1. Introduction

The book under review discusses the question of how syntax, semantics, phonology and pragmatics work together in deriving elliptical constructions. In this book, Winkler proposes that Information Structure mediating between syntax and semantics constitutes the driving force in the derivation of ellipsis and yields two types of elliptical sentences: the first type is derived by a series of syntactic movements and the second one by a phonological deletion.

In this review article, I will outline Winkler’s analysis based upon Information Structure (section 2). Then, I will point out that this analysis incorrectly rules out some acceptable ellipses (section 3). I will also propose an alternative approach to account for the two types of elliptical sentences (section 4).
2. The Hybrid Focus Analysis of Ellipsis

2.1. The Double-Cycle Information Structure Hypothesis

Winkler aims to develop an interdisciplinary account of the following elliptical constructions:

(1) a. Leon read *The FACTS* and Manny *The Great American NOVEL*.
    b. Leon read *The FACTS*, but not *The Great American NOVEL*.
    c. John said that Manny read *The FACTS*. But Mary, who knows that Manny has never read a book by Philip ROTH, said that he HASN’T.

(1a) is an example of gapping where the verb read is gapped in the second conjunct. (1b) is a case of stripping where the second conjunct is interpreted as ... but he has not read *The Great American NOVEL*. (1c) is an instance of VP-ellipsis that elides the verb phrase read *The FACTS* after the auxiliary HASN’T.¹

Winkler classifies (1) into two types in terms of different information structural functions of remnants. In (1a), the remnants Manny and *The Great American NOVEL* contrast with Leon and *The FACTS* in the first clause respectively and hence are contrastive focuses. Gapping is infelicitous when its remnants do not contrast with their corresponding phrases:

(2) a. *John bought APPLES, and John (he) BANANAS.
    b. *JOHN bought apples, and MARY apples. (p. 193)

Likewise, in (1b), *The Great American NOVEL* is contrastively related to *The FACTS* in the first clause and hence is a contrastive focus. On the other hand, in (1c), since the remnant he is the anaphoric pronoun that takes Manny as its antecedent, it does not contrast with any phrases in the previous sentences and thus is not a focused phrase. Rather, prosodic prominences are put on the auxiliary hasn’t that marks the deleted constituent as an anaphoric element. Given this difference, she claims that the information structural function of gapping and stripping is to present contrastive pairs of information segments, whereas that of VP-ellipsis is to mark anaphoric elements. She calls the former type of ellipsis Sentence-Bound Ellipsis (SBE) and the latter type Discourse-Bound Ellipsis (DBE).

Winkler tries to derive these different functions of SBE and DBE from

¹ Hereafter, I will apply the terms “gapping,” “stripping” and “VP-ellipsis” to operations that form these ellipses or structures derived from them.
the following derivational model of grammar:

(3) Elaboration of the D(erivational)-Model of Grammar

(3) shows that Logical Form (LF) has Information Structure (IS) as a subcomponent. IS consists of two separate cycles, the functional cycle and the grammatical cycle (the Double-Cycle Information Structure Hypothesis (DC-ISH)). The functional cycle is the first cycle (cycle 1), and checks the distribution of given and new information in correspondence with pragmatics and then identifies new information as an information focus. On the other hand, the grammatical cycle is the second cycle (cycle 2), and checks the grammatical status of constituents, then identifies constituents displaced to edges of syntactic structures as a contrastive focus or a contrastive topic. Thus, the DC-ISH identifies the different types of focuses.

Cycle 1 is the default cycle in that all syntactic structures must be sent through cycle 1. This cycle determines whether a syntactic structure needs to be sent on to cycle 2 on the basis of formal features that are assigned to a contrastive focus/topic. If syntactic structures do not involve those formal features, cycle 1 sends structures directly to PF without handing them to cycle 2. In contrast, if syntactic structures contain those formal features, cycle 1 transfers structures to cycle 2, which sends them back to the syntactic component.
Winkler assumes with Chomsky (2000, 2001, 2004, 2005) that the grammatical derivation of a specific sentence is subdivided into smaller units called *phases* which are vP or CP. Under this assumption, once a phase is formed by syntactic operations, it is sent to cycles 1 and 2 of LF. After cycles 1 and 2 have operated over a phase, they send it to PF, which interprets an incoming phase. Thus, the syntactic, semantic and phonological components communicate with each other at the interfaces by handing on and manipulating a phase.

This model of grammar allows semantic interpretation at LF to be directly accessible to phonological interpretation at PF so that deletion is driven by semantic identity. Winkler argues that this analysis is free from the problem with all approaches that assume that deletion takes place at PF under the following architecture of the "T-model":

\[
\text{(4) } \begin{array}{c}
\text{Lexicon} \\
\text{PF} \quad \text{LF}
\end{array}
\]

In (4), since LF does not interface directly with PF, semantic interpretations are in principle inaccessible to deletion at PF. Consequently, those approaches must assume that the identity condition on deletion operates between PF and LF.

(3) derives (1) differently. First, let us consider the derivation of the example of gapping in (1a). The elided clause of (1a) has the following structure at some point of its derivation in the syntactic component:

\[
\text{(5) } [\text{vP Manny read The Great American NOVEL}]
\]

(5) is the input to cycle 1 of the DC-ISH at LF. (5) involves the contrastive topic *Manny* and the contrastive focus *The Great American NOVEL* and these have formal features. Accordingly, cycle 1 sends (5) to cycle 2, which in turn hands it to the syntactic component. Then, *Manny* and *The Great American NOVEL* move to Spec of vP:

\[
\text{(6) } [\text{vP}_1 \text{ Manny}_1 [\text{vP}_2 \text{ The Great American NOVEL}_2 [\text{vP}_3 t_1 \text{ read } t_2]]]
\]

(6) is sent through cycle 1 to cycle 2, where *Manny* and *The Great American NOVEL* are identified as a contrastive topic and a contrastive focus respectively. Then, (6) is handed to PF, where the displaced phrases are assigned heavy accents. At the next stage of the derivation in the syntactic component, (6) is merged with the conjunction *and* under the assumption that gapping involves the coordination of vPs and not of TPs (Johnson (1996)):
(7) \[\text{[and } [\text{vP1 Manny}_1 [\text{vP2 The Great American NOVEL}_2 [\text{vP3 } t_1 \text{ read } t_2]]]]\]

The next step is the sideward movement of the vacated vP3: vP3 is copied from (7) and then merged with the correlates Leon and The FACTS to yield the following structure:

(8) \[\text{[vP Leon [vP The FACTS [vP3 } t_1 \text{ read } t_2]]}\]

Then, (8) is merged with Tense (T) and then Leon raises to its Spec:

(9) \[\text{[TP Leon}_4 \text{ T [vP } t_4 \text{ [vP The FACTS [vP3 } t_1 \text{ read } t_2]]]}\]

The vP3 in (9) moves to the postsubject position to yield the following structure:

(10) \[\text{[TP Leon}_4 \text{ T [vP3 } t_1 \text{ read } t_2]_5 \text{ [vP } t_4 \text{ [vP The FACTS } t_5]_5]}\]

The final syntactic operation is to merge (7) and (10) to form the following structure:

(11) \[\text{[TP Leon}_4 \text{ T [vP3 } t_1 \text{ read } t_2]_5 \text{ [vP } t_4 \text{ [vP The FACTS } t_5 \text{ and [vP1 Manny}_1 [\text{vP2 The Great American NOVEL}_2 [\text{vP3 } t_1 \text{ read } t_2]]]]]}\]

The vP3 in the first clause is identical to the vP3 in the second clause. They undergo the following Chain Reduction process:

(12) Chain Reduction:

In syntax, the lower copy in a chain is marked [—segmental] and [-—suprasegmental], which is translated as phonological silence at PF. (p. 66)

(12) deletes the vP3 of the second clause in the phonological component to yield the surface word order of (1a).

The example of stripping in (1b) has the same kind of derivation as (1a). The second clause of (1b) has the following structure at some point of its derivation:

(13) \[\text{[but [vP1 not The Great American NOVEL}_2 \text{ [vP3 Leon read } t_2]]}\]

(13) is derived by the movement of the contrastive focus phrase not The Great American NOVEL to Spec of vP. Then, the vP3 is copied from (13) and merged with the corresponding phrase The FACTS:

(14) \[\text{[vP The FACTS [vP3 Leon read } t_2]]}\]

(14) leads to the following structure at a later stage of the derivation in the syntactic component:

(15) \[\text{[TP Leon}_4 \text{ T [vP3 } t_4 \text{ read } t_2]_5 \text{ [vP The FACTS } t_5]_5}\]

(15) is derived by two independent movement operations: the movement of

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2 Winkler (p. 189) assumes that this movement is triggered in order to restore the SVO word order at the surface.
Leon to Spec of T and the subsequent movement of the vacated vP3 to the postsubject position. Then, (13) and (15) are concatenated to yield the following structure:

\[(16) \ [TP \ Leon_4 \ T \ [vP_3 \ t_4 \ read \ t_2]_5 \ [vP \ The \ FACTS \ t_5]] \text{ but } [vP_1 \ not \ The \ Great \ American \ NOVEL_2 \ [vP_3 \ Leon \ read \ t_2]]\]

Finally, Chain Reduction deletes the vP3 in the second clause to yield (1b). Thus, gapping and stripping are derived by the syntactic component interacting with cycle 2 at LF.

Next, let us turn to the derivation of the example of VP-ellipsis in (1c). The elided clause of (1c) has the following structure at some point of its derivation in the syntactic component:

\[(17) \ [TP \ he_1 \ hasn't \ [vP \ t_1 \ read \ The \ FACTS]]\]

The vP in (17) is sent to cycle 1 of the DC-ISH at LF, where its discourse information is checked by the pragmatic component. This component recognizes the vP as an anaphoric element since its referent has already been introduced into the discourse by the previous sentence. Winkler (p. 74) calls the relation between an anaphor and its antecedent ‘accessibility’ and has it subject to the following conditions:

\[(18) \ \text{Accessibility Conditions:} \]

\[\begin{align*}
\text{a. Distance: The distance between the antecedent and the anaphor.} \\
\text{b. Competitions: The number of competitors for the role of antecedent.} \\
\text{c. Saliency: The antecedent being a salient referent, mainly whether it is a topic or a non-topic.} \\
\text{d. Unity: The antecedent being within vs. outside the same frame/world/point of view/segment or paragraph as the anaphor.} 
\end{align*}\]

(18) was originally proposed by Ariel (1990) for interpreting noun phrases and pronominal elements. It marks the vP in (17) as \([-\text{distance}], \text{[-competition]}, \text{[+saliency]}, \text{[+unity]}\]. Consequently, the vP is classified as a high accessibility marker. Furthermore, the vP does not have any contrastive phrases with formal features and hence does not enter cycle 2. Then, as illustrated by (3), the vP is sent from cycle 1 at LF to PF, where the whole vP is deleted according to the following condition:

\[\text{3 On the basis of (18), Winkler (pp. 73–75) assumes that overt VP-proforms and deaccented VPs are medium accessibility markers and low accessibility markers respectively.}\]
(19) Phase Invisibility Condition
The smallest phase $\alpha$ is marked invisible (i.e., $[-\text{suprasegmental}]$ and $[-\text{segmental}]$) by cycle 1 of the DC-ISH for interpretation at PF if it is highly accessible. Consequently, the vP lacks phonetic material although it has all the structure of its antecedent. What receives a pitch accent is the auxiliary *hasn't* which takes the vP as its complement. Thus, VP-ellipsis is derived by cycle 1 at LF cooperating with the pragmatic component.

Winkler argues that the DC-ISH also derives the following two types of elliptical constructions in German:

(20) a. Leon kann die Aufgabe lösen und Peter kann *(es) auch.
    Leon can the task solve and Peter can *es too.
    'Leon can solve the task and Peter can too.'

b. Leon kann die Aufgabe lösen und Peter auch.
    Leon can the task solve and Peter too.
    'Leon can solve the task and Peter too.'

The VP-anaphor *es* in (20a) is a high accessibility marker that refers to an event type introduced in the discourse. This construction is similar to VP-ellipsis in English and hence is derived by cycle 1 of the DC-ISH. On the other hand, the remnant *Peter* in (20b) contrasts with *Leon*. This ellipsis is like stripping in English and thus is derived by cycle 2 of the DC-ISH.

To summarize, Winkler proposes that the DC-ISH makes a clear distinction between elliptical constructions which involve syntactic movements and those which do not. When a phrase moves out of the vP, the moved phrase is interpreted as a contrastive phrase and the vacated vP is deleted at PF as an instance of chain reduction. In contrast, when no movement occurs, the vP is marked as highly accessible by the pragmatic component and then is deleted at PF. The former type of ellipsis is SBE including gapping and stripping, whereas the latter is DBE including VP-ellipsis and VP-anaphora.

2.2. Deriving Differences between Gapping and VP-ellipsis

Winkler’s analysis subsumes DBE under the theory of discourse anaphora and claims that DBE is intrinsically anaphoric. This analysis accounts for the fact that VP-ellipsis patterns with other types of anaphora, such as pronouns. One similarity between VP-ellipsis and pronouns is that they may be cataphoric in similar circumstances (Lakoff (1968) and Jackendoff (1972)):

(21) a. Although we won’t vote for her$_1$, Merkel$_1$ might win the election.
b. *She, might win the election, although we won’t vote for Merkel

(22) a. Although we think [IP she shouldn’t [VP e]], Merkel might
[VP win the election].

b. *We think [IP she shouldn’t [VP e]], although Merkel might
[VP win the election].

(21) and (22) show that a pronoun and VP-ellipsis may be cataphoric only
when they are embedded. Another similarity is that like a pronoun, VP-el-

(23) The thought came back, the one nagging at him these past four
days. He tried to stifle it. But the words were forming. He
knew he couldn’t.     (Hardt (1990))

In (23), VP-ellipsis refers to the distant antecedent stifle it across the
immediately preceding sentence. Thus, similarities between VP-ellipsis and
pronouns follow from the DC-ISH that licenses DBE, including VP-ellipsis,
at cycle 1 of LF, cooperating with the pragmatic component.

On the other hand, the DC-ISH subsumes SBE under the theory of move-
ments and claims that SBE must occur within sentence boundaries. There-
fore, the DC-ISH accounts for the fact that the acceptability of gapping falls
when it must find an antecedent over utterance boundaries, as illustrated in
(24), where struck-through text indicates deleted material:4

(24) A: George blasted the press. He’s going to pay a big price for
that.

B: #And Al blasted the newspaper reporters. In his case the
fallout will be minimal, however.

Likewise, the DC-ISH prohibits gapping from finding its antecedent in the
nonlinguistic context, as illustrated in (25b):

(25) Mary is at the toy store checkout counter, buying a skate-
board. Her friend says:

a. I am glad you’re going to. Then, your son will be really
happy!

b. #And Sam a bicycle. Then your son will really be happy!

(Lobeck (1999: 102))

4 Sag (1976: 192) points out that Gapping across utterance boundaries is possible only
when the conversational participants are ‘collaborating’ to construct what can conceptually
be thought of as a single sentence, as illustrated in (i).

(i) A: Jorge is peeling an apple.

B: And Ivan an orange.
(25a) shows that the DC-ISH allows VP-ellipsis to receive its interpretation from the nonlinguistic context.

The DC-ISH also explains the following contrast between gapping and VP-ellipsis:

(26)  a. *John discussed my question of which flowers they saw and Bill discussed my question (of) which animals they saw.

       (Neijt (1979: 136))

b. John didn't hit a home run, but I know a woman who did hit a home run.

       (Sag (1976: 13))

(26) shows that VP-ellipsis can reach into an NP, whereas gapping cannot. The DC-ISH requires that a remnant of gapping move to Spec of vP. Accordingly, (26a) has the following structure:

(27) *John discussed my question of which flowers they saw and [vP Bill [v' which animals [v discussed my question -t they saw]]]

(27) involves the movement of which animals from the clause embedded within the NP my question. This movement violates the Complex Noun Phrase Constraint proposed by Ross (1967) so that (26a) is ungrammatical. On the other hand, the DC-ISH derives VP-ellipsis without resort to syntactic displacement of contrastive focus. Consequently, (26b) does not involve any movement out of the clause embedded within the NP a woman so that (26b) is grammatical.

This analysis can be generalized to the following ungrammatical examples of gapping:

(28) a. *John came home to find his wife sick, and Bill came home to find his child sick.

       (Neijt (1979: 132))

b. *John wondered what to cook today and Peter wondered what to cook tomorrow.

       (Neijt (1979: 138))

The DC-ISH assigns (28a, b) the following structures respectively:

(29) a. *John came home to find his wife sick, and [vP Bill [v' his child [v came home to find -t sick]]]

b. *John wondered what to cook today and [vP Peter [v tomorrow [v wondered what to cook -t]]]

In (29a), the movement of his child violates the Adjunct condition, which prevents movements out of an adjunct clause. In (29b), the movement of tomorrow violates the Wh-Island constraint, which prohibits movement out of indirect questions. Thus, conditions on movements help decide which strings gapping can affect so that there is a correspondence between the strings past which phrases can move and the strings that can be gapped. Winkler's analysis derives this fact from the DC-ISH, which re-
quires that remnants of gapping move to Spec of vP.

Furthermore, her analysis accounts for the fact that the distribution of gapping is more restricted than that of VP-ellipsis. First, gapping applies only to coordinate structures and not to subordinate ones:

(30) *Mary met Bill at Berkeley although Sue met at Harvard.
    (Lobeck (1995: 22))

Second, gapping is impossible in embedded contexts:

(31) *Mary bought a skateboard and she thinks that Sam bought a bicycle.
    (Lobeck (1999: 101))

On the other hand, VP-ellipsis can apply to these contexts:

(32) Mary met Bill at Berkeley although Sue didn’t meet Bill at Berkeley.
    (Lobeck (1995: 22))

(33) Mary bought a skateboard and she thinks that Sam should buy a skateboard too.
    (Lobeck (1999: 101))

The ungrammaticality of (30) and (31) follows from the assumption that a gapped “clause” is actually a vP rather than a TP. Since coordinating conjunctions like and can conjoin vPs, gapping is possible in coordinate structures. In contrast, subordinate conjunctions like while and complementizers like that do not select a vP as complement, so that they cannot introduce a gapped “clause.” Therefore, gapping is impossible in subordinate structures and embedded contexts. Thus, Winkler derives some differences between gapping and VP-ellipsis from the analysis based upon the DC-ISH.

3. Problems

3.1. Contrastive Focus Principle

Although Winkler’s analysis accounts for some differences between gapping and VP-ellipsis, it encounters at least two serious problems. The first problem lies in the claim that the information structural function of gapping is to isolate a contrastive focus and topic. She derives this function from cycle 2 of the DC-ISH and then proposes the following principle:

(34) Contrastive Topic and Focus Principle

In gapping, the first remnant is a contrastive topic, the second remnant a contrastive focus. The gapped elements must be given.

(p. 192)

(34) means that the elided element must be given in the previous discourse in order for remnants to be contrastive phrases. Although it is not stated explicitly, (34) is based upon the following rules for interpretation of focus:
(35) An expression $P$ is a Contrastive Focus in a discourse $\delta$, $\delta = \{\psi_1, \ldots, \psi_n\}$, if, and only if,
   a. $P$ is an expression in $\psi_i$, and
   b. if $P/\psi_i$ is the result of extracting $P$ from $\psi_i$ then $P/\psi_i$ is directly c-construable, and $\psi_i$ is not directly c-construable.

(Rochemont (1986: 65–66))

(36) An expression $P$ is c-construable in a discourse $\delta$ if, and only if, $P$ is either directly or indirectly c-construable in $\delta$.

(Rochemont (1986: 62))

(37) An expression $P$ is directly c-construable in $\delta$ if, and only if,
   a. $P$ has a semantic antecedent $P'$ in $\delta$, or
   b. the intended antecedent of $P$ in $\delta$ has been brought to the attention of the participants in $\delta$.

(Rochemont (1986: 63))

(38) An expression $P$ is indirectly c-construable in $\delta$ if, and only if,
   a. $P$ is a member of a lexically specified class of scenesetters, or
   b. $P$ is an acceptable scenesetter in $\delta$ by virtue of the participants’ anticipated familiarity with speaker’s discourse setting.

(Rochemont (1986: 63))

It follows from (35)–(38) that a focus is interpreted as contrastive when the nonfocused material is directly c-construable. Thus, the “given” requirement in (34) is defined as the “directly c-construable” condition in (37).

With these in mind, let us consider the following example of gapping:

(39) Q: Who bought what?
    A: JOHN bought APPLES, and MARY bought BANANAS.

(p. 192)

The nonfocused part in the answer of (39) is the verb *bought* that has its antecedent in the previous question. Accordingly, it is directly c-construable so that APPLES and BANANAS are interpreted as a contrastive focus. Thus, (34) accounts for examples of gapping whose remnants serve as answers to a multiple wh-question. However, a problem arises with respect to the following gapping sentence:

(40) Q: What happened to your parents yesterday?
    A: MY FATHER broke HIS LEG and MY MOTHER broke HER ARM.

Unlike (39), the nonfocused verb *broke* does not have its antecedent in the previous question and hence is not directly c-construable. This is because the question is not a multiple question requiring as its answer a narrow contrastive focus on a remnant, but a wide-focus inducing question taking a
whole sentence as its scope. Consequently, HIS LEG and HER ARM are not a narrow contrastive focus but an information focus that represents new information.\(^5\)

The same kind of problem turns up from the following acceptable gapping constructions:

(41) a. When I was at home yesterday, a LONG LETTER arrived for MY MOTHER and a HEAVY PACKAGE arrived for MY FATHER.

b. While you were at the hospital yesterday, a RIGHT-WING WOMAN came into my OFFICE and a MODERATE MAN came into my HOME.

These are discourse initial sentences so that the nonfocused verbs are indirectly c-construable as defined in (38). Moreover, these are verbs of appearance and cause an information focus reading realized on a remnant (p. 102). Therefore, the remnants must assume an information focus reading rather than a contrastive focus.

The gapping constructions in (40) and (41) pose a serious problem with the DC-ISH. Since their remnants assume a new informational focus reading, the DC-ISH compels these ellipses to be derived by cycle 1, identifying new information as an information focus. However, cycle 1 cannot mark just the verbs as invisible because the phase invisibility condition in (19) marks as invisible the complete incoming phase vP rather than its individual nodes. Therefore, cycle 1 of the DC-ISH cannot derive (40) and (41) and thus incorrectly rules out these acceptable gapping sentences.

3.2. Sideward Movement

The second problem comes from the following example of VP-ellipsis:

(42) Q: Should I take Italian and German in the spring semester?
A: ITALIAN, you should take but GERMAN, you shouldn’t.

In the answer, the displaced phrases ITALIAN and GERMAN are contras-

\(^5\) Winkler (p. 194) suggests a stipulation to deal with this problem, but it is not promising as she claims. An anonymous reviewer points out that (40) might cease to be a problem on the basis of the following argument: the elided verb of the second conjunct in (40) has the verb of the first one as its antecedent. Accordingly, the gapped verb is directly c-construable so that the remnants MY MOTHER and HER ARM are interpreted as a contrastive phrase. However, I contend that this argument does not stand up. The verb of the first conjunct cannot be the antecedent of the elided verb because the latter is the “trace” of the former and hence these consist of the single lexical item broke under Winkler’s analysis of gapping based upon sideward movements.
tive topics and hence have formal features. Therefore, the DC-ISH requires (42) to be derived by movement operations within the grammatical cycle:

(43)  
   a. $[[\text{vP } \text{you take GERMAN}]]$
   b. $[\text{vP } \text{GERMAN}_1 [\text{vP}_6 \text{you take } t_i]]$
   c. $[[\text{TP you}_2 \text{shouldn't } [\text{vP } \text{GERMAN}_1 [\text{vP}_6 t_2 \text{take } t_i]]]]$
   d. $[[\text{CP } \text{GERMAN}_1 [\text{TP you}_2 \text{shouldn't } [\text{vP } t'_1 [\text{vP}_6 t_2 \text{take } t_i]]]]]]$
   e. $[\text{vP } \text{you } [\text{vP } \text{ITALIAN } [\text{vP}_6 t_2 \text{take } t_i]]]]$
   f. $[[\text{TP you}_4 \text{should } [\text{vP } t_4 [\text{vP } \text{ITALIAN } [\text{vP}_6 t_2 \text{take } t_i]]]]]]$
   g. $[[\text{TP you}_4 \text{should } [\text{vP } [\text{vP}_6 t_2 \text{take } t_i]_6 [\text{vP } t_4 [\text{vP } \text{ITALIAN } [\text{vP } t_2 t_6]]]]]]$
   h. $[[\text{CP } \text{ITALIAN}_5 [\text{TP you}_4 \text{should } [\text{vP } [\text{vP}_6 t_2 \text{take } t_i]_6 [\text{vP } t_4 [\text{vP } t_5 [\text{vP } t_2 t_6]]]]]]]]$
   i. $[[\text{CP } \text{ITALIAN}_5 [\text{TP you}_4 \text{should } [\text{vP } [\text{vP}_6 t_2 \text{take } t_i]_6 [\text{vP } t_4 [\text{vP } t_5 [\text{vP } t_2 t_6]]]]]]])$ but $[[\text{CP } \text{GERMAN}_1 [\text{TP you}_2 \text{shouldn't } [\text{vP } t'_1 [\text{vP}_6 t_2 \text{take } t_i]]]]]]$

In the derivation from (43a) to (43b), the contrastive remnant GERMAN moves out of the phase vP. It moves through Spec of vP to Spec of CP in the derivation from (43b) to (43d). After the subject you raises to Spec of TP, the vacated vP6 undergoes sideward movement and then merges with the corresponding phrases you and ITALIAN at the stage of (43e). After you moves to Spec of TP, the vacated vP6 moves across ITALIAN in the derivation from (43f) to (43g). Then, the contrastive phrase ITALIAN raises to Spec of CP in the derivation from (43g) to (43h). Finally, the structure in (43h) and the one in (43d) are merged at the stage of (43i). This derivation leads to the following structure:
In (44), the conjunction phrase adjoins to CP under the assumption that two phrases may be coordinated only if they are of the same linguistic sort. Under phase-based PF interpretation, the chain reduction applies to the intermediate structure in (43c), where both subject and object move out of the vP. However, since the chain reduction does not mark the vP6 in (43c) as a lower copy, it is not interpreted as phonological silence by the PF-mapping. Thus, the DC-ISH incorrectly excludes the answer in (42).

In summary, I have argued that Winkler’s analysis based upon the DC-ISH incorrectly rules out the acceptable examples of gapping and VP-ellipsis in (40)–(42). In the next section, I will propose an alternative analysis to derive them, and then account for differences between gapping and VP-ellipsis without resort to the DC-ISH.

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6 Winkler (p. 188) assumes with Munn (1993) that coordination is an adjunction structure.

7 This was suggested to me by an anonymous reviewer.
4. An Alternative Analysis

4.1. Definitions of a Contrastive and Informational Focus

Winkler proposes that the DC-ISH connects the two different types of focus, a contrastive focus and an information focus, with the operation of different computational processes in grammar. This proposal is based upon the following definitions of a contrastive and informational focus:

(45) a. Contrastive focus/topic:
\[ [\alpha \mathbf{XP}[\mathbf{F}/[T]]]_{\text{E-feature}} \]
The \([F]/[T]\)-feature must be erased either via agreement or via movement.

b. Information focus:
\[ [\alpha] \text{ is the domain of information focus, where } \alpha \text{ is defined as the smallest phase.} \]

(45) claims that a contrastive focus is assigned a formal feature (an \(E(dge)\)-feature \([F]\)), whereas an information focus is not. Accordingly, (45) distinguishes these two types of focus in the syntactic and semantic component.

On the other hand, I will make the following assumption about a contrastive and informational focus:

(46) Both a contrastive focus and an information focus have a focus feature \(F\) that is interpreted at PF and LF.

(cf. Jackendoff (1972) and Rooth (1996))

Unlike (45), (46) means that the difference in interpretation between the two types of focus is entirely determined by the discourse context. I will assume (35)–(38) as the rules for interpretation of a contrastive focus. For an information focus, I will adopt the following rule, where a Presentational Focus means an information focus:

(47) An expression \(P\) is a Presentational Focus in a discourse \(\delta\), \(\delta = \{\psi_1, \ldots, \psi_n\}\), if, and only if,

a. \(P\) is an expression in \(\psi_i\), and

b. at the time of utterance of \(\psi\) in \(\delta\), \(P\) is not c-construable.

(Rochemont (1986: 52))

Given (46), I will assume that both a contrastive focus and an information focus move to Spec of the phase if its head has an \(E(dge)\)-feature.

Since I do not assume the DC-ISH, I will adopt the "T-model" in (4) rather than the D-model in (3). Then, I will suppose that both gapping and VP-ellipsis are derived by deletion in the PF component, which is subject to the following condition at LF:

(48) The LF Identity Condition
At LF, the elided phrase must match with its antecedent in terms of the lexical content of the phrases involved as well as their syntactic form. (cf. Fiengo and May (1994)) (48) requires that an elided phrase and its antecedent be identical at LF rather than PF. Given (48), I suppose that the deleted projection in the PF component must be \( \sqrt{ } \)-marked as subject to (48) before Spell-Out (Chomsky (1995: 252)). This marking enables us to define identity between an elided phrase and its antecedent in terms of lexical and syntactic information at the LF representation, and also to maintain that an elided phrase is derived by deletion in the PF component.

With (46) and (48) in mind, let us first consider the example of VP-ellipsis in (42), which the DC-ISH incorrectly excludes. (42) has the following structure:

(49) 
\[
\text{[CP ITALIAN5 C0 [E] [TP you4 should [VP t'5 [v, t4 [v + take6 [VP t6 t5]]]] but [CP GERMAN1 C0 [E] [TP you2 shouldn’t [vP-t'4-[v' t2 [v + take7 [vp t7 t1]]]
\]
\]
\]
\]

(49) involves the movements of the contrastive topics to Spec of CP, whose head has an E-feature. Since the vP of the second clause is identical to the vP of the first one, (48) allows the former vP to undergo deletion at PF.

Next, consider the example of gapping in (40). Let us assume with Winkler that a gapped “clause” is vP rather than TP and that the coordinating conjunction \( \text{and} \) conjoins two vPs. This assumption accounts for the fact that gapping can apply neither to subordinate structures nor to embedded contexts, as shown in (30) and (31). The assumption gives (40) the following structure before Spell-Out:

(50) 
\[
\text{[TP MY FATHER3 [vP t3 [v' [v, v + broke4 [VP t4 HIS LEG]]] and [vP MY MOTHER5 [v' HER ARM1 [v' t5 [v' [v' [v v [E] + broke2 [vp t2 t1]]]]]]}
\]

In (50), \( \text{MY MOTHER} \) and \( \text{HER ARM} \) move to Spec of vP, whose head has an E-feature. As a result, these remnants pass a feature \( \alpha \) to v by Spec-head agreement.\(^9\) Suppose that the lexicon of English lacks a morphological realization of the feature bundle corresponding to a v\([\alpha] \) head. Then,

\(^8\) The notation \([v + take]\) means that the verb \( \text{take} \) undergoes head movement to the light verb \( v \).

\(^9\) Notice that \( \alpha \)- and E-features differ in the way they are assigned to v: an E-feature is optionally assigned to v in the lexicon, whereas an \( \alpha \)-feature is given to v as the result of Spec-head agreement between v and a focused phrase in its Spec. I will leave further investigation of issues concerning \( \alpha \)-features for future research.
the syntactic object in (50) does not have a phonological value because it cannot be paired with a corresponding morphological matrix from the lexicon (Halle and Marantz (1993)). Consequently, (50) leads to violating the principle of Full Interpretation (FI), which requires that all terminal nodes, which are structured bundles of syntactic features, have a phonological value at PF. The violation of FI is remedied by an application of deletion which may be construed as an instruction to "bypass" morphophonological instantiation. In other words, deletion of a constituent containing $v_{[a]}$ would vacuously satisfy FI. Therefore, PF-deletion must apply to the projection of $v_{[a]}$ and hence necessitates $\downarrow$-marking it before Spell-Out, as follows:

(51)  $\begin{array}{l}
[TP \ \text{MY FATHER}_3 \ [vp \ t_3 \ [v' \ [v \ v + broke_4] \ [vp \ t_4 \ \text{HIS LEG}]]) \end{array}$ and

$\begin{array}{l}
[vp \ \text{MY MOTHER}_5 \ [v'_v \ \text{HER ARM}_1 \ [v'_v \ t_5 \ [v' \ [v \ v [E] + broke_2] \ [vp \ t_2 \ t_1])]]]
\end{array}$

After (51) is transferred to the PF component by Spell-Out, the $\downarrow$-marked projection is deleted only if this projection satisfies (48) at LF. However, it violates (48) because the lexical content of the elided $v'$ is different from that of the antecedent $v'$. Accordingly, (48) requires HIS LEG to move out of the $v'$ in the LF component, as illustrated in (52):

(52)  $\begin{array}{l}
[TP \ \text{MY FATHER}_3 \ [vp \ \text{HIS LEG}_6 \ [vp \ t_3 \ [v' \ [v \ v + broke_4] \ [vp \ t_4 \ t_6])]] \end{array}$ and $\begin{array}{l}
[vp \ \text{MY MOTHER}_5 \ [v'_v \ \text{HER ARM}_1 \ [v'_v \ t_5 \ [v' \ [v \ v [E] + broke_2] \ [vp \ t_2 \ t_1])]]]
\end{array}$

This LF representation satisfies (48) because the $\downarrow$-marked $v'$ in the second clause finds the syntactically identical antecedent $v'$ in the first one. As a result, the $\downarrow$-marked $v'$ in (51) is deleted in the PF component to yield (40).\(^{10}\) Thus, the analysis based upon (46) and (48) derives the examples of gapping and VP-ellipsis that the DC-ISH cannot yield.

The same kind of analysis holds of the example of stripping in (1b). It has the following structure at some point of its derivation:

\(^{10}\) Coppock (2001) also proposes that a gapped "clause" is $vP$ that undergoes deletion. An anonymous reviewer questions whether the proposed analysis of gapping can account for the fact that the remnant she has nominative Case in the following example:

(i) He broke his leg and she her arm.

I assume that although she occupies Spec of vP, its Case is assigned under Agree by T (Chomsky (2000, 2001, 2004)). The remaining problem is why she cannot raise to Spec of TP to yield the following sentence:

(ii) *[TP Shel \ [vp he broke his leg and \ t_1 her arm]]

I will not go in the matter here.
TWO TYPES OF ELLIPTICAL CONSTRUCTIONS

(53) \[ TP \text{Leon}_3 [vP t_3 [v' v + \text{read}_4] [vP t_4 \text{The Facts}]] \] but \[ vP \text{not The Great American Novel}_1 [v\text{\_Leon}_4 [v' v \text{[E] + \text{read}_2} [vP t_2 t_1]]] \]

In (53), the movement of \textit{not The Great American Novel} to Spec of \(vP\) passes a feature \(a\) to its head so that the projection of \(v\) with the remnant excluded is \(\sqrt{}\)-marked as subject to (48). In the LF component, \textit{The Facts} in the first clause and \textit{Leon} in the second move out of \(vP\) to yield the following structure:

(54) \[ TP \text{Leon}_3 [vP \text{The Facts}_5 [vP t_3 [v' v + \text{read}_4] [vP t_4 t_3]]] \] but \[ vP \text{Leon}_6 [vP \text{not The Great American Novel}_1 [v\text{\_t}_6 [v' v \text{[E] + \text{read}_2} [vP t_2 t_1]]]] \]

(54) satisfies (48). Accordingly, the \(\sqrt{}\)-marked \(v'\) in (53) is allowed to undergo deletion in the PF component so that (1c) is derived.

4.2. Two Interpretation Strategies for Ellipsis Constructions

Finally, let us consider how the proposed analysis accounts for the following differences between gapping and VP-ellipsis discussed in section 2.2:

(55) a. VP-ellipsis can take a distant antecedent, whereas gapping cannot.

b. VP-ellipsis can have a pragmatic antecedent, whereas gapping cannot.

c. VP-ellipsis can violate island constraints, whereas gapping cannot.

Although Winkler tries to derive these differences from the DC-ISH, I have argued in the previous section that the DC-ISH incorrectly rules out grammatical examples of VP-ellipsis and gapping. To the extent that my argument is considered to be correct, we have to explain (55) without resorting to the DC-ISH. (55c) follows from my analysis, in that it assumes that gapping involves movements of remnants to Spec of \(vP\). The remaining problem is how to account for (55a, b).

In order to address this problem, I will make the following assumption about interpretation of ellipsis constructions:

(56) Although an empty category is always analyzed as involving a syntactic representation that undergoes deletion at PF, the empty category can be reanalyzed as an empty version of a deep anaphor like \textit{it}, as in \textit{Bill did it}.


For the purpose of exposition, a silent version of a deep anaphor is simply notated \textit{pro} here. This proform does not have an internal structure and so is simply assigned an interpretation through the anaphoric relation it bears.
to some other semantic object in the discourse, such as pronouns. (56) allows the examples of VP-ellipsis in (23) and (25a) to have the following structures:

(57) The thought came back, the one nagging at him these past four days. He tried to \[vP \text{stifle it}\]. But the words were forming. He knew he couldn’t \text{pro}_1.

(58) Mary is at the toy store checkout counter, buying a skateboard. Her friend says:

I am glad you’re going to \text{pro}. Then, your son will be really happy!

The empty proform \text{pro} in (57) takes as its antecedent the \text{vP stifle it}, two sentences back in the discourse. The one in (58) receives its interpretation from the nonlinguistic context. These are just the properties of pronouns.

On the other hand, gapping cannot resort to the second empty pronoun strategy because it involves syntactic movement out of the ellipsis site. If the ellipsis site contained an empty proform, it would not provide the displaced phrase with a coindexed trace:

(59) \[\text{TP MY FATHER}_3 [vP t_3 [v v + \text{broke}_4] [vP t_4 \text{HIS LEG}]]\] and \[vP \text{MY MOTHER}_5 [v \text{HER ARM}_1 [v t_5 [v v [E\text{pro}]]]]\]

(59) does not receive a legitimate interpretation at LF and hence violates FL, like \text{do so} anaphora in (60).

(60) a. *I know which book Max read, and which book Oscar hasn’t done so.

b. *This is the book of which Bill approves, and this is the one of which he can’t do so. \quad \text{(Johnson (2001: 466))}

Thus, gapping must have syntactic representations and hence cannot involve a silent proform in the same way as VP-ellipsis can. Accordingly, gapping is interpreted as involving a syntactic representation that undergoes PF-deletion and hence must satisfy condition (48). I suppose that an application of deletion is “local” in that a clause including an elided phrase must be adjacent to the one including its antecedent. (48) states that deletion is possible only when there is a linguistic antecedent that is syntactically identical to an elided phrase. Consequently, unlike VP ellipsis, gapping cannot refer to a distant antecedent across an immediately preceding sentence or find an antecedent from the nonlinguistic context.

The proposed analysis based upon (56) also accounts for possible interpretations of VP-ellipsis and gapping whose antecedent clauses contain reflexives, as in the following sentences:
(61) a. George W. Bush voted for himself, and his campaign manager did too. 
    (Kehler (2002: 58))

b. George bought himself a book on health care, and Al a book on the environment. 
    (Kehler (2002: 92))

Although (61a, b) both have a sloppy reading, they differ with regard to a strict reading: many speakers judge that (61a) yields a weak strict reading, whereas (61b) excludes a strict reading altogether. Following Hestvik (1995), I will derive a weak strict reading of (61a) from (56). As the first interpretation strategy, (56) gives (61a) the following structure:

(62) George W. Bush [\(_{vp}\) voted for himself], and his campaign manager did [\(_{vp}\) vote for himself], too.

Condition (A) of the binding theory requires that himself of the second conjunct take his campaign manager as its antecedent to yield a sloppy reading. Then, as the second interpretation strategy, (56) also assigns (61a) the following structure:

(63) George W. Bush [\(_{vp}\) voted for himself], and his campaign manager did \(_{pro}\) too.

In (63), \(_{he1f1}\) is bound by the subject of the first clause and hence denotes George W. Bush. Accordingly, the vP of the first conjunct refers to the individual event and then is coreferential with the empty pronoun. Thus, (61a) has a strict reading.\(^{11}\)

I assume with Hestvik (1995) that the weakness of this reading is attributed to processing difficulty: in the case of interpreting an empty category in VP-ellipsis in coordinated sentences such as the and...too construction, it is difficult to reanalyze the empty category as a null anaphor in order to get a strict reading. This is because this construction requires the hearer to identify maximal parallelism between an elided clause and an antecedent one. To identify parallel elements below the vP level necessitates recovering the missing syntactic material at the site of the elided node (Kehler

\(^{11}\) Winkler (p. 150) points out that a strict reading is unavailable in the following sentence:

(i) Everyone respects himself and Ben does, too.

(56) permits (i) to have the following structure:

(ii) Everyone [\(_{vp}\) respects himself], and Ben does \(_{pro}\) too.

Unlike (63), \(_{he1f1}\) in (ii) is bound by the operator everyone and hence does not denote an individual. Consequently, the vP containing \(_{he1f1}\) does not refer to an individual event and thus cannot corefer with the empty proform. Furthermore, since the vP does not c-command \(_{pro}\), \(_{pro}\) cannot be its bound variable. Thus, \(_{pro}\) does not bear an anaphoric relation to the vP so that (i) lacks a strict reading.
(2002)). However, this syntactic analysis yields a sloppy reading. The re-analysis of (61a) as (63) is costly for the hearer and hence leads to processing difficulty. Thus, the strict reading in (61a) is only marginally acceptable.

In contrast, since the null anaphor strategy is unavailable for gapping, (61b) must have the following structure:

\[(64)\  \text{George bought himself a book on health care, and } [vP \ Al [\nu, a book on the environment2 [\nu'-t_1 [\nu' [\nu [E] + bought] [vP-t_3 \text{himself} t_2]]]]] \]

Condition (A) of the binding theory requires himself in the second clause to take Al rather than George as its antecedent so that (b) yields the sloppy reading in which Al bought himself a book on the environment. Accordingly, (61b) has only a sloppy reading. Thus, differences between gapping and VP-ellipsis follows from (56).

Summarizing this section, I have assumed that the difference in interpretation between a contrastive focus and an informational focus is entirely determined by the discourse context, and that both gapping and VP-ellipsis are derived by PF-deletion subject to the LF identity condition in (48). These assumptions account for the examples of gapping and VP-ellipsis that are problematic for Winkler’s approach based upon the DC-ISH. I have also derived some differences between gapping and VP-ellipsis from the two interpretation strategies for elliptical constructions in (56).

5. Conclusion

In this review article, I have critically examined Winkler’s analysis of ellipsis constructions based upon the assumption that a contrastive focus and an informational focus are distinguished in the syntactic and semantic component. After pointing out empirical problems with Winkler’s approach, I have instead assumed that interpretation of a focused phrase is entirely determined by the discourse context. Under this assumption, I have argued that PF-deletion, which is subject to the LF identity condition, derives the acceptable examples of gapping and VP-ellipsis that Winkler’s analysis incorrectly excludes. I have also accounted for differences between gapping and VP-ellipsis by assuming two interpretation strategies for elliptical constructions.
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