



Clausal Ellipsis and Non-Simultaneous Transfer* **

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ABSTRACT

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Diverse theories have employed elliptical constructions as testing grounds to investigate the nature of the various postulated components of grammar, including interactions between syntax, phonology, and semantics. We present a unified account of clausal ellipsis for Sluicing and Fragment answers in English, as well as Fragmentary Questions in Korean and Japanese. We propose an assumption as to how it can be implemented in the current syntactic framework. In accordance with Non-Simultaneous Transfer (Felser 2004, Wurmbrand and Bobaljik 2003, Citko 2014, Marušič 2005, 2009), each element contributing to the derivation must be pronounced and interpreted during the different phases. A Non-Simultaneous Transfer system is a plausible explanation for why the locations for transferring resultant items to both interfaces (Sensorimotor system Interface and Conceptual-Intentional Interface) are distinct. This article is an attempt to bring together research on clausal ellipsis and current syntactic theory, specifically Minimalism.

KEYWORDS

clausal ellipsis, fragmentary answers, sluicing, fragmentary questions, non-simultaneous transfer, minimalism, interfaces

1. Introduction

A large portion of the theoretical literature has embraced the idea that ellipsis is a genuine syntactic phenomenon that involves both syntactic movement and PF deletion ever since Merchant's work in 2004. The discussion will be limited to clausal ellipsis found in sluicing, fragment answers, and fragment questions. Ellipsis is a mismatch between sound and meaning. Since the generation of phonologically null items or the deletion of existing items is a complex process, the ellipsis is one of the greatest puzzles in generative grammar.

(1) John can play something, but I don't know what John can play. (Adapted from Merchant 2013:3)

(2) A: What did she eat?
B: She ate beans. (Adapted from Merchant 2005:675)

In particular, substantial consideration is given to how to derive fragments that nevertheless yield a full-fledged clausal interpretation. Consider (1) and B's responses in (2) as examples of clausal ellipsis. (2B) is an example of a fragment answer (FA), which indicates that the response to a query frequently consists of a fragment as opposed to a complete sentence (Morgan 1989, Merchant 2004). According to Merchant (Ross 1969, Merchant 2001), a fragment of this kind is created by moving the remnant to the left-peripheral focus phrase and then deleting TP. Put differently, the ellipsis applies to the clause except for the focused remnant. In analogy with FA in (2B) and sluicing in (1), Merchant (2004) contends that FA and sluicing entail a fully completed structure in which the fragment moves from a position within the TP to a left-peripheral position, Spec FP, containing [E] (elide) features at head F before the constituent TP ellipsis, as shown in (3). (See also Morgan 1989, Park 2005, Nichigauchi 2006, 2010, 2011).

(3) [Remnant [_{FocP} Foc [_{TP}]]]

In his syntactic implementation, he contends that the left-peripheral head that attracts the fragment to its Spec possesses a feature [E] that permits the non-pronunciation of its complement. In other words, the pronounced fragment DP shifts to the clausal peripheral specifier position of a functional projection referred to as FP in this instance. In other words, the [E] feature prevents pronouncing TP.

(4) A: Nomikai-de-wa min'na nani-o nondeita no?
party-at-TOP everyone what-ACC drank Q
'What did everyone drink at the party?'

B: Yuki-wa biiru-o nondeita yo.
Yuki-TOP beer-ACC drank PART
'Yuki drank beer.'

A: Takashi-wa (nani-o)?
Takashi-TOP what-ACC
'What did Takashi drink?'

A': *Nani-o Takashi-wa?
what-ACC Takashi-TOP
'What did Takashi drink?'

(Adapted from Maeda 2019:7)

Maeda (2019) asserts that the derivation of FQ in Japanese is comparable to that of FA and Sluicing in English (Merchant 2005), involving a shift in focus¹ and an ellipsis of the TP. Maeda and Jeon (2019) reveal the syntactic properties of Fragmentary Questions (FQs) in Japanese and Korean and show that FQs are best analyzed in terms of the movement of remnants to the left peripheral position followed by a clausal ellipsis.

- (5) a. Chelswu-nun So-Yun-eykey-nun mwues-ul cwess ni?
 Chelswu-top So-Yun-dat-top what-acc gave q
 b. PF: **So-Yun-eykey-nun** mwues-ul Chelswu-nun cwess ni?
 c. LF: So-Yun-eykey-nun mwues-ul Chelswu-nun cwess ni?

(Adapted from Maeda and Jeon 2019:174)

However, the phenomenon of missing constituents, *mwues-ul Chelswu-nun cwess ni?* in (5b), needs to be speculated on: If the [E]-feature is employed to license the deletion of elided constituents, can they be deleted at PF or narrow syntax (NS)? If so, why and how? To give a plausible solution, we should focus on how to treat the elided part of FQ that is "unpronounced" at Phonetic Form (PF), but there is a Logical Form (LF) like (5c). Put differently, what are the licensing conditions for putatively missing material? In the minimalist program, the output of the narrow syntax is sent to LF and PF, referred to as the Conceptual-Intentional system (CI) and the Sensorimotor system (SM), respectively, employing the process of Transfer. Furthermore, we raise a question: how parallel or independent are the information transfers to CI and SM?

To the best of our knowledge, how to encode the clausal ellipsis and how to interpret the fragments at interfaces have received scant attention in the literature. The aim of this paper is therefore to disclose the syntactic properties of clausal ellipsis and investigate how to encode and interpret clausal ellipsis at interfaces, underscoring the theoretical implications for current concepts of Minimalism. We show that FA and sluicing in English and FQs in Japanese and Korean exhibit more or less the same syntactic properties and argue that they can be safely analyzed in terms of the movement of remnants to the left peripheral locus followed by a clausal ellipsis. We further investigate how to encode and interpret the clausal ellipsis at interfaces via Transfer as an enabling function of SMT.²

Section 2 describes the properties of clausal ellipsis. In Section 3, we discuss how to encode syntactic information to each interface. In Section 4, we postulate a computational operation called Transfer, which transmits structure information to each interface and presents a viable Transfer system. One of the objectives of this paper is to propose a Transfer method that does not require identical transfer domains for each interface (SM and CI). The article concludes with Section 5.

2. Deletion in Clausal Ellipsis

¹ Maeda (2019) assumes that analogous to wh-movement in sluicing, wh-phrase move to FocP in FQs (Grebnyova 2007, Baltin 2010, Nakamura 2013, Winkler 2013; see also Rizzi (1997) for the assumption that wh-movement targets FocP in the matrix CP). Maeda(2019) schematized FQs in Japanese below.

[_{Top-FocP} XP: Top-Foc [_{FocP} (wh) Foc [_{TP} *t*_i (wh)]]]

² SMT (The Strong Minimalist Thesis): FL (Faculty of Language) is designed optimally using the simplest computational operation. (Chomsky 2023:350)

There have been at least two approaches to fragments: the ellipsis approach and the direct interpretation approach. The ellipsis approach assumes that an apparent fragmentary expression is underlyingly a full-fledged clause, and the ellipsis applies to the clause except for the focused remnant. Merchant's (2005) movement-and-deletion approach (henceforth, MDA) is a prevalent theoretical framework for ellipsis research in the current generative grammar. The direct interpretation approach, on the other hand, assumes that the syntactic structure of fragments is merely a fragmentary remnant, with the propositional interpretation being supplemented by the semantic/pragmatic division (Ginzburg and Sag 2000, Jackendoff 2002, Culicover and Jackendoff 2005, Progovac 2006, Yoo 2013, Cho 2016). Progovac (2006) argues that the base generation of non-sentential phrases is much more economical and thus much more minimal than sentential derivation from the perspective of theorizing.

I present two sorts of evidence for clausal syntactic structure within fragments: case matching effects and connectivity effects. Maeda and Jeon (2019) reveal the syntactic properties of Fragmentary Questions (FQs) in Japanese and Korean and show that FQs are best analyzed in terms of the movement of remnants to the edge of root sentences followed by clausal ellipsis. Furthermore, this data suggests that FQs are derived from full-fledged clausal structures. FQs demonstrate a connectivity effect in relation to cases. The FQ in (6) is preceded by the dative antecedent. In this instance, the remnant must have the dative-Case marker; any other Case marker or absence of a Case marker degrades the sentence. This indicates that it contains the concealed structure consisting of the verb *ageta*, which assigns dative case to the remainder.

- (6) A: Ken-wa Mari-ni nani-o ageta no?
 Ken-top Mari-dat what-acc gave q
 'What did Ken give to Mari?'
 B: Hanataba desu.
 bouquet cop
 'A bouquet.'
 A: Yumi-ni/*ga/*o/*φ-wa? (FQ)
 Yumi-dat /*-nom /*-acc /*-φ-top
 'To Yumi? (Intended: What did Ken give to Yumi?)'

(Adapted from Maeda and Jeon 2019:184)

Maeda and Jeon (2019) presume, following Merchant (2001, 2005) and Aelbrecht (2010), that FQs are derived from clausal deletion, which is supported by the fact that FQs reflect the interpretation of a linguistic antecedent (cf. Li 2016). Case-matching effects discovered in sluicing and fragment answers are easily accounted for if the pertinent case assigners are present syntactically but unpronounced, as first noted in Ross (1969, republished in 2012). Ross's example is derived from German, where *schmeicheln*, 'flatter', assigns the dative case only.

(7) Sluicing in German

- a. Er will jemandem **schmeicheln**, aber sie wissen nicht, { *wer / *wen / wem }.
 he wants someone. **DAT flatter**, but they know not who.NOM who.ACC. who.DAT
 'He wants to flatter someone, but they don't know who.'

(Adapted from Ross 2012:16)

(8) Greek

a. Pjos idhe tin Maria? - O Giannis / *Ton Gianni.

who.NOM saw the Maria – the Giannis.NOM / the Giannis.ACC

‘Who saw Maria? - Giannis.’

b. Pjon idhe i Maria? - *O Giannis / Ton Gianni.

who.ACC saw the Maria – the Giannis.NOM/ the Giannis.ACC

‘Who did Maria see? - Giannis.’

(Adapted from Merchant 2004:676)

As shown in (7-8), the case matching effect shows that the fact that fragments must appear in a particular Case indicates that a deleted Case assigner must exist in the structure of the fragment answer. Merchant (2005) also indicates binding connectivity results in addition to case-matching effects. Fragment answers are not illicit, for instance, if the corresponding non-elliptical utterance would violate binding theory principles.

(9) a. Principle C

Where is he₂ staying? — *In John₂'s apartment. / *He₂ is staying in John₂'s apartment.

b. Principle B

Who did John₁ try to shave? — *Him₁./*John₁ tried to shave him₁.

(Adapted from Merchant 2005:679)

The same binding relation is observed in Japanese, as shown in (10). The assumption that FQ is derived from a full-fledged CP structure is supported by the fact that FQ remnants can be bound variables. For instance, *zibun* ‘self’ in (10B) can be interpreted as a bound pronoun that takes *subete-no otokonoko* ‘every boy’ as its antecedent. Given the general assumption that a bound variable needs a c-commanding antecedent, it follows that FQ in (10B) is underlyingly a clause structure where the quantified subject c-commands the remnant.

(10) A: Class-no [subete-no otokonoko]_i-ga zibun_i-no hahaoya-ni hana-o rasii yo.

class-gen every-gen boy-no self-gen mother-dat flower-acc gave heard part

‘I heard that [every boy]_i in the class gave flowers to his_i mother.’

B: Zibun_i-no titioya-ni-wa? (FQ)

self_i-gen father-dat-top

‘(Lit.) Self’s father? (Intended.) What did [every boy]_i give to his_i father?’

(Adapted from Maeda and Jeon 2019)

The remnant, which has its origin in a complex island of NP, cannot be a remnant in FQ, as can be seen from the second utterance of A; in order to be a legitimated FQ, the entire complex NP must be pied-piped, as in A'. Maeda (2019) argues that island sensitivity indicates that the derivation of FQ entails an island-obeying movement. The connectivity effects in FQs provide evidence for a comprehensive clausal interpretation of FQs.

- (11) a. A: Kimi-wa [[Syoota-ga katta] omotya]-o dare-ni ageta no?
 you-top Shota-nom bought toy-acc who-dat gave q
 ‘Who did you give the toy Shota bought?’
 B: Yuki da yo.
 cop part
 ‘Yuki.’
 A: *(FQ)
 Yuta-top
 ‘Yuta? (Intended: Who did you give a toy that Yuta bought?)’
 A’: [[Yuuta-ga katta] omotya]-wa?
 Yuta-nom bought toy-top
 ‘(Lit.) The toy Yuta bought?’ (Adapted from Maeda 2019:5)

In this section, I present connectivity effects in FQs, including Case and Binding, to support the movement and deletion analyses. In addition, these data indicate that FAs, FQs, and sluicing generated by clausal ellipsis are derived from a fully developed clausal structure. Jeon (2022) has described the syntactic properties of FQs in Korean and what causes this phenomenon, noting that a remnant is a contrastively topicalized element that endures A-bar movement. Aelbrecht (2010, 2016) postulates that an ellipsis is licensed by a licensing head (Lobeck 1995, Johnson 2001, Merchant, 2001, 2005, Gengel 2007) using the traditional approach that assumes the ellipsis licensing heads and ellipsis sites are in a head-complement relationship.

Given Lobeck (1990, 1995)’s proposal³ that there exist common properties among N’-deletion, VP-deletion, and sluicing, they are all related to the deletion of the complement of the head. She further claims that these major cases of ellipsis bear the same structural requirements. In other words, these all involve functional heads (D, T, and C), and only when the Specifier is filled is it permissible to delete the complement. With this background, including FAs and sluicing in English and FQs in Korean and English, varieties of clausal ellipses can be unified into a single configuration, as schematized in (12).

- (12) [remnant [_{Licensing Head}⁴ [...]]]

According to Van Craenenbroeck (2004, 2012), there are two levels of CP: CP₁ and CP₂. Specifically, CP₁ specializes in clause typing (Cheng 1991, Aelbrecht 2009), and CP₂ is comparable to ForceP, according to Rizzi (1997). CP₂, parallel to FocP in the sense of Rizzi (1997), refers to a projection in which operator-variable dependence is constructed. The interrogatives are aimed specifically at the CP₁ projection. Meanwhile, the CP₂ head contains only focused or topicalized phrases. In the view of Rizzi (1997), fronted topics and foci are

³ Lobeck (1995)’s generalization

- a. [_{VP} V°[E] {VP...}] (VP-deletion)
 b. [_{TP} T°[E] {_{VP}{VP...}}] (vP-deletion)
 c. [_{CP} C°[E] {_{TP-TP}{VP...}}] (TP-deletion)

⁴ Takita et al. (2016) and Ko (2011) argue that the functional head H serves as a phase head.

structurally articulated as projections via a Topic and Focus head. YP, Spec of Topic or Focus, includes the topicalized or focused element. Li (2016), following Constant (2014), asserts that a contrastive topic remnant is focused and endures topicalization to TopP, the head of which possesses the [E]-feature adopted from Rooth's (1992a) focus condition of ellipsis, which is depicted below by Gengel (2007).

(13) Focus Condition on Ellipsis

A constituent α in XP_E can be deleted only if there is an XP_A ,

where

(i) $\|XP_A\|^o$ either is or implies an element of $\|XP_E\|^f$, and

(ii) $\|XP_E\|^o$ either is or implies an element of $\|XP_A\|^f$

(Adapted from Gengel 2007:214)

The concept of the ellipsis focus condition has been acknowledged and extended to other types of ellipsis (Romero 1998, Reich 2007). Li (2016) further assumes that a wh-phrase's null Operator is merged with Spec-CP, which implies there exist another CP related to Wh-operation above CP related to Focus and Topic extending the focus condition of ellipsis to fragment questions, IP in TopP can only be deleted if an antecedent question $[[Q]]^g$ exists, where Q is or implies an element of $[[TopP]]^f$. Let us consider (14).

(14) A: Phathi-eyse motwu mwues-ul masyess ni?

party-at-top everyone what-acc drank q

'What did everyone drink at the party?'

B: Yumi-nun maykcwu-lul masyesse yo.

Yumi-top beer-acc drank part

'Yumi drank beer.'

A: Minswu-nun mwues-ul masyess ni? (FQ)

Minswu-top what-acc drank q

'Minswu? (Intended: What did Minswu drink?)'

(Adapted from Maeda and Jeon 2019 :182)

Jeon (2022) postulates that FQ is derived by moving to the target position (Contrastive Topic), the spec of CP_2 , in the left periphery above TP. Consequently, remnants in FQs can be viewed as peripheral elements located in an A-bar configuration. Armed with Merchant's (2001) belief that focused marked material is not permitted in the elliptical sites, Jeon (2022) assumes that the higher CP hosts the clausal typing features, whereas the lower CP is concerned with discourse-related features, for instance, Topic and Focus. This split CP analysis will be extended to include data on Fragments. Ott (2014) notes that numerous ellipsis phenomena, including sluicing and fragment answers, share a common derivational process involving movement to the clausal boundary followed by ellipsis.

(15) a. A: What did she eat?

B: She ate beans. (FAs in English)

b. A: What did she eat?

B: Someone ate beans, but I don't know who ate beans. (Sluicing) (Adapted from Merchant 2005:675)

- (16) a. [*Beans* [_{FocP} Foc [_{TP}]]] (FAs in English)
 b. [*who* [_{FocP} Foc [_{TP} ate beans]]] (Sluicing)
 c. [_{Top-FocP} remnant_i Top-Foc [_{FocP} (wh) Foc [_{TP} *t_i* (wh)]]]
 (FQs in Korean and Japanese, Adapted from Maeda and Jeon 2019:327)
 d. [_{CP1} **XP** [_{CP2} C [_{TP} ...XP]] (Adapted from Jeon 2022:122)

Given the proposed syntactic properties of fragments via clausal ellipsis, ellipsis constructions, if omitted, require all syntactic object information, including A-bar position as focus or topicalization. In particular, in English FAs and sluicing and in Korean and Japanese FQs, the remnants in the left periphery of the clause must be contrastively topicalized in A-bar position, as shown in (16d).

With this background, including FQs, as outlined in (15-16), these types of ellipses can be unified into a singular deletion site. More recently, in the spirit of Minimalism⁵ and the notion of Duality of Semantics (DOS)⁶, it is a great virtue that the different forms of clausal ellipsis can have their internal syntactic structure described in a single, unified way, which indicates that remnants surviving from ellipsis are topicalized or focused elements that appear in the A-bar position. I have described how deletion should be implemented in clausal ellipsis in this section. It remains unclear how this information checking at interfaces is enabled by deploying Chomsky's phase theory. Moreover, we analyzed the nature of the interaction between syntax and two interfaces, in an attempt to explain how elided constructions are executed and how to encode clausal ellipsis for each interface.

3. How to Encode Clausal Ellipsis

In an effort to unify a number of instances of elided structures, a further issue demanded consideration, particularly in light of recent work on Transfer. Additionally, we analyzed the nature of the interaction between syntax and its two interfaces. In a manner analogous to Sluicing, Fragment answers and Fragment Questions can be demonstrated to involve the movement of their corresponding remnants out of phrases that have been designated for deletion. Importantly, in these cases, this particular TP is intended for deletion., an assumption I exploit in my analysis of the ellipsis process within a phase-based Minimalist framework.

The phase theory, which depends on the vP phase and the CP phase with its Transfer mechanism, appears to be amenable to an account of ellipsis that employs specific Transfer domains. More specifically, in Chomsky's (2001, 2005) analysis, the transfer of the TP, regarded as the domain of the CP is inappropriate in elliptical constructions that target the higher position of the clause, such as sluicing, fragments, and fragment questions.

There are two perspectives on ellipsis: the view that ellipsis is the deletion of unstressed material, and the view that ellipsis is the deletion of designated syntactic domains. Chomsky and Lasnik (1993) argue that ellipsis is an extreme form of phonological reduction, with optional suppression of intonationally marked ("deaccented")

⁵ Chomsky (2020) hypothesizes that the A- and A-bar movements serve vastly distinct purposes within the overall system of thought generation. Specifically, A-positions serve as the foundation for fundamental semantics, which include theta and argument-positions. A-bar structures are associated with discourse and information structures.

⁶ Duality of Semantics (Chomsky 2020) asserts that CI incorporates a dual semantics, with generalized argument structure as one component and discourse-related and scopal properties as the other. Chomsky (2007, 2008) asserts that "External Merge (EM) yields argument structure and Internal Merge (IM)

material. According to this theory, a fragment response such as (17B) derives from the emphasized sentential form in (18a), not (18b) (here and where necessary below, capitals indicate emphasis, and italics indicate deaccented material).

(17) A: Who did Mary talk to yesterday?

B: John.

(Adapted from Ott and Struckmeier 2018 :394)

(18) a. *She talked to JOHN yesterday.*

b. #*JOHN she talked to yesterday.*

(Adapted from Ott and Struckmeier 2018:394)

Both of the approaches mentioned above are needed to speculate on how the interface decodes the information given in syntax. Merchant argues that a fragment response, as in (17B), derives from the syntactic movement of the remnant and following deletion of TP, similar to the origin of sluicing (Ross 1969, Merchant 2001). Put simply, remnants move to the head's specifier, escaping the ellipsis site. Armed with the assumption that (17B) is derived from (18b) rather than the independently available (18a) and has significant implications for acquisition, essentially compelling the learner to acquire a unique syntax for elliptical constructions, Ott and Struckmeier (2018) present an alternative to the movement and deletion analysis of Merchant. They present a novel set of data regarding modal particles in German that firmly argues against the obligatory movement of ellipsis remnants, indicating that deletion applies to individually generated surface forms in a manner akin to deaccenting.

According to Merchant (2004), there is no process of syntactic deletion. In contrast, the information that deletion will occur in the PF component is already present in the syntax, as the licensing head of the elliptical structure is merged with the E-feature. In Merchant's (2001) analysis, the E-feature is defined as having specific semantics and a phonological effect that triggers deletion. Merchant (2001) states that the E-feature imposes the Focus Condition on the elided constituent, which is the E-Givenness⁷Condition (Merchant 2001). According to Weir (2014), evacuation movements are captured in the PF mapping, which is driven solely by the need to manage the instruction to elide TP with the instruction to point out focus-marked items. Thus, ellipsis approach that relies on the interaction between focus and deletion is well completed with the bifurcation of CP.

Chomsky (2015) presumes that syntactic objects must be labeled to be interpreted at the CI interface and for the externalization principles. The interpreted material appears to have endured a computational operation called Transfer, which conveys part of the structure to interfaces; the transferred object effectively disappears from the syntactic computation. The majority of approaches to the phase theory presume that specific functional heads (typically at least v,C) are "phase heads," whose projections continue phases; the phase head's complement is then subject to Transfer. In classical Minimalism, the operations that send syntactic objects to SM and CI are called Interpret and Spell-Out, respectively (cf. Chomsky 1995, Lasnik et al. 2005). In the most recent Minimalist framework, the mapping of structure to SM and CI has been refined by the incorporation of multiple Spell-outs (Uriagereka 1999, Chomsky 2000, 2001, among others).

There have been many approaches to phase theory. Phase Theory (Chomsky 2000, 2001) posits that Spell-Out

⁷ Merchant (2001)'s E-Givenness: An expression E counts as e-GIVEN iff E has a salient antecedent A and, modulo \exists -type shifting,

(i) A entails F-clo(E), and

(ii) E entails F-clo(A).

is cyclic, occurring more than once at structural points called 'phases'. More specifically, upon completion of a phase, the head's complement is extracted from the syntactic derivation and transferred to the interfaces. The widely adopted view of the syntax interfaces is that narrow syntactic processes (Merge) precede Spell-Out and Transfer⁸. In other words, once a particular domain is spelled out, it cannot be accessed by syntax.

In a derivational phase-based syntactic theory, a structure is formed and transmitted phase by phase to the interfaces. The issue naturally arises as to whether the structure is sent to the two interfaces simultaneously or whether the two interfaces receive different structures at different times. Before dealing with this question, we should examine in greater depth what we mean by phases at interfaces. In Chomsky's framework, every phase induces a PIC (the Phase Impenetrability Condition) effect. The procedure by periodically transmitting a portion of the generated structure to each interface, the Sensorimotor (SM) and Conceptual-Intentional (CI) systems, Shim (2022) argues that Transfer is one of these efficiency-driven devices that reduces computational complexity. Specifically, Chomsky formulates PIC, which states that once a phase has been determined, the internal domain of the phase, that is, the complement of the phase head is transferred to the interfaces, making it inaccessible to operations outside the phase. According to Chomsky, phases are only vP and CP. Once these domains have been constructed from a lexical subarray, a significant portion of their content is promptly transferred to the interfaces and can be "set aside" for computational purposes, thereby reducing the load placed on the computational system. Reduction in computational cost is the most important conceptual advantage and motivation for phases (Chomsky 2000).

- (19) a. Which of his₁/*₂ pictures did Bill₁ ask me why nobody/everybody₂ hated *t*?
 b. Which of his₁/*₂ pictures doesn't Bill₁ think that everyone₂ liked *t*?

(Adapted from Boeckx and Grohmann 2007:212)

AGREE is an operation on phases, so having no AGREE indicates that there is more than one phase between the syntactic object of the embedded clause and the matrix. Put differently, CI must check multiple spelled-out objects for binding purposes. As mentioned briefly in the previous section, we provided an integrated framework for explaining fragments with hidden structures. The timing of Transfer is subsequently a crucial matter. Are the two interfaces sent the same structural information at the same time, or do they receive different information at different times? Why are there distinct loci for transferring resultant labels to both interfaces, given this circumstance? The question remains, however, as to whether the transferences to CI and SM are parallel or independent. We suggest plausible assumptions via Non-Simultaneous Transfer.

4. Non-Simultaneous Transfer

As briefly discussed in the last section, we provided a novel way to shed light on the licensing head of the clausal ellipses in FAs, sluicing, and FQs. We suggest a plausible assumption via Non-Simultaneous Transfer. For

⁸ In the current minimalist program, the notions, Spell-Out, and Transfer are no longer differentiated in a strict way based on the idea that each Interface interprets the information of syntax via transmitting the information from the syntax part.

computational efficiency⁹, I propose that the phase relations to the interfaces of the language module are not unique, but should be separated into the concepts of PF-phase (PF) and LF-phase (LF).

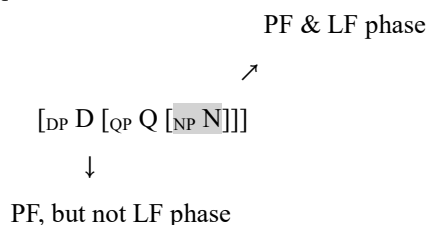
According to the recent development of the Minimalist Program's phase theory, sentences are composed of smaller units called phases. Each phase begins and concludes when the structure built in that phase is sent to interfaces. A portion of structures can be interpreted differently than where it is pronounced. Put differently, certain elements can be interpreted at a lower level than where they are pronounced or pronounced lower than where they are interpreted as a result of covert movement.

As previously stated, phases are cycles of derivation, at the conclusion of which the structure is transmitted to the two interfaces. If the ends of the LF and PF phases differ, does this imply that the beginnings of subsequent phases will also differ? Covert movement poses a serious challenge to conventional phase theory. Nothing should be able to escape if phase boundaries prevent all syntactic movement. When something escapes, the only possible resultant movement is LF. Commonly, however, it is argued that covert movement is syntactic.

Chomsky (2005a) quotes Nissenbaum's (2000) "resolution", which interprets the covert versus overt distinction as a timing difference between Transfer and movement. If movement to the edge is applicable before Transfer, the movement is overt. If Transfer is activated prior to edge movement, the movement is covert. Under the conventional assumption that Spell-Out is simultaneous and creates impenetrable boundaries, there should be no movement following Spell-out and therefore no covert movement. Nissenbaum (2000) speculates that Transfer at both interfaces does not occur simultaneously but rather that only phonological features are spelled-out to PF, while the remaining features persist in the derivation on the way to LF.

According to Matushansky (2006) and Sauerland (2005), the highest phase within a DP with a strong quantifier is not an LF phase as shown in (20). Whenever the DP spells out to PF, as it is only a PF phase, its LF features are not subtracted from the derivation (as is the case with their PF counterpart features), and the derivation can proceed.

(20) quantificational DP



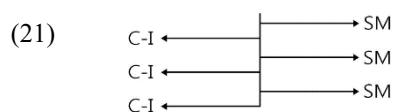
(Adapted from Marušič 2005:18)

Citko (2014) asserts that Non-Simultaneous Multiple Transfer is ideally suited for situations in which a given element is phonologically visible in one position and semantically visible in another. Simply put, Transfer to each interface can occur at different points of times.¹⁰ There exists a variant of the standard non-simultaneous strategy

⁹ "A solution to the conundrum would be satisfaction of SMT for UG combined with recourse to language-independent principles of computational efficiency" (Chomsky 2023:347)

¹⁰ There is a variant of the general non-simultaneous approach to allow Multiple Spell Out to apply only one to one of the two interfaces, as illustrated below respectively. (Adapted from Citko 2014:42)

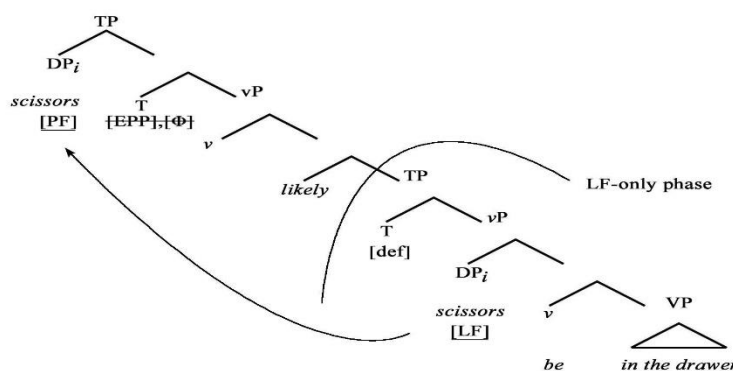
that permits Multiple Spell Out to be applied to only one of the two interfaces, as depicted below.



(Adapted from Citko 2014:42)

According to Felser (2004), and Marušič and Žaucer (2004), at the Transfer stage, the structure generated within a phase can be transmitted to a specific interface (either PF or LF). Accepting the existence of non-simultaneous phases, we can derive the phenomena of misaligned pronunciation and interpretation. Marušič and Zaucer (2006) and Marušič (2005, 2007) utilized Non-Simultaneous Spell-out as a derivational mechanism and elucidated two distinct but related phenomena, Total reconstruction and quantifier raising. Non-simultaneous Spell-Out to each interface has already been proposed in Felser (2004), and Wurmbrand & Bobaljik (2003). It is also hinted at in Total Reconstruction claimed by Sauerland and Elbourne (2002)¹¹ and offered as one possibility. Marušič (2005, 2007) explores the possibility that the complement of the phase head may be sent to either PF or LF, but not both. Specifically, LF-only Spell-Out results in early (lower copy) interpretation and late (higher copy) pronunciation, as in reconstruction.

- (22) a. Scissors are likely to be in the drawer.
 b.



(Adapted from Marušič 2005:36)

Under Marušič’s Transfer system, the subject, *scissors* in (22) is transferred to ¹²LF before it is transferred to PF since the subject *scissors* is pronounced in TP Spec and interpreted in the lower position. Put differently, the

¹¹ Sauerland & Elbourne (2002:315):

"Slightly extending Chomsky’s idea, we propose that actually the edge of a phase can be distinct for LF and PF and that a phrase in only the LF or PF edge of a phase is accessible only for LF or PF movement, respectively, in a later phase."

¹² Marušič implies a significantly more intricate clausal structure than CP-vP. He indicates that a projection is a phase when it corresponds with a proposition at the LF interface. In other terms, some projection surrounding TP matches a proposition when transmitted to the LF interface.

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Examples in: English
Applicable Languages: English
Applicable Level: Tertiary