

## On Retroactive Gerund Constructions in English

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In this research, we deal with retroactive gerund constructions (henceforth, RGCs), which are exemplified in the following sentences:

- (1) a. This car deserves repairing.  
 b. This car needs repairing.

In (1), as pointed out by Poutsma (1926) and Jespersen (1940), the gerund *repairing* is passive in interpretation although it is active in form. The passive meaning of the gerund is confirmed from the following fact:

- (2) a. This car deserves to be repaired.  
 b. This car needs to be repaired.

Sentences (2) show that the gerund in (1) is paraphrased to the passive infinitive, and suggest that the subject NP in RGCs is interpreted as the object of the gerund. In other words, the gerund in this construction refers back to the DP in subject position as the logical object. Thus, it is referred to as retroactive gerunds (RGs).

In RGCs, there are 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*). Previous analyses (Hantson (1984) and Safir (1991)) point out that RGCs with verbs of requirement exhibit different syntactic behaviors from the ones with verbs of evaluation. The purpose of this study attempts to find the reason why such syntactic differences arise according to the verbs used in the constructions, and we attribute it to the difference of the categorial status of RGs, which is determined on the basis of the lexical properties of the verbs.

Let us begin by examining some syntactic properties of RGCs. First, RGCs with verbs of evaluation can allow parasitic gaps, unlike the ones with verbs of requirements, shown in (3) and (4):

- (3) a. These proposals merit reading before filing. (Safir (1991:102))  
 b. ? This idea deserves looking into before filing. (Safir (1991:102))  
 (4) a. \* This student needs talking to without insulting. (Safir (1991:105))  
 b. \* This idea could use working through before accepting. (Safir (1991:105))

In (3), the main subjects, which are interpreted as the objects of the gerunds in the

adjunct phrases, can be extracted without violation of the adjunct condition. This suggests that in (3), a null operator should be concerned with the derivation of RGCs with verbs of evaluation, because this phenomenon is generally assumed to be licensed in the construction derived from *WH*-movement of a null operator. In (4), on the other hand, the main subjects cannot be extracted, which implies the null operator is not involved in the derivation of RGCs with verbs of requirement.

Second, RGCs with verbs of evaluation also allows preposition stranding to occur in the RGs, in contrast with the ones with verbs of requirement, as in (5) and (6):

- (5) a. This player bears keeping an eye on. (Safir (1991:103))  
 b. This student does not merit giving a chance to. (Safir (1991:103))  
 (6) a. \* This student needs going to some trouble for. (Safir (1991:105))  
 b. \* This player could use keeping an eye on. (Safir (1991:105))

In (5), the prepositions *on* and *to* are stranded in the RGs. This fact also suggests that a null operator is responsible for RGCs with verbs of evaluation, because this phenomenon is assumed to occur in constructions involving *WH*-movement of a null operator. In (6), on the other hand, preposition stranding is not allowed in RGCs with verbs of requirement. From the above observations, it follows that RGCs with verbs of evaluation are derived via *WH*-movement involving a null operator, which is considered to be a kind of A'-movement, while the ones with verbs of requirement are not.

Third, RGCs with verbs of evaluation do not permit the occurrence of *by*-phrases in the RGs, unlike the ones with verbs of requirement, as in (7) and (8):

- (7) a. This idea doesn't deserve looking into (\*by scholars). (Safir (1991:102))  
 b. These proposals do not merit working on (\*by an experts). (Safir (1991:102))  
 (8) a. This student needs looking after by a caring parent. (Safir (1991:105))  
 b. That overcoat wants cleaning by an expert. (Safir (1991:105))

Sentences (7) show that RGCs with verbs of evaluation become ungrammatical when *by*-phrases occur in the construction. On the other hand, sentences (8) indicate that it still remains grammatical for the phrases to occur in RGCs with verbs of requirement. Previous analyses argue that when *by*-phrases occur in RGs, a suffix *-ing* functions like a passive morpheme *-en*; that is, the suffix dethematizes the agent of the RG and suppresses the ability of the RG-verb to assign a structural case to its object. Given that the passivization is usually assumed to be concerned with NP-movement, it is

suggested that RGCs with verbs of requirement undergo NP-movement in their derivation, which is considered to A-movement, while the ones with verbs of evaluation do not.

Taking these facts into consideration, we propose that the structures of RGCs with verbs of evaluation and the ones with verbs of requirement are as follows:

- (9) a. This car deserves repairing.  
 b. [<sub>TP</sub> This car<sub>i</sub> [<sub>VP</sub> deserves [<sub>CP</sub> Op<sub>i</sub> [<sub>DP</sub> PRO [<sub>NP</sub> -ing [<sub>VP</sub> repair t<sub>i</sub>]]]]]]]
- (10)a. This car needs repairing.  
 b. [<sub>TP</sub> This car<sub>i</sub> [<sub>VP</sub> needs [<sub>DP</sub> PRO<sub>i</sub> PRO<sub>agt</sub> [<sub>NP</sub> -ing [<sub>VP</sub> repair t<sub>i</sub>]]]]]]]

In (9b), the main verb *deserve* takes a CP as its complement. In the RG, in which the agent-PRO and a null operator are base-generated in the spec of DP and the comp of VP, the null operator undergoes *WH*-movement to the spec of CP, which is assumed to be A'-position. In (10b), on the other hand, the main verb *need* selects a DP as its complement. In the RG, the agent-PRO is dethematized and the object-PRO undergoes *NP*-movement to the spec of DP to receive a case in the course of derivation. Given these structures, we can account for the above syntactic phenomena properly: The RGs in RGCs with verbs of evaluation are CPs, in which *WH*-movement of a null operator to the spec of CP takes place; as a result, parasitic gaps and preposition stranding are licensed. In contrast, the RGs in RGCs with verbs of requirement are DPs, where a syntactic operation like a passivization takes place; as a consequence, the occurrence of *by*-phrases is permissible. Thus, we argue that the different syntactic behaviors of the two types of RGCs follow from the differences of the categorial status of RGs.

Why, then, is it that verbs of evaluation and requirement select a CP and a DP as their complements, respectively? To solve this fundamental issue, we propose that the categorial status of the complements is determined on the basis of the lexical properties of the main verbs, i.e. c(ategorial)-selection. In particular, we assume the rule of canonical structural realization (CSR) as follows: The syntactic objects which receive an eventive interpretation are usually realized as CPs, except that an event is interpreted as if it were a thing and the syntactic objects are realized as DPs. Given this rule, it is expected that the RGs in the RGCs with verbs of evaluation have an eventive interpretation, while the RGs which verbs of requirement select 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:

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

In (11a), in which a verb of evaluation *deserve* takes the same DP complement, the DP is usually construed as *to receive the prize*. In (11b), on the other hand, where a verb of requirement *need* selects the DP *the prize* 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 require 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 (12a):

- (12) a. She deserves (to receive) a medal.  
 b. She needs (to receive) a medal.

In (12a), 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. 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 (12b). However, this use of verbs of requirement is no longer concerned in RGCs, because the subject of the main clause in (12b) has some agentivity.

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. Given this fact, it is expected that when RGCs with this type of verbs takes the RGs as their complements, the RGs are interpreted as a clausal event. As a result, they are realized as CPs, according to the CSR. In contrast, the complement of verbs of requirement is usually construed as a thing, as seen in (11b). Therefore, it is expected that the RGs in RGCs with verbs of requirement are interpreted as a thing and thus their categories are realized as DPs.

In conclusion, we have argued that some different syntactic behaviors in the two types of RGCs, such as the license of parasitic gaps and preposition stranding, and the occurrence of *by*-phrases, are explained by the difference of categorial status of the RGs, which is ascribed to the lexical properties of each verb.