P-WORD INTEGRITY: a new condition on ellipsis at the syntax-phonology interface

Overview: We identify a new condition on ellipsis, which says that ellipsis cannot break up strings that form a phonological word. The condition explains a hitherto unnoticed pattern, in which the ability of function words to be stranded by ellipsis is conditioned by their prosodic properties, in particular the linear direction to which they prosodically cliticize. Our proposal implies that word-formation precedes and feeds (at least some cases of) ellipsis. It also allows a simplification of the theory of VP-ellipsis licensing.

The behavior of function words in ellipsis is exemplified in (1). An unstressed object pronoun such as (1a) cannot be stranded by deletion of the verb. But if the pronoun is stressed, or if there's a non-pronominal, verb-deletion becomes possible (1c).

(1)   a.   I called Sheryl on Monday, and called her on Tuesday again.
        b.   *I called Sheryl on Monday, and ~~called~~ her on Tuesday again.
        c.   I called Sheryl$_{(1)}$ on Monday, and ~~called~~ Mary/HER$_{(2)}$/HIM on Tuesday.

Analysis: We argue that the phenomenon is rooted in the fact that unstressed object pronouns form a single **phonological word** with their verbal host. We propose the following condition:

(2)   P-WORD INTEGRITY: *Ellipsis cannot delete sub-parts of phonological words (P-WORDS).*

By P-WORDS, we mean units in the prosodic hierarchy above the foot level but below the phonological-phrase level, for the purpose of stress assignment (Selkirk 1981, Tyler 2019). Function words typically do not map to P-WORDS by themselves: Ito and Mester (2009) argue that function words in such cases are bare syllables, which prosodically cliticize onto adjacent material, forming a single P-WORD (3). If independent factors prevent cliticization—such as focus as in (1c), or movement as in (4)—an unreduced form is used, which maps to a P-WORD by itself.

(3)   *called [-ɨm] / [ət-] home / [ðə-] doctor / [tə-] Mary.*

(4)   a.   [him]/*[ɨm] leaving$_1$, I saw __$_1$ b.   *Who$_1$ did you talk [tu]/*[tə] __$_1$?*

We adopt the proposal of Tyler (2019), according to which functional items can subcategorize for the direction in which they cliticize: accusative pronouns cliticize to the left; most auxiliaries, determiners and prepositions cliticize to the right (see 3).

Leftward-cliticizing elements: Because accusative pronouns cliticize to the left, the verb and the pronoun in (1b) form a single P-WORD, and cannot be separated. In (1c), the focused pronouns and lexical noun phrases do not form a P-WORD with the verb, and can therefore be stranded. The pattern in (1) is not a result of a condition requiring e.g. contrast on the arguments of an elided verb. Weak Definites (Carlson et al. 2006) can be repeated, even though they don't contrast (5).

(5)   I took the bus when I went to NY, and ~~took~~ the bus again when I went back home.

Have also cliticizes to the left. Our prediction is that for a case like (6), *should* and *have* constitute a P-WORD, and therefore cannot be separated by ellipsis. This is correct:

(6)   *Cassandra should have left yesterday, and Hector should ~~have left~~ two days ago.

Rightward-cliticizing elements: Possessor pronouns cliticize to the right (Selkirk 2011). Our account correctly predicts that ellipsis cannot delete material to the **right** of possessors, (7b). As in the case of accusative pronouns, contrastively focused possessor pronouns (as well as full NPs) are possible, (7c). This again follows from our account, since the latter map to P-WORDS by themselves. (8) shows that it is likewise impossible to delete just the possessor, again as predicted.

(7)   a.   I borrowed Maria's book about Russia, and her book about Crete too.
        b.   *I borrowed Maria's book about Russia, and her(s) ~~book~~ about Crete too.
        c.   I borrowed HER$_{(1)}$ book about Russia and Patrick's/HERS$_{(2)}$ ~~book~~ about Crete.

(8)   * I borrowed Maria's book about Russia and ~~her~~ book about Crete too.

Similarly, determiners don't map to P-WORDS, and cliticize to material to their right. Again, they cannot be stranded by NP-ellipsis (9a), nor be deleted (9b). Strikingly, if lexical material, such as a numeral, appears to the right of a determiner or possessor, ellipsis becomes possible (9c). This is explained by P-WORD integrity, since the determiner in this case cliticizes to the numeral.

(9)   a. *I borrowed the book about Russia, and the ~~book~~ about Crete.
        b. *I borrowed the book about Russia, and ~~the~~ book about Crete.
        c. I borrowed Maria's/the five books about Russia, and her/the eleven ~~books~~ about Crete.

The analysis also extends to the passive progressive auxiliary *being*. It cliticizes to the right (as a foot, see Ito and Mester 2009), and again, it cannot be separated from its host by ellipsis:

(10)   *Rochelle was being arrested at the same time as Aaron was being ~~arrested~~.

The same facts hold for 'portmanteau' function complexes like *gonna* ('going to') *hafta* ('have to'), *oughta* ('ought to') and others, which cliticize rightward; see (11a). This is not a general restriction against contraction in this position: *have*, which cliticizes leftward, can appear here, (11b).

(11)   a. *Reginald was gonna leave, and Mary was gonna as well.
        b. Reginald was going to'əve left, and Mary was going to'əve as well.

Note that there is an independent condition requiring finite T in ellipsis to map to a P-WORD (12a). This prevents auxiliaries that would ordinarily cliticize rightwards (such as *should* in 12b) from doing so. This makes it always possible for finite T to be stranded in ellipsis.

(12)   a. *Janet thinks that I am in New York, and Eleanor thinks that I'm too (c.f. *I am*).
        b. Janet should go to New York, and Eleanor should ~~go to New York~~ too.

Consequences: Our P-WORD INTEGRITY proposal supports a particular order of operations: prosodification of a syntactic structure (and therefore vocabulary insertion) must precede ellipsis. Crucially, all the above function words have unreduced forms that can be used if syntax bleeds their insertion (by movement, cf. 4), or if a host is unavailable to begin with (as in e.g. *Him leaving surprised me*, where the accusative pronoun doesn't have a left host from the get-go). If ellipsis preceded vocabulary insertion, we would expect the unreduced forms to be used, since their potential host would simply be absent from the PF representation. These phenomena therefore constitute a novel argument in favour of a PF-deletion theory of ellipsis, at least for the ellipsis configurations discussed here. An LF-copying theory has no clear way to capture these facts, since LF copying should not care about morpho-phonological properties of heads.

P-WORD INTEGRITY constitutes a unified explanation for a range of ellipsis phenomena that seem at first glance unrelated. Some, like the distribution of reduced accusative/possessor pronouns, have not (to our knowledge) been pointed out in the ellipsis literature. Others are longstanding puzzles. For example, there is evidence that T is the licensor of VP-ellipsis (Aelbrecht 2011). It is surprising, then, that the complement of T cannot always be deleted, as seen in the case of non-finite *have* (cf. (6); also van Craenenbroeck 2017:ex.24). Theories of VP ellipsis have had to introduce various complications to handle this; for example, Aelbrecht introduces an Agree relation between T and a lower head, whose complement is elided. Our analysis raises the possibility that a simple theory of VP-ellipsis, in which T licenses ellipsis of its complement, is correct. Cases in which a smaller constituent is elided could (as with *have* and *being*) be attributed to P-WORD INTEGRITY.

Selected References: **Aelbrecht, L.**. 2010. The Syntactic Licensing of Ellipsis ⟨LINK⟩. **van Craenenbroeck, J.**. 2017. VP Ellipsis ⟨LINK⟩. **Ito, J & Mester, A.**. 2009. The Extended Prosodic Word ⟨LINK⟩. **Tyler, M.**. 2019. Simplifying 'Match Word' ⟨LINK⟩.