Cyclic Spell-Out and Ellipsis

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1. Introduction

In this paper, I make two proposals: an economy condition on Spell-Out (Spell-Out economy) and a condition on ellipsis. The former amounts to saying that the size of a Spelled-Out unit must be maximized. The latter states that a possible elided unit corresponds to a Spelled-Out unit. Building on Spell-Out economy, I construct a convergent-based cyclic Spell-Out model, arguing that PIC effects can be deduced under this model without stipulating the Phase Impenetrability Condition.

Furthermore, it is argued that the proposed model of cyclic Spell-Out, combined with the condition on ellipsis, can explain three paradigms concerning wh-extraction out of ellipsis sites. The first one is the Sluicing/VPE Asymmetry, which is exemplified by the following pair of sentences (drawn from Schuyler 2001):

(1) a.* I think you should adopt one of these puppies, but I don't know which one you should. [VP-ellipsis: VPE]
   b. I think you should adopt one of these puppies, but I don't know which one. [Sluicing]

The contrast between (1a) and (1b) in acceptability indicates that extraction of object wh-phrases out of a sluiced site is allowed while that out of an elided VP is not.

The second paradigm to be explained is the Complement/Non-Complement Asymmetry, which is illustrated in the following data (drawn from Schuyler (2001) with a slight modification):

(2) a.* I think you should adopt one of these puppies, but I don't know [which one] you should. [Object]
   b. I think you should adopt one of these puppies, but I don't know [when] you should. [Adjunct]
   c. I think Pete caught some crawdads, but I don't know [why] he did. [Adjunct]
   d. I think one of my classmates adopted the puppy, but I don't know which one
This paradigm suggests that while wh-movement of objects is not allowed under the VPE context, wh-movement of adjuncts and subjects is.¹

The final paradigm to be explained is the focus effect, which is illustrated by the following examples (drawn from Schuyler (2001))(the capitalized words are focused words):

(3)  

a.* I think you should adopt one of these puppies, but I don't know WHICH one you should.  [Focus on WH]
b. I think YOU should ride the tallest camel, but I don't know which one PHIL should.  [Focus on Subj.]
c. I think you SHOULD adopt one of these puppies, but I can't predict which one you actually WILL.  [Focus on AUX]

This paradigm indicates that even object wh-phrases can be extracted out of an elided VP if contrastive focus is put on a word between the moved wh-phrase and the ellipsis site. In (3b), focus is put on the subject Phil and in (3c), the auxiliary verb will has focus.

Merchant (2008) accounts for the Sluicing/VPE Asymmetry and the focus effect by MaxElide, which states that the biggest deletable constituent must be elided if an elided domain contains an A’-trace (cf. Fox and Lasnik 2003, Lasnik 2001, Merchant 2008, and Schuyler 2001). Let us see how MaxElide accounts for the relevant paradigm. In the sentence in (1a), the elided VP contains an A’-trace of which one. As indicated by the acceptability of the sentence in (1b), TP rather than VP is the biggest deletable constituent in this sentence. Therefore, MaxElide rules out the sentence in (1a). On the other hand, in sentences like (3b) and (3c), TP is not a possible elided site because it contains a focalized element. That's why VPE is licit in these sentences.

However, as Merchant acknowledges, the ultimate source of MaxElide remains obscure. Particularly, it is not clear why MaxElide is applied only to domains containing an A’-trace.

¹ One complication that I put aside here is that adjunct extraction out of elided VP is allowed only if there is no element in an antecedent clause corresponding to the adjunct wh-phrase, as pointed out by Norbert Hornstein and Howard Lasnik (personal communication). Thus, the following sentences are unacceptable, in contrast with (ia) and (ib).

(i)  
a.* I think you should adopt one of these puppies sometime, but I don't know when you should.
b.* I think Pete caught some crawdads for some reasons, but I don't know why he did.
For example, sentences like (4a), in which the embedded VP is elided, are acceptable even if a bigger VP can be elided, as shown in (4b).

(4) a. John said Mary likes Peter. Bill also said she does.
   b. John said Mary likes Peter. Bill also did.

The elided VP does not contain an A’-trace. MaxElide applies only to domains containing an A’-trace. Thus, (4a) is acceptable even if (4b) is acceptable. However, there is no fundamental reason why MaxElide applies only to domains with an A’-trace. Therefore, at this time, MaxElide is not an explanation but a generalization to be explained. My analysis offers a principled explanation.

In section 2, I propose an economy condition on Spell-Out and construct a convergent-based cyclic Spell-Out model. It is shown that the proposed model can derive the PIC effect. In section 3, based on the proposed model of cyclic Spell-Out, a condition on ellipsis is proposed, illustrating that the three paradigms that I listed above can be explained by the condition under the proposed model of cyclic Spell-Out. Section 4 is a brief summary.

2. The Size of the Spelled-Out Unit

In this section, I propose an economy condition that determines the size of Spelled-Out unit (Spell-Out economy), and construct a convergent-based cyclic Spell-Out model (cf. Felser 2004, Narita to appear, Radford 2001, Svenonius 2000, 2001). It is shown that PIC effects can be deduced under this model without stipulating the Phase Impenetrability Condition (PIC) (Chomsky 2000, 2001).

2.1. Background

In what follows, I adopt the following assumptions without justifying them:

(5) a. C and v (and possibly D) are phase heads (Chomsky 2000, 2001).
   b. A phase head triggers Spell-Out.
   c. Spell-Out ships a syntactic object to the CI and SM interfaces.
   d. Lexical items in a Spelled-Out syntactic object are linearized and are inaccessible to syntactic operations (Uriagereka 1999, Nunes and Uriagereka 2000).
   e. For Agree operation to apply, the goal must be active in the sense of containing (unchecked) uninterpretable features. (Activity Condition: (Chomsky 2000,
The assumption in (5b) has to do with the timing of Spell-Out but not with the size of the Spelled-Out unit. Then, the question is what is Spelled-Out when Spell-Out is triggered by a phase head: the entire phase or a sub-constituent? Of course, we do not want to Spell-Out the entire phase because long-distance movement out of phases is impossible and the phase becomes inaccessible to further selection. Chomsky (2000, 2001) just stipulates that a Spelled-Out unit is a complement of a phase head rather than the entire phase. According to the PIC model, at the vP-phase level, VP, rather than vP, is Spelled-Out, as illustrated in the following (a domain in an angle bracket is a Spelled-Out domain):

\[(6) \quad a. \ [vP \, DP_{\text{Subj}} \, v \, [vP \, V \, DP_{\text{Obj}}]] \]

In (6b), the subject DP and v are not Spelled-Out. Thus, the subject can be moved out of vP and v can be selected by T. On the other hand, V and the object DP are no longer accessible to further computation due to the assumption in (5d). In order to extract the object DP out of vP, the DP must move to SpecvP before VP is Spelled-Out, as shown in the following:

\[(7) \quad [vP \, DP_{\text{Obj}} [DP_{\text{Subj}} \, v \, <vP \, V, \, t_{\text{Obj}}>]] \]

In (7), the object DP is not Spelled-Out. Thus, it can be a candidate for further syntactic operation such as wh-movement. In this way, the PIC makes movement out of a phase and further selection of a phase possible. However, the following questions about the PIC model arise:

\[(8) \quad a. \text{ Why is the Spelled-Out unit a complement of a phase head? That is, can we deduce the PIC?} \]

\[b. \text{ How can the matrix CP be Spelled-Out?} \]

\[c. \text{ How can T access subjects of unaccusative/passive clauses if vP is a phase?} \]

The question in (8a) is an important one. The PIC is just a stipulation. It is unclear why a complement of a phase is a Spelled-Out unit. The second question and the third one arise because the size of a Spelled-Out unit is fixed under the PIC model: it is always a
complement of a phase. For example, in a matrix wh-question, TP is Spelled-Out at the CP-
phase level, as illustrated in the following schematic structures:

\[
\begin{align*}
(9) & \quad \text{a. } [C_P \text{ Wh } C [T_P t_{Wh} T [v_P t_{Wh} v <_{VP} V, DP> ] ] ] \\
& \quad \text{b. } [C_P \text{ Wh } C <_{TP} t_{Wh}, T, t_{Wh}, v, <_{VP} V, DP> > ]
\end{align*}
\]

Therefore, it is expected under the PIC model that a wh-phrase in the matrix SpecCP is never
pronounced. In order to overcome this problem, we need to make an additional assumption
that only at the matrix CP-phase level, the entire phase, rather than a complement of a phase,
is Spelled-Out. As for the third question, in unaccusative clauses, T Agrees with DP in the
object position, which is within VP. However, VP is Spelled-Out at the vP-phase level under
the PIC model, which makes it impossible to access the DP, as illustrated in the following
structure:

\[
(10) \quad [T_P T [\cdot_{VP} v <_{VP} V, DP> ]]
\]

Thus, we need something that differentiates \(v\) in transitive clauses from that in
unaccusative/passive clauses. Given this problem, Chomsky assumes that \(vP\) in
unaccusative/passive clauses is a weak phase, which does not trigger Spell-Out, as opposed to
a strong phase. In the remainder of this section, I propose a convergent-based cyclic Spell-Out
model, which is based on Spell-Out economy and show that the three questions in (8) are
answered under this model of cyclic Spell-Out without undesirable, ad-hoc stipulations.

2.2. Spell-Out Economy

Given that all syntactic operations are subject to economy conditions, it is the null
hypothesis that Spell-Out is constrained by an economy condition because Spell-Out is a kind
of syntactic operation. The question is what kind of economy it is. I propose an economy
condition in terms of the quantity, which is given in the following:

\[
(11) \quad \text{Spell-Out Economy}
\]

\text{Spell-Out as much as you can when the derivation reaches a phase.}

For example, Spell-Out Economy requires that in the schematic structure in (12), in which \(Ph\)
is a phase head, YP be not Spelled-Out if Spell-Out of XP is legitimate. In this case, XP must
be Spelled-Out.
The condition is a plausible economy condition because the larger the element we Spell-Out, the more we can reduce computational burden (memory load): the computational system can forget the internal structure of a Spelled-Out unit.

The next question is what kind of syntactic objects can be legitimate Spelled-Out units. Given the Full Interpretation principle, syntactic objects that contain unchecked (or undeleted), uninterpretable features are illegitimate objects at the CI interface. Therefore, if a syntactic object that contains unchecked, uninterpretable features is Spelled-Out, the derivation will crash. Given this consideration, I propose that the largest syntactic object that contains no unchecked, uninterpretable feature is the largest syntactic object that can be Spelled-Out. (See Felser (2004), Narita (to appear), Radford (2001), Svenonius (2000, 2001) for similar proposals).

Before illustrating how Spell-Out Economy works, I make an additional assumption, which is concerned with categorial selection. I propose that a head \( \alpha \) that (or whose projection) is selected by another head \( \beta \), whose syntactic category X, has an uninterpretable categorial feature \([uX]\), which has to be checked by being merged with \( \beta \). Thus, for example, \( V \) has an uninterpretable feature \([uv]\), \( v \) has \([uT]\), and so on. This is summarized in the following:

(13) a. \( V \) \([uv]\)  
b. \( v\)\([uT]\)  
c. \( T_{\text{fin}}\)\([uC]\)  
d. \( T_{\text{nonfin}}\)\([uV/A]\)  
e. \( C_{\text{matrix}}\)  
f. \( C_{\text{embedded}}\)\([uV/A]\)

Notice that the matrix C does not have any selectional feature since it is not selected by anything. On the other hand, the embedded C has \([uV]\) or \([uA]\) because it is selected by a predicate. If categorial selection is operative in syntax, this is one of the possible implementations under a feature-based model of syntax.
2.2.1. Transitive Clauses

Let us see how the proposed system of cyclic Spell-Out works and how we can answer the questions in (8) under this system.

First, let us consider a derivation of an ordinary declarative transitive clause, which is illustrated in the following:

\[(14) \]
\[
\begin{align*}
a. & \quad [vP SU[uCase] v[\underline{\phi}, uT] [vP V[\underline{\phi}, OB]] ] \\
b. & \quad [vP SU[uCase] v[\underline{\phi}, uT] <VP V, OB>] \\
c. & \quad [CP C_{\text{embedded}}[uV] [TP SU[uCase] T[\underline{\phi}, uC] [vP T SU v[\underline{\phi}, vC] <VP V, OB>]]] \\
d. & \quad [CP C_{\text{embedded}}[uV] <TP SU, T, v, <VP V, OB> >]
\end{align*}
\]

As can be seen in (14a), at the vP-phase level, the Case feature of the object DP and the uninterpretable \( \nu \)-feature of V are checked by \( v \) and the uninterpretable \( \phi \)-feature of \( v \) is checked by the object DP. On the other hand, the uninterpretable Case feature of the subject DP and the uninterpretable T-feature of \( v \) remain unchecked. Therefore, the largest syntactic object that contains no unchecked, uninterpretable feature is VP. Thus, VP is Spelled-Out according to Spell-Out Economy, as shown in (14b). Suppose that this clause is an embedded finite clause. Then, at the CP-phase level, the embedded C has the unchecked, uninterpretable V-feature, as shown in (14c). Then, TP is Spelled-Out according to Spell-Out Economy since it is the largest syntactic object that contains no unchecked, uninterpretable feature, as illustrated in (14d). This is the answer to the first question in (8): A Spelled-Out unit is a complement of a phase because it is the largest syntactic object that contains no unchecked, uninterpretable feature.

Next, suppose that the relevant sentence is a matrix clause. Then, at the CP-phase level, the largest syntactic object that contains no unchecked, uninterpretable feature is the whole CP rather than TP since the matrix C does not have any selectional feature by hypothesis. This is illustrated in the following schematic representations:

\[(15) \]
\[
\begin{align*}
a. & \quad [CP C_{\text{matrix}} [TP SU[uCase] T[\underline{\phi}, uC] [vP T SU v[\underline{\phi}, vC] <VP V, OB>]]] \\
b. & \quad <CP C_{\text{matrix}}, SU, T, v, <VP V, OB> >
\end{align*}
\]

This is the answer to the second question in (8): at the matrix CP-phase, the entire CP is Spelled-Out because the matrix C, unlike the embedded C, has no selectional feature.
2.2.2. Unaccusative/Passive Clauses

Next, let us see how a declarative unaccusative/passive clause is derived under the proposed system. Notice that one of the crucial differences between the PIC system and the present one is that under the PIC system, the size of the Spelled-Out unit is fixed while under our system, it could vary depending on the convergent status of syntactic objects. Thus, under the present system, it is possible that a complement of a phase is not Spelled-Out even if the phase is completed: if the complement contains an element with an unchecked, uninterpretable feature, the complement is not Spelled-Out.

Given this, let us consider a derivation of a declarative unaccusative/passive clause, which is illustrated in the following schematic derivation:

\[
\begin{align*}
\text{(16) a. } & \left[\text{VP} \left[ V_{[uT]} \text{SU} \left[ u_{\text{Case}} \right] \right] \right] \\
\text{b. } & \left[\text{TP} \text{SU} \left[ u_{\text{Case}} \right] \text{T}_{\text{fin}} \left[ u_{\phi}, u_{C} \right] \left[\text{vp} \text{VP} \left[ V_{[uT]} \text{SU} \left[ u_{\text{Case}} \right] \right] \right] \right]
\end{align*}
\]

At the vP-phase level, nothing is Spelled-Out because VP contains the subject DP that has the unchecked, uninterpretable Case feature, as shown in (16a). Therefore, at the TP level, T can access the subject DP and the subject moves to SpecTP, getting its Case feature checked. This is the answer to the third question in (8): T can access the unaccusative/passive subject since VP is not Spelled-Out. Thus, we do not need to posit the strong/weak distinction between transitive \( v \) and unaccusative/passive \( v \). We can simply assume that \( v \) always triggers Spell-Out.

3. Spelled-Out Unit and Elided Unit

In this section, I propose a condition on ellipsis, based on the proposed system of cyclic Spell-Out, which is given in (17).

\[
\text{(17) X can be elided only if X is a Spelled-Out unit.}
\]

This condition amounts to saying that a possible elided unit corresponds exactly to a Spelled-Out unit. If his condition holds, it can optimize the PF computation, which determines an elided unit: it reduces computational burden since the PF computation does not have to look into a Spelled-Out unit. In what follows, I demonstrate that under the proposed model of cyclic Spell-Out, this condition, combined with some auxiliary assumptions, can explain the three paradigms concerning wh-extraction out of an elided site that I listed in the introduction: the Sluicing/VPE Asymmetry, the Complement/Non-Complement Asymmetry, focus effects.
3.1. Sluicing/VPE Asymmetry

First, let us see how we can explain the Sluicing/VPE asymmetry. The relevant data are repeated below:

(18) a. I think you should adopt one of these puppies, but I don’t know which one you should *(adopt). [VPE]
b. I think you should adopt one of these puppies, but I don’t know which one (you should adopt). [Sluicing]

For the underlying sentence for the second conjunct sentence in (18) (i.e. I don’t know which one you should adopt), there are two possible derivations. In one derivation, v has the EPP feature. In the other derivation, v does not have the EPP-feature. If v does not have the EPP-feature, the sentence is derived as in the following:

(19) a. \[vP you[uCase] v[uCase, uT] [VP adopt[uCase] which one[uCase, uQ] ]\]
b. \[CP which one[uCase, uQ] C[uV, EPP] [TP you[uCase] should[uCase, uT] [vP tyou v[uCase, uT] [VP adopt[uCase] twhich one ] ] ]\]
c. \[CP which one[uCase, uQ] C[uV, EPP] <TP you, should, adopt> \]

As can be seen in (19a), the object wh-phrase which one does not move to SpecvP since v does not have the EPP-feature. At this level, nothing is Spelled-Out because VP contains which one, which has the unchecked [uQ]. At the CP-phase level, the wh-phrase moves to SpecCP, as shown in (19b). Then, TP rather than CP is Spelled-Out since the C is embedded C, which has [uV]. This is illustrated in (19c). Notice that in this derivation, the only Spelled-Out unit is TP. Crucially, neither VP nor vP are Spelled-Out. Therefore, the Sluicing/VPE Asymmetry follows: Sluicing is allowed while VPE is not because TP is a Spelled-Out unit while neither VP nor vP are in this derivation.

On the other hand, in the other possible derivation, VP as well as TP is a Spelled-Out unit. Let us see why. The relevant derivation is as the following:

(20) a. \[vP you[uCase] v[uCase, uT, EPP] [VP adopt[uCase] which one[uCase, uQ] ]\]
b. \[vP which one[uCase, uQ] [you[uCase] v[uCase, uT, EPP] <VP adopt> ]\]
c. \[CP which one[uCase, uQ] C[uV, EPP] [TP you[uCase] should[uCase, uT] [vP twhich one [tyou v[uCase, uT, EPP] <VP adopt> ] ] ]\]
At the vP-phase level, the wh-phrase moves to SpecvP since v has the EPP-feature, as illustrated in (20b). Then, VP is Spelled-Out because VP no longer has *which one*, which has the unchecked [uQ]. At the CP-phase level, the wh-phrase moves from SpecvP to SpecCP. Then, TP is Spelled-Out, as illustrated in (20d). Therefore, if v has the EPP-feature, VP as well as TP is a Spelled-Out unit. Then, we wrongly predict that object wh-phrases can move out of either elided VPs or sluiced sites.

I argue that this undesirable derivation can be ruled out if we assume, following Ura (1994), that multiple-Specs are not allowed in English. With this assumption, the intermediate movement of the wh-phrase to SpecvP is illicit because it leads to a multiple-Spec configuration. Therefore, if we assume that multiple-Specs are not allowed in English, we can explain the Sluicing/VPE Asymmetry.

Notice that the reason why v cannot have the EPP-feature in English is that v has another Spec, the subject: if v has the EPP-feature, the wh-phrase moves to SpecvP, yielding a multiple-Spec configuration since v has another Spec, the subject. Then, it is predicted that we do not find the Sluicing/VPE Asymmetry in unaccusative clauses because unaccusative v does not have subject in its Spec (even if an object wh-phrase moves to SpecvP, it does not yield multiple-Spec configuration). This prediction seems to be borne out, as shown in the following examples:

(21) a. I heard one of your friends will arrive soon, but I don’t know which one will.
    b. I heard one of your friends will arrive soon, but I don’t know which one.

The underlying vP structure for these sentences is as the following:

(22) [vP which one[uCase, uQ] V[EPP, uT] [vP arrive twhich] ]

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2 In Funakoshi (to appear), with the assumption that multiple-Specs are not allowed in English, I explain why neither headless VP-movement nor -ellipsis are allowed in English (headless VP is a VP whose head V has moved out of VP).

3 Our analysis also makes a prediction about cross-linguistic variation. According to Ura (1996), v allows multiple-Specs in Chamorro, Hawaiian, Kinyarwanda, Swahili, Korean, and Chickasaw because in these languages, possessor-raising out of objects is possible. If this is correct and other things are equal, it is predicted that there is no Sluicing/VPE asymmetry in these languages.
At this level, VP can be Spelled-Out since the wh-phrase with [uCase, uQ] moves out of VP. This movement to SpecVP is licit because it does not yield a multiple Spec configuration.

3.2. Complement/non-Complement Asymmetry

Next, let us consider the Complement/Non-Complement Asymmetry. The relevant paradigm is repeated below:

(23) a.* I think you should adopt one of these puppies, but I don’t know [which one] you should. [Object]
    b. I think you should adopt one of these puppies, but I don’t know [when] you should. [Adjunct]
    c. I think Pete caught some crawdads, but I don’t know [why] he did. [Adjunct]
    d. I think one of my classmates adopted the puppy, but I don’t know which one did. [Subject]

The paradigm indicates that object wh-phrases cannot be moved under the VPE context while subject and adjunct wh-phrases can. I explained why object wh-phrases cannot move out of an elided VP in section 3.1. Let us see how we can explain why subject and adjunct wh-phrases can be moved. Suppose that when and why are adjoined to vP. Then, the vP structure for (23b) and (23c) is as in the following:

(24) \[ vP \[ vP you[uCase] \[ vP adopt[u\phi, uT] \[ vP one of these puppies[uCase] \] when/why[uQ] \] \]

At this level, VP is Spelled-Out since it is the largest syntactic object that does not have unchecked, uninterpretable features. Crucially, the wh-phrases, which have [uQ], are outside of VP. This is illustrated in the following:

(25) \[ vP \[ vP you[uCase] \[ vP adopt, one of these puppies> \] when/why[uQ] \] \]

This means that VP can be elided when a wh-phrase is an adjunct. Therefore, the reason why adjunct wh-phrases can be moved under the VPE context is that they are base-generated outside of VP.

Subject wh-phrases, like adjunct ones, are base-generated outside of VP (i.e. SpecVP). Thus, as illustrated in the following representations, VP is Spelled-Out at the vP-phase level also in this case, making VPE possible:
(26) a. \([v_P \text{who}_{[u\text{Case}, u\text{Q}]} v_{[u\Phi, uT]} [v_P \text{adopt}_{[u\text{u}]} \text{the puppy}_{[u\text{Case}]}]]\)
b. \([v_P \text{who}_{[u\text{Case}, u\text{Q}]} v_{[u\Phi, uT]} <v_P \text{adopt, the puppy}>]\)

In this way, under our analysis, the Complement/Non-Complement Asymmetry can be attributed to the difference between complements and non-complements in their base-generated positions.

3.3. Focus Effect

Finally, we see how the present analysis can account for the focus effect. The relevant paradigm is repeated below:

(27) a.* I think you should adopt one of these puppies, but I don’t know WHICH one you should.                  [Focus on WH]
b. I think YOU should ride the tallest camel, but I don’t know which one PHIL should.                  [Focus on Subj.]
c. I think you SHOULD adopt one of these puppies, but I can’t predict which one you actually WILL.              [Focus on AUX]

This paradigm indicates that even object wh-phrases can be extracted out of elided VPs if contrastive focus is put on a word between the moved wh-phrase and the ellipsis site. In (27b), focus is put on the subject Phil and in (27c), the auxiliary verb will has focus.

In order to account for this fact under the present system, I adopt an auxiliary assumption about the syntactic mechanism of contrastive focus that an element with focus has an uninterpretable feature (uF), which is checked by a functional head above CP.

First, let us consider the derivation of (27a), in which focus is put on the wh-word. As illustrated in the following, at the vP-phase level, nothing is Spelled-Out since VP contains WHICH, which has unchecked [uQ] and [uF]:

(28) \([v_P \text{you}_{[u\text{Case}]} v_{[u\Phi, uT]} [v_P \text{adopt}_{[u\text{u}]} \text{WHICH one}_{[u\text{Case}, u\text{Q}, u\text{F}]}}]\)

At the CP-phase level, after wh-movement of WHICH one to SpecCP, TP is Spelled-Out because TP is the largest syntactic object that contains no unchecked, uninterpretable feature. This is illustrated in the following:
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(29) a. \[\text{CP WHICH one}_{\text{uCase, uQ, uF}} \text{C}_{\text{embedded}}[\text{uV, EPP}] \text{[TP you}_{\text{uCase}} \text{should}_{\text{uQ, uC}} \text{[vP you}_{\text{uCase, uT}] \text{[vP adopt}_{\text{uV}] \text{t}_{\text{which one}} \text{}}} \text{]} \text{]} \]

b. \[\text{CP WHICH one}_{\text{uCase, uQ, uF}} \text{C}_{\text{embedded}}[\text{uV, EPP}] <\text{TP you, should, adopt}> \]

In this derivation, neither vP nor VP are Spelled-Out. That is why VPE is prohibited in this sentence.

Next, let us turn to the acceptable sentence in (27c), in which focus is put on the auxiliary verb. At the vP-phase level, nothing is Spelled-Out since VP contains the wh-phrase, which has the unchecked [uQ], as shown in the following:

(30) \[\text{vP you}_{\text{uCase}} \text{v}_{\text{uQ}, \text{uT}} \text{[vP adopt}_{\text{uV}] \text{which one}_{\text{uCase, uQ}} \text{]} \]

At the CP-phase level, in contrast with the previous case, vP rather than TP is Spelled-Out. This is because the auxiliary verb WILL has the unchecked [uF], as illustrated in the following representations:

(31) a. \[\text{CP which one}_{\text{uCase, uQ}} \text{C}_{\text{embedding}}[\text{uV, EPP}] \text{[TP you}_{\text{uCase}} \text{WILL}_{\text{uQ, uC, uF}} \text{[vP you}_{\text{uCase, uT}] \text{[vP adopt}_{\text{uV}] \text{t}_{\text{which one}} \text{}}} \text{]} \text{]} \]

b. \[\text{CP which one}_{\text{uCase, uQ}} \text{C}_{\text{embedding}}[\text{uV, EPP}] \text{[TP you}_{\text{uCase}} \text{WILL}_{\text{uQ, uC, uF}} <\text{vP adopt}_{\text{uV}] \text{t}_{\text{which one}} \text{ }> \text{ ]] \]

This is why VPE (vP-ellipsis in this case) is allowed in this derivation.

Finally, let us consider the sentence in (27b), in which focus is put on the subject PHIL. Also in this case, nothing is Spelled-Out at the vP-phase level since VP has the wh-phrase with the unchecked [uQ], as shown in the following:

(32) \[\text{vP PHIL}_{\text{uCase, uF}} \text{v}_{\text{uQ, uT}} \text{[vP adopt}_{\text{uV}] \text{which one}_{\text{uCase, uQ}} \text{]} \]

At the CP-phase level, TP contains the focused subject PHIL, which has unchecked [uF]. Given, following Chomsky (1995) (see also Speas 1990, Travis 1984), that intermediate projections are syntactically invisible, the largest syntactic object that contains no unchecked, uninterpretable feature is vP. Therefore, vP is Spelled-Out, as illustrated in the following:

(33) a. \[\text{CP which one}_{\text{uCase, uQ}} \text{C}_{\text{uV, EPP}} \text{[TP PHIL}_{\text{uCase, uF}] \text{should}_{\text{uQ, uC}} \text{[vP PHIL}_{\text{uCase, uT}] \text{v}_{\text{uQ}, \text{uT}] \text{[vP adopt}_{\text{uV}] \text{t}_{\text{which one}} \text{}}} \text{]} \text{]} \]

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In this derivation, vP is Spelled-Out unit. This is why VPE (vPE) is allowed in this derivation.

4. Conclusion

In this paper, I showed that the proposed model of cyclic Spell-Out, which is based on Spell-Out economy can derive the PIC effects without stipulating the PIC. Furthermore, it was argued that a possible elided unit corresponds to a Spelled-Out unit and this correspondence condition offers an explanation of the three paradigms concerning wh-extraction out of an ellipsis site under the proposed model of cyclic Spell-Out.

References


Lasnik, Howard (2001) "When Can You Save a Structure by Destroying it?," Proceedings of the NELS 31, ed. by Minjoo Kim and Uri Strauss, 301–320, GLSA.


Ura, Hiroyuki (1994) "Varieties of Raising and the Feature-Based Bare Phrase Structure Theory," MIT Occasional paper in Linguistics 7, MITWPL.

