

Investigation of WCO intervention in VP-fronting feeding VP-ellipsis

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Abstract: This paper discusses Johnson's (2001)^[6] claim that VP-fronting and VP-ellipsis exhibit similar syntactic licensing conditions — or rather, VP-fronting feeds VP-ellipsis; in order for a VP to be deleted, it firstly undergoes VP-fronting. In light of this, this paper nevertheless observes that the legitimization of VP-fronting does not necessarily entail that of VP-ellipsis; in other words, there are some cases where VP-fronting is licensed but VP-ellipsis seems to be disallowed. As such, the paper tentatively argues that VP-fronting does not necessarily feed VP-ellipsis. In addition, this study tries to explain why in some cases VP-fronting is legitimized while VP-ellipsis is not. For this purpose, by invoking English counterexamples, this paper bases its theoretical apparatus on the notion of WCO (Weak Crossover). The observed non-parallelism between VP-fronting and VP-ellipsis can be attributed to the intervention of WCO effects in the syntactic construction with VP-ellipsis.

Keywords: VP-fronting, VP-ellipsis, WCO

1. Introduction

VP-fronting is a widespread phenomenon cross-linguistically and refers to a construction in which a verbal constituent (i.e. the verbal head or the whole verb phrase) has undergone movement into the left periphery of the clause (Lee-Schoenfeld & Ott, 2021)^[8]. According to the movement as copy view (Chomsky, 1995; Hornstein, 2013)^{[4][5]}, both VP-fronting and VP-ellipsis have the same representation; the only difference is which copy to pronounce in the second conjunct. Under such an assumption, Johnson (2001)^[6] observes that VP-fronting and VP-ellipsis exhibit similar syntactic licensing conditions — or rather, VP-fronting feeds VP-ellipsis; in order for a VP to be deleted, it firstly undergoes VP-fronting.

It is against such a background that, this paper starts with Johnson's (2001)^[6] claim that syntactic constraints on VP-ellipsis closely match those on VP-fronting, as can be seen below.

1. (a). John doesn't [VP eat spaghetti] and [VP eat spaghetti] Mary wouldn't [VP_{trace}].
(b). John doesn't [VP eat spaghetti] and Mary wouldn't [VP_{elided}], either.
2. (a). *Eating rutabagas, Holly started [VP_{trace}].
(b). *Sally Tomato started eating rutabagas, but only after José started [VP_{elided}].

Where VP-fronting is legitimized, VP-ellipsis is legitimized, too, as illustrated in the comparison between 1(a) and 1(b). In contrast, in the same way that VP-fronting produces ungrammaticality, VP-ellipsis does the same, as shown in the comparison between 2(a) and 2(b). Therefore, it is tempting to make a conclusion that VP-fronting runs parallel with VP-ellipsis in distribution. According to Johnson (2001)^[6], if VP-ellipsis is to be derived via VP-fronting, then VP-ellipsis should be illicit under every syntactic condition where VP-fronting is illicit. Stated differently, it is expected that any syntactic constraints which are incompatible with VP-fronting will also be problematic with VP-ellipsis. In light of this, this paper makes a tentative attempt to demonstrate why this prediction can go awry by resorting to counterexamples where VP-fronting can be sufficiently licensed but VP-ellipsis cannot. Besides, it is also important to note that, contrary to what is proposed by Ott (2018)^[10], VP-fronting is regarded as a clause-internal movement in this work and not as a dislocation.

2. Literature Review

2.1 Research arguing against Johnson's (2001)^[6] claim

As to Johnson's claim, there are a few scholars who have done valuable research in an attempt to refute it. Significantly, Aelbrecht and Haegeman (2012)^[1] evaluate the VP-fronting derivation of VP-ellipsis as proposed by Johnson (2001)^[6]. They indicate that, making VP-ellipsis dependent on VP-fronting is problematic because VP-fronting and VP-ellipsis are not distributionally equivalent. As such, they come to the conclusion that, VP-fronting targets the left periphery and therefore is subjected to various constraints on movement to the left periphery, while VP-ellipsis is not so restricted; in other words, the syntactic contexts licensing VP-fronting are more restricted than those licensing VP-ellipsis, a finding that presents a challenge to Johnson's (2001)^[6] proposed movement analysis. Moreover, most impressively, Kim (2015)^[7] observes that VP-fronting and VP-ellipsis are not as parallel as Johnson proposes; instead, they show different distributional properties. In particular, Kim (2015)^[7] claims that, VP-fronting movement is more restricted than VP-ellipsis in that the former is governed by PIC (Phase Impenetrability Condition), AL (Anti-locality Condition), and locality in the form of intervention, while the latter is not. That explains the observed non-parallelism between VP-fronting and VP-ellipsis.

In summary, while a few researchers have already cast doubt on Johnson's (2001)^[6] claim and conducted thorough investigations leading to insightful conclusions, almost all of them aim only to show that VP-ellipsis is licensed more loosely than VP-fronting, not the other way around. Put another way, the counterexamples they invoke in their studies simply reveal that in syntactic conditions where VP-fronting is disallowed, VP-ellipsis is yet allowed.

Against such a backdrop, this paper, instead, makes a tentative attempt to argue against Johnson's (2001)^[6] claim from the other side — presenting and analyzing counterexamples so as to demonstrate that where VP-fronting can be legitimized, VP-ellipsis is yet not.

2.2 About WCO (Weak Crossover)

According to Sapir (2017)^[12], Weak Crossover (WCO) may be described as a syntactic configuration in which pronouns cannot be interpreted as co-construed with certain kinds of displaced or quantified antecedents. If it is correct to say that (a) the blocking of this co-construal does not seem logically required, (b) the effect is syntactically conditioned, (c) the effect is widespread in the world's languages, and (d) it does not appear to arise from instruction, then it is reasonable to assume that the WCO effect is a peculiar consequence of the human language capacity and a clue to the structure of that capacity.

Since Postal's (1971)^[11] ground-breaking work, virtually every major initiative in generative grammar has spawned accounts of WCO, and moreover, each new theoretical proposal has driven empirical research into subtleties that could distinguish between approaches. As a result, the distribution and nature of the effect, both syntactic and semantic factors, have been carefully explored over a wide range of constructions and languages, along with other effects that some proposals have linked to WCO, such as functional readings and superiority effects.

The term "crossover" was originally coined by Postal, for the contrasts in (3) and (4).

3. (a) *Who_i did his_i mother praise?

(b) Who_i praised his_i mother?

4. (a) *Who_i did he_i say Mary saw?

(b) Who_i said Mary saw him_i?

Even though *who* is easily co-construed with *his* in (3b), *his* cannot be easily construed with *who* in (3a). The key emphasis is on the relative difference of easy co-construal, which clearly distinguishes the (a) examples from the (b) examples. Postal (1971)^[11] proposes that the effect is found where the wh-phrase originates to the right of a pronoun that it "crosses over" as a result of leftward movement. The effect in (3a) is called "weak" because Wasow (1979)^[13], and many who have come after, assume it is not as sharp a contrast as that between (4a) and (4b), which is called strong crossover (SCO). The configurational distinction between WCO and SCO is that in SCO, the pronoun, *he* in (4a), c-commands the position where the wh-phrase originates, whereas in (3a), *his* does not c-command the extraction site. This study mainly involves WCO instead of SCO.

3. Analysis and Discussion

With the above research background and theoretical assumptions, the argument against Johnson's (2001)^[6] claim is made in this section to prove otherwise, that is, to illustrate that VP-fronting is not necessarily a prerequisite to VP-ellipsis. The argumentation, which is based on three sets of English sentential examples, is developed in such a way that, after a corollary of the first two set of examples is given and taken to be legitimate in accordance with Johnson's (2001)^[6] claim, the theory of WCO (Weak Crossover) is invoked to demonstrate the illegitimacy of that corollary. It is worth mentioning that, for the analysis and discussion of examples, the Copy Theory is employed in support of the syntactic operation "movement": "movement" is the combination of copy and merge: an element moves to the target and leaves a copy at its base-generated position (Chomsky, 1995; Bobaljik, 2002; Nunes, 2004)^[4] [2]^[9].

As is previously indicated, VP-fronting and VP-ellipsis seem to follow a similar path: in cases where VP-fronting is licensed, VP-ellipsis is as well, as seen by the comparison between 1(a) and 1(b). However, it cannot be deduced that VP-fronting always feeds VP-ellipsis.

Firstly, let's start with the following examples of 5 (a) and 5(b).

5. (a) Mothers_i have decided to play with their_i sons.

(b) Decided to play with their_i sons, mothers_i have [VP_{trace}].

As is indicated in 5(a) and 5(b), *mothers* and *their* are co-indexed. Significantly, the co-indexing effect preserved in 5(a) can also survive in 5(b), where VP (*decided to play with their sons*) is moved to the left periphery of the clause with a trace left in-situ. In other words, just as in the canonical form represented by 5(a), VP-fronting, as a clause-internal movement, seems not to trigger any misunderstanding in 5(b) in terms of pronoun reference, not to mention of the overall semantic meaning. That means, the cognitive effort required for decoding 5(a) can be assumed to be almost identical with that for 5(b), and hence, an easy understanding for both.

In a similar way, since *play* can function as either a transitive or intransitive verb, the following set examples of 6(a) and 6(b) should also follow the same grammaticality as shown in the above 5(a) and 5(b), further instantiating a common sense of legitimacy afforded by VP-fronting.

6. (a) Mother_i has decided to play.

(b) Decided to play, mother_i has [VP_{trace}].

Now, in light of the above, it naturally begs the question: if that same VP is elided in a similar syntactic context, can the same grammaticality, as indicated in 6(b), definitely arise in the corresponding ellipsis-featuring construction? It is tempting at this point to give a positive answer to this question, since, following Johnson's (2001)^[6] claim, if VP-fronting is legitimized under a certain syntactic condition, then the corresponding VP-ellipsis construction can be legitimized as well. In brief, that predicts the following 7(a) and 7(b) should be both legitimized, or at least well-informed and unambiguous.

7. (a) *Mother_i has decided to play with her_i sons, but I don't know [with [which son]_g]_k his_g mother has [~~decided to play~~_{trace_k}].

(b) Mothers_i have decided to play with their_i sons, but I do not know [which mother]_k has [~~decided to play with her_k son~~].

However, it is actually not the case. Now, let's take a close look at 7(a). At first glance, 7(a) seems to be a little ambiguous to the point that one cannot figure out its meaning intuitively at first; to put it another way, unlike what is illustrated in 5(b) and 6(b), 7(a) is comparatively more cognitively demanding for it to sink in. The subtle gap between 7 (a) and 5(b) or 6(b) in terms of cognitive-effort processing — which are required for their semantic decoding — can be initially attributed, at first sight, to the seemingly puzzling co-reference between *which son* and *his*. A further comparison between 7 (a) and 7(b) seems to further reinforce this point of view, for the latter is devoid of a tricky co-reference issue in the second coordinated clause introduced by *but*. Therefore, it seems as if that puzzle is triggered by the interpretative interaction between *which son* and *his*, not the ellipsis gap contained in the right periphery of the second conjunct.

However, if we persist in dwelling on and dig deeper into that issue, the VP-ellipsis part should be blamed for the slight difference in cognitive-effort processing required for the semantic decoding of 7 (a) compared to 5 (b) or 6 (b). Specifically, one of the most prominent differences between 7(a) and 7(b) lies

in the existentiality of the pronoun *his*, which is overtly available in 7 (a) (located in the second conjunct), but absolutely absent in 7(b) in the counterpart position. Then what is the implication for this difference? Our initial instinct is likely to go to the observation that *his* seems to be interfering with the meaning negotiation between *his mother* and *which son*; after all, it is pretty straightforward to decode and interpret the meaning where *his* is removed as evidenced in “Mother_i has decided to play with her_i sons, but I don’t know [with which son]_k mother has [~~decided to play trace~~]_k”, or more directly in 7(b). Therefore, it makes sense to assert that the entire trickiness boils down to the pronoun *his* itself — it indeed contributes to a sense of tangible intervention in the process of disambiguating the co-reference between *his* and *which son*.

But what’s the underlying reason behind it? A natural way to further explore a certain issue is through tracing the source. This leads us, understandably enough, to closely investigate the D-structure of the clause to ascertain whether and how a clause-internal movement facilitates the transformation of a D-structure into an S-structure. Then, it is quite effortless to perceive that the wh-phrase *which son*, which is originally positioned at the rightmost periphery of the whole clause, is internally moved over *his* to the position immediately preceding *his*, with a trace left behind. To be brief, *which son* crosses over *his*, driven by a leftward movement and thus, evidently, *his* syntactically precedes the trace where *which son* is originally located. Now, at this point, we eventually “see the light at the end of the tunnel”. In light of this syntactic phenomenon, Chomsky (1976)^[3] proposes that a variable, understood as the trace left by movement (wh-movement or quantifier-movement), cannot bind a pronoun to its left (called the Leftness Condition). As such, the Leftness condition can, in some sense, account for why 7(a) is infelicitous, for the trace *which son* — left by wh-movement — binds the pronoun *his* to its left and thus violates the Leftness Condition. Again, that can explain why 7(a) is infelicitous to some extent. Most importantly, the infelicity of 7(a) can be also explained by the theory of WCO (Weak Crossover), which states that the infelicitous effect is found where the wh-phrase originates to the right of a pronoun that it “crosses over” as a result of leftward movement (Safir, 2017)^[12]; and the infelicitous effect in (7a) is thus called “Weak Crossover (WCO)”. Particularly, the reason why 7(a) with ellipsis is infelicitous can be ascribed to the WCO effects triggered by the wh-phrase — by crossing over the pronoun *his*, the wh-phrase *which son* undergoes a clause-internal leftward movement from the clause’s rightmost periphery to a syntactic position immediately preceding that pronoun. At this point, it suggests for itself that, even though the legitimacy of VP-fronting can entail that of a corresponding VP-ellipsis, but it is not always the case. Where there is a WCO effect intervening, VP-fronting does not necessarily feed VP-ellipsis, as witnessed by the set of examples in 7(a) and 7(b) (repeated as follows).

7. (a) *Mother_i has decided to play with her_i sons, but I don’t know [with [which son]_g]_k his_g mother has [~~decided to play trace~~]_k.

(b) Mothers_i have decided to play with their_i sons, but I do not know [which mother]_k has [~~decided to play with her_k son~~].

In summary, the above analysis and discussion, nevertheless, observes that the legitimization of VP-fronting does not necessarily entail that of VP-ellipsis; in other words, there are some cases where VP-fronting is licensed but VP-ellipsis seems to be disallowed, as illustrated in the comparison between 7(a) and 7 (b) above.

4. Conclusion

Why does Johnson’s (2001)^[6] claim fail to work in every syntactic condition? In order to address this query, this study tentatively presents a modified generalization stating that VP-fronting does not necessarily feed VP-ellipsis. Put differently, a syntactic condition that licenses VP-fronting does not always license VP-ellipsis. This indicates that VP-fronting doesn’t go parallel with VP-ellipsis. The main point is that VP-fronting and VP-ellipsis do show different distributional properties rather than being parallel to each other. Then, it begs the question: how can the aberrant example contradicting Johnson’s (2001)^[6] claim be explained appropriately? In view of this, the present study resorts to the notion of WCO (Weak Crossover), reaching the conclusion through the analysis and discussion that, the syntactic constrain on VP-fronting doesn’t necessarily match that on VP-ellipsis and where any mismatch arises therein, WCO is assumed to play an intervention role in contributing to that. Again, this explains why VP-fronting is legitimized in some syntactic conditions yet VP-ellipsis is not.

In conclusion, this study demonstrates how the idea of WCO might provide an explanation for the unexpected syntactic phenomenon that is seen. In particular, through the lens of WCO, it is argued that

VP-fronting does not necessarily feed VP-ellipsis. More specifically, syntactic environments that license VP-fronting do not invariably license VP-ellipsis. The resulting asymmetry between the two constructions can be attributed to the intervention of Weak Crossover (WCO) effects in structures involving VP-ellipsis. More broadly, the findings of this study indicate that the relationship between VP-fronting and VP-ellipsis should be understood as more restricted than previously assumed. Rather than viewing VP-fronting as a necessary prerequisite for VP-ellipsis in all cases, the present analysis suggests that the two constructions may be subject to partially independent licensing conditions. If the analysis proposed here is on the right track, then any account of the relationship between VP-fronting and VP-ellipsis should also take into consideration the intervention of independent syntactic constraints such as Weak Crossover. It is hoped that the present study will contribute not only to a better understanding of the licensing conditions governing VP-related constructions, but also to ongoing research concerning the interaction between movement operations and locality constraints in generative syntax.

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