Agree and Move*

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Lee, Sangoh. 2003. Agree and Move. *The Linguistic Association of Korea Journal, 11*(3), 45-64. The aim of the paper is to show that the definition of Move given in Chomsky (2000) cannot be maintained because there are cases where the phrase for "pied-piping" is not identified by an uninterpretable feature in a goal for Agree. It also gives rise to a "look-ahead" problem. Furthermore, his Activization hypothesis that only the expression with an uninterpretable feature is accessible to syntactic operations leads us to make an *ad hoc* assumption that expletive *there* merged to Spec-T is an X^0 head. We do not need to keep the argument that simpler operations (Merge, Agree or their combination) are chosen over Move even though Move is analyzed as a more complex operation. The choice of an operation does not depend on economy considerations that employ the Merge over Move preference.

Key words: Agree, Move, Merge, Identify, Move over Merge (MoM), look-ahead, probe, goal, Phrase Impenetrability Condition (PIC), lexical array (LA), pied-piping

1. Introduction

Chomsky (2000: 135) states that Move of β, targeting α, consists of the following three components:

(1) a. A probe P in the label L of α locates the closest matching [goal] G in its domain.
b. A feature G′ of the label containing G selects a phrase β as a candidate for "pied-piping."
c. β is merged to a category K.

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He claims that the operation Move is a *composite* operation involving Agree (= (1a)), Identify (= (1b)) and Merge (= (1c)). The present paper is to argue (i) on the conceptual aspect, Move should not be analyzed as a composite operation like one of the traditional transformations such as Passivization; and (ii) on the empirical aspect, there are no reasons to assume that Move is economically more complex than Merge. I will discuss Lee's (2001c) claim that Chomsky's (2000, 2001a) assumption that simpler operations (that is, Merge, Agree or their combination) prevent Move from applying is conceptually incorrect. I will also show that the definition in (1) brings about "look-ahead" properties. And it will be argued that empirically there is no need to assume that Move is chosen when nothing else (Merge or Agree) is possible.

2. Agree and Move

Chomsky (2000) assumes that there are three computational operations in the grammar: Merge, Agree, and Move. The operation Merge, which is indispensible for any language-like system, selects two syntactic objects (α, β) and forms a new syntactic object K (α, β). Agree[1] establishes a relation between (a set of) features in a lexical item (LI) α and (a set of) features F in the domain of α.[2] The third operation Move is defined as follows: it first establishes agreement between a *probe* of an LI α and a *goal* F in its domain and then merges P(F) to αP, where P(F) is determined by F and αP is a projection headed by α. The notion of Move in Chomsky (2000) differs from that in Chomsky (1993, 1995) in two respects:

(2) a. Move is a combined operation of Agree, Identify and Merge.
b. There is no longer Move-F.

1) In fact, there is an operation very similar to Agree in Chomsky (1993, 1995): checking. But checking is treated as an ancillary process of the operation Move. I believe that checking should have been treated as one of the major computational operations, as Agree in Chomsky (2000).

2) The domain of a head P is the c-command domain of P.

(2a) implies that conceptually Move is more complex than Merge. (2b) presupposes that the phenomena that used to be analyzed in terms of covert Move or Move-F must be accounted for by some other mechanisms.

To understand how Agree and Move operate in Chomsky (2000), let us consider the derivation of sentence (3).

(3) A young candidate was elected.

Suppose that at some stage of the derivation of (3) we have the following structure:

(4) T-was elected a young candidate.

The ϕ-set of T acting as a probe seeks a goal, a set of "matching" features to establish agreement, erasing uninterpretable features of both probe and goal. This is called Agree. In (4) the goal is the ϕ-feature set of *a young candidate*, including the nominative Case. But the EPP-feature of T must also be satisfied and erased; in this case, by raising the phrase P(G), *a young candidate*, determined by the goal, to [Spec, TP].

According to Chomsky's (2000: 122) claim, "The combination of selection of P(G), Merge of P(G), and feature-deletion under match (Agree) is the composite operation Move, which dislocates *a young candidate*, eliminating all uninterpretable features." In other words, Move is a composite operation which consists of the processes of seeking a goal for Agree, determining a phrase for Move, and moving the phrase to satisfy the EPP-feature. It is claimed in the earlier model of generative grammar that the three elementary transformations (i.e., movement, insertion, and deletion) happen to co-occur in English passive constructions, without recourse to such a transformational rule as Passivization. This paper, on the basis of this observation, claims that the three processes, listed in (1), happen to occur together in the derivation of a sentence like (4), but there is no such thing as a

composite operation Move, unlike Chomsky's (2000) assumption. Both theoretical and empirical reasons supporting our claim that Move is not a composite operation will be unpacked below.

First of all, Chomsky's (2000: 102) claim that "... Merge or Agree (or their combination) preempt Move ..." *conceptually* contradicts his definition of Move given in (1). If Move is a composite operation of Agree and Merge (plus Identify) as defined in (1), how do its subcomponents Merge and Agree (or their combination) prevent the operation of which they are parts from taking place? In other words, according to (1) Move of a phrase means that (i) the phrase must be selected by an uninterpretable feature in a goal for Agree, and that (ii) it is merged to Spec-α, α containing a probe. If his claim is on the right track, human languages must not have any movement properties, because in his system Agree and Merge, which are subcomponents of Move, always *preempt* Move. Therefore, in *there* constructions I claim that Move should not be regarded as a composite operation consisting of Agree and Merge (plus Identify) as defined in (1) but an independent syntactic operation. This argument against Chomsky's (2000, 2001a) definition of Move can also be found in Lee (1999b).

Lee (1999b) analyzes that it is not difficult to find *empirical* evidence in which the P(G) that contains a goal for Agree does not coincide with a syntactic object that is moved by Move. Consider the following English expletive construction, which shows that a raised category is not a phrase identified by the goal for Agree.

(5) There seems [$_{TP}$ *t* to be someone in the backyard]

At some point of the derivation of (5), we will have the following intermediate structure:

(6) T-seems [$_{TP}$ there to be someone in the backyard]

Under Chomsky's (1995) checking system, in order to derive (5) from (6) the expletive *there* first moves to Spec-T overtly, and then the Φ

-features of *someone* covertly raise and adjoin to matrix T (checking the relevant features). Under Chomsky's (2000) Agree system which no longer admits the overt-covert distinction, however, the operation Agree applies first: the probe, the ϕ-set of T, seeks a goal (matching features *someone* carries along) for agreement, eliminating the uninterpretable ϕ -set of T and the structural Case of *someone*. But what raises to Spec-T in this case is not the phrase *someone* determined by the goal, but the expletive *there*. In other words, in (6) T agrees with *someone*, but identifies the expletive *there* as a phrase for dislocation. This expletive construction clearly shows that a moved category is not a phrase identified by the goal for Agree. In other words, a candidate for Move is not always determined by the goal of a probe. If our observation is correct, structures like (5) clearly show that Move and Agree are independent operations.

Lee (1999b) indicates that the following simpler expletive example also shows that the P(G) containing a goal for Agree is not identical with the phrase that merges to Spec-T to meet the EPP:

(7) There is someone in the backyard

Before we merge the expletive *there* to SPEC-T, we will have the following structure:

(8) T-is someone in the backyard

In (8) the probe ϕ-set in T takes matching features of *someone* as its goal, but the expletive *there* merges to Spec-T instead of raising *someone* to SPEC-T, again indicating that Move and Agree are independent operations.

According to Lee's (1999b) analysis, the following English ECM construction is another example in which a phrase containing a goal for Agree is different from a phrase that satisfies the EPP:

(9) He believes there to be someone in the backyard

At some stage of the derivation of (9), we have a structure like (10) as its intermediate structure:

(10) [$_{v'}$ v [$_{VP}$ believe [$_{TP}$ there T (= to) [$_{VP}$ be someone in the backyard]]]

In (10) the embedded T as a probe takes the ϕ-features of *someone* (including Case) as its goal for Agree, perhaps erasing the uninterpretable [person] feature of T but not the uninterpretable accusative Case of *someone.* According to Chomsky (2000), this is due to the fact that the T of the complement of raising and ECM predicates is "defective." Thus, we can say that "full" agreement does not take place between the "defective" T and *someone*, meaning that the latter has to undergo further agreement with v to eliminate its uninterpretable Case feature. But I do not see any connection between the P(G) (i. e., *someone*) containing the goal (G) of the probe (in this case, the embedded T or v) and the expletive *there* merged to embedded Spec-T. To put differently, the goal for Agree selects *someone*, but what is merged to embedded Spec-T to meet its EPP-feature is the expletive *there*.

Another piece of evidence against the claim that the operation Move is a composite operation is found in the following example:

(11) Who do you believe Mary to like?

At some stage of the derivation of sentence (11), we would obtain (12) as its intermediate structure.

(12) [v believe-v[$_{VP}$ tv [$_{TP}$ Mary [$_{T'}$ T$_{def}$(=to) [$_{vP}$ who [$_{v'}$ t$_{Mary}$ [$_{v'}$ like-v [$_{VP}$ t$_{V}$ t$_{who}$]

In (12) the verbal complex *believe-v* selects *Mary* in the Spec-T as its goal for Agree, deleting its own Φ-features and the accusative Case of the goal. However, *who*, the specifier of embedded vP, has to raise to

its Spec position, to obviate a Phrase Impenetrability Condition (PIC) violation for further raising of *who*. The condition is defined as follows:

(13) The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations. (Chomsky 2001a)

PIC claims that the operation applying at ZP in structure [$_{ZP}$ Z . . . [$_{HP}$ α [H YP]]] is accessible only to the edge α or head of HP, but not to elements within YP. Thus, the *wh*-word *who* has to be raised to the outer Spec-*v*P, so that it may get to the matrix [Spec, CP].

In summary, I have argued that the definition of Move as a composite syntactic operation as in (1) cannot be maintained on both conceptual and empirical ground, as long as it is assumed that the so-called "simpler operations" Merge and Agree preempt more complex operations like Move. As noted above, these problems have already been pointed out by Lee (1999b), too. Therefore, he presented a range of empirical evidence in support of the claim that Move should be regarded not as a composite operation of Agree and Merge (plus Identify) but as an independent syntactic operation.

3. Global Properties of Move

Let us now reconsider the conceptual problems with Chomsky's (2000) the definition of Move in (1), repeated here for convenience sake. First of all, it may give rise to a "look ahead" property that human language should not have.

(1) (a) A probe P in the label L of α locates the closest matching [goal] G in its domain.
(b) A feature G′ of the label containing G selects a phrase β as a candidate for "pied-piping."
(c) β is merged to a category K.

Chomsky (2000: 135) adds to (1), "P and G′ are uninterpretable. P

deletes if G is active (Suicidal Greed). G′ also deletes, but it cannot delete in step (a) before carrying out its function in step (b)."

Suppose we apply (1) to (4), repeated here as (14).

(14) T-was elected a young candidate.

First, the operation Agree, step (a) of (1), applies to (14): the probe P, the ϕ-feature set of T, takes the ϕ-feature set of *a young candidate* as its closest goal G, and deletes (Suicidal Greed), because the goal is "active."[3] But G′, the uninterpretable nominative Case feature of *a young candidate*, which makes the goal active, cannot delete in step (a). If it were deleted, step (b) cannot apply to determine the same DP as a candidate for "pied-piping", because G′ is no longer available.

Then, let's compare the derivations of the expletive sentence in (15a) and its corresponding non-expletive sentence in (15b).

(15) a. There seems [*t* to be someone in the backyard]
b. Someone seems [*t* to be *t* in the backyard]

At some stage of the derivation, both sentences in (15) will have the following intermediate structure:

(16) [$_{T'}$ T_{def}-be someone in the backyard]

Since Chomsky (2001a) assumes that only a probe with a full complement of ϕ-features is capable of erasing the uninterpretable feature that makes the matching goal active, the "defective" probe T_{def}, which is assumed to have only the [person] feature, cannot delete the uninterpretable nominative Case of the associate nominal in (16). We can either merge the expletive *there* or raise the associate *someone* to Spec-T_{def}: if the initial lexical array(LA) contains *there*, Merge applies,

3) Chomsky (2000) claims that a syntactic object must contain an uninterpretable feature to be visible to an operation. Once it is deleted from a syntactic object, it becomes inactive and "frozen in place."

yielding the structure (17a), otherwise, Move applies, deriving the structure in (17b):

(17) a. [$_{TP}$ there to be someone in the backyard]
b. [$_{TP}$ someone to be *t* in the backyard]

If we merge the verb *seem* and the functional category T to structures in (17), we obtain the structures in (18a) and (18b), respectively.

(18) a. T-seems [$_{TP}$ there to be someone in the backyard]
b. T-seems [$_{TP}$ someone to be *t* in the backyard]

Notice that both *there* and *someone* in (18) are computationally active syntactic objects because their uninterpretable features ([person] in the former[4)] and nominative Case in the latter) are not erased, as we have indicated above that the embedded T_{def}, being defective, is not capable of deleting relevant uninterpretable features.

The derivation of (15b) from (18b) exactly follows the steps described in (1): the ϕ-feature set of nondefective T locates the ϕ-set of *someone* as its goal, the nominative Case feature G′ of *someone* selects *someone* as a candidate for "pied-piping", and finally *someone* is merged to SPEC-T. As we have mentioned above, however, according to Chomsky (2000), we cannot delete the uninterpretable nominative Case feature of *someone* in step (a) because it should remain active until we complete steps (b) and (c). The derivation of (15a) from (18a), however, is in contrast to that of (15b) from (18b): the probe P of T takes the ϕ-feature set of *someone* as its goal G (step (a)). But, unlike in (18b), the Case-feature G′ of *someone* can (perhaps must) delete at this point before step (b) because it does not play any role in determining the phrase for "pied-piping" in this construction. Instead, the expletive *there*,

4) Chomsky (2000) assumes that the expletive *there* contains an uninterpretable [person] feature, which makes the expletive computationally "active", so that it is visible to Merge and Move.

located closer to T than *someone,* is selected as a candidate for "pied-piping," and merged to Spec-T. If this is true, it is obvious that we have to know in advance (or "look ahead") whether G′ functions in selecting a phrase for "pied-piping" or not, before we decide to delete G′ (i.e., Case feature). If G′ determines the phrase for "pied-piping," it has to remain until the completion of step (c); if not, it deletes with application of Agree (i.e., step (a)).

To sum up, I have argued that the definition of Move in (1) involves a global (i.e., "look-ahead") property. In other words, when we apply step (a) of (1), we have to know in advance whether a phrase containing a goal is to be selected and "pied-piped" or not before we delete its uninterpretable features. If it is so, we have to keep them intact until the completion of steps (b) and (c). Otherwise, they delete upon application of step (a).

4. Economy Conditions

Next, let's consider how the operation Move is treated in the minimalist program under economy considerations. Of the three computational operations, Merge, Agree and Move, Merge is claimed to be indispensable in any language-like system, but Agree and Move are found only in human language. But it is interesting that in Chomsky (2000, 2001a) Move is economically more expensive than the latter two operations, and he also claims that simpler operations, Merge or Agree (or their combination), preempt Move. Therefore, if there occurs a situation in which Merge/Agree and Move compete for application, economy considerations require that Merge or Agree always win over Move.

However, it will be argued that Chomsky's assumption that Merge is preferred over Move cannot be maintained since the former is more economical than the latter (cf. Lee (1999c)). Consider the following examples that Chomsky (1995) frequently uses when he argues for the preference of Merge over Move:

(19) a. There seems [$_{TP}$ *t* to be a man in the room]
b. *There seems [$_{TP}$ a man to be *t* in the room]

Chomsky (1995) claims that the grammaticality contrast between the examples in (19) constitutes the evidence that Merge is preferred over Move.

Then, let's consider why it is so. At some point of the derivation of (19), we will have the following intermediate structure:

(20) [$_{T'}$ T (= to) be a man in the room]

There are two possible ways to fill in SPEC-T in (20): we can either insert the expletive *there* as in (21a) or raise *a man* as in (21b).

(21) a. [$_{TP}$ there to be a man in the room]
b. [$_{TP}$ a man to be *t* in the room]

If we merge the verb *seem* and T to the structures in (21), we will obtain the structures in (22), respectively:

(22) a. T-seems [$_{TP}$ there to be a man in the room]
b. T-seems [$_{TP}$ a man to be *t* in the room]

Raising of the expletive *there* to the Spec position of the matrix T in (22a) produces the grammatical sentence in (19a), but merging of expletive *there* to the Spec position of the matrix T in (22b) produces the ungrammatical sentence in (19b).[5] Chomsky (1995) argues that the result naturally follows if we assume that Merge is chosen over Move in (20), when we generate (21).

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5) Of course, we can obtain the grammatical expression, "A man seems [*t* to be *t* in the room]," by raising *a man* to the Spec of the matrix T. But this option cannot be taken, because it does not exhaust the relevant Numeration, leaving expletive *there* unused. By definition, the derivation that does not exhaust Numeration crashes.

The following example, however, presents evidence that directly contradicts the claim that Merge has to apply over Move. Consider the derivation of the super-raising construction in (23).

(23) *John seems [that it was told t_{John} [that he had to leave]]

At some stage of the derivation of (23), we will have the structure in (24) as an intermediate structure.

(24) [$_{T'}$ T-was told John [that he had to leave]]

As was the case in (20), we have two options for filling the Spec position of T in (24): we can either insert the expletive *it* or move *John*. Suppose we choose the first option, inserting expletive *it* to the Spec of the embedded clause, following Chomsky (1995: 346). Then, we will obtain (25).

(25) [$_{TP}$ it was told John [that he had to leave]]

Next, suppose we merge (25) with the verb *seem* and T. We will get the structure in (26).

(26) T-seems [that [$_{TP}$ it was told John [that he had to leave]]

Clearly, there is no way of obtaining any convergent derivation from (26). If we raise expletive *it* to the matrix Spec-TP, it violates one of the most important principles which regulates movement in the grammar:

(27) Last Resort
Move raises α to target K only if some feature F of α enters into a checking relation with some feature F′ of the target K.

Since features of expletive *it* are all checked in embedded Spec-TP,

raising it to the matrix Spec-TP as in (23) violates (27).

Then, suppose we raise *John* to the Spec of the matrix T as in (28).

(28) *John seems [that it was told t_{John} [that he had to leave]]

(28) seems to satisfy the Last Resort Condition since both *John* and *it* enter into relevant checking relations with the matrix T and the embedded T, respectively. (28), however, violates another important principle of the grammar:

(29) Minimal Link Condition
A head H attracts α only if there is no β, β closer to H than α, such that H attracts β.

In (28), expletive *it* is closer to the matrix T than *John* before raising. Therefore, the expletive prevents *John* from raising to the matrix Spec-TP position. This fact shows that if we choose the application of the "cheaper" operation Merge to (24), following Chomsky (1995), we have no way of generating any convergent expression.

Then, it is obvious that we have to choose the option of applying Move over Merge to (24), generating (30), which violates the theory that Merge is preferred over Move.

(30) [John was told t_{John} [he had to leave]]

Merging of the verb *seem* and T with (30) will produce (31).

(31) T-seems [that [John was told t_{John} [he had to leave]]]

At the final step, if we merge expletive *it* with (31), then we get the grammatical sentence in (32).

(32) It seems [that John was told [that he had to leave]]

Chomsky (1995: 295-97) offers a "global" account of this type of the super-raising construction like (23). He claims that what rules out super-raising as in (23) is not economy considerations, because economy of derivation is taken into consideration at some stage Σ of a derivation only if there is a convergent extension of Σ. Since in the minimalist framework the most economical (i. e., optimal) derivation is selected only from convergent derivations, it is claimed that economy has nothing to do with the structure like (23), which does not lead to any convergent derivations. The conclusion we can draw from the analysis of the super-raising construction given above is that whether we apply Merge or Move to a structure is not determined by economy considerations, but by a "looking ahead evaluation" whose operation (i.e., Merge or Move) will eventually lead to a convergent derivation.

Chomsky (2000) continues to argue the theory that Move (and Agree) is more expensive than Merge, and thus Merge (or Agree) is preferred over Move by economy considerations. That is, he introduces the phase to maintain the preference of MoM(Merge over Move). In Chomsky (2000), it is assumed that we provide a separate sublexical array for every cyclic node, called phase: CP and *v*P. For example, the sentence in (33) has four (bracketed) phases:

(33) [$_{CP}$ John [$_{vP}$ *t* thinks [$_{CP}$ that Tom will [$_{vP}$ t win the prize]]]

Derivations must proceed phase by phase. In other words, the Phase Impenetrability Condition given in (13) requires that operations applying in a given phase cannot apply solely affecting some lower phases. Thus, if there is something to merge or move in a phase, we have to do it within the phase.

Consider the structure in (20), repeated here as (34).

(34) [$_{T'}$ T (= to) be a man in the room]

As we have discussed above, either the expletive *there* may be merged or *a man* may be raised, yielding (21a) and (21b), respectively.

As Chomsky (2000: 104) indicates, the choice depends on whether or not the expletive *there* is included in the sublexical array for the phase under consideration: if it is, Merge applies; otherwise, Move applies. If it is true, there is no motivation to maintain the argument that Merge is preferred over Move.

5. Merge over Move and EPP

Before discussing the combining form of *there* and T_{def} in terms of the effect of EPP, let's consider another case of an example where an nontrivial question arises. According to Chomsky (2000, 2001a), Move is more complex than its subcomponents Merge and Agree, or even the combination of the two, since it involves the extra step of determining P(F) (generalized "pied piping"). If so, is it right that the preference of Merge over Move is always applied for satisfying EPP? I will show that this answer is not conformable to the satisfaction of EPP, in particular, in the case of raising constructions containing expletive *there*. Furthermore, the upcoming observation on EPP leads us to postulate that Move should not be considered as a composite operation consisting of Agree and Merge plus Identify but an independent syntactic operation necessary only for the EPP satisfaction. According to Chomsky, the EPP-feature of T can be satisfied by either Move or pure merge of *there*, as in (35a) and (35b) below, respectively.

(35) a. A man is [t in the room]
b. There is [a man in the room]

If so, why is the sentence in (36b) blocked even though the EPP-feature of the embedded T is satisfied by the movement of the DP *a man*?

(36) a. There seems [$_{TP}$ t to be a man in the room]
b. *There seems [$_{TP}$ a man to be $t_{a\ man}$ in the room]
(37) a. We expect [$_{TP}$ several students to be $t_{several\ students}$ in the classroom]

b. *We expect [$_{TP}$ t_{we} to be several students in the classroom]

As previously mentioned, the ungrammaticality of (36b) is attributed to Chomsky's (2000, 2001a) assumption that Move is preempted where possible by the simpler operations such as Merge and Agree. That is, Merge of *there* is preferable to Move of *a man* in satisfying the EPP feature of the embedded T. On the contrary, where an expletive is not available in the initial lexical array, Move of DP *several students* yields a desirable result (37a). Therefore, MoM does not seem to be applied in (37). That is, although the preferred operation Merge of an argument *we* applies to satisfy the EPP-feature of the embedded T in (37b), the derived sentence (37b) is proven to be ungrammatical, contrary to our expectation.

To solve this problem, Chomsky (2000) adopts the theta-theoretic principle proposed in Hale & Keyser (1993): arguments are required to be pure-merged only in theta positions. (37b) is now excluded, since the argument *we* is merged in non-theta position (i.e., [Spec, TP]). Despite the assumption that Agree and Merge preempt Move, the reason why raising is possible is attributed to the theta-theoretic principle. The theta-theoretic principle bars pure merge of arguments in non-theta positions, but allows Move to such positions.

From this point of view, Chomsky assumes that preference of Agree or Merge over Move yields the *good design conditions* and preempts Move. At this point, another question arises as to why Merge of EXPL does not always bar Move as seen in (32) and (34)?

To answer this question, Chomsky (2000) partly answers by using the initial choice of lexical array (numeration).[6] However, these claims are not conformity with the following sentences. Although EXPL is available in the lexical array, Move takes place in the embedded phrase

6) The concept of Numeration is introduced in Chomsky (1994) like the following:

(i) A numeration N is a set of pairs (LI, ι), where LI is an item of the lexicon and ι is its index, understood to be the number of times that LI is selected.

α, as illustrated in (38), (39), and (40).

(38) There are questions about [$_{\alpha}$ what C [$_{TP}$ John read t]]
(39) It's fun [$_{\alpha}$ PRO to [t go to the beach]]
(40) [$_{\beta}$ There is likely [$_{\alpha}$ a proof to be discovered]]

Raising is possible throughout in the closed system α, despite the fact that Agree and Merge preempt Move. In terms of Merge over Move, (38) and (39) are contrasted with (40). That is, neither MoM nor LA(lexical array) can account for the above examples.

As a solution to these examples, Chomsky (2000) assumes the notion of 'phase', depending on the subarray LA_i. Suppose that the subset LA_i is also a phase (PH), which refers to a verbal phrase with full argument structure (*v*P) or a full clause including tense and force, i.e., CP. LA_i contains one occurrence of C or of v, determining clause or verb phrase. Thus, every movement should observe the 'Phase Impenetrability Condition'(PIC), repeated here as (41):

(41) PIC
In PH α with head H, the domain of H is not accessible to operations outside α, but only H and its edge are accessible to such operations. (where PH= [α[H β]], β= the domain of H, α= the edge of H) (Chomsky 2000: 108)

Let us examine the examples (38) and (39) under Chomsky's assumption that derivations proceed phase by phase (i.e., CP and *v*P). At each phase of a derivation, a subset of the numeration is submitted to the derivational operation, and when the subset is exhausted, the computation may proceed if possible, or it may turn to the numeration and select another subset, proceeding as before. Under the assumption that phases are propositional, LA_i is determined by a single choice of C or v, and further look-ahead is likely to be unnecessary, with the embedded clause α derived from LA_i lacking EXPL. In (38) and (39), the PH is α that contains no expletive. However, in (40), the PH is

β, not α. The PH β contains the expletive *there,* hence the EPP of the matrix T is satisfied by Merge of *there* because of MoM. In (38) and (39), although expletive *there* is available in the lexical array, Move of the *wh*-phrase applies in the embedded CP. By introducing the notion of "subarray", in (38) and (39), expletive *there* is not available in the embedded CP, which is a phase, thus Move can take place within the phase. Therefore, raising constructions seem to extend the phase to the matrix clause as in (40).

6. Conclusion

In Chomsky (2000), Move is defined as a composite operation consisting of three components: Agree, Identify and Merge. I have argued that the definition of Move given in (1) cannot be maintained because there are cases (see (7), (9) and (12)) where the phrase for "pied-piping" is not identified by an uninterpretable feature in a goal for Agree. I have claimed that, just as there is no composite transformation such as Passivization, there is no composite operation like Move as defined in (1). The derivation of sentences like (3) happens to follow the three processes in (1), as the three elementary transformations (i.e., movement, insertion and deletion) happen to occur together in English passive constructions.

I have also argued that his definition of Move in (1) and the added comments give rise to a "look-ahead" problem; we have to know "in advance" whether the uninterpretable feature G′ of a goal plays a role in selecting a phrase for "pied-piping" or not, before we delete G′. If it does, G′ has to remain until the phrase is merged to a category; if it does not, G′ immediately deletes. Furthermore, his Activization hypothesis that only the expression with an uninterpretable feature is accessible to syntactic operations leads us to make an *ad hoc* assumption that expletive *there* merged to Spec-T is an X^0 head.

We do not need to keep the argument that simpler operations (Merge, Agree or their combination) are chosen over Move even though Move is analyzed as a more complex operation. As I have argued, the choice of

an operation does not depend on economy considerations that employs the Merge over Move preference.

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