

## A Note on the *Deserve*-Type Retroactive Gerund Construction in English\*

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### 1. Introduction

This article deals with the *deserve*-type retroactive gerund construction (henceforth, the DRGC) in English.<sup>1</sup> The DRGC is the construction in which the understood object in the complement gerund is identical to the subject of the main clause, as exemplified in (1):<sup>2</sup>

- (1) a. This car<sub>i</sub> deserves repairing *e*<sub>i</sub>.  
 b. These proposals<sub>i</sub> merit reading *e*<sub>i</sub>.

Safir (1991) suggests that the gerundive complement of the DRGC is involved in the  $\bar{A}$ -movement in the course of its syntactic derivation as follows:

- (2)  $[_{TP} \text{ This car}_i [_{VP} \text{ deserves } [_{CP} \text{ Op}_i [\text{PRO repairing } t_i]]]]$

He proposes the  $\bar{A}$ -movement analysis on the basis of the observation of the two phenomena, i.e. parasitic gaps and preposition strandings. These are generally assumed as being licensed via the  $\bar{A}$ -movement of the operator to the Spec of CP, as illustrated in (2).

His proposal is based on the movement analysis that reasonably confirms the  $\bar{A}$ -property of the DRGC. From the suggestion, however, he does not pursue any prediction or consequence. Thus, if the proposal predicts and is applied to other CP-involving phenomenon except for the phenomena related to the movement, the

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<sup>1</sup> In the DRGC are used other verbs such as *merit*, *repay*, *bear*, etc. (cf. Visser (1973:1886-8)).

<sup>2</sup> The retroactive gerund construction is not confined to the DRGC. There is another type: the *need*-type retroactive gerund construction.

- (i) a. This car needs repairing.  
 b. These proposals need reading.

In sentences (i), unlike sentences (1), the verb *need* serves as the main verb. According to Safir (1991), the gerundive complement of this construction behaves differently from that of the DRGC. In this article, I only focus on the DRGC. For details of the *need*-type retroactive gerund construction, see Safir (1991).

CP-categorical status of the complement of the DRGC is highly justified.

This article aims to support and strengthen Safir's (1991) proposal of  $\bar{A}$ -property in the complement of the DRGC, with independent evidence to be predicted. This comes from the view point of the cartographic approach. On the basis of the evidence, the  $\bar{A}$ -property of the gerundive complement of the DRGC becomes robust.

The organization of this article is as follows. Section 2 overviews Safir's (1991) analysis to observe the  $\bar{A}$ -property of the complement of the DRGC. Section 3 applies Safir's (1991) analysis to other instance and offers to Safir (1991) supporting evidence on the  $\bar{A}$ -property of the complement of the construction. Section 4 summarizes this article.

## 2. $\bar{A}$ -Property of the Complement of the DRGC

In this section, I overview Safir's (1991) observation and proposal for the syntactic structure of the DRGC.

Safir (1991) offers the syntactic structure in (2) for the DRGC, repeated as (3):

- (3)  $[_{TP} \text{ This car}_i [_{VP} \text{ deserves } [_{CP} Op_i [_{PRO} \text{ repairing } t_i]]]]$

The complement category of the DRGC is CP, as seen in (3). Assuming that the Spec of CP is generally the landing site for the operator, he claims that the DRGC involves the  $\bar{A}$ -movement. For this proposal, Safir relies on syntactic phenomena which the DRGC shows. In what follows, I review two basic facts on the syntactic structure of the gerundive complement of the DRGC.

The first is the possibility of the occurrence of parasitic gaps (henceforth, PGs). PGs are generally licensed by  $\bar{A}$ -movement. Consider the example in (4):

- (4) a. This is the kind of food<sub>i</sub> [<sub>CP</sub> Op<sub>i</sub> you must cook  $t_i$  before you eat  $pg_i$ ].  
(Engdahl (1983:5), with slight modifications)
- b. \* John<sub>i</sub> was killed  $t_i$  by a tree falling on  $pg_i$ .  
(Engdahl (1983:13), with slight modifications)

In (4a), the null operator  $Op$   $\bar{A}$ -moves from the complement position of the verb *cook* to [Spec, CP] in the relative clause. In this way, the  $pg$  in the adjunct clause is licensed by  $\bar{A}$ -movement. In (4b), contrastively, where the DP *John* A-moves from the complement position of the verb *kill* to the [Spec, TP] in the passivization process, the  $pg$  in the adjunct phrase is not licensed. Whether PGs are licensed or not depends on the existence or absence of the  $\bar{A}$ -movement.

Bearing this in mind, consider the case of the DRGC. Observe the following sentences:

- (5) a. These proposals<sub>i</sub> merit reading  $t_i$  before filing  $pg_i$ .  
 b. ? This essay<sub>i</sub> repays talking about  $t_i$  after reading  $pg_i$ .  
 (Safir (1991:102), with slight modifications)

In the sentences in (5) the occurrences of the  $pg$ s in the adjunct phrases are licensed. This indicates that the DRGC is involved in  $\bar{A}$ -movement.

The second evidence concerns the possibility of preposition strandings. This phenomenon is also related to the  $\bar{A}$ -movement. Observe the following examples:

- (6) a. Who did John give the book to?  
 b. \* Tom was given the book to.  
 (Chomsky (1981:292))

In (6a), where the *wh*-phrase is extracted from the prepositional phrase in the interrogativization process, the preposition can be stranded in situ. In (6b), on the other hand, in which the DP *Tom* is moved from the prepositional phrase in the passivization process, the preposition stranding leads to the ungrammaticality of the sentence. The availability of the preposition stranding is dependent on the  $\bar{A}$ -movement.

Taking this into consideration, let us look at the case of the DRGC. Consider the following examples:

- (7) a. This student does not merit giving a/the chance to.  
 b. This player bears keeping an eye on.  
 (Safir (1991:103), with slight modifications)

The sentences in (7) permit the preposition strandings in their gerundive complements. This further suggests that the DRGC is involved in  $\bar{A}$ -movement.

So far, I have overviewed Safir (1991), observing two pieces of evidence on the structure of the DRGC. He postulates, on the basis of above phenomena, the structures in (8):

- (8)  $[_{TP} \text{This car}_i [_{VP} \text{deserves } [_{CP} Op_i [\text{PRO repairing } t_i]]]]$  (cf. (2))
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In the syntactic representation in (8), the category of the gerundive complement is

CP and the Spec of CP is the position where the *Op*  $\bar{A}$ -moves from the complement of the gerund, as indicated by the arrow. This movement permits the occurrence of the parasitic gap and preposition stranding, as observed in (5) and (7), respectively. Thus, the syntactic structure in (8), so far, seems tenable. However, if this structure is the case, another kind of CP-involving evidence should be observed in the DRGC. Safir (1991) does not investigate this possibility, which I significantly pursue in this article.

In the following section, I will confirm the prediction from the analysis of Safir (1991). This prediction in turn provides a piece of evidence which attests the CP category of the complement of the DRGC.

### 3. A Prediction: Independent Evidence on CP of the DRGC Complement

In this section, I show that CP structure suggested by Safir (1991) is supported by the cartographic approach (cf. Cinque (1999)). This approach, in the light of the non-movement instance, provides further evidence for the view that the complement of the DRGC projects up to CP.

Cinque (1999), in the theory of the cartography, proposes universal hierarchy of functional heads such as tense, mood, aspect, voice, etc., above *vP*, as seen in (8):

#### (9) The universal hierarchy of clausal functional projections

[Mood<sub>speech-act</sub> *frankly*  
 [Mood<sub>evaluative</sub> *fortunately*  
 [Mood<sub>evidential</sub> *allegedly*  
 [Mod<sub>epistemic</sub> *probably*  
 [T<sub>past</sub> *once*  
 [T<sub>future</sub> *then*  
 [Mod<sub>irrealis</sub> *perhaps*  
 [Mod<sub>necessity</sub> *necessarily...*  
 ... [*vP* ]]]]]]]]]

(Cinque (1999:106), with modifications)

In this hierarchy, each functional head licenses the relevant adverbs. For instance, one of the functional head *Mod<sub>irrealis</sub>* licenses the adverb *perhaps*. In this way, Cinque (1999) systematically analyses adverbial positions, leading to a strict universal hierarchy.

What concerns the structure of the DRGC is the adverbial position matching the left periphery of the clause (CP zone). The left periphery is the realm above *T<sub>past</sub>* in (9): the functional heads from *Mod<sub>epistemic</sub>* up to *Mood<sub>speech-act</sub>*. Each

functional head in this zone also licenses the adverbs from *probably* to *frankly*, as seen in (9).

Bearing the distribution of adverbs in mind, let us now turn back to the DRGC. If Safir's analysis taking the gerundive complement of the DRGC as CP is on the right track, one prediction naturally arises that the adverbs of the left periphery can occur in the gerundive complement of this construction. This prediction is borne out, as seen in the following sentences:

- (10) a. ? This car deserves [probably repairing].  
 b. ?? This car deserves [frankly repairing].

In (10a) and (10b), in which the epistemic adverb *probably* and the speech-act adverb *frankly* are within the gerundive complements of the DRGCs, the sentences are acceptable.<sup>3</sup> The occurrences of the adverbs *probably* and *frankly* indicates that the functional heads Mod<sub>epistemic</sub> and Mod<sub>speech-act</sub> (i.e. CP-realm) exist in the complements of the DRGCs. It is, thus, attested that the gerundive complement of the DRGC is CP.

To sum up this section, I verified Safir's (1991) analysis providing further supporting evidence that the complement of the DRGC bears  $\bar{A}$ -property and is CP, from the view point of the cartography.

#### 4. Summary

I have supported and strengthened the CP status of the gerundive complement of the DRGC. I provided the  $\bar{A}$ -property of the DRGC's complement with the independent argument from the cartographic approach.

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<sup>3</sup> My informant judged the sentences in (10a) and (10b) less acceptable than the ones without the adverbs, so that I attached ? and ?? to each sentence.

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