

A Note on the Retroactive Gerund Construction in English*

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1. Introduction

In this paper, I am concerned with the retroactive gerund construction (henceforth, RGC) in English, exemplified in the following examples:

- (1) a. This car_i deserves repairing *t*_i.
 b. This car_i needs repairing *t*_i.

In (1), where the verbs *deserve* and *need* select the gerund *repairing* as their complements, the understood object of the gerund is construed as identical to the main subject *this car*. Thus, it is referred to as ‘retroactive gerund (RG).’

In the RGC, since Jespersen (1940), there have been found two semantically different types of verbs: verbs of requirement (e.g. *need*, *want* and *could use*) and verbs of evaluation (e.g. *deserve*, *merit* and *bear*). It is often pointed out in the literature (cf. Hantson (1984) and Safir (1991)) that the two types of this construction exhibit different syntactic behaviors. In this paper, to explain the syntactic difference, I attempt to propose the derivation of each type of the construction.

The organization of this paper is as follows. Section 2 examines some basic facts of the two types of the RGC, which suggest that the derivation of each type of the construction is involved in a different type of movement. Section 3, based on the observation in section 2, proposes the derivations of the two types and shows that the derivations can explain the basic facts properly. Section 4 makes summary remarks.

2. Basic Facts

In this section, I review some basic facts of the RGC, often pointed out in the previous studies: the licensing of the parasitic gap, preposition stranding, and *by*-phrases. These facts lead us to suggest that each type of the RGC has a different derivation: The *deserve*-type of the RGC is derived via \bar{A} -movement, while the *need*-type A-movement.

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2.1. Parasitic Gap

In this subsection, I observe how the two types of the RGC behave syntactically with respect to the parasitic gap, which is generally licensed by the trace of \bar{A} -movement.¹ This phenomenon, thus, serves as a diagnosis for \bar{A} -movement. Observe the following sentences:

- (2) a. This is the kind of food_i [_{CP} *Op*_i you must cook *t*_i before you eat *pg*].
 (Engdahl (1983:5), with slight modifications)
 b. * John_i was killed *t*_i by a tree falling on *pg*.
 (Engdahl (1983:13), with slight modifications)

In (2a), where the \bar{A} -movement of the null operator *Op* from the complement of the verb *cook* to the Spec of CP in the relativization process is applied, the \bar{A} -trace of the null operator allows the parasitic gap to occur in the adjunct clause. In (2b), on the other hand, which is involved in the A-movement of the DP *John* to the Spec of TP in the passivization process, the A-trace of the DP cannot license the gap.

Keeping this in mind, let us consider the case of the two types of the RGC. Observe the following examples:

- (3) a. These proposals_i merit reading *t*_i before filing *pg*.
 b. ? This idea_i deserves looking into *t*_i before filing *pg*.
 (Safir (1991:102), with slight modifications)
 (4) a. * This student_i needs talking to *t*_i without insulting *pg*.
 b. * That overcoat_i wants cleaning *t*_i without getting *pg* wet.
 (Safir (1991:105), with slight modifications)

Sentences (3) and (4) indicate that the parasitic gap is licensed in the *deserve*-type of the RGC, whereas the gap is not in the *need*-type. This fact means that the derivation of the former type is involved in \bar{A} -movement, while that of the latter is not.²

2.2. Preposition Stranding

In this subsection, I observe whether the two types of the RGC show preposition stranding. Since this phenomenon is also generally restricted to \bar{A} -movement, it functions as another diagnosis for \bar{A} -movement.³ Consider the

¹ For further details of the licensing mechanism of the parasitic gap, see Culicover and Postal (2001).

² I will propose the derivations of the two types of this construction in section 3.1.

³ For further argument, see Chomsky (1981) and Hornstein and Weinberg (1981).

following examples:

- (5) a. Who did John give the book to?
 b. * Tom was given the book to.

(Chomsky (1981:292))

In (5a), which is involved in \bar{A} -movement of the *wh*-phrase *who* from the complement position of the preposition *to* to the Spec of CP, the preposition can remain in-situ without pied-piping. In (5b), on the other hand, which is involved in A-movement of the DP *Tom* from the complement position of the preposition to the Spec of TP, the preposition *to* cannot be stranded in-situ.

Bearing this in mind, let us consider the case of the two types of the RGC. Observe the following examples:

- (6) a. This player_i bears keeping an eye on t_i .
 b. This student_i does not merit giving {a / the} chance to t_i .
 (Safir (1991:103), with slight modifications)

- (7) a. * This student_i needs going to some trouble for t_i .
 b. * That overcoat_i wants going to some trouble for t_i .
 (Safir (1991:105), with slight modifications)

Sentences (6) and (7) show that preposition stranding is permitted in the *deserve*-type of the RGC, while it is not in the *need*-type. This fact also suggests the former type is derived via \bar{A} -movement, while the latter is not.

2.3. The Occurrence of *By*-phrases

In this subsection, I examine whether the two types of the RGC are compatible with *by*-phrases. Observe the following:

- (8) a. This student needs looking after by a caring parent.
 b. That overcoat wants cleaning by an expert.
 (Safir (1991:105))

- (9) a. This idea doesn't deserve looking into (*by scholars).
 b. These proposals do not merit working on (*by the doctors).
 (Safir (1991:102))

Sentences (8) and (9) indicate that the *by*-phrases can occur in the *need*-type of the RGC, whereas they cannot in the *deserve*-type. With respect to the occurrence of

the phrases, Hantson (1984) assumes that the morpheme [-ing] in the *need*-type of the RGC, like a passive morpheme [-en], dethematizes a subject and deprives a verb of ability to assign accusative Case. Given his assumption, it is suggested that the derivation of the *need*-type of the RGC contains the passivization process, in which theme-DPs are generally assumed to undergo A-movement to the subject position; that is, the derivation of the *need*-type is concerned with A-movement.⁴

2.4. Interim Summary

So far, I have observed some basic facts of the two types of the RGC. This observation is summarized as follows:

(10)

	Parasitic gap	Preposition stranding	By-phrase	Type of movement
<i>deserve</i> -type	✓	✓	*	\bar{A} -movement
<i>need</i> -type	*	*	✓	A-movement

As indicated in (10), the *deserve*-type of the RGC licenses the parasitic gap and permits preposition stranding. Since these phenomena are referred to as diagnoses for \bar{A} -movement, as seen above, these behaviors of this type suggest that its derivation is involved in \bar{A} -movement. In contrast, although the *need*-type of the RGC, unlike the *deserve*-type, does not license the parasitic gap, nor does it permit preposition stranding, it permits the occurrence of *by*-phrases. Since this behavior is restricted to A-movement in the passivization process, as argued above, it suggests that the *need*-type of the RGC is derived via A-movement.

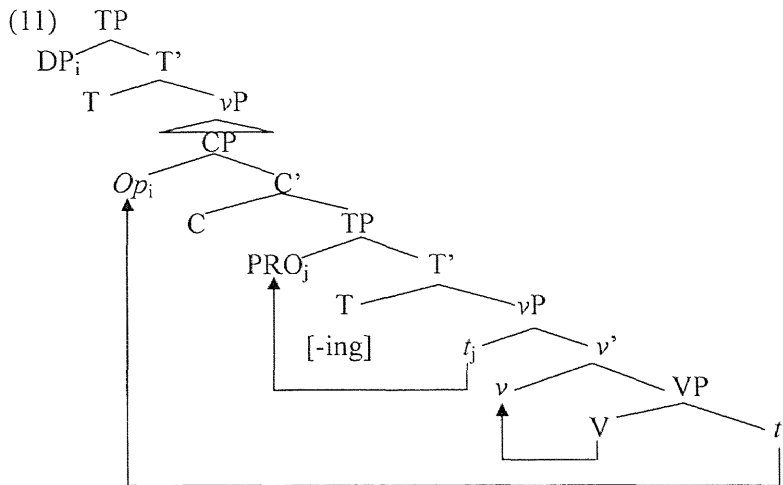
In the next section, on the basis of these asymmetries between the two types of the RGC, I will propose the derivations of each type. Then I will also explain the different syntactic behaviors of the two types under my analysis.

3. Derivations of the Two Types of the RGC

3.1. A Proposal

I propose the derivation of the *deserve*-type of the RGC, whose derivation proceeds as follows:

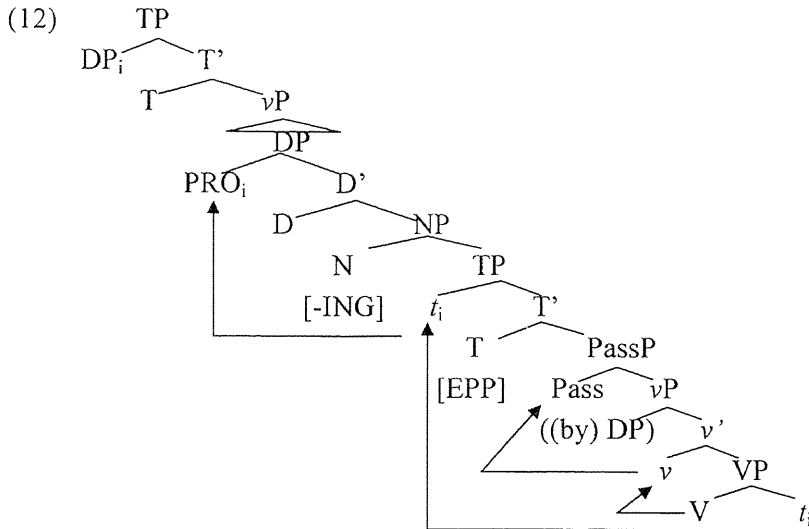
⁴ Although Hantson does not deal with the *deserve*-type of the RGC, the incompatibility of *by*-phrases in (9) implies that this type of the RGC is not concerned with A-movement.



First, Op is base-generated in the complement of VP. Second, v is merged and V makes head-movement to v . Third, an agent-PRO is merged and vP is formed. Fourth, T serving as an affix [-ing] is merged with vP and the PRO moves to the specifier of TP for the requirement of EPP. Finally, C establishes an AGREE relation with Op and the Op moves to the specifier of CP for requirement of EPP; consequently, Op makes the predication relation with the main subject DP for the semantic requirement.⁵ Note here that in this structure, the categorial status of the RG which the verbs of evaluation select as their complements is CP, unlike the status which is generally assumed in the literature (cf. Abney (1987)).

Let us next turn to the derivation for the *need*-type of the RGC. I propose that the derivation proceeds as follows:

⁵ I assume that the formulation of predication is reduced to closeness between elements. Here, for the Op to form predication relation with the subject DP, the Op must move to the closest position to the DP.



First, the theme-PRO is base-generated in the complement of V. Second, v is introduced by Merge, and a PRO is merged in the Spec of vP .^{6, 7} Incorporating into Pass, the v is deprived of its ability to assign accusative Case to its object and θ -role to the external argument. Third, when T is introduced by Merge with PassP, and T searches down for a goal and it enters into an AGREE relation with the theme-PRO.⁸ Consequently, the Case-feature of the PRO is checked and the PRO moves up to the Spec of TP for the EPP requirement. At this point, the DP in the Spec of vP has no occasion to receive Case, so the preposition *by* is inserted as the last resort for the DP to receive a θ -role and oblique Case; consequently, the *by*-phrase is realized.⁹ Fourth, the PRO moves to the specifier of the TP, satisfying EPP on T (cf. Hantson (1984)). Fifth, N serving as a nominalizer is merged with the TP. Finally, D is merged with the NP, and the PRO in the specifier of TP moves to the specifier of DP for the EPP requirement. In the structure, co-referential relation between the DP in the main subject and the Theme-PRO is formed by control.¹⁰ Notice that in this

⁶ Following Hasegawa (1988), I assume that the PRO base-generated in the Spec of vP corresponds to Indirect Argument, which is θ -marked through some other θ -assigner such as P(reposition) etc. The v , thus, does not assign any θ -role to the PRO.

⁷ Although Hasegawa does not state, I stipulate that the Case-assignment of v to the internal argument and the θ -role assignment to the external argument are suspended at this point. This stipulation seems problematic and remains to be open.

⁸ Although there is no warrant, I stipulate that indirect argument DP is not an intervener. Given this stipulation, the establishment of an AGREE relation between T and the theme-PRO does not constitute a violation of locality.

⁹ In English passive sentences, *by*-phrases are not necessarily realized. In my analysis, however, the phrases are expected to occur obligatorily, contrary to fact. In this paper, I remain the problem to be unsolved.

¹⁰ The PRO moves up to the closest position to the DP in main subject position. By doing this, since there is no intervener between the PRO and the DP, their control relation is established.

structure, the categorial status of the RG which verbs of requirement take as their complements is DP.

In the next subsection, I will illustrate how I explain the facts observed in the previous section under my analysis.

3.2. *Explanation*

In this subsection, I argue that my proposal explains the facts observed in section 2.

Let us start by considering the fact of parasitic gap. As observed in (3) and (4), the *deserve*-type of the RGC licenses the parasitic gap, whereas the *need*-type does not:

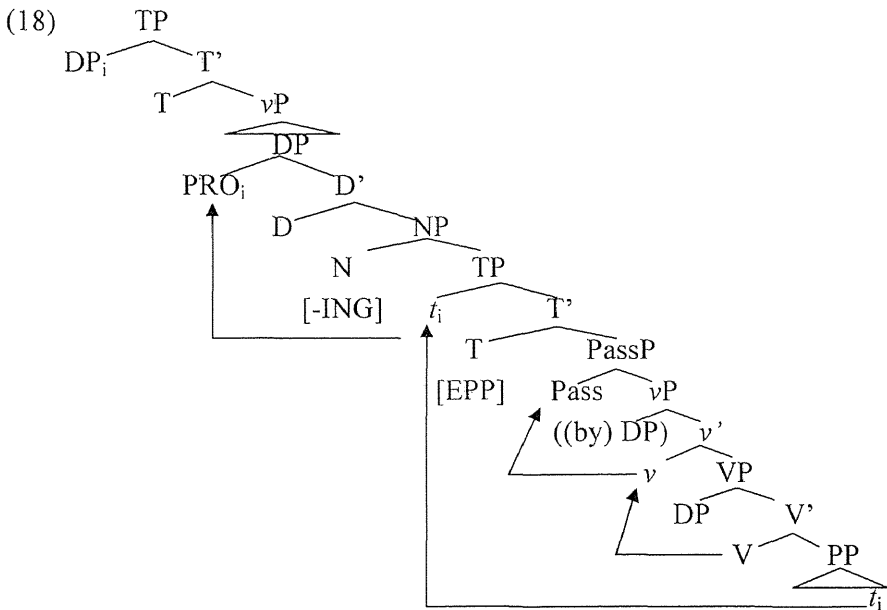
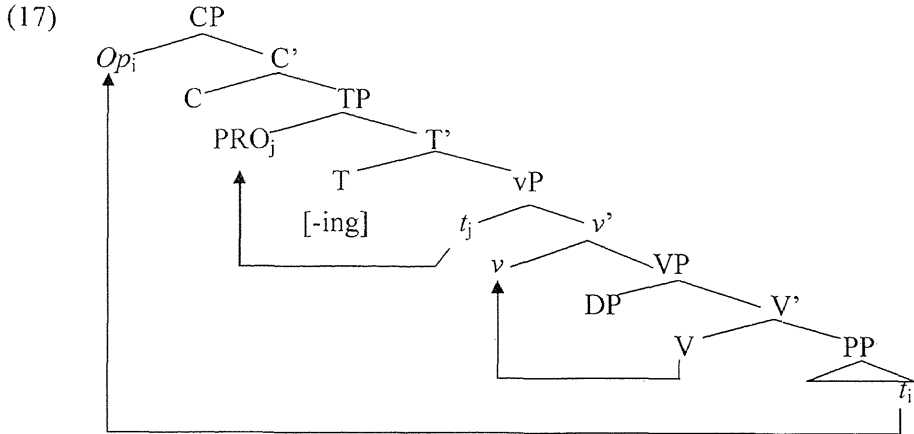
- (13) ? This idea_i deserves [*Op*_i looking into *t*_i before filing *pg*]. (= (3b))
 (14) * This student_i needs [*PRO*_i talking to *t*_i without insulting *pg*]. (= (4a))

As seen in 2.1, given that the parasitic gap is generally assumed to be licensed by the trace of \bar{A} -movement, this asymmetry between the two types of the RGC can be accounted for under my analysis. In the structure of the *deserve*-type, as shown in (11), the *Op* base-generated in the complement of VP enters into an AGREE relation with C and undergoes \bar{A} -movement to the Spec of CP; as a consequence, the \bar{A} -trace left by the movement allows the parasitic gap to occur inside the adjunct clause. In the structure of the *need*-type in (12), on the other hand, the theme-PRO base-generated in the complement of VP establishes an AGREE relation with T and undergoes A-movement to the Spec of TP. That is, this structure does not contain any \bar{A} -trace. As a result, since A-trace does not license the parasitic gap, the gap cannot occur in the *need*-type of the RGC.

Let us next consider the facts of preposition stranding. As shown in (6) and (7), the *deserve*-type of the RGC permits the preposition stranding but the *need*-type does not:

- (15) This student_i does not merit [*Op*_i giving {a / the} chance to *t*_i.] (= (6b))
 (16) * This student_i needs [*PRO*_i going to some trouble for *t*_i.] (= (7a))

As seen in 2.2, provided that the preposition stranding is assumed to be allowed in \bar{A} -movement, the asymmetry between the two types of the RGC can be given an explanation under my analysis. Here, to explain the grammaticality of (15) and the ungrammaticality of (16), I assume that the structures of (15) and (16) as follows:



In the structure of the *deserve*-type in (17), the *Op* base-generated in the complement position of the PP selected by the V, enters into an AGREE relation with C and undergoes \bar{A} -movement to the specifier of CP. Consequently, the \bar{A} -movement allows the preposition to be stranded. The structure of the *need*-type in (18), on the other hand, does contain no \bar{A} -movement; that is, in the structure, the theme-PRO base-generated in the complement of PP establishes an AGREE relation with T and undergoes A-movement up to the specifier of DP via the specifier of TP. As a result, since A-movement does not license the preposition stranding, the preposition stranding is not permitted in the *need*-type of the RGC.

Let us finally turn to the facts of *by*-phrases. As observed in (8) and (9), the *need*-type of the RGC licenses the occurrence of the phrases, whereas the

deserve-type does not:

- (19) This student needs looking after by a caring parent. (= (8a))
 (20) This idea doesn't deserve looking into (*by scholars). (= (9a))

As seen in 2.3, given that *by*-phrases occur in the passivization process which includes A-movement, this asymmetry between the two types of the RGC can be accounted for under my analysis. The derivation of the *need*-type contains the passivization process, as shown in (12); that is, in the structure, the theme-PRO base-generated in the complement of VP establishes an AGREE relation with T and undergoes A-movement for Case. At this point, the DP base-generated in the specifier of *v*P can receive no Case, because T has already assigned structural Case to the PRO. Thus, for the DP not to violate Case filter, a preposition *by* is introduced and the preposition assigns Case to the DP. In the structure in (11), on the other hand, the *Op* base-generated in the complement of VP and the agent-PRO base-generated in the specifier of *v*P are assigned Case from *v* and T, respectively; that is, no passivization process is concerned. As a result, it is not necessary for the preposition *by* to be inserted as a Case assigner.

So far, I have shown how the facts observed in section 2 are explained under my proposal. If my analysis of the two types of the RGC is on the right track, the categorial status of the RG selected by verbs of evaluation is CP and that of the RG taken by verbs of requirement is DP.

In the next subsection, I offer supporting evidence for the difference of the categorial status between the two types of the RG.

3.3. *Supporting Evidence: Canonical Structural Realization*

In the previous subsection, I confirmed the validity of my analysis. Under my analysis, I argue that the categorial status of the RG in the *deserve*-type of the RGC is CP, in which *Op* undergoes \bar{A} -movement to the Spec of CP; whereas the status of the RG in the *need*-type is DP, where the theme-PRO undergoes A-movement to the Spec DP via the Spec of TP.

In this subsection, in order to reinforce my analysis I provide supporting evidence for the categorial status. In discussing their categories, I assume the rule of canonical structural realization (CSR) as follows: The syntactic objects which receive an eventive interpretation are usually realized as a CP, except that an event is interpreted as if it were a thing and the syntactic objects are realized as a DP. Given this rule, it is expected that the RGs selected by verbs of evaluation have an eventive interpretation, while the RGs of the *need*-type receive a thing-like eventive

interpretation.

To verify this expectation, let us examine the difference in the interpretation of the complement which the two types of verbs take. Consider the following sentences, where simple nominals are selected as their complements:

- (21)a. He deserves the prize.
 b. He needs the prize.

In (21a), in which a verb of evaluation *deserve* takes the DP *the prize* complement, the DP is usually construed as *to receive the prize*. In (21b), on the other hand, where the verb of requirement *need* selects the same DP as its complement, the DP is literally interpreted as a thing. This difference leads us to propose that verbs of requirement require their nominal complements to be interpreted as it is, while verbs of evaluation force their nominal complements to be interpreted as a clausal event.

There is an argumentation to make this proposal more plausible. Dixon (2005:188-195), classifying every verb into some semantic types, states as follows: In WANTING type, which verbs of evaluation belong to, the verbs like *get* and *receive* can be left out between main clause verbs and its complement, as in (22):

- (22) She deserves (to receive) a medal.

In (22), the DP complement *a medal* is interpreted as *to receive a medal*. This means that the complement of verbs of evaluation is construed as a clausal event.¹¹

To sum, the complement of verbs of evaluation is always forced to be interpreted as a clausal event. Thus, even though an infinitive phrase becomes covert and the verb seems to select a simple nominal as its complement, the meaning of *get* and *receive* remains to be there and thus the complement is construed as a clausal event. In contrast, the complement of verbs of requirement is usually construed as a thing, as seen in (21b). Therefore, it is expected that RGs of *need*-type are interpreted as a thing and thus their categories are realized as a DP.

In this subsection, I have provided the evidence that supports the categorial difference between RGs of the *deserve*-type of the RGC and the *need*-type; the

¹¹ Note here that verbs of requirement, according to Dixon's classification, also belong to WANTING type: Consequently, the complement of the verb *need* can be interpreted as *to receive a medal*, as shown in (i):

- (i) She needs (to receive) a medal.

I believe, however, that this use of verbs of requirement is no longer concerned in RGCs, because the subject of the main clause in (i) has some agentivity.

former is CP the latter DP. The attested evidence for the categorial difference strengthens my analysis of the derivation for the two types of the RGC.

4. Summary

In this paper, to account for the syntactic differences between the *deserve*-type of the RGC and the *need*-type, I proposed the derivation of each type: The former is derived via \bar{A} -movement, while the latter via A-movement. There, however, remain a lot of problems unsolved in my analysis. Thus, I will tackle the problems in the future research.

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