the following examples where the clitic host is a wh-element:

- (34) Ja dałem książkę wysokiej dziewczynie, a jakiej wy?
 I gave book tall girl and which you?
 ‘I gave book to a tall girl and to what (type) did you?’
- (35) Ja dałem książkę wysokiej dziewczynie, a jakiejście wy?
 I gave book tall girl and which+CL you?
 ‘I gave book to a tall girl and to what (type) did you?’

The situation is different when instead of a wh-word we have a topic host:

- (36) Ja dałem książkę wysokiej dziewczynie, a niskiej dziewczynie wy
 I gave book tall girl and short girl you
 ‘I gave book to a tall girl and you did to a short girl’
- (37) ?? Ja dałem książkę wysokiej dziewczynie, a niskiej dziewczynieście wy
 I gave book tall girl and short girl+CL you
 ‘I gave book to a tall girl and you did to a short girl’

When a wh-word hosts the clitic bare-VP ellipsis is possible, however, when a topic hosts a clitic it is not. I argue that this is because in (37) the VP has to topicalize above the clitic host in lower Spec-Topic (following a Left Periphery structure in Rizzi 1997) and thus making the construction ungrammatical. In (35) the VP also topicalizes but the clitic is hosted by a wh-word in Spec-Force, which is above the landing site of the VP.

In this section I have shown that bare VP-ellipsis is licensed by VP topicalization in overt syntax, whereas non bare-VP ellipsis does not involve VP topicalization but focusing the subject in Spec- Σ .

Now we can answer the first puzzle - Why English does not have bare VP ellipsis? The answer is that there is no way to have VP topicalization that leaves just the

subject behind (see also Johnson 2001) because Tense is an affix and needs an overt phonological host (see examples 15-17). Non bare-VP ellipsis is possible in English because there is no VP topicalization involved.⁶

4. Ellipsis and Relative Clause Formation

Let me now turn to the second puzzle, namely why bare VP ellipsis is impossible in *który/kotoryj*-relatives but not in *co/čto*-relatives. In Szczegielniak (2005a) I argue that *który/kotoryj*-relatives are formed via operator movement and adjunction to the head noun (matching analysis Sauerland 1998), whereas *co/čto*-relatives are formed via head noun movement (raising analysis Sauerland 1998). For example, idiomatic expressions in Polish and Russian can be relativized with *co/čto*-relatives, but not with *który/kotoryj*-relatives.⁷ Consider the following examples:

- (38) Słów **co** on nie rzucał na wiatr
words that he not throw on wind
'Empty promises that he did not make'
- (39) ?? Słów **których** on nie rzucał na wiatr
words which he not throw on wind
'Empty promises that he did not make'
- (40) Slov **čto** on ne brosal na veter
words that he not throw on wind
'Empty promises that he did not make'
- (41) ?? Slov **kotoryh** on ne brosal na veter
words which he not throw on wind
'Empty promises that he did not make'

I will argue that bare-VP ellipsis is impossible in *który/kotoryj*-relatives because the relative operator (*który/kotoryj*) undergoes topicalization to the lower Spec-Topic position (for arguments that operator movement is to a Spec-Topic position see Bianchi, 1999). In order to have bare-VP ellipsis, the VP containing the trace of the operator has to then raise to the higher Spec-Topic position (cyclicity prohibits any other order of movements). This violates restrictions on Remnant Movement (Müller 1998).

(42) Remnant movement condition (informal)

A constituent α cannot raise above β if α contains a copy of β , and α and β have undergone the same type of movement: $*[_x [_{sp} \dots \alpha \dots t_1]_2 \dots [\beta]_1 \dots \lambda P \dots [t_2]]$

⁶ Conversely, following Johnson (2001), there is VP topicalization in English non bare-VP ellipsis but the affix filter is satisfied. I do not assume the proposals in Johnson (2001) in order to maintain the same analysis of non bare-VP ellipsis for Polish and Russian and for English.

⁷ In Szczegielniak (2005a, 2005c), I provide a battery of reconstruction tests supporting the difference between these two types of relatives.

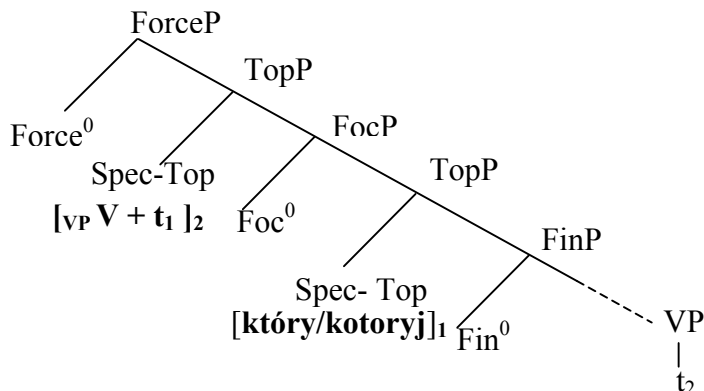
We can see the condition in operation in both Polish and Russian:

- (43) Ja wiem że [o Reaganiu]₁ ty kupiłeś [nową książkę t₁]
 I know that about Reagan you bought new book
 ‘I know that you bought a new book about Reagan’
- (44) ?? [Nową książkę t₁]₂ ja wiem że [o Reaganiu]₁ ty kupiłeś t₂
 New book I know that about Reagan you bought
 ‘I know that you bought a new book about Reagan’
- (45) [Nową książkę o Reaganiu]₁ ja wiem że ty kupiłeś t₁
 New book about Reagan I know that you bought
 ‘I know that you bought a new book about Reagan’
- (46) Ja znaju što [o Reagane]₁ ty kupil [novuju knigu t₁]
 I know that about Reagan you bought new book.
 ‘I know that you bought a new book about Reagan’
- (47) * [Novuju knigu t₁]₂ ja znaju što [o Reagane]₁ ty kupil t₂
 new book I know that about Reagan you bought.
 ‘I know that you bought a new book about Reagan’
- (48) [Novuju knigu o Reagane]₁ ja znaju što ty kupil t₁
 new book about Reagan I know that you bought.
 ‘I know that you bought a new book about Reagan’

In examples (44) and (47) we see that topicalization of a DP containing a trace/copy of a PP that has topicalized before the DP is impossible. The other examples show that the DP and PP can be topicalized separately.

Let us consider an ungrammatical derivation of bare-VP ellipsis in *który/kotoryj*-relatives (Left Periphery structure following Rizzi 1997):

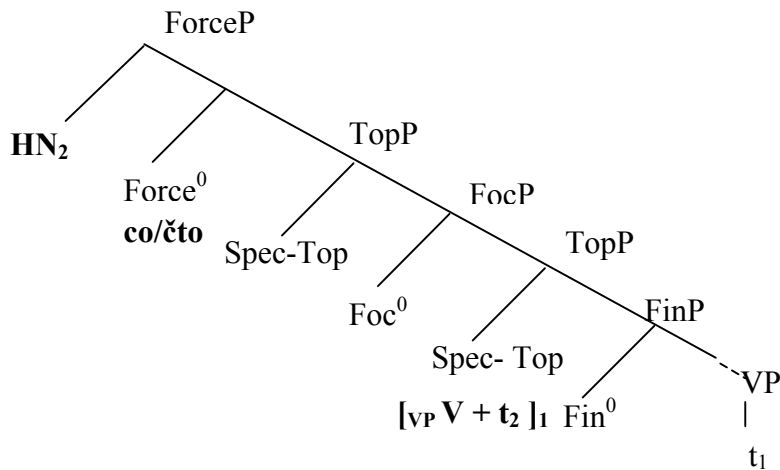
- (49) * Ja przeczytałem każdą książkę **którą** ty
 I read every book that you
 ‘I read every book that you did’



VP Ellipsis and Topicalization

The offending movement is VP topicalization to Spec-Topic carrying the trace/copy of the operator that has moved to lower Spec-Topic. Bare-VP ellipsis is possible in *co/čto*-relatives because there is no operator movement and the VP containing the head noun can topicalize to lower Spec-Topic in order to license VP ellipsis. The head noun raises out of the CP and the VP is deleted.

- (50) Ja przeczytałem każdą książkę **co** ty
 I read every book that you
 ‘I read every book that you did’

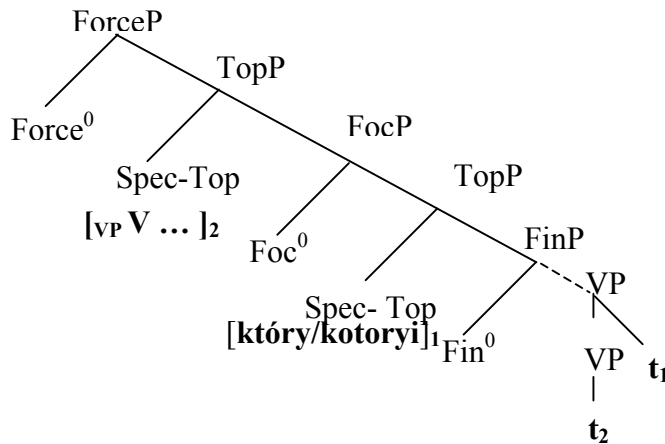


Non-bare VP ellipsis is possible in both types of relative clauses because there is no VP topicalization.

This account has two interesting predictions. First, bare-VP ellipsis should be possible in cases when the topicalized VP does not contain a trace/copy of the operator. Secondly, bare-VP ellipsis should be possible in cases when the elided VP is contained in a subordinate clause. Both predictions are correct. Consider first bare-VP ellipsis in relative clauses where the operator is an adjunct.⁸

- (51) a. Ja zagram w każdym barze **w którym** ty
 I play in every bar in which you
 ‘I will play in every bar in which you will

⁸ Some speakers of Russian do not seem to have the contrast between ellipsis in relative clauses that have an adjunct operator and that have a complement operator. I am not sure what this split between speakers entails. One possible account is that Russian speakers do not have a uniform representation of adjunct constructions.



The raised VP does not contain the trace/copy of the adjunct operator and bare-VP ellipsis is possible.

The second prediction is that bare-VP ellipsis, when the operator is an adjunct, cannot have wide scope (David Pesetsky p.c.).

(52) Ja wiem że Jurek spał pod każdym mostem **co** Marek
 I know that Jurek slept under every bridge that Marc
 ‘I know that Jurek slept under every bridge that Marc did (know that Jurek slept/slept)’

(53) Ja znaju što Vania spał pod każdym mostom **što** Mark.
 I know that Vania slept under every bridge that Mark.
 ‘I know that Vania slept under every bridge that Marc did (know that Vania slept/slept)’

(54) Ja wiem że Jurek spał pod każdym mostem **pod którym** Marek ~~spał~~
 I know that Jurek slept under every bridge under which Mark ~~slept~~
 ‘I know that Jurek slept under every bridge under which Marc did (sleep/*know that Jurek slept under every bridge)’

(55) Ja znaju što Vania spał pod każdym mostom **pod kotorym** Mark
 I know that Vania slept under every bridge under which Mark.
 ‘I know that Vania slept under every bridge that Marc did (sleep/*know that Vania slept)’

This is because the matrix VP carries the copy of the operator when undergoing Topicalization.

(56) [Force [Topic VP2₂ [Finiteness (który/kotoryi)₁] ... t₂

Where: t₂ = [VP2 [Force ... [VP1 [VP1 VP1] t₁]]]

5. Conclusions

I have provided answers to both puzzles. Polish and Russian allow two types of ellipsis because T is not an affix in those languages. Bare-VP ellipsis is licensed by overt VP topicalization that interacts with relative clause formation. Hence the impossibility of bare-VP ellipsis in relative clauses that are derived via operator movement.

This research supports the model where VP ellipsis is licensed via de-stressing which in turn is licensed via Focus closure (Rooth 1992). However, I have also argued that we have to assume that ellipsis is preceded by the establishment of Focus/Topic relations in overt syntax. This can be done in two ways: by focusing the subject, provided a Σ head is in the numeration, or by topicalizing the VP. The first strategy gives rise to non bare-VP ellipsis, the second to bare-VP ellipsis.

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