

On the equipollent nature of verb phrase parentheticals in English and their syntax-prosody interface

Key words: Syntactic equipollence, Prosodic equipollence, Verb phrase parentheticals, Merge.

This paper analyzes the syntax and prosody of English verb phrase parentheticals (VPPs), illustrated in (1).

- (1) The initiative, *I think/believe/know*, must (*I think/believe/know*) come (*I think/believe/know*) from (*I think/believe/know*) Europe.

We address two questions: (i) how do the syntactic and prosodic domains of VPPs in English interact and align; and (ii) do the prosodic boundaries and hierarchy accessibility points for merging VPPs match or mismatch?

Semantically, VPPs guide the hearer to an appreciation of the matrix statement in its social, logical, or evidential context (Urmson (1952)). In syntactic terms, for Ross (1973), VPPs undergo *Slifting* from a remote structure wherein the matrix clause is a complement of the parenthetical verb. McCawley (1982) deploys trees as sets to account for the embedding of parentheticals in discontinuous constituents. Espinal (1991) proposes a multidimensional syntax model. In prosodic terms, Dehe (2007) argues that there is no one-to-one mapping between syntactic and prosodic parentheticals. Peters (2006) shows that not all parentheticals form a distinct intonational phrase. Selkirk (1986, 1995, 2005) proposes that edges of designated syntactic constituents align with edges of corresponding prosodic constituents (Intonation, Major and Minor Phrases).

We combine Selkirk's insights with the way syntax is mapped into PF in terms of multiple and dynamic spell-out domains, along the lines of Uriagereka (1999). We propose that: (i) VPPs in English are linearly integrated within the sentence as a whole but at the same time instantiate independent syntactic structures that are merged as a single syntactic unit directly to the positions they appear in; and (ii) the prosodic domains of the VPPs are grounded in a Merge-based and dynamic multiple spell-out.

An English written corpus analysis of the interaction of VPPs with different types of adverbs maps their positions primarily to the CP and IP clausal layers:

- (2) a. *Certainly*, the initiative, *I think*, must come from Europe.
b. The initiative must *necessarily*, *I think*, come from Europe.
c. The initiative must, *I think*, *not/never* come from Europe.

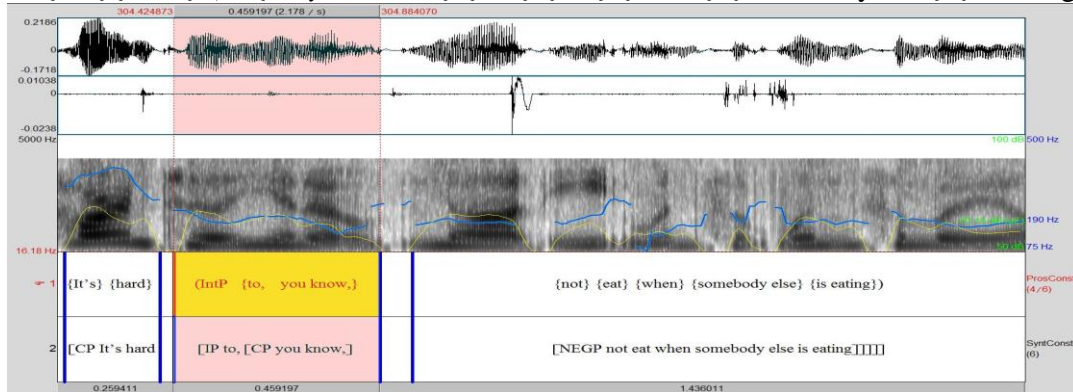
VPPs are syntactically equipollent in that they can be detached from, integrated into, or subordinate to the matrix clause. Thus, the interpretation of *so* in (3) excludes the VPP and the adverb in (4) scopes under the VPP, but VPPs can host negative polarity items (5), and reflexives (6).

- (3) Edward is aggressive, *I think*, and his wife thinks so too.
(4) The agents, *luckily I think*, gave up the operations in Europe.
(5) The agents will not give up, *I think on any*, of the operations in Europe.
(6) He_i controlled, *I think himself_i first*, then the others.

We analyze these properties as the by-product of the derivational points at which external Merge and dynamic spell-out applies.

If so, the equipollent character of VPPs should also be exhibited in prosody. We show that VPPs in an English spoken corpus exhibit hallmarks of prosodic incorporation { }, prosodic parataxis {...} {...} {...} and prosodic parenthesis {... {...} ...}, as respectively illustrated in (7)-(9).

- (7) a. [IP She was just really concerned [PP about [CP you know] everything]]].
 b. {She was} {just} {really concerned} (MinP{about} {you know} {everything}).
- (8) a. [IP I wrote her a letter and [IP told her, [CP I said], [CP I think], [CP I said], [CP [IP I feel like I know you]]]]].
 b. {I wrote her a letter and} {told her}, (IntP {I said}), (IntP {I think}), (IntP {I said}), {I feel like I know you}.
- (9) a. [CP It's hard [IP to, [CP you know,] [NEGP not eat when somebody else is eating]]].
 b. {It's}{hard} (IntP{to, you know,} {not} {eat} {when} {somebody else} {is eating}).



VPPs interrupt the prosodic flow of the utterance and are characterized by pitch and loudness differences from surrounding prosodic domains. Their prosodic boundaries align with different types of syntactic constituents, and map onto prosodic constituents at different levels. This suggests that the mapping from syntactic to prosodic structure is a Merge-based isomorphic one, with the prosodic structure of the VPP being grounded in the clausal levels and derivational points where Merge applies. Our analysis can accommodate mismatches between prosodic and syntactic parenthesis without postulating additional technology. Untriggered Merge suffices.

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