Some Theoretical Problems of the Ellipsis and a Possible Approach to It under the Feature-Inheritance System

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Abstract

In this paper, I first clarify some theoretical problems of previous studies of ellipsis in the eyes of the Minimalist Program (Chapter 1), and then propose a possible approach to it in terms of Chomsky's (2007, 2008) feature-inheritance system (Chapter 2). Consequently, I argue that Chung et al.'s (1995) Sluicing Merger Effects and Merchant's (2001) Sluicing COMP Generalization can be given a principled account (Chapter 3).

1 Previous Studies

1.1 Spec-Head Agreement Analysis

Lobeck (1990) and Saito and Murasugi (1990) argue that an elliptical site must be the complement of a functional head that agrees with its specifier. Thus, the VP elliptical site in (1a) (VPE) is licensed by the T head that enters into an agreement relation with *Peter* in its Spec-TP position, and the TP elliptical site in (1b) (sluicing) is licensed by the C head that enters into an agreement relation with *who* in its Spec-CP position, and the NP elliptical site in (1c) is licensed by the D head that enters into an agreement relation with Bill in its Spec-DP position.

(1) a. John liked Mary and Peter did [$_{VP}$ e] too.
b. John met someone but I don't know who [$_{TP}$ e].
c. John's talk about the economy was interesting but Bill's [$_{NP}$ e] was boring.

One of the most important consequences of this analysis is that it can uniformly account for the ungrammaticality of (2):

(2) a. *Robin saw someone, but I don't believe that [$_{TP}$ e]. (Ross 1969:272)
b. *Ralph knows that I went, but his wife doesn't know whether [$_{TP}$ e] (ibid.)
c. *I wanted to read a book, so I bought a/the [$_{NP}$ e]

The TP elliptical sites of (2a, b) are not licensed because the C heads, *that* and *whether*, do not have elements in their Spec positions to agree with. Likewise, the NP elliptical site of (2c) is not licensed because the D heads, a and *the*, do not have elements in their Spec positions to agree with.

This spec-head agreement analysis is descriptively adequate, but it is not a true explanation in terms of the current Minimalist Program (MP). Since in the MP, an agreement relation is an instance of a probe-goal relation, i.e. a head-head relation (Chomsky 2000, 2001, 2004, 2007, 2008), we cannot rely on a spec-head relation to express agreement configurations any more. Specifically, given that "There should be no SPEC-head relations" Chomsky (2008:146), it is far from clear why a spec-head relation can function as a licensing condition on ellipsis which occurs at the complement domain of a functional head.

1.2 Probe-Goal Analysis

Under the probe-goal system, it is quite natural to see to what extent the recent theory of agreement can deal with ellipsis. Noticing this point, Abe (2008) has already suggested that "an elliptic site must be the complement of a functional head that enters into an Agree relation" (p.162). Thus, the TP elliptical site of the sluicing sentence (1b) is licensed as follows:

(3) John met someone but I don't know [$_{CP}$ C$_{[Q]}$ [$_{TP}$ ~~John met~~ who]]

Under the mechanism of *wh*-movement suggested by Chomsky (2000:128), Abe claims that the Q-feature on a C head enters into an Agree relation with a *wh*-phrase that carries a *wh*-feature as in (3), and this Agree relation is sufficient for licensing the TP elliptical site. Under this analysis, the fact that VP and NP become the relevant elliptical sites in (1a) and (1c) is accounted for basically in the same way as the analysis of sluicing: since the T head and the D head have Agree features that can act as probe features, the VP and the NP are licensed as the relevant elliptical sites. In this approach, it is obvious that the ungrammaticality of (2) is just attributed to the fact that the relevant functional heads lack Agree features to establish probe-goal relations, and hence the elliptical sites are not licensed.

The probe-goal analysis seems to be on the right track in terms of the current MP that does not assume spec-head agreement, but we have to dismiss it given Chomsky's (2008) *wh*-movement system. In Chomsky (2008), since *wh*-movement to Spec-CP is triggered by the edge feature (EF)-probe by C, we cannot rely on the Q-feature to license the TP elliptical site. In fact, given that "EF-probe does not involve feature matching; hence Agree" (ibid.:161, fn. 49),

we can no longer appeal to the probe-goal relation in licensing the TP elliptical site. Hence, the present analysis does not hold at least for sluicing, which suggests that we need to seek a new approach to identifying the relevant elliptical sites without recourse to probe-goal relations.

1.3 Edge Feature Analysis

Here, it might be worth considering a possible revision of the probe-goal analysis in terms of the EF-based probe-goal system. This attempt is motivated by the following contrast:

(4) a. John met someone but I don't know [$_{CP}$ **who** [$_{TP}$ e]]. (= (1b))
b. *Robin saw someone, but I don't believe [$_{CP}$ __ that [$_{TP}$ e]]. (= (2a))

In explaining the contrast in (4) under the previous analyses, it was argued that a certain Agree feature played an important role in licensing the relevant elliptical site.

However, it is, in fact, possible to capture the difference even if we do not assume such an Agree property; rather the EF-based probe-goal system can provide a straightforward account for the contrast. That is, as is clear from the bold parts of the structures, given the fact that the relevant elliptical site is licensed only when Spec-CP is occupied by a *wh*-phrase as in (4a), we can reasonably ascribe the ability to license the relevant elliptical site of the functional head to the possibility of its EF-satisfaction itself ; in fact, the same holds true for the following contrast:

(5) a. John's talk about the economy was interesting but [$_{DP}$ **Bill's** [$_{NP}$ e]] was boring. (= (1c))
b. *I wanted to read a book, so I bought [$_{DP}$ __ a/the [$_{NP}$ e]]. (= (2c))

Therefore, it would not be so peculiar to revise the probe-goal analysis as follows: an elliptical site must be the complement of a functional head whose EF is satisfied.

The EF-based analysis seems to be on the right track in that it can eliminate the notion of agreement entirely from a licensing condition on ellipsis, but unfortunately, it potentially has the same problem as the spec-head agreement analysis does: it is rejected by the premise that "There should be no SPEC-head relations." (Chomsky 2008:146) That is, even if we succeed in abstracting away the notion of agreement from a licensing condition on ellipsis, the notion of "edge" is still as unreliable as the notion of "spec" to license an elliptical site.

If we strictly follow the minimalist assumptions that "There should be no

SPEC-head relations" Chomsky (2008:146) and "EF-probe does not involve feature matching; hence Agree" (ibid.:161, fn. 49), we should avoid making crucial use of the notion of "agreement" or the notion of "spec" or "edge" in unifying the relevant elliptical sites.

1.4 Phase Impenetrability Condition Analysis

Under the present circumstances, one may find it hard to give a unified approach to the relevant elliptical sites in (1). However, Takahashi (2002) proposes the following interesting generalization on ellipsis in terms of the notion of phase:

(6) *Takahashi's Generalization*
Elliptical sites must be the complement of the phase heads – C, v*, and D.

Given that "a phase should be the closest syntactic counterpart to a proposition" (Chomsky 2000:106), it is natural to assume that the functional heads C, v*, and D are phase heads in that they take a propositional argument for their complements. Furthermore, in terms of the Phase Impenetrability Condition (PIC) (Chomsky 2000), which in effect states that the domain of the phase is spelled out as the domain that computations have already finished, we can reasonably identify the domain of ellipsis with the domain of spell-out. Thus, if we consider TP, VP, and NP to be the domains of the CP phase, the v*P phase, and the DP phase, respectively, we can naturally unify the relevant elliptical sites under the notion of phase that is constrained by the PIC.

Building on (6), Takahashi suggests that an elliptical material is in fact recycled elements that computations have already finished at an antecedent clause, and an instance of ellipsis is a result of PF-deletion that applies to the recycled elements. Thus, the elliptical sites in (1) is analyzed as in (7) (strike-through indicates deletion):

(7) a. [C [$_{TP}$ John met someone]] but I don't know [who$_i$ [C [~~$_{TP}$ John met t_i~~]]].
b. John [v* [$_{VP}$ liked Mary]] and Peter did [v* [~~$_{VP}$ liked Mary~~]] too.
c. John's [D [$_{NP}$ talk about the economy]] was interesting but Bill's [D [~~$_{NP}$ talk about economy~~]] was boring.

In particular, the elided parts of the sentences in (7) (indicated by strike-through) are the copies of the relevant antecedents involved in each sentence, and the complements of the phase heads at the antecedent clauses (indicated by underline), where the PIC operates, are indeed used as the recycled

elements that will be deleted at PF.

In this way, given Takahashi's generalization in (6), the relevant elliptical sites can be deduced from the PIC, and hence we do not have to assume neither spec-head relations nor probe-goal relations in unifying the relevant elliptical sites any more. In this respect, we can take the PIC-based analysis to be theoretically more adequate than the previous approaches. However, it is important to notice at the same time that the present approach is too weak to rule out the cases in (2): if nothing were said, (2) should be ruled in, contrary to fact.

To accommodate the fact in (2) under the present analysis, I have two possible solutions in mind. Extending Pesetsky and Torrego's (2001) idea that the complementizer *that*, which has long been assumed to be based-generated in C, is indeed based-generated in T and moves to C in the course of a derivation, one may argue that the complementizers, *that* and *whether*, and the articles, *a* and *the*, are base-generated in T and N, respectively, and hence it is impossible for the elements to appear overtly in (2), where ellipsis applies. Another possibility is to argue, following Roussou's (to appear) idea, that complementizers such as *that* and *whether* require a "propositional complement" to be licensed, and hence (2a, b), where the propositional complements are deleted, are ruled out as ungrammatical due to an illicit context for the overt complementizers. Likewise, given that noun phrases and sentences are parallel, as pointed out just above in terms of phase, it should, in principle, be possible to extend the same analysis to (2c): for the functional heads, *a/the*, to be licensed, a propositional argument must be in the complement of the functional heads. In any case, the ungrammaticality of (2) seems to be explicable in terms of independent mechanics of grammar even if we cannot capture the fact under a uniform licensing condition on ellipsis.

Thus, in the remainder of this squib, instead of examining a precise approach to (2), I seek a principled explanation of Takahashi's generalization in (6) by raising the following question:

(8) Why an elliptical site must be the complement of the phase head?

In the next section, I propose that (8) is explained in terms of Chomsky (2007, 2008) and Richards' (2007) feature-inheritance system.

2 Proposal

Chomsky (2007, 2008) argues that uninterpretable features (uF) such as Agree (φ-)features are inherited from phase heads, C and v*, to non-phase heads, T and V, respectively. Importantly, Richards (2007:569) develops this

feature-inheritance system further and reaches the following conclusion:

(9) "uF must spread from edge to nonedge (i.e., from C to T, v* to V, etc.)."

Specifically, Richards argues that the mechanism of feature-inheritance is indispensable for the phase-based approach that premises that (i) "Value and Transfer of uFs must happen together" (Richards 2007:566; Chomsky 2007:18-19) and (ii) "The edge and nonedge (complement) of a phase are transferred separately" (Richards 2007:568; Chomsky 2000:108; Chomsky 2001:13). Thus, if uninterpretable φ-features on C are not inherited by T when TP is transferred in accord with the premise (ii), the φ-features remaining on C are expected to induce a violation of the premise (i), according to which Value and Transfer of the uφ-features on C and the φ-features on DP, which is base-generated in Spec-v*P, must take place at the same transferred domain of TP. Hence, under the current MP, the mechanism of feature-inheritance plays an important role for yielding a convergent derivation for the interface.

Here, under this feature-inheritance system, I would like to claim that Takahashi's Generalization (6) is "explained" as follows: an elliptical site must be the complement of the phase head because the phase head enters a derivation with an Ellipsis-feature (hereafter [E]), which triggers deletion at PF, and an [E]-feature is inherited from the phase head to the complement head. Thus, under our analysis, the relevant elliptical sites in (1) are identified through the direct head-head relations between the phase heads, C, v*, and D, and their complement heads, T, V, and N, as follows:

(10) a. John met someone but I don't know [who$_i$ [C [~~$_{TP}$ T$_{[E]}$ John met t_i~~]]].

b. John liked Mary and Peter did [v* [~~$_{VP}$ V$_{[E]}$ liked Mary~~]] too.

c. John's talk about the economy was interesting but Bill's [D [~~$_{NP}$ N$_{[E]}$ Talk about economy~~]] was boring.

In (10), [E]-features are inherited from the phase heads, C, v*, and D, by their complement heads, T, V, and N, respectively, and as a result, the maximal projections, TP, VP, and NP, are identified as the relevant elliptical sites that can undergo deletion at PF. One significant theoretical consequence of the present analysis is that it does not have to assume spec-head relations nor probe-goal relations to identify the relevant elliptical sites, and it nicely fits with the current MP. In what follows, while clarifying some unclear points of

the present analysis, it is demonstrated that two distinguished properties of sluicing (i.e. Sluicing Merger Effects in Chung et. al 1995 and Sluicing COMP Generalization in Merchant 2001) can be given a principled account.

2.1 Sluicing Merger Effects

Our [E]-feature-inheritance analysis immediately raises the question of why [E]-feature must be inherited by the complement head from the phase head, or why the phase head cannot keep the feature without letting it inherited to the complement head. This can be given a principled explanation by considering the nature of Value and [E]-feature. That is, if the nature of Value is "feature matching" and "matching is feature identity" (Chomsky 2000:122), it follows from Richards' argument that it is matching that in fact takes place at the complement domain of the phase head. Further, if one of the core properties of [E]-feature is "the locus of morphosyntactic and semantic 'identification' requirements" (Merchant 2008b:170) (as well as the trigger for PF-deletion, as we have already mentioned), then it should be the case that [E]-feature encodes relevant information about an antecedent clause.

It is important to notice here that these considerations can yield a definite reason for why [E]-feature must be inherited from the phase head to the complement head: [E]-feature is the locus of identification, and identification requires feature matching, and hence [E]-feature must be inherited from the phase head from the complement head, because the complement domain of the phase head is the most appropriate domain for feature matching (identification). In this way, we can have a rationale for [E]-feature- inheritance from the intrinsic nature of the mechanisms involved.

As one may have already noticed, the above development of our analysis is reminiscent of Chung et al.'s (1995) LF copy theory for the derivation of sluicing. According to them, a sluicing sentence like (11a) has the structure in (11b, c):

(11) a. She's reading something. I can't imagine what.
b. … I can't imagine what [TP *e*]
c. … I can't imagine [CP what [TP She's reading something]]

They claim that from the underlying structure (11b), an LF representation appropriate for interpretation is derivable simply by copying (or recycling, in their terms) the antecedent TP (cf. Takahashi 2002 cited above, where it is important to notice that he uses the notion of recycling without recourse to LF, unlike Chung et al.). Thus, the final LF representation of (11b) looks like (11c). In order to get a proper interpretation from this LF representation, they claim it is necessary for *something* to be taken as a variable of the operator *what*.

Then, they propose a process called merger, which combines the indefinite part of a *wh*-phrase with its inner antecedent to make them serve together as a variable bound by the *wh*-operator. In a simple case like (11c), the indefinite part of *what*, which amounts to *something*, is totally merged into the inner antecedent by this process, and hence the domain of the *wh*-operator is unchanged.

As they claim, Chung et al.'s LF copying analysis makes an interesting prediction given Chomsky's (1964) proposal that non-branching lexical *wh*-phrases are in fact composed of two distinct morphological feature sets: WH on the one hand and an indefinite QP "something/someone" on the other. According to their theory, since the domain of a *wh*-operator is restricted by its inner antecedent, inner antecedents must be indefinites, one of the crucial components of *wh*-phrases. This prediction is borne out:

(12) a. ?*I know that Meg's attracted to Harry, but they don't know who.
b. ?*Since Jill said Joe had invited Sue, we didn't have to ask who.

(13) a. *She said she had spoken to everybody, but he wasn't sure who.
b. *She's read most books, but we're not sure what/which.

The ungrammaticality of these sentences is attributed, according to their theory, to the fact that the inner antecedents of the remnant *wh*-phrases are not indefinites (proper names in (12) and generalized quantifiers in (13)) and hence merger fails.

Remarkably, our [E]-feature-inheritance analysis explains (12) and (13) basically in the same way as Chung et al.'s analysis by attributing the process of merger directly to that of [E]-feature-inheritance. Specifically, since [E]-feature "knows" the content of the inner antecedents when it is inherited from the phase head to the complement head, the inner antecedents of the remnant *wh*-phrases must observe feature matching (identity) when an [E]-feature is inherited to the complement head from the phase head. Therefore, the ungrammaticality of (12) and (13) is reduced to a violation of feature matching, in our terms.

One crucial difference between our analysis and Chung et al. is whether the relevant licensing process takes place in narrow syntax or in LF: while in their analysis, it is implemented in LF by positing an entity such as *e* (cf. (11b)) as a triggering feature of the merger process, in our analysis such an entity is unnecessary. If possible, it would be better off to dispense with such an unclear feature in the grammar. In this respect, we can give credence to [E]-feature. Further additional advantage of positing [E]-feature in narrow syntax comes

from a consideration of the whole architecture of grammar. This point is well expressed by Merchant (2008a) as follows:

> "The greatest advantage of using [E]-feature, encoded as a partial identity function, to impose the identity requirement is that it localizes ellipsis identification, and allows us to dispense with the more usual formulations of the requirement on ellipsis which essentially postulate a separate 'ellipsis module' in the grammar (i.e., a global, late, well-formedness condition imposed just on the structures containing ellipsis)...."

In short, with [E]-feature that links licensing and identification requirements on ellipsis directly to the syntax that pairs sound and meaning, we can dispense with superfluous components only for dealing with elliptical phenomena. In this view, PF-deletion is the result of a feature on the syntax, not of a freely operating "deletion transformation" (Merchant 2008a). So, postulating [E]-feature in the grammar presents meaningful consequences for the overall architecture of grammar, beyond its rejectable appearance.

2.2 Sluicing COMP Generalization

To tell the truth (as we have often mentioned above), Merchant (2001, 2008a, b) has already proposed an analysis of ellipsis similar to the one we have developed here. Thus, Merchant (2008b:170) writes:

> "Ellipsis is implemented as a result of a feature, [E], present on the head whose complement is elided; this [E] feature (taken from Merchant 2001) triggers PF nonparsing ("deletion") of the complement of its host head, …"

Thus, he analyzes sluicing and VPE as follows (see Merchant 2008a for sluicing and Merchant 2008b for VPE, in particular):

(14) a. John met someone but I don't know [who$_i$ [C$_{[E]}$ [$_{TP}$ ~~John met t_i~~]]].
b. John liked Mary and Peter did [v*$_{[E]}$ [$_{VP}$ ~~liked Mary~~]] too.

According to Merchant, [E]-feature has the effect of triggering a context sensitive rule of the following sort, in SPE terms: [$_{\varphi IP/VP}$] → ⦸ / E __ (cf. Merchant's (2008a) (3)).

It is very important to notice here that our analysis of ellipsis entirely agrees with Merchant on assuming [E]-feature in the grammar and identification requirements on it, with the effect of PF-deletion of an element "associated" with it. However, it is more important to note that the way of its actual

implementation is crucially different from each other. That is, in Merchant's system, the relevant PF-deletion is triggered by instructing "do not pronounce a complement of a functional head that has [E]-feature." On the other hand, in our system, whether pronounced or not is more directly, or straightforwardly, associated with the syntactic operation, feature-inheritance. In fact, under our analysis, PF-deletion of an element is applied to the maximal projection that contains the functional head that is assigned [E]-feature in terms of feature-inheritance. Thus, a crucial difference between Merchant's system and ours is whether feature-inheritance is involved in identifying a relevant elliptical site in terms of an [E]-feature.

Significantly, this technical consideration of the actual role of [E]-feature on the PF side brings a conceptual problem for Merchant's system and, at the same time, offers conceptual support for our system. Conceptually, it is not clear at all why in Merchant's system ellipsis domains are the ones we found. More specifically, his system cannot explain why ellipsis takes place at a complement position but not a spec position (cf. Gallego 2009). Even if his system could have an answer to this question, it is clear that it would result in a stipulation. Contrary to this, our system is not troubled by such things. Under our analysis, since the domain to which PF-deletion is applied correlates with the position in which [E]-feature resides, or PF-deletion is simply triggered exactly at the position where [E]-feature remains, we do not have to stipulate such a devise that is needed to compensate for the "gap."

It is important to recall here that under our analysis, the position in which [E]-feature locates is crucially determined by the applicability of feature-inheritance. Thus in (10a) above, TP can undergo deletion at PF thanks to [E]-feature-inheritance from C. Here, a prediction emerges: CP, but not TP, should delete at the environment where inheritance is inoperative. This is because the phase head C is the locus of [E]-feature. If inheritance does not take place, [E]-feature is forced to remain on C and its maximal project CP, not TP, to be deleted at PF.

So our immediate task is to see whether there is such an environment indeed. Interestingly, following Richards' (2007) argument for the feature-inheritance system, Goto (2011) and Obata (2010) independently argue that C-to-T feature-inheritance does not take place in the matrix *wh*-question. According to them, the reason runs as follows: if C-to-T feature-inheritance is operative at the domain where "the edge and nonedge (complement) of a phase are transferred separately" (cf. the discussion around (9)), then it is expected that C-to-T feature-inheritance is inoperative at the domain where such a separate Transfer system is inoperative.

As illustrated by the derivation in (15) below, given that the most appropriate

manner of Transfer in the matrix *wh*-question is to hand the whole structure to the interface in one fell-swoop fashion (cf. Nissenbaum 2000), it should be the case that C-to-T feature-inheritance becomes inoperative at the matrix *wh*-question:

(15) [$_{CP}$ *who will(C)* [$_{TP}$ John visit]] ?
=> Transfer

Particularly, if the edge of C and TP were transferred separately in accord with Richards' argument, it is expected that the elements merged to the CP-edge position in (15), *who* will, wrongly remain as a residue of Transfer in narrow syntax, and will not be transferred throughout the derivation. If Transfer of a domain is triggered by the phase head which is merged immediately above the transferred domain (Chomsky 2000:108; Chomsky 2001:13), it is unclear how the final edge position, where no further phase heads are merged above, is transferred into the interface. Accordingly, the separate Transfer system should not be forced to apply in the matrix *wh*-question, as in (15), which crucially suggests that C-to-T feature-inheritance is inoperative at the matrix *wh*-question (see Goto 2011 and Obata 2010 for further arguments for this claim).

This consideration yields a significant consequence for a matrix sluicing like (16a), which has been standardly analyzed as having the structure in (16b):

(16) a. Mary will see someone. Who?
b. [$_{CP}$ Who$_i$ ~~C [$_{TP}$ Mary will see t_i]~~]

It is standardly assumed that a matrix sluicing as in (16a) is derived by PF-deletion after *wh*-movement, as shown in (16b), and there is no marked difference between the derivation of the embedded sluicing and that of the matrix sluicing.

However, it is important to notice here that from Goto/Obata's generalization that C-to-T feature-inheritance does not take place in the matrix *wh*-question, it follows that [E]-feature remains on C in the matrix sluicing, and it triggers PF-deletion of CP, but not TP, as follows:

(17) ~~[$_{CP}$~~ Who$_i$ ~~C [$_{TP}$ Mary will see t_i]~~]

In (17), one might wonder why the *wh*-phrase *who* can circumvent PF-deletion. However, this worry disappears once we assume the recoverability principle on deletion (Chomsky and Lasnik 1993): though PF-deletion applies

to the relevant part of the sentence that satisfies an identity condition which is required between an elliptical element and its antecedent, in (16a), there is no element that corresponds to *who* in the antecedent clause, and hence *who* remains not to be deleted, as in (17). Consequently, given our [E]-feature-inheritance analysis of sluicing together with the generalization that C-to-T feature-inheritance does not take place in the matrix *wh*-question, it follows that CP is identified as a relevant elliptical site for a matrix sluicing.

Remarkably, this analysis of a matrix sluicing gives a straightforward account for the following Sluicing COMP Generalization, first observed by Merchant (2001:62):

(18) *Sluicing COMP Generalization* (Merchant 2001:62)
In sluicing, no non-operator material may appear in COMP.

(18), in effect, states that T-to-C movement does not take place in the matrix sluicing, as illustrated by the example given in (19):

(19) A: Max has invited someone.
B: Who (*has)?

Note that the obligatory absence of the auxiliary element *has* in (19B)'s reply is puzzling when we combine two standard assumptions: the auxiliary raises to C in English *wh*-questions and sluicing involves TP-ellipsis. Under these standard assumptions, the auxiliary element *has* in (19B) should have moved out of the elliptical site, and should hence be able to surface next to the *wh*-phrase *who*, contrary to fact.

However, under our analysis of the matrix sluicing presented in (17), we can straightforwardly explain why the auxiliary element cannot appear in the C head under the matrix sluicing. That is, as shown in (20) below, since the C head retains an E-feature without passing it to the T head, the auxiliary element *has* cannot appear in the C head whether it stays in situ (i.e. the T head) or moves to the C head (a possible landing site for the element). In either way, it is doomed to be deleted with those other than the *wh*-phrase in accord with the recoverability principle on deletion.

(20) ~~[$_{CP}$ who$_i$ has$_j$ C$_{[E]}$ [$_{TP}$ Max t_j invited t_i]]~~

In this way, the sluicing comp generalization (18) is explained in terms of the non-feature-inheritance property of the matrix *wh*-question.

3. Conclusion

In the first half of this paper, we have argued that neither spec-head relations nor probe-goal relations can play a key role in licensing the relevant elliptical sites under the current MP, and in the latter half, we have proposed that they are licensed in terms of the mechanism of [E]-feature-inheritance from the phase head to the non-phase head. Our analysis offers a principled explanation for Takahashi's generalization that states that an elliptical site must be the complement of the phase head. Furthermore, it offers empirical support for Chomsky's hypothesis that some of the properties that appear to be inherent to a head are inherited from the above phase head. Finally, through the technical refinement of the system, we have argued that the [E]-feature-inheritance analysis of sluicing provides a principled account for both Chung et al.'s Sluicing Merger Effects and Merchant's Sluicing COMP Generalization.

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