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Move is Remerge*

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In this paper I discuss a basic theoretical question: Does movement contain a step of copying? Since Chomsky (1993), Copy as an operation to derive displacement effects has been introduced into the syntactic theory. In contrast, it is also claimed that displacement effects are achieved by the operation Remerge, without any copy operation (Epstein et al. 1998, among others). I present some problems of the Copy Theory of movement: the problematic motivation and implementation of the assumed PF-deletion; a paradox with respect to the locality of feature-checking; and a problem in theta-role receptivity. I argue that overt movement is simply remerger of a given term, rather than copying of any element. The Remerge Theory works without the assumed operation of Copy, and is free from the problems of Copy Theory of movement. The paper also addresses how issues such as trace, reconstruction effects, and resumptive pronouns are dealt with in the Remerge Theory of movement.

Key words: movement, move, merge, remerge, copy

1. Introduction

In this paper we discuss a basic theoretical question: Does movement contain a step of copying? Or, do we need the operation of Copy in computation to achieve a displacement effect? Since Chomsky (1993), Copy as an operation to derive displacement effects has been introduced into the syntactic theory. (For the history of the Copy theory, see Chomsky 1981:89f, 2000:145, ft.62.) In contrast, it is also claimed that displacement effects are achieved by the operation Remerge, without any copy operation (e.g., Epstein et al. 1998, also cf. Bobaljik 1995a, Gärtner 1997). We shall call the Copy Theory of movement CT, and the Remerge Theory of movement RT.

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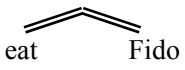
Let us first of all see how a simple sentence, (1a), is derived in CT and RT, respectively. The lexical Array of the sentence is listed in (1b). (Strictly speaking, there should be two Arrays, one is for the building of vP and the other is for the rest of the structure. Let us ignore this).

(1) a. A monster ate Fido.
b. Array: a, monster, [+past], eat, Fido

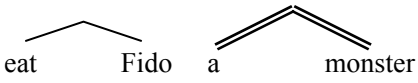
Merge is defined as in (2) (Chomsky 1995:396):

(2) Apply to two objects α and β, Merge forms the new object γ.

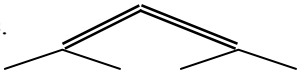
In order to derive (1a), both theories have the steps in (3a) through (3d), where only Merge occurs.

(3) a.


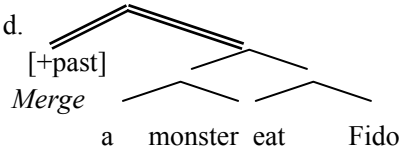
Merge

b.


Merge

c.


Merge

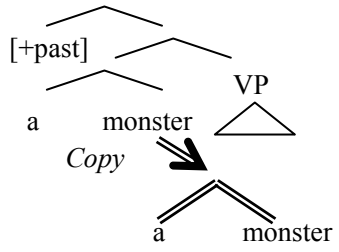
d.


After (3d), it is generally assumed that there is an EPP feature of Infl (or some other feature, see Bošković 2002) that needs to be checked by Merge immediately.

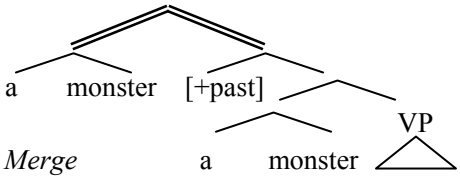
CT: copy-merge-delete

In CT, the nominal *a monster* is copied, as in (3e), and is merged, as in (3f). This operation of Merge checks the EPP feature. Later, the lower copy of *a monster* is deleted, as in (3g).

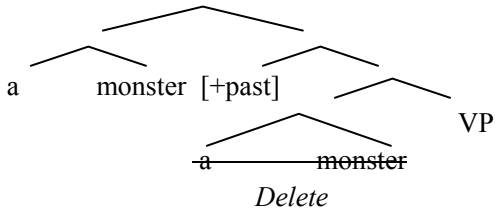
(3) e.



f.



g.



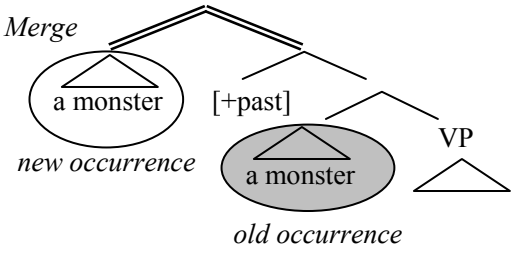
The crucial issue here is that the original *a monster* is cloned in (3e) and thus there are two copies of *a monster* in the whole derivation.

Now consider RT.

RT: merge again

In RT, the DP *a monster* undergoes another instance of merge. Specifically, in (3c), it is merged with *eat Fido*, and in (4), it is merged with the output of (3d). This operation of Merge checks the EPP feature.

(4)



Derivationally, when the element *a monster* travels, it appears in a new syntactic position, and establishes new structural relations with other elements. It cannot occur in the old place and the new place at the same time. Accordingly, no deletion operation exists for displacement. Moreover, the old occurrence and the new occurrence of the same element, *a monster* here, cannot be both visible with respect to any specific structural consideration. If the old occurrence is considered, as in reconstruction, the new occurrence is invisible. In this case, only the structure of (3c) or (3d) is examined.

In (3c) or (3d), *a monster* does not c-command [+past], for instance. In contrast, if the new occurrence of *a monster* is considered, this DP does c-command [+past]. Therefore it is wrong to claim that this DP in its new occurrence does not c-command [+past].

We can see that the displacement effect is derived from the remerger of *a monster*, not from a copying operation in RT. The crucial issue here is that the DP *a monster* travels, instead of being cloned. The nominal has two occurrences in the whole derivation, but not two full-fledged sets of features. This is the major difference between RT and CT.

In the literature, problems of CT have been noted. Gärtner (1998), for instance, points out a technical problem of CT (see our 2.2), and Epstein et al. (1998) straightforwardly deny the existence of the Copy operation. Nevertheless, we still see the frequent use of this assumed operation in the literature (e.g., Hornstein 2001, Nunes 2001, Fox 2002). To copy or not to copy has thus become one of the basic issues of syntactic theory. If CT is indeed problematic, one needs to be shown its conceptual and empirical inadequacies. This is the goal of this paper.

We shall first present some problems of CT (section 2), then the properties of RT, showing how RT is superior to CT (section 3), and finally, we shall discuss problems of some copy theories not related to movement (section 4).

2. Problems of the copy theory

CT assumes that movement contains two more steps than Merge: copying and PF-deletion of the silent copy. I present three main problems of CT.

2.1 The assumed PF-deletion

In this section I argue that either the motivation or the operation of the assumed PF-deletion of CT, the step in (3g), is problematic.

In CT, it is assumed that raising a syntactic element α leaves a copy behind. Chomsky (1995:250) states: "[...] Delete (Delete-α), which we have assumed to leave the structure unaffected apart from an indication that α is not 'visible' at the interface." In Chomsky (2000:114), he claims:

> If α in the syntactic object SO is merged somewhere else (by the operation Move) to form SO', then the two occurrences of α constituent a chain, the original occurrence called the *trace* or *copy* of the new one. The terminology is misleading, for several reasons. First, each of the elements is a "copy" of the other. Second, copy theory is the simplest version of transformational

> grammar, making use of Merge, not Merge followed by an operation that deletes the original.

Chomsky's second claim is compatible with his idea that two links of a chain are in fact two occurrences of one element. If so, this is not CT. However, the fact is that nearly all copy approaches use this deletion operation. Let us examine various possibilities.

If the assumed copy operation had the effect that only the derived copy rather than the original could have phonological features, the operation would violate "the Inclusiveness Condition, which bars introduction of new elements (features) in the course of computation" (Chomsky 2001:2).

Alternatively, if the assumed copy operation created two copies that were equal with respect to phonological features, and the two copies were sent to PF, then what would be the motivation for the assumed deletion?

Is it LF-driven? It is indeed claimed that only one copy can be interpreted at LF (Kitahara 1997, among others). However, the question is: Is there any other phonological operation which is driven by LF consideration?

Is it PF-driven? One might claim that the deletion were required since only one copy could be interpreted at PF. Let us consider two cases. On the one hand, if we assume that two identical elements cannot coöccur, how can we explain reduplication? Since reduplication does exist in phonology, phonology does not provide a motivation for deletion of the lower copy in CT. On the other hand, if we assume that the deletion of one of the two copies is required by linearization, then both copies should have equal chances of deletion, or the deletion should be sensitive to phonological conditions. Although the deletion of the upper copy instead of the lower one has been proposed for some constructions, the relevant licensing conditions are not phonological. Similarly, there is no phonological reason for deletion of the lower copy to be the default case.

Is it linearization-driven? In approaches such as Nunes (1995), the assumed PF-deletion is claimed to be required by Kayne's (1994) Linear Correspondence Axiom. Specifically, since the assumed two copies of a movement chain occur in different positions, they fail to achieve a unified asymmetrical c-command relation with another element. Therefore, deletion of one copy becomes necessary. It is clear that the presupposition of this LCA-driven PF-deletion is the existence of two copies of x. If x does not have any copy, the whole LCA argument becomes irrelevant. In section 2.2 and 2.3, we shall show that a movement chain of x cannot have two copies of x involved.

The viewpoint of this alleged LCA-approach is that all derivational steps are arranged in a flat representation. In fact, this is an illusion. The assumed unification tries to unify different historical stages of a derivation. In contrast, RT assumes that "X C-commands all and only the terms of the category Y with which X was paired/

concatenated by Merge or by Move in the course of the derivation." (Epstein et al. 1998:32) In other words, a late merged element c-commands all of the elements which have been merged earlier. If Move of x is Remerge of x, x c-commands a set of terms after its initial Merge, and it c-commands a different (bigger) set of terms after the Remerge. At each step of the derivation, a new relation is established, the c-command relation is clear, and there is no reason to unify anything.

In this section, we have discussed the problems of the step in (3g), with respect to its motivation and implementation. In the sections 2.2 and 2.3, we discuss the problems of the step in (3e), the operation of Copy.

2.2 The locality of feature-checking

CT contains a paradox with respect to the locality of feature-checking. Chomsky (1995) stipulates that the foot of a chain differs from the head in not being visible to the computational system. Hornstein (2001:67) however assumes that all copies are grammatically equal. If x reaches the checking domain of y, a copy of x is left in situ. As noted by Gärtner (1998, 1999), if the locality condition on checking is taken in its strictest sense, the lower copy of x must not be affected when the higher one checks against y. In such a case, however, the computation will never exhaust the resources driving movement/feature-valuation operation. In Chomsky (2001), feature-checking is mutual feature valuation. Then, in (3), for instance, if the upper copy of *a monster* in step (3f) did the feature-checking against the Infl, how about the lower copy? Chomsky (1995:381, ft.12) states, "Technical questions arise about the identity of α and its trace t(α) after a feature of α has been checked. The simplest assumption is that the features of a chain are considered a unit: if one is affected by an operation, all are." In other words, the same feature of Infl in example (3) has a local checking-relation with the upper copy of *a monster,* and it also has a remote checking-relation with the lower copy of *a monster*, magically.

It is magical if there are two copies. But it is not magical if there is only one *a monster*, which is merged twice. When it is merged with the verb, it has no checking-relation with Infl, and when it is merged in the checking domain of Infl, it does. This is exactly the basic idea of RT, which does not have the locality problem with respect to feature-checking.

The anonymous reviewer wonders whether it is the Case features of the lower copy of *a monster* in (3f) that drive the deletion of the copy, assuming that the two copies have identical sets of formal features and the higher copy gets the Case features deleted by entering the checking domain of Infl. This argument cannot go through, however. As we know, Case features are not strong features. If the Case features of an in situ DP

alone could trigger the deletion of the DP, we would not expect any post-verbal subject in the *there-be*-construction to survive, since such a subject has Case features, and the Case features in this case are not checked by entering the checking domain of Infl. If the Case features of any postverbal subject required the deletion the feature-host, all postverbal subjects would be killed, contrary to the fact. It is generally assumed that the Case features of post-verbal subjects are checked by either covert movement (Chomsky 1995) or Agree (Chomsky 2001). In either case, there is no copying-deletion involved.

Summarizing, if one assumes that movement has two copies involved, which, by definition, must have identical sets of formal features, the problem of the feature-checking locality exists. If one assumes that the upper link of a movement chain can be different from the lower link, the assumed two links cannot be two copies of the same element.

2.3 The theta-rule receptivity

CT creates a problem for the theta-role assignment. Let us consider two approaches. In one approach, both V and v assign a theta role to a DP in the respective local domain. I call this approach Local Assignment Approach. In the other approach, the thematic information of any lexical item is configurationally determined (Hale & Keyser 2002). I call this latter approach Configurational Approach.

A generally accepted stipulation in the Local Assignment Approach is that no element can move to a theta-position. As noted by López (1999:36, 2001:698), however, "[I]t is not clear why the head and the foot of a chain, being identical copies, are different with respect to theta-role receptivity." This can be illustrated by the cases where object raising to vP is overt: it is not clear why v assigns a theta-role only to a subject rather than a raised object, although both are equally local (both are at SpecvP in Chomsky 1995). If the two copies of the object are grammatically identical, they should have equal chances to receive a theta-role.

Note that in some CT approaches (e.g., Hornstein 1999, 2001), an argument can receive two theta-roles, thus logically, the raised object can receive another theta-role from v. But no one claims that it does. If we stick to the principle that one argument receives only one theta-role, we face the problem of why it is the lower copy rather than the higher copy of the object that receives a theta-role, if the two copies are identical, and each of them is local to a theta-role assignor, v and V, respectively.

If a nominal gets a single theta role, it must do so in only one of its multiple occurrences. A presupposition of this well-established constraint is that the two occurrences of the same element are related to different syntactic properties. This presupposition, however, is in conflict with CT.

In the Configurational Approach, internal argument DPs and external argument DPs are represented in different structural positions, before any movement of arguments occurs. If we consider movement, i.e., the relationship between two syntactic positions, we have two choices. If both positions are filled at the same time at any step of the derivation, the two placeholders cannot have the same thematic information, simply because they are in different positions of a single structure. Consequently, the two elements cannot be identical. This shows that CT cannot be true. Alternatively, if there is only one element involved in the movement, it is possible that this element keeps its thematic information when it moves to the new position (since no operation has deleted the information), as assumed in RT.

All of these problems lead us to cast a reasonable doubt on CT, which claims that there are grammatical identical copies of elements in movement.

3. Move is remerge

In contrast to CT, RT claims that there is no operation of copy in movement. Displacement effect of x is derived when x is remerged with y after it has been merged with z. This is stated in Collins (2001:3): "The theory of movement must relate a single syntactic object to two syntactic positions. Any further assumptions or mechanisms should be excluded (e.g., indexes, chains, copies, deletion, etc.)."

Conceptually, RT differs from CT in a straightforward way: the former assumes that to move x is just to merge x again, whereas the latter assumes that to move x needs to clone x first. Empirically, we present the following six aspects to show the properties of RT.

3.1 RT avoids the problems and redundancies of CT

To move x means multiple occurrences of the SINGLE element x. For instance, if there is only one *a monster* in the derivation of (1a), then, (i) there is nothing to delete, thus the above PF-deletion problem does not occur; (ii) since there are no identical copies, feature-checking by movement is always local; (iii) the issue that both the head and the tail of a chain might get a theta-role does not exist; (iv) since there is no copy operation, we do not need any constraint on copy and deletion. Such constraints have been proposed in the literature. For instance, in order to avoid the case where x is copied but it is not immediately merged, Hornstein (2001:100) stipulates, "A copy C made at step N of a derivation must be grammatically integrated at step N+1." Constraints like this have no position in RT, a desirable result from the minimalist viewpoint.

3.2 Merge & remerge: Unification of their similarities

Certain similarities between initial merger and remerger can be unified.

First of all, RT captures the common property of Merge and Move. This has been noted by Kitahara (1995, 1997), Epstein et al. (1998), and Epstein (1999), etc. Specifically, Epstein (1999:324) claims: "[T]here is a fundamental operation, common to or shared by Merge and Move: 'Concatenate A and B, forming C (C = the head of A or of B).' "

Both merger and remerger establish syntactic relations. According to Collins (2001:1, 2002:44, 61), all merge operations establish syntactic relations. He presents the following list:

(5) All merge operations establish syntactic relations:

a.	Theta (X, Y)	X assigns a theta-role to Y
b.	EPP (X, Y)	Y satisfies the EPP feature of X
c.	Agree (X, Y)	X matches Y, and Y values X
d.	Subcat (X, Y)	X subcategorizes for a feature Y

Moreover, since movement is remerge, it shares constraints with initial merge on both target and source.

With respect to the target of an operation, the Extension Condition or the Cyclicity Condition rules out not only downward movement, but also upward movement and Merge operations not extending the structure on the top.[1] As pointed out by Bobaljik (1995b:57), "(T)he Extension Requirement is an axiomatic part of the definition of Merge: the operation simply and solely derives new terms." Thus one constraint on the target of operations, the Extension Condition, is applied to both Move and Merge.

As for the source of an operation, Merge cannot combine elements belonging to another Array/phase, nor can movement start from a position internal to another spelled-out phase (Chomsky 2000, Nunes & Uriagereka 2000). Thus one constraint on the source of operations, the phase constraint, is applied to both Move and Merge.

Furthermore, if element x does not project in the initial merger, it does not do so in the remerger either. This has been stipulated by the Chain Uniformity Principle, which states, "[A] chain is uniform with regard to phrase structure status." (Chomsky 1994:18) In phrasal movement, as claimed by Chomsky (1994:19, also 1995:256ff, 2000, section

[1] See Epstein (2001), Suranyi (2003), and Donati (2003) for new accounts of syntactic head movement.

5) and argued by Nunes (1998), it must be the target that projects.[2] In head movement, it has been argued that the elements that undergo the movement project (Suranyi 2003, Donati 2003).

3.3 The issue of trace: What's done cannot be undone

Traces are at best a notational device employed for encoding previous stages of a derivation in an output representation. In fact, both CT and RT want to eliminate this type of element, trace, but they pursue different implementations. CT eliminates trace at the cost of adding a new type of operation, Copy. The absence of trace in RT, however, follows directly from Merge, which simply pairs two available elements together, without leaving a trace anywhere.

In order to capture the fact that a merger operation has occurred in the derivation history, CT introduces a new type of operation, whereas RT does not need any additional type of operation to do this. This is because if a merger operation occurs, it cannot be undone. One can cancel a coming appointment, but cannot cancel an appointment that occurred in the past. Similarly, remerger occurs only after the initial merger, and it cannot cancel the initial merger. Accordingly, we do not need any special OPERATION to keep the reality of the initial merger to be true.

However, we can represent the reality. It is important to distinguish operations which establish certain structure relations and representations which encode the established relations. Gärtner's (to appear) Establish Immediate Dominance (DoID) might be regarded as a notion related to the latter.[3] From a derivational viewpoint, each step of the computation has its own representation. At step (3c), for instance, *a monster* is not yet dominated by TP, which will be headed by [+past] later. Thus at this stage, it cannot be dominated by both vP and TP. Later, when it is remerged with TP, it is dominated by

[2] Iatridou et al. (2001:224) claim that relativization is a case where the moved element projects, assuming that a modifier of a nominal must also be nominal and that "the relative pronoun moves to change the category of the relative clause" into a nominal. However, their first assumption is not convincing. In addition, relative clauses are syntactically different from other types of modifiers of nominals (Schmitt 2000, Zhang 2001). The differences may be accounted for by the assumption that the clausal projection of relative clauses is selected by D (Kayne 1994, Bianchi 2000).

[3] It needs to be mentioned that Gärtner's use of "Do" or "Establish" here is confusing, since it blurs the distinction between implementation of an operation and the representation of the result of an operation. Immediate Dominance is the result of an operation, whereas "Do" is the implementation of an operation. For the same reason, we do not use terms such as "Do-Adjunction," "Do-Complementation," etc.

TP, as in (4), and is not dominated by vP anymore. Thus from the perspective of each occurrence of the DP, there is no multiple dominance relation.

3.4 Reconstruction effects as memory effects

The occurrence of a previous merger may or may not have effects on interpretation. If the occurrence has an effect on interpretation, the effect is a reconstruction effect, which is similar to memory. Reconstruction effects can exist without any stipulation of deletion of assumed higher copies (contra Chomsky 1993). As we know, doing x for the first time and re-doing x cannot occur at the same time. This is common sense. Accordingly, the old occurrence and the new occurrence of the same element, *which relative of hers* in (6), for instance, cannot be both visible with respect to any specific structural consideration.

(6) [Which relative of $hers_j$]$_i$ did every $student_j$ invite t_i?

In reconstruction, the old occurrence is considered, and the new occurrence is invisible. In (6), when [*which relative of hers*] occurs in the position of t_i, it is c-commanded by [*every student*], so is *hers*. Therefore, the quantificational DP legally binds the bound pronoun. In this derivational perspective, the new occurrence of *which relative of hers* is invisible in reconstruction. The invisibility is captured by the common sense mentioned above. In CT, however, the invisibility requires the assumed deletion of the higher copy (Chomsky 1993).

On the other hand, as we know, forgetting x does not mean the non-existence of x. Similarly, the lack of a certain type of reconstruction effect with respect to the operation x does not mean that x has never occurred (contra Manzini & Roussou 2000, Aoun & Li 2003, etc. See Boeckx 2000 for arguments against Manzini & Roussou 2000). It has been widely recognized that for certain types of operations and/or in some constructions there is no reconstruction effect, as we see in the A-movement in (7).

(7) Everyone seems not to have arrived yet. ($\forall >> \neg$; $*\neg >> \forall$)

There are different accounts for the presence and absence of reconstruction effects. Boeckx (2001) links scope-reconstruction effects with Case-checking: "[A]s long as an NP has an unchecked Case feature, its feature set is uninterpretable. Once Case is checked, the element is free for interpretation." (p.318)[4] In (7), for instance, *everyone* is

[4] Similarly Kitahara (2000:155) proposes, "An NP gets interpreted upon the checking of its Case feature in the course of a derivation."

not interpretable in its initial merger with the verb *arrive*. It is interpretable only after it is remerged with the matrix T projection and gets its Case-checked. This explains why there is no scope reconstruction in the A-movement here.

This approach, however, cannot be extended to the various binding reconstruction asymmetries (see Munn 1994, Kim 1999, Barss 2001, et al. for the asymmetries). Nevertheless, generally speaking, it is possible that a memory effect shows up in only certain types of syntactic operations.

It is equal to both CT and RT that one needs to work out the correlation between the kind of reconstruction effect (scope, binding (Binding Condition C vs. Binding Condition A), idiom chunk, etc.) and the type of operation (A-, A-bar movement, etc.), the type of the elements which undergo the operation (predicate or not), and importantly, as shown in Heycock (1995), the semantic type of the relevant verbs.[5]

3.5 The issue of resumptive pronouns

This subsection addresses the issue raised by the anonymous reviewer: "If Move is Remerge, how should we interpret the existence of resumptive pronouns?"

Since Zaenen et al. (1981), it has been noted that resumptive pronouns may occur in the positions of traces, and thus look like spelled-out-traces of movement. The computations of such resumptive pronouns can be accounted for by an application of Kayne's (2002) cluster-split hypothesis, which has been used to explain a series of syntactic dependencies, including clitic doubling and control. Specifically, I claim that resumptive pronouns and their antecedents form a cluster, and the cluster is integrated into the relevant structure. In the later steps of the relevant derivation, the antecedents move, whereas the resumptive pronouns do not. Instead, they remain in situ. In the resultant representations of this cluster-splitting, the resumptive pronouns surface at the trace positions of their antecedents.

Consider Zaenen et al.'s original Swedish example.

[5] In early versions of this paper, I cited Kim's (1999:14) reconstruction argument against CT. Although Kim's conclusion is compatible with my conclusion here, her argumentation crucially relies on the hypothesis that adjuncts are inserted noncyclically (Riemsdijk 1981, Freidin 1986, Lebeaux 1988, 1991, Stepanov 2001). I am grateful to the anonymous reviewer for pointing this out to me. Johnson's (2002:3) following example shows that the hypothesis is problematic:

(i) How many days after his election will almost every president start receiving graft money?

In this example, the pronoun in the adjunct is bound by the subject, indicating that it is being interpreted in the position it has moved from. Data like this suggest that adjuncts are introduced in a way that can feed movement operations.

(8) a. [Vilken av sina$_i$ flickvänner] tror du att Kalle$_i$ inte längre träffar?
which of his girlfriends think you that Kalle no longer sees
b. [Vilken av sina$_i$ flickvänner]$_j$ undrade du om det att Kalle$_i$ inte längre
which of his girlfriends wonder you if it that Kalle no longer
fick träffa henne$_j$ kunde ligga bakom hans dåliga humör?
must see her could lie behind his bad mood

They claim that both the resumptive pronoun *henne* 'her' in (8b) and the gap in (8a) allow the same type of dependency relation to be established. My application of Kayne's cluster-splitting hypothesis to the derivation of (8b) is illustrated in (9).

(9) undrade du om det att Kalle$_i$ inte längre fick träffa
wonder you if it that Kalle no longer must see
[vilken av sina$_i$ flickvänner$_j$ henne$_j$] kunde ligga bakom hans dåliga humör?
which of his girlfriends her could lie behind his bad mood

In (9), the DP [*vilken av sina$_i$ flickvänner*] 'which of his girlfriends' and the pronoun *henne* 'her' form a cluster, and the cluster is base-generated as the object of the verb *träffa* 'see.' Then the DP undergoes the *wh*-movement, leaving the pronoun behind. The position of the pronoun is corresponding to the gap position in (8a).

Importantly, in Kayne's cluster split hypothesis, both components of a cluster are present in the Numeration or Lexical Array. They form a cluster and get split later. The Inclusiveness Condition is satisfied. No copy operation is involved, and no new element is created in the computation.

The existence of resumptive pronouns poses no challenge to RT. In contrast, since the forms of resumptive pronouns are never identical to their antecedents, the existence of resumptive pronouns might be incompatible with CT, which assumes that movement must have two identical copies involved.

Summarizing, we have reviewed a few main properties of RT, showing how it works without any help of the assumed Copy operation, and is free from the problems of the latter.

4. On two copy theories unrelated to movement

We have shown that movement is not derived by copying (section 2&3). Now we consider some constructions that are not derived by movement but are claimed to require a copying operation. We shall show that the arguments for the assumed copying operation are not convincing.

4.1 On the preference of identical configurations in coordination

Frazier & Clifton (2001) find that a conjunct is read faster if it is structurally parallel to its preceding conjunct than if it is not. Number (10a) was read more quickly than (10b):

(10) a. Hilda noticed a strange man and a tall woman when she entered the house.
b. Hilda noticed a man and a tall woman when she entered the house.

They claim that a Copy α operation is present in (10a) and absent in (10b), and the reason for the faster reading of the former is that copying is cheaper than a step-by-step structure-building.

However, Frazier & Clifton's assumed operation, Copy α, has three properties not shared by a regular syntactic operation.

First, it is applied to conjuncts only. There is no parallelism effect if two elements are linked by a transitive verb rather than the conjunction *and* (Frazier & Clifton: 3). The following two sentences do not show the processing speed contrast in (10).

(11) a. A strange man noticed a tall woman yesterday at Judi's.
b. A man noticed a tall woman yesterday at Judi's.

This property runs against the general property of a syntactic operation: it cannot be construction-specific.

Second, it copies only a configuration rather than the elements realizing the configuration. The nominals *a strange man* and *a tall man* are configurationally identical, but lexically different. What is copied is the configuration, not the lexical elements, in the assumed copying. This second property is not found in syntactic operations either: no syntactic operation can affect a configuration without affecting the elements realizing the configuration.

Third, in the absence of the assumed cheap configuration-copying, the derivation never crashes. For instance, although (10b) takes longer time to process than (10a), both sentences are grammatical. In contrast, choosing an expensive operation instead of an available cheap operation in the computation must cause a crash, and thus no grammatical sentence can be derived.

These three properties indicate that the assumed Copy α looks more like a parallelism effect in human parsing mechanism than an operation in syntax. As Frazier & Clifton state in their footnote 11, "In fact we suspect that Copy α is just the linguistic reflex of a more general cognitive ability that we dub 'ditto'." It is possible that what

they reveal in their study is a reflection of the general law of inertia in language processing.

We conclude that the assumed Copy α in this processing study is not a syntactic operation.

4.2 VP-Ellipsis by copying?

VP-Ellipsis has been claimed to undergo copying. There are two versions of this copying hypothesis. Wasow (1972) and Williams (1977) assume that the elided part is generated as a phonological null element and a copying operation copies the semantic features of the antecedent to the elided part at LF. Donati (2000), on the other hand, assumes that the elided part is originally fully copied from its antecedent in syntax, and then gets deleted at PF.

Regardless of the differences between the two approaches, these copying hypotheses face the following two problems. First, the presence of a sloppy reading indicates that the interpretation of the elided part can be different from that of the antecedent and thus semantic features are not copied, as shown in (12).

(12) Mary has always loved her job and John has too.
 a. Mary has always loved Mary's job and John has always loved Mary's job. (strict)
 b. Mary has always loved Mary's job and John has always loved John's job. (sloppy)

Second, phrases can be elided under non-identity with its antecedent, suggesting that there cannot be a copying operation. The following data are cited from Potsdam (1997:358) and Johnson (2001:468) (originally from Hardt 1993 and Chao 1987):

(13) a. I didn't touch the TV, but Percy might have ~~touched the TV~~.
 b. John said that he would never take money on the side but I knew he was ~~taking money on the side~~.
 c. We haven't decided to blacklist any firms. But there's a chance we might ~~blacklist some firms~~.
 d. David Begelman is a good laugher, and when he does ~~laugh~~, his eyes crinkle at you the way Lady Brett's did in *The Sun Also Rises*.

Moreover, sentences potentially containing ellipsis can be pronounced without any deletion:

(14) Mary will leave tomorrow, and Paul will (leave) the day after.

The possibility of PF-realization of the elided part makes one wonder why the elided part cannot be generated independently with identical or near identical structures to its antecedent, regardless of what mechanism makes it silent.[6]

Donati's argument against this non-copying approach is that the parallelism effects show a dependency that restricts the interpretation of the assumed two copies. The examples in (15) are used to show the point (similar data are seen in Hankamer 1973:66):

(15) a. The children are ready to eat.
(2-ways ambiguous)
b. The children are ready to eat and so are the chickens.
(2/*4-way's ambiguous)

Number (15a) is ambiguous between two comically opposed readings: the argument *the children* is either agent or patient. In (15b), if the elided part in the second conjunct received its interpretation independently of its antecedent, she argues, we would expect it to be ambiguous as well. And then the sentence should be four-ways ambiguous. However, in fact, the elided part inherits its interpretation from the first conjunct. As a result, (15b) is only two-ways ambiguous rather than four-ways ambiguous. She concludes that the two VPs in (15b) must be generated in the syntax by a copying operation.

This parallelism effect, however, is similar to what we discussed in section 4.1. It is a principle of economy in processing that plays a role here. (See also Carlson 2002 for a processing study of parallelism in ellipsis sentences.) This effect thus cannot be used to argue for a copy operation in syntax.

Note that our discussion above does not make any claim with respect to whether the operation of copying exists in other areas, such as phonology or morphology. We focus on the issue of whether syntactic movement has a copying operation involved, and whether certain assumed syntactic copying operations are plausible. We leave some other instances of copying operations proposed in the literature, such as those in Travis (2001) and Fancelow & Cavar (2002), which have nothing to do with movement, for future research.

[6] Considering the optionality fact, the copy approach does not want to rule out this possibility of independent Merge rather than Copy (Donati 2000: sec 6).

5. Conclusion

I have argued in this paper that overt movement is simply Remerger of a given term, rather than Copy of any element. RT works without the assumed operation of Copy, and is free from the problems of CT.

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移位之再拼合說

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句法學的基本理論議題之一是移位是否經過拷貝這一程序。本文從理論上和語言事實上論證移位不經過拷貝，強調移位僅僅是句法成份 X 在與句法成份 Y 拼合之後又與句法成份 Z 再次拼合的過程。

關鍵詞：移位，拼合，再拼合，拷貝