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ON THE CASE OF SUBJECTS OF GERUNDS: SYNTACTIC AND SEMANTIC CONSIDERATIONS*

I INTRODUCTION

It is a well known fact that English is a language which permits various kinds of complement types. Some of the examples are as the following:

- (1) a. I have [_{DP} some drawings by Norman Rockwell].
- b. I like [his calling me Aunt Jane].
- c. I like [him calling me Aunt Jane].
- d. I saw [him giving a sign to the catcher].
- e. I saw [him give a sign to the catcher].
- f. I believe [him to be a genius].
- g. I believe [him a genius].
- h. I know [_{CP} that she had a hard time].

Although it is intuitively possible to call all the bracketed parts of the sentences above *complements*, their syntactic categories and their semantic functions differ significantly from each other. While the complement in (1a) is a complete noun phrase labeled as DP in generative grammar, and the one in (1h) is an embedded sentence CP introduced by a complementizer, the categories of the ones in the other examples have been quite controversial. (1b) and (1c) types of complements have traditionally been regarded as belonging to a class of constructions called *gerunds*,¹ and they are called *POSS-ing* and *ACC-ing* respectively. (1d) and (1e) are typical perception constructions. (1f) is an ECM construction and (1g) is widely known as a

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¹ The term *gerund* is used in various ways in different languages. In the present paper I consider that an English gerund is a construction containing V-ing form which is conventionally understood to preserve both nominal and verbal properties to some extent. As for the instances in other languages, see Haspelmath (1995) for example.

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small clause. It must be both empirically and theoretically worthwhile to investigate the relationship among these so-called *nonfinite clauses* (1b-g).² As the first step toward this, in the present paper I will especially pay attention to (1b) and (1c) types of complements in relation with other syntactically similar constructions.

The aim of the present paper is to examine English gerundive constructions, especially the ones such as (1b) and (1c) which are classified as *verbal gerunds*. They have attracted much attention because of their peculiarities in possessing both nominal and verbal properties. Without any theoretical device, one might dismiss these constructions as mere stylistic variants; however, many linguists have considered these to be certain linguistic phenomena worthy of careful study, and tackled the problem to explain the hybrid nature of gerundives theoretically in various ways.

There are two things that I would like to work on in the present paper. One is to discuss the syntactic and semantic properties involved in each type of the gerundives and to reveal the significant difference between them, and the other is to suggest another possibility of analysis on the structure of them, especially the one for ACC-ing, introducing the idea of feature change in V-ing.

The paper is organized as follows. First, I discuss the classification of English gerundive constructions in section 2. Among the whole gerundive constructions there are some other variations, and a certain gradience is observed within them: from the one closest to an ordinary noun to the one closest to a sentence. As the discussion proceeds from both syntactic and semantic points of view, we will demonstrate that it is plausible to analyze POSS-ing and ACC-ing not as mere stylistic variants, but as syntactically and semantically distinguishable constructions. In section 3, in order to inquire into the significance of the different Case realizations of the subjects of POSS-ing and ACC-ing, we will point out some problems in the alternation and related facts, and will introduce a theoretical key to the problem within the framework of the Minimalist Program (Chomsky 1992, 1995).

Section 4 and 5 are used for the discussions given in the previous analyses on the structure and the Case licensing of POSS-ing and ACC-ing. As for POSS-ing, there has not been much significant change since the structure proposed by Abney (1987) within the DP Analysis. However, as for ACC-ing, the structure and the Case licensing of the subject of ACC-ing have been the arguable issues since the theoretical framework has shifted from Government and Binding (GB) Theory to the Minimalist Program. Then in section 6, I will propose the idea of feature change of V-ing and will give some discussions to defend the plausibility of the idea including some empirical facts in relation with matrix verbs and historical perspectives.

2 THE CLASSIFICATION OF ENGLISH GERUNDIVE CONSTRUCTIONS

Before further investigating the problem concerning the difference in Case

² Later in the paper I will use the term *tenseless finite clause* to show that there is another possibility of analysis for those which have been treated equivalently as *nonfinite clauses*.

realizations between POSS-ing and ACC-ing, let us first review the classification of the whole gerundive constructions, in order to identify the theoretical status of them correctly among other gerundive constructions. By summarizing some previous analyses I will clarify the syntactic and semantic properties involved based on nominal and verbal properties.

2.1 *Nominal vs. Verbal Gerunds*

As I mentioned in the introduction, English gerundives show a certain gradience among themselves, from the ones with nominal properties to the ones with verbal or clausal properties.³ In the first place, they are classified briefly into two types: *nominal gerunds* and *verbal gerunds*. One of the earliest analyses that made this type of classification was Fraser (1970). Fraser originally called the former type of constructions *action nominalizations*; however, I use the term *nominal gerunds* instead, in contrast with the other constructions, *verbal gerunds* following Wasow and Roeper (1972). The examples in parallel with the ones given in Fraser (1970) are as follows:

(2) *nominal gerund*:

[My sister's riding of her bicycle] surprised me.

(3) *verbal gerund*:

- a. I clearly remember [his driving his father's car].
- b. I clearly remember [him driving his father's car].
- c. Though I was drunk, I clearly remembered [PRO walking there with him].

The differences between these two types of gerundive constructions are worth noting both syntactically and semantically.

2.1.1 *Difference in Syntactic Properties* Syntactic differences between these two types of gerunds are easy to observe. As for the nominal gerunds, they have syntactically common properties with *derived nouns*, whose example is given in (4a). Their shared properties are generally assumed as in (5):⁴

(4) a. *derived noun*:

³ According to Abney (1987), the existence of the gradience from a tensed S to a noun phrase was already observed, and its generally accepted cut has been between ACC-ing and POSS-ing since Reuland (1983).

⁴ Although they share a lot in common, there is one crucial difference between derived nouns and nominal gerunds. While derived nouns allow genitive objects such as (i),

(i) the city's destruction

nominal gerunds disallow such genitive objects and the noun phrase preceding V-ing marked as genitive must always function as its subject as in (ii):

(ii) a. *the city's destroying by the enemy
 b. the enemy's destroying of the city

- [the enemy's destruction of the city]
- b. *nominal gerund*:
[the enemy's sudden destroying of the city] (Taylor 1996: 273)
- (5) a. A noun phrase regarded as the subject of the gerundive construction can be either expressed in possessive form or introduced by a preposition *by*.
b. A direct object noun phrase must be preceded by the formative *of*.
c. Adjective modifiers instead of adverb modifiers are used.
d. Auxiliaries cannot occur in the constructions.⁵

Compared with nominal gerunds, verbal gerunds show one of the crucial verbal properties. It is that a verb in *ing* form takes an object argument noun phrase without a formative *of*. This property in contrast with (5b) above indicates the difference in the Case-assigning properties of each construction. In short, the relation between a verb and an object in a verbal gerund is exactly the same with the one between a verb and an object in a tensed finite clause. The syntactic properties of verbal gerunds generally assumed in comparison with the ones of nominal gerunds are as follows:

- (6) *verbal gerund*:
[{the enemy's / the enemy} suddenly destroying the city]
- a. If the construction needs to specify its subject noun phrase, its form can be either possessive or accusative.
b. A direct object noun phrase comes directly after the verb without *of*.
c. Adverb modifiers can be used.
d. Auxiliaries are available within the constructions.

Therefore, as we have pointed out, there exist these syntactic differences between nominal gerunds and verbal gerunds.

2.1.2 Difference in Semantic Properties As well as the syntactic differences summarized above, there is certain semantic difference observed between nominal gerunds and verbal gerunds. In Fraser (1970) it was already pointed out that a nominal gerund expresses only *an action*, *an activity*, *an act*, or *an event*, and never expresses *a fact* or *a statement*. It is supported by the fact that a stative verb such as *resemble* does not occur as a nominal gerund.⁶

- (7) a. *John's resembling of his father surprised us. (nominal gerund)
b. John's resembling his father surprised us. (verbal gerund)

For related information, see Grimshaw (1990).

⁵ Instead of *auxiliary* the term *tense marker* was often used in the descriptive texts; however, both these expressions are highly misleading. What is actually meant here by the term *auxiliary* is aspect, which does not include modal auxiliaries. As for the syntactic realization, I postulate a syntactic node T in ACC-ing, and later in this paper, I claim that T in ACC-ing is specified as [-T] just as T in ECM constructions.

⁶ Taylor (1996) argues the semantic difference in these constructions in the framework of cognitive grammar, which I do not discuss here. For details, see Chapter 10 of Taylor (1996).

(8) a. *eventuality*: Mary's awkward singing of the first song took place in the dining room.
b. *propositional entity*: Mary's singing the song sweetly amazed us.
I just couldn't believe her singing so sweetly!
(Parsons 1990: 133)

(9) a. The great fear caused [John's firing of the gun]. (nominal gerund)
 b. *The great fear caused [{John's / John} firing the gun]. (verbal gerund)

However, a verbal gerund seems not to be so restricted as a nominal gerund in respect of its semantic interpretation. A verbal gerund is generally supposed to denote a fact as Fraser (1970) claims; however, it is also possible to have the interpretation of an action or an activity if the context allows. The example showing that complexity is as follows:

- (10) a. *action*: Your driving a car to New York took longer than I expected.
 b. *fact*: Your driving a car to New York in your condition disturbs me greatly. (Quirk et al. 1985: 1064)

As we have summarized so far, there is a distinction between nominal gerunds and verbal gerunds both syntactically and semantically. The differences are syntactically observable between them, and corresponding to such syntactic differences, the semantic differences also exist. However, the matter may be stated from a different side: the reason for the existence of these different syntactic forms is somehow motivated semantically. Accordingly, such a semantic difference is syntactically represented in different linguistic forms as nominal gerunds and verbal

gerunds. The intricate relation between syntax and semantics is another problem which needs further clarification, and I do not discuss the matter here. For consistency I follow the former idea in this paper and consider that the syntactic difference induces the relevant semantic difference.

2.2 *POSS-ing vs. ACC-ing*

Next, the verbal gerunds will be further classified into three types according to the forms of the subjects of the constructions: (i) *POSS-ing*, (ii) *ACC-ing*, and (iii) *PRO-ing*. Each of the examples in (3) repeated here as (3') corresponds to each type of the three variants of the verbal gerunds.

- (3') a. *POSS-ing*: I clearly remember [his driving his father's car].
 b. *ACC-ing*: I clearly remember [him driving his father's car].
 c. *PRO-ing*: Though I was drunk, I clearly remembered [PRO walking there with him].

The apparent difference among the three types of verbal gerunds is the form of the subjects, in other words, the Cases represented on the subject noun phrases of the constructions. Along the same line of the arguments in the previous section, I will clarify the syntactic and semantic differences among these variants. Although there exist three types, in the present paper, I will focus the discussions only on *POSS-ing* and *ACC-ing* and will not take *PRO-ing* into consideration.⁷

A part of the ultimate goal is to see if it is possible to give any coherent explanation for the fact that there exist different Cases for the subjects of verbal gerunds when they are to be overtly expressed. As its first step, I summarize the syntactic and semantic differences between *POSS-ing* and *ACC-ing*.

2.2.1 *Difference in Syntactic Properties* Some of the interesting syntactic characteristics of *POSS-ing*, according to the previous analyses, are as follows:

- (I) WH-element extraction out from the construction is prohibited.
 (11) a. *Whose_i did you defend [_{t_i} kissing Mary]?
 b. ?* [Whose kissing Mary]_i did you defend _{t_i}?

⁷ *PRO-ing* appears when its subject is understood or unspecified. Some of the early analyses on the semantic characteristics of *PRO-ing* were Wasow and Roeper (1972) and Thompson (1973). On the other hand, the syntactic characteristics of *PRO-ing* are generally accepted as follows, and what is problematic with it is that in certain respects it shows the same behavior with both of the other types of constructions, *POSS-ing* and *ACC-ing*. Some of the characteristics are as follows:

- (i) *PRO* is considered to be checked its Null Case.
- (ii) WH-movement is possible.
- (iii) It appears in the focus positions of cleft sentences.
- (iv) *It*-extraposition is possible.

Chomsky (1995) explains (i) in Chapter 1 supposing that *ING* in this case is *INFL* specified as [-T, -Agr]. We leave the problem with *PRO* for future study.

⁹ Abney (1987) also presents other data such as long distance binding, specificity, pied-piping, scope, and availability of sentential adverbs.

- b. *[Fred singing the national anthem], everyone imagined.
(Reuland 1983: 108)

(IV) When conjoined in the subject position, they require singular verb agreement.

- (18) [John playing the piano] and [Fred singing a song] {was / *were}
terrifying. (Horn 1975: 378)

All of these examples are effective in indicating that ACC-ing are rather close to ordinary (embedded) clauses, while POSS-ing share some properties with ordinary noun phrases.¹⁰

2.2.2 Difference in Semantic Properties The semantic difference between POSS-ing and ACC-ing are quite difficult to explain. The reason for the difficulty is that the difference in meaning between these constructions in the same environment is rarely observed at the intuitive level, and even if it is possible to detect the difference, it is hard for us to determine linguistically on what level the difference is. In the sense of objective meaning, they are treated equivalently. Though such is the case, there are some previous analyses focusing on the semantic interpretations of the gerundive constructions, on the basis of *definiteness*.¹¹

Portner (1992) argues for the different semantic interpretations of the English gerunds in complement positions and he claims that POSS-ing is inherently definite and ACC-ing is indefinite. In supporting the claim he gives three pieces of evidence. First, he contrasts the two pairs of the constructions: a pair of ACC-ing and POSS-ing, and a pair of an ordinary indefinite NP and a definite NP in a complement position of the same matrix verb.¹²

- (19) a. John imagined Bill leaving.
b. John imagined Bill's leaving.
(20) a. John imagined an earthquake.
b. John imagined the earthquake. (Portner 1992: 382)

Portner explains the contrast observed between these two types as follows:

- (26b)[=(19b)] presupposes a salient departure by Bill, and (27b)[=(20b)]

¹⁰ As for (II) and (III) the judgment on the grammaticality varies slightly among the previous analyses. Mainly there are two views: the one following Abney (1987) and the other following Horn (1975) and Reuland (1983). Some of the ones marked with an asterisk become the supporting data in claiming the striking contrast between POSS-ing and ACC-ing, and on the other hand, ? or unmarked cases are often understood to indicate the difference between ACC-ing and other similar, but not gerundive, constructions such as ECM or small clauses.

¹¹ Taylor (1996) also discusses the semantic difference between POSS-ing and ACC-ing admitting that the difference is quite small.

¹² There is a different view on this matter. For example, Hegarty (1991) analyzes the semantics of these two constructions in a different way. It is said that each of the gerunds has occurrences as both definite and indefinite in both subject and object positions. See 2.3 in Hegarty (1991).

presupposes a salient earthquake; in contrast, neither (a) sentence presupposes anything relevant. This pattern strongly suggests that the POSS-ing gerund is definite.
(Portner 1992: 382)

The next two pieces of evidence also reflect the contrast above, and what is especially worth noting is that they correspond to the distributional difference between the POSS-ing and ACC-ing pointed out in section 2.2.1. in the present paper. They are on topicalization and on WH-extraction.

- (21) a. John's kissing Mary we remembered.
b. *John kissing Mary we remembered.¹³
- (22) a. The man we remembered.
b. *A man we remembered. (Portner 1992: 382)
- (23) a. Which city do you remember him describing?
b.?? Which city do you remember his describing?
- (24) a. Which man did he see a picture of?
b. ?Which man did he see the picture of? (ibid.: 383)

Portner notes that what is definite is presupposed and it can be a topic in the sentence. Therefore, the definite expression is able to occur in the topicalized position as in (21a) and (22a). As with topicalization, the same contrast is observable with WH-extraction in (23) and (24).¹⁴

As has been summarized so far, it seems to be plausible to claim that POSS-ing and ACC-ing are of different types both syntactically and semantically. As for the syntactic distributional properties given above in section 2.2.1, the two constructions behave in a different way. Some of the differences on topicalization and on WH-extraction are connected with the semantic difference between the two constructions as Portner (1992) claims.

3 A PROBLEM ON POSS-ING AND ACC-ING CONSTRUCTIONS

3.1 *A Problem and Related Facts*

In this section I will point out a problem which has not been discussed much in the previous literature. This problem, concerning the subjects of English gerundive constructions, or more precisely, the subjects of POSS-ing and ACC-ing, is considered from a syntactic point of view.

¹³ There is again a variation in respect of the judgment on the grammaticality of this sentence. One informant I consulted accepts this example as grammatical. If it is grammatical, the example will not mark a sharp contrast anymore, against Portner's expectation.

¹⁴ The similar example is also given in Abney (1987), which concerns the specificity effects.

- (i) the city that we remember him describing /
- (ii) *the city that we remember his describing /

As I have briefly discussed in the previous section, English verbal gerunds are further classified into three types: (i) POSS-ing, (ii) ACC-ing, and (iii) PRO-ing. In generative grammar, the categorial status of these constructions attracted much attention especially since the DP analysis by Abney (1987).¹⁵ Abney treats all types of gerundives uniformly as DP and explains the syntactic differences owing to the different internal structures postulated in the theory. However, for the distributional tests, there are two contradictory views: one entirely following Abney's judgment taking all types of gerundives as DP and the other taking the slight difference seriously and considering ACC-ing as something other than DP. It should be self-evident from the foregoing discussion that I agree to the latter idea. In addition to the differences pointed out in 2.2.1, the facts which we will shortly look at suggest that there must be a categorial difference between POSS-ing and ACC-ing.

While the categorial status is not easy to determine as the theory changes, one fact that is empirically unquestionable is that there exist two different Cases, a possessive Case and an accusative Case, on the subjects of gerundives. (As I mentioned above, PRO-ing is out of the scope of the argument in that it does not overtly manifest the subject of the construction.) Whichever view we take on the categorial status, we are left to give some plausible explanation for these two different Cases. If we assume that the categorial status of POSS-ing and ACC-ing is the same by adopting Abney (1987), we still need to explain what induces the difference in the Case realization. On the contrary, if we assume that the categorial status of POSS-ing and ACC-ing indeed differs, the explanation may not be as difficult as we imagine. Later in section 6 I will propose different categorial statuses for them; however, the mechanism inducing the different Case realizations is, unexpectedly, not so simple and straightforward.

What is interesting about the latter problem is that the exchange between two different Cases is acceptable in some cases and is not allowed in other cases. The acceptability differs at various levels: it depends on the context, the matrix verbs and the position of the adverbs. POSS-ing and ACC-ing are sometimes misleadingly considered to be mere stylistic variants; however, as I have already summarized, they are indeed different constructions both syntactically and semantically. If we examine their distribution further, we will be able to consider the syntactic mechanism underlying each case, which will help clarify the existence of the two apparently similar but significantly different constructions.

To examine the distribution of each construction, I will restrict the relevant syntactic environment to the argument positions such as a subject position and a complement position. As I mentioned in the introduction I will not discuss the construction generally considered to be a *free adjunct*, which is conventionally distinguished from *gerunds*.¹⁶ Then, in order to capture the systematic difference and

¹⁵ Valois (1991) also analyses verbal gerunds under the category DP, for which he claims more elaborate internal structure than the ones discussed in Abney (1987). I will introduce the structure proposed there in section 4.

¹⁶ Reuland (1983) treats *free adjuncts* such as (i) on a par with ACC-ing discussed here in this paper. The difference is the position of the occurrence of each construction. While ACC-ings occur in the argument position, the construction (i) is in the adjunct position.

similarity in the licensing of the accusative Case of the embedded subjects, I will treat all NP[+ACC]+V-ing on a par with ACC-ing previously discussed.

First, the verbs which are traditionally considered to take gerundive complements allow both POSS-ing and ACC-ing on their complement position. Among the ones allowing such exchange, there exist two types: (A) without any particular difference in meaning and (B) with a slight difference in meaning.

- (I) The exchange is possible:
- (A) Without any difference in meaning:
- (25) I remember [{his / him} kissing Mary].
- (26) I like [{his / him} calling me Aunt Jane].
- (27) I dislike [{his / him} going out with Amy].
- (28) We are in favor of [{his / him} studying abroad].

Here I do not consider the semantic difference between definite and indefinite, alluded to in the section 2.2.2. The sentences in (IA) are able to be treated equivalently, although there might be certain preference among speakers. For example, in (27), some people prefer POSS-ing because ACC-ing might bring about the impression that "I dislike him". In the present discussion I do not consider such preference to be a structurally crucial matter.

On the other hand, a slight difference in meaning is observable in (B) sentences.

- (B) With a slight difference in meaning:
- (29) a. She witnessed [his stealing his master's money].
- b. She witnessed [him stealing his master's money].
- (30) a. They could visualize [his playing important roles on Broadway].
- b. They could visualize [him playing important roles on Broadway].

While in (29a) the bracketed part of the sentence is interpreted as an action, in (29b) it is interpreted as a process, in other words, the object of the action, *witness*, is *him*. As for (30), *how he plays* is visualized in (30a) and the actual person, *he* is visualized in (30b).

Then, there are verbs which do not allow the free alternation of POSS-ing and NP[+ACC]+V-ing. In some cases the exchangeability seems to depend on the context and in other cases it seems to depend on the property of the matrix verbs. In

(i) Elaine's winking at Roddy was fruitless, *he being a confirmed bachelor*.

There are also similar constructions called *absolute constructions* such as (ii) in the older Indo-European languages. This construction and other related constructions involving so-called *converbs* are discussed in Haspelmath (1995).

(ii) Old Russian
Zautra že, solnčj-u vřsxodjaščj-u, vřmid-oša vř svjatuju Sofiju.
 morning PT sun/DAT go.up/DAT enter/AOR/3/PL into holy Sophia
 'And in the morning, while the sun was rising, they went into St. Sophia.'

In Haspelmath (1995) and others, (i) and (ii) constructions are treated differently. Although these data are quite interesting in respect of the problem of Case and agreement, I leave the issue for future study.

the following examples either construction is not allowed for some reason.

(II) The exchange is impossible:

(A) ACC-ing is not allowed:

- (31) I thoroughly regret [{my / *me} being involved in that].
 (Kilby 1984: 141)¹⁷
- (32) The fact of [{my / *me} being here] was remarked upon. (ibid.)
- (33) We defended [{his / *him} opposing the plan].
- (34) They attacked [{his / *him} being so rude to his stepmother].
- (35) They will discuss [{the Japanese people's / *the Japanese people} protesting against the nuclear test blasts by France].

(B) POSS-ing is not allowed:

- (36) a. I am against [{*his / him} being moved].
 b. Instead of [{*his / him} coming here], we went there.
 c. With [{*his / him} supporting us] we can't go wrong.
 (Kilby 1984: 141)
- (37) We {saw / observed} [{*Joan's / Joan} dancing to a waltz in that hall].
- (38) I noticed [{*his / him} writing a letter].
- (39) The paparazzi photographed [{*his / him} sitting in an infamous after-hours club].
- (40) She kept [{*his / him} waiting for more than an hour].
- (41) She stopped [{*his / him} going out in the rain].

Furthermore, there are some cases in which the exchangeability depends not on the context nor the matrix predicate, but on other elements such as an adverb involved in the sentence.

(III) The exchangeability depends on the position of adverbs:

- (42) I remember [{his / him} willingly giving his money to his friend].
- (43) a. I remember {clearly / vividly} [{his / *him} giving his money to his friend].
 b. I remember {*his / him} {clearly / vividly} giving his money to his friend.
- (44) a. I recall vividly [{his / *him} lying in a pool of blood].
 b. I recall {*his / him} vividly lying in a pool of blood.

In (42) *willingly* modifies the verb within the gerundive construction, *give*, and in that case, the alternation between POSS-ing and ACC-ing is allowed. In (43) *clearly* or *vividly* does not modify *give*, but it modifies the verb in the matrix clause, *remember*. In that case, NP[+ACC]+V-ing cannot appear as a constituent after the

¹⁷ Generally, the verb *regret* is thought to take both POSS-ing and ACC-ing. In the case of (34), the matrix subject and the embedded subject should be coreferential in the expected reading, and in such a reading, the embedded subject cannot be expressed in accusative.

adverb. The same structural relationship is also observed in (44). In these cases, the distribution of POSS-ing and ACC-ing is complementary.

As we have observed so far, the alternation between POSS-ing and ACC-ing in some cases is not just the stylistic matter. It is sensitive to the context, the matrix predicate, and the relation it holds with other syntactic elements in the matrix sentence. Then, the biggest concern will be to see if it is possible to give any plausible and coherent explanation for the variations above.

3.2 *A Key to the Problem*

One of the keys to the problem of alternation above seems to be *Case*. Before I proceed to examine the constructions any further, I will briefly point out the conceptual difference in the ways of treating Case between the frameworks before and after the Minimalist Program which was proposed in Chomsky (1992).

Before the basic idea of the Minimalist Program took a form in *A Minimalist Program for Linguistic Theory*, Case was considered to have two subtypes. One was called inherent Case which was assigned by certain lexical categories; the other was called structural Case which was, as the name represents, assigned structurally. What often attracted great attention were the structural Cases: nominative Case and accusative Case. These were assigned under government. In English, nominative Case had been considered to be assigned to a noun phrase under government by AGR, and accusative Case, under government by a verb. Therefore, the relation concerning Case assignment is either the one between a head and its specifier (nominative Case), or the one between a head and its complement (accusative Case). In the spirit of the Minimalist Program, the idea of such Case assignment is replaced by that of Case checking, which we will explain shortly.

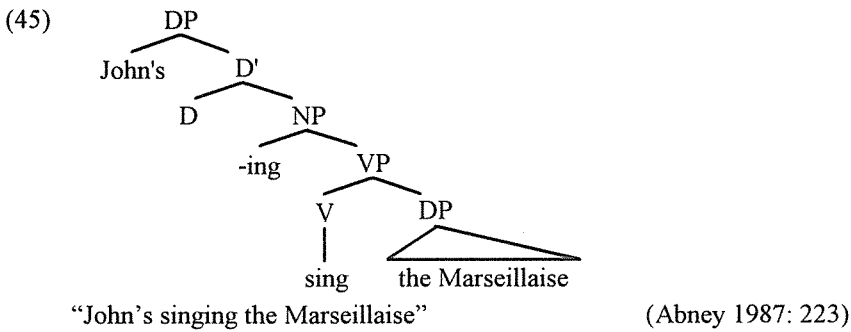
Some important consequences of the Minimalist Program are that there is no level of syntactic representation such as D-structure and S-structure, and that every lexical item is introduced into the derivation in fully inflected form. In addition, every movement is motivated only by morphological properties which are either overt or non-overt. Thus, the structural Case properties depend on the characteristics of T and the V head of VP: nominative Case is considered to be checked with the nominative Case feature possessed by T, and accusative Case is checked with the accusative Case feature possessed by a verb. The relation concerning Case checking here is only the Spec-head relation, and the head bears associated Case and agreement features.

Therefore, the differences which were observed between POSS-ings and ACC-ings in the previous sections must be reduced to the morphological difference of the subject of each construction. Both genitive Case and accusative Case need to be checked off in the course of the derivation, and their difference may either result from the different structure for each construction, or from making them eventually go through the similar derivation with different features required for checking.

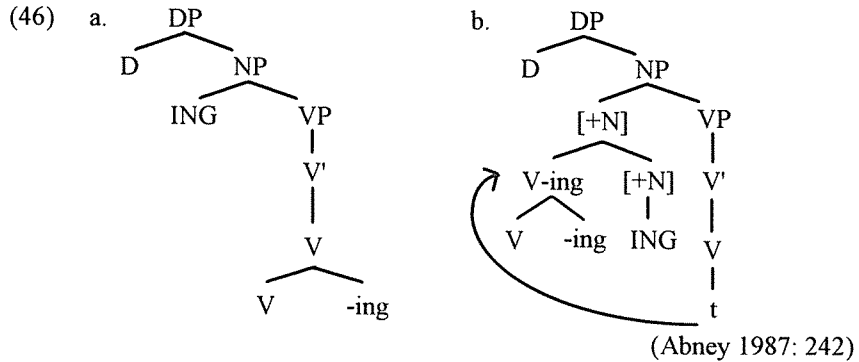
4 ON THE STRUCTURE AND THE CASE OF POSS-ING CONSTRUCTIONS

4.1 *The Previous Analyses*

As I mentioned in the previous section, genitive Case needs to be checked in the course of the derivation. Before the Minimalist Program, the most striking analysis on a possible structure for POSS-ing was proposed in Abney (1987) as one of the crucial supports for his proposal of the DP analysis. The structure proposed is as the following:

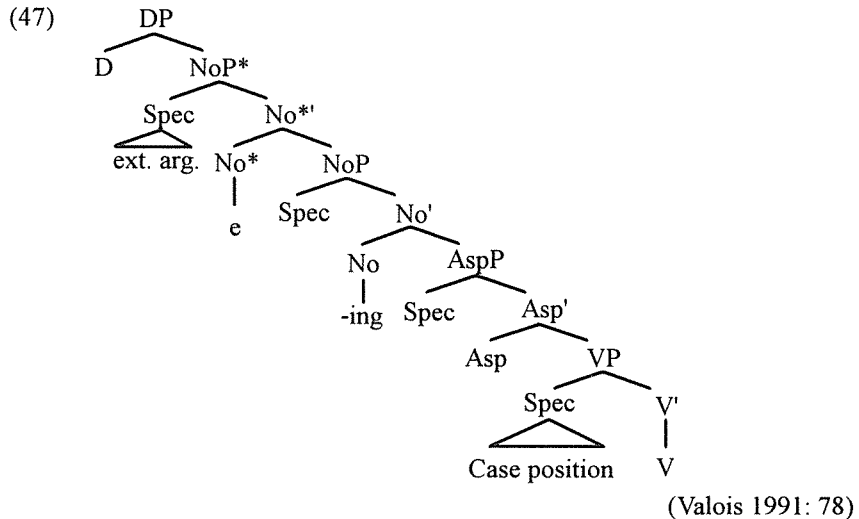


As for the categorial status, Abney (1987) concludes that POSS-ing is indeed a noun phrase, exactly a DP since it has the distribution of a noun phrase. As for the subject with genitive Case, *John's*, he proposes the idea that it receives its Case from D_{AGR}. 'S' is thought either to be generated under D or to function as a postpositional Case-marker. If it is a Case-marker, there is a non-overt AGR to assign genitive Case to its subject, *John*. As for the form of V-ing, *-ing* is independently base-generated in (45). Then the required process is that it should be combined with the verb, *sing*, in some way at the surface structure. The simplest way is to lower the *-ing*, which we would not like to choose. Therefore, to avoid the lowering of *-ing*, Abney (1987) assumes the non-overt morphological affix, ING, which is an abstract element instead of *-ing*. Then, the revised structure is the following. The structure depicted in (46b) shows the LF-raising of V-ing. With the structures proposed below, one can assume LF-raising of V-ing instead of PF-lowering of *-ing*.



What is important here is that the structure proposed by Abney certainly had the potential to match with the idea pursued in the Minimalist Program. In the structure above, by postulating the abstract ING, the verb and the suffix *-ing* are not necessarily separated in the syntactic derivational process. The idea is quite compatible with the one in the Minimalist Program that the words are selected and merged in the derivation in fully inflected forms.¹⁸

Valois (1991) adopts Abney's DP analysis and proposes the slightly modified structure of POSS-ing as the following:



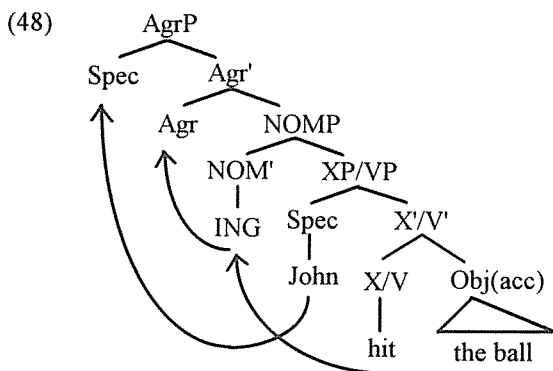
As for the genitive Case of the subject of POSS-ing, Valois (1991) postulates the node CaP (Ca(se) Phrase) above NoP*, and the subject gets Case from 's by Spec-head agreement.¹⁹ In the structure (47) *-ing* is projected separately under the node No,

¹⁸ As for syntactic affixation, see also Baker (1985).

¹⁹ Valois (1991) points out the difference in the Case realization of the subjects of noun phrases between English and French:

and is considered to lower to V as was supposed in (45) by Abney (1987). This last point needs to be considered seriously in the Minimalist Program. (For further discussion, see Valois (1991).)

In Hazout (1995) another more elaborate view on the structure of a noun phrase is pointed out in relation with ING.



(Hazout 1995: 387)

The structure (48) reflects the idea of Case checking and the subject internal hypothesis. In this structure *hit* is unspecified for grammatical category, and it will be recategorized as V by percolation of features. The subject moves to the Spec of AgrP in order to receive the genitive Case by coindexation with Agr.

What is commonly observed among these previous analyses are (i) the genitive Case of the subject is checked within the construction and (ii) the node for either abstract ING or suffix *-ing* is independently postulated.

4.2 Similar Constructions in Other Languages

One of the reasons that have made it difficult to determine the internal structure of POSS-ing is that such a construction is not a universally recognizable phenomenon. While there are quite many examples of derived nouns among various languages, the POSS-ing type of constructions are not widely observed. Although the actual data is scarce, English is not the only language that uses an expression with both nominal and verbal properties and with its subject in genitive Case. From the papers I have examined so far, there are certainly a few languages that have the constructions structurally equivalent to English POSS-ing.

The first example is a Turkish gerund, discussed in Abney (1987). According to Abney, all the subordinate clauses in Turkish are gerundive, and they are also divided

(i) Le portrait de Rembrandt d'Aristote

(ii) Rembrandt's portrait of Aristotle

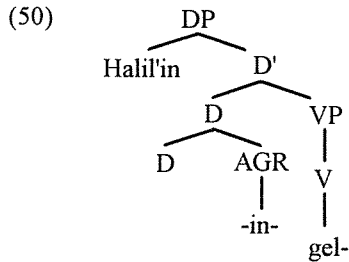
He claims that the affix 's projects its own maximal projection labeled Ca(se) Phrase in English but not in French.

into two types as those in English: verbal nouns and nominalizations. Each type has a different affix and a different meaning. The verbal noun has *-mE* / *-mEk* for the affix and its meaning is characterized as “action”. On the other hand, the nominalization has *-DIg* or *-(y)EcEg* for the affix and its meaning is characterized as “fact”. The one that corresponds to English POSS-ing syntactically and semantically is the latter case, the nominalization construction. The example is given as follows:

- (49) Halil'-in gel-diğ-in-I bil-iyor-um
 Halil/GEN come/ING/3s/ACC know/PROG/1s
 ‘I know that Halil is coming.’

(Abney 1987: 52, 196)

The structure of the nominalization above is as follows:



(Abney 1987: 197)

While there is non-overt AGR in the English POSS-ing construction, the Turkish gerundive construction has an overt AGR and the genitive Case is assigned by it.

The other examples are the action nominalization constructions in Modern Hebrew and in Standard Arabic discussed in Hazout (1995). Hazout (1995) compares the constructions in parallel with English POSS-ing.

(these) facts are strongly reminiscent of facts which have been often observed in similar constructions in other languages, such as, notably, the gerund in English.

(Hazout 1995: 357)

Hebrew and Arabic action nominalizations are, (however), very different from Grimshaw's complex event nominals and are much more similar in their properties to English gerunds in particular the variant known as POSS-ING. (ibid.: 365)

The basic syntactic properties of such constructions are as follows:

- (I) In the matrix clause, the construction itself functions as a subject or as an object of a verb or a preposition. The verb with a nominalizing suffix is marked with the case that must be marked within the matrix clauses.

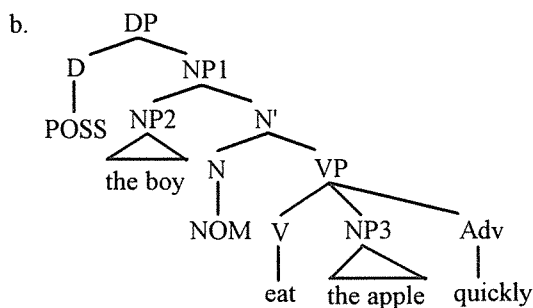
- (51) a. raʔayt-u iRtiyaal-a l-waziir-i
 saw-I assassination/ACC the-minister/GEN
 'I saw the assassination of the minister.'
 b. fujiʔt -u bi-Rtiyaal-i zaid-en al-waziir-a
 surprised-I with-assassination/DAT zaid/GEN the-minister/ACC
 'I was surprised by Zaid's assassination of the minister.'
 (Hazout 1995: 358)

- (II) The logical subject of the construction is marked by a possessive Case.
 (III) It takes a direct object with an accusative Case.
 (IV) The occurrence of the arguments is the same with the matrix sentence.
 (V) Adverb modifiers are available.²⁰

The important difference between these languages and English is the Case marking of the gerundive construction itself. While Turkish, Modern Hebrew and Standard Arabic mark the Case of the construction by morphologically marking the head (-I (ACC) in (49), -a (ACC) in (51a), and -I (Dat) in (51b)), such Case marking cannot be observed in English gerundive constructions. This may not be the problem since the same phenomenon, the head of the construction not being marked in respect of its Case, is also observed with ordinary noun phrases including nominal gerunds. English is a language that does not show agreement overtly by morphological marking.

The underlying configuration for the action nominalization construction is as follows:

- (52) a. axilat ha-heled et ha-tapuax bi-mehirut
 eating the boy ACC the apple quickly
 'The boy's eating the apple quickly'
 (Hazout 1995: 365)



(ibid.: 366)

With the analyses developed for similar constructions in other languages, I argue in the present paper that the category of a POSS-ing is DP and the genitive Case of

²⁰ Although they show certain similarities, Semitic constructions is more nominal than POSS-ing in three respects according to Hazout (1995). For details, see Hazout (1995).

the subject is checked with the agreement feature within the construction.²¹

5 ON THE STRUCTURE AND THE CASE OF ACC-ING CONSTRUCTIONS

As we went through in the previous section, the structure of POSS-ing has attracted much attention because of its peculiarity in possessing both nominal and verbal properties. Although one might claim that its exact internal structure still remains a problem, there is, at least, no doubt about the explanation that the genitive Case of its subject is either assigned by or checked with the relevant feature within the construction. It is not that the Case is assigned by or checked with a certain feature possessed by some element outside the construction. However, as for ACC-ing, the mechanism of its accusative Case checking involved seems to be not so straightforward.

Logically, there is a possibility of considering two different approaches to this problem: the accusative Case which is realized on the subject is checked (i) within the construction as with the case of POSS-ing, or (ii) with the accusative Case feature possessed by the element external to ACC-ing, eventually, by the matrix verb. In other words, the first case of the Case checking mechanism somehow parallels that of the nominative Case checking of the matrix subject of a tensed finite clause, and the second case parallels that of the accusative Case checking of the embedded subject of an ECM construction. I will give the following example to illustrate the point:

(53) I remember him kissing Mary.

- (i) The accusative Case feature of *him* is checked with an accusative Case feature possessed by some element within the construction, [him kissing Mary].
- (ii) The accusative Case feature of *him* is checked with an accusative Case feature possessed by the matrix verb *remember*.

These two complementary approaches to the accusative Case of the subject noun phrase of the construction have already been pursued by other linguists. (Reuland 1983, Kayne 1983, Abney 1987, Nakajima 1991, Matsuoka 1994, Suzuki 1994). In this section, I make it clear on what point their approaches seem convincing by summarizing the previous analyses and also point out the problems related to them, including my own work, Ishino(1995). Then, in the next section I will claim that both approaches are required in explaining the nature of ACC-ing and its relation with other NP[+ACC]+V-ing, and will propose more plausible explanation taking both

²¹ Haspelmath (1995) mentions the existence of *converbs* marked for possessor agreement with their subjects. So-called *nonfinite* verb forms requiring possessive construction is quite normal with *verbal nouns*, but it can also be observed with participles and converbs. According to Haspelmath (1995), a converb is defined as 'a nonfinite verb form whose main function is to mark adverbial subordination'. POSS-ing that we are investigating here does not have a function as an adverbial subordination. This might raise a problem on the nature of the genitive Case marking, and we need some investigation to see if we could draw any generalization or not.

approaches into consideration.

5.1 *Case Checking within the Construction*

5.1.1 Previous Analyses and Their Problems The first possibility is that the accusative Case is checked within the construction which is often regarded as one type of embedded clauses. Some of the previous analyses that follow this approach are Reuland (1983), Kayne (1983), Abney (1987), Nakajima (1991) and Matsuoka (1994). In these analyses the crucial reason for favoring the Case checking mechanism within the construction is the difference in behavior between ACC-ing and ECM constructions.

The evidences are briefly summarized as follows:

- (I) While ECM type constructions are narrowly restricted, ACC-ings are able to occur in the sentence initial position functioning as subjects.
 - (54) a. *Mary to be happy is believed by everyone.
 - b. {John / Him} painting his daughter is a delight to watch.
- (Nakajima 1991: 45)

Other examples of ACC-ing in the subject position are as the following:

- (55) a. Them trying to sing a song was just too horrible. (Reuland 1983: 101)
 - b. Him having to attend that meeting caused John not a few moments of anxiety. (ibid.: 111)
 - c. Him driving the car was a dreadful sight. (Kilby 1984: 135)
 - d. Him studying Linguistics would be a waste of time. (Rizzi 1990: 35)
 - e. Him climbing a tree is something I've got to see. (Pullum 1991: 766)
 - f. {*He / Him} getting the UNESCO chair would be unthinkable.²²
- (Taylor 1996: 282)

The examples in (54) and (55) are quite controversial and it is sometimes claimed that an accusative Case in the sentence initial position itself is problematic. Although these sentences are not so ordinarily used, such rarity does not mean that the phenomenon can entirely be put out of the scope of the argument. On the contrary, we must investigate and find out the factors involved in generating such sentences. There should exist various techniques for explaining this phenomenon; however, in this present paper, I take the syntactic point of view in order to be coherent as much as possible throughout the discussion.

The second evidence preferring the Case checking within the construction is as follows:

²² This example indicates that nominative Case is not allowed in this position, which supports the view that the feature involved in this construction does not have the ability to check nominative Case feature of the embedded subject.

- (II) While ECM cannot appear after the preposition, ACC-ing can.
- (56) a. *My belief of John to be a fool.
 b. *You'd better not bank on there to be another riot.
- (57) You'd better not bank on there being another riot. (Kayne 1983: 30)

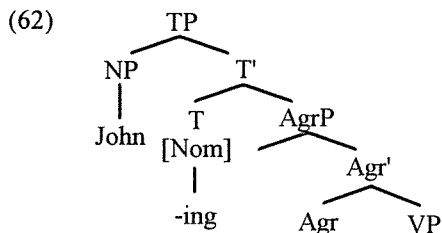
If we consider not only that the prepositions involved in the above examples do not allow the structural accusative Case checking, but also that the Case of the subject of the embedded clause is satisfied within the construction, the explanation follows. In (56), the accusative Case of the subject of ECM remains unchecked. On the other hand, for ACC-ing, if we consider that the accusative Case checking is satisfied within the construction, the problem does not arise in (57).

Then, there are three more pieces of evidence which show that Case checking within the construction is preferred.

- (III) Passivization which can be applied to ECM constructions cannot be applied to ACC-ings.
- (58) a. John is believed [t to be a genius].
 b. *John is remembered [t kissing Mary].
- (IV) While the subjects of ECM constructions c-command the elements in the matrix clause, those of ACC-ings do not.
- (59) a.*? Joan believes him_i to be a genius even more fervently than Bob's_i mother does.
 b. Mary recalls him_i having been a genius even more fervently than Bob's_i mother does. (Matsuoka 1994: 129)
- (V) Heavy NP Shift, which is possible for ECM constructions, is impossible for ACC-ings.
- (60) a. I believe to have been tortured by Brazilians [the priests who are going to speak today].
 b. I believe to be wealthy [more than 40% of the expected guests]. (Kayne 1983: 31)
- (61) a. *I don't favor being allowed to join [that sort of rude, uncouth, ill-behaved person].
 b. *I'm counting on marrying her [the man I was telling you about].
 c. *We're in favor of studying linguistics [each and every honors student]. (ibid.: 29)

In Nakajima (1991) the difference between these two constructions is thought to be ascribable to the Case Filter. In (58), the subject of the ECM complement is not assigned a structural Case by the matrix participle *believed* and therefore must move to the subject position of the matrix clause. On the other hand, the subject of ACC-ing construction has already been assigned Case within the construction, therefore, it does not move to the matrix subject position due to the "last resort" condition. Then,

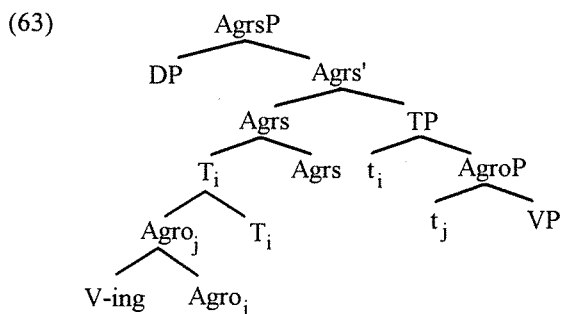
the following structure for ACC-ing is proposed.



(Nakajima 1991: 44)

In this structure, what the nominal head T assigns to its specifier is considered to be an inherent accusative Case. Therefore, passivization also supports the analysis of Case checking within the construction.

With the evidence pointed out above, Matsuoka (1994) proposes the following structure for ACC-ing.



(Matsuoka 1994: 131)

In the structure above, the accusative Case is checked with T which is adjoined to Agr-s. His proposal seems to work quite successfully except that he does not clearly specify the reason why it has to be accusative and not genitive nor nominative.

5.1.2 Ishino (1995) and Its Revision

In the previous study I tried to analyze the mechanism of accusative Case checking with the feature $[\pm T]$ and $[\pm Agr]$. The idea of this feature distinction was originally argued in Reuland (1983). Reuland (1983) claims that the constructions that he calls NP-ing constructions are *tenseless finite clauses*. In his idea, an element functioning like an agreement marker is syntactically present in the construction and it assigns Case to its subject. He also states that tensedness and finiteness constitute separate parameters. Following his idea, I have classified embedded clauses into the following four classes:^{23,24}

²³ The term *tensed/tenseless finite/nonfinite clause* is a little misleading, for it is often considered that tensedness is one type of the specifications indicating finiteness. Finiteness is often specified for features such as *aspect*, *mood*, *tense* and *subject agreement*. The feature distinction proposed here is obviously not

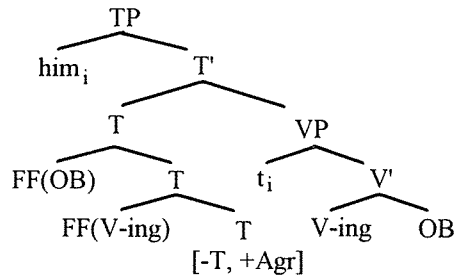
- (64) a. [+T][+Agr]: tensed finite clause ... *that* clause
 b. [+T][-Agr]: tensed nonfinite clause²⁵
 c. [-T][+Agr]: tenseless finite clause ... ACC-ing
 d. [-T][-Agr]: tenseless nonfinite clause ... *to*-infinitive

Considering that ACC-ing belongs to the third class, *tenseless finite clauses*, Ishino (1995) proposed the following:

- (65) A Tense is able to check the Case feature [+ACC] of a DP in [Spec, AGRsP] position, iff that tense is specified as [-T, +Agr].²⁶

Summarizing the arguments so far, I conclude that there is some evidence supporting the idea of Case checking within the construction, and the reason why the Case has to be accusative is assumed to result from the tense when it is specified as [-T, +Agr]. This way of Case checking parallels that of POSS-ing in that the Case of the subject is checked with the feature within the construction, and as for the features involved, it parallels that of an ordinary tensed finite clause. I restate the proposal (65) above in the system of Case checking without Agr Phrase proposed in Chomsky (1995) and hypothesize the possible structure for ACC-ing as follows.²⁷

- (66) A Tense is able to check the Case feature [+ACC] of a DP in [Spec, TP] position, iff that tense is specified as [-T, +Agr].



The structure itself parallels that of an ordinary English matrix clause. The difference

exhaustive. The reason that I only considered tense and agreement here is that these two features, I assumed, directly manifest the syntactic relationship. I need further investigation into this matter.

²⁴ See foot note 2.

²⁵ Apart from English, it is said that there exists a language with clauses specified for these features.

²⁶ The relation between this feature distinction and Case realization of the subject of the construction is not straightforward. For related issues, see Kakouriotis (1980) and Iatridou (1993) for Modern Greek data and Raposo (1987) for European Portuguese. I need further investigation for the relationship between the proposal here and the data in other languages. My speculation is that there exists some parameter.

²⁷ For ease of explanation, I omit the structure of ν P. ν is a light verb to which V overtly raises, and the ν -VP configuration is used to express the causative or agentive role of the external argument. For details, see Chomsky (1995) in Chapter 4.

is the feature specification of T. In the structure above, the T specified as $[-T, +Agr]$ checks $[+ACC]$ feature of the subject NP of ACC-ing. The problem of the categorial labeling of the construction still remains. While POSS-ing was labeled as DP, here I label ACC-ing as TP. In section 6, I will maintain this proposal.

5.2 Case Checking with a Matrix Verb

The second possibility is that the accusative Case is checked with the feature possessed by a matrix verb. One of the previous analyses preferring this approach is Suzuki (1994). This Case checking mechanism, if it is correct, is more straightforward than the one in the previous section. If it is possible to explain the accusative Case checking mechanism in this way, it will be generalized that the accusative Case after a matrix verb in English is always a structural Case and is always checked in relation with a matrix verb.

Suzuki (1994) considers ACC-ing as a variant of ECM construction and says that the accusative Case is checked with the matrix verb:

- (67) a. I believe [John to be intelligent].
 b. I remember [Asako often having a date with Ken]. (Suzuki 1994: 17)
- (68) a. I remember him often having a date with her.
 b. $[_{AGRS_P} I_i [_{TP} [_{AGRO_P} [_{VP} t_i \text{ remember } [_{TP} \text{him}_k [_{AGRO_P} [_{VP} \text{often } t_k \text{ having a date with her }]]]]]]]]$.
 c. $[_{AGRS_P} I_i \text{ remember}_j [_{TP} [_{AGRO_P} \text{him}_k t_j' [_{VP} t_i t_j [_{TP} t_k' [_{AGRO_P} \text{a date}_n \text{ having}_m [_{VP} \text{often } t_k t_m t_n \text{ with her }]]]]]]]]$.

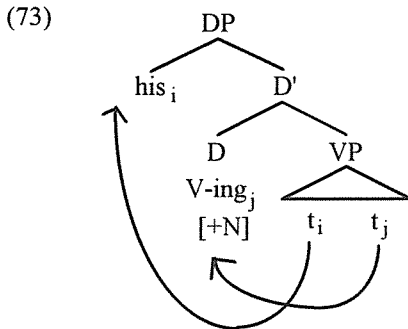
Though the same mechanism is pursued for both ECM and ACC-ing constructions in his analysis, there remains a difference in respect of the five characteristics pointed out in the previous section: (i) Subject position (ii) Object of preposition (iii) Passivization (iv) C-commanding relation between an element in the matrix clause (v) Heavy NP Shift. Among others, Suzuki (1994) focuses on the difference in passivisability between ECM constructions and ACC-ings. The examples are repeated as follows:

- (69) a. Eiko is believed [t to be honest].
 b. *Tomoko is remembered [t playing Bach on the piano].

He explains that the passivization of ACC-ing will form a non-uniform chain and its intermediate traces will be deleted. Once such traces are deleted, the result will violate the binding condition A, which he claims to induce ungrammaticality of (69b).

- (70) a. $[_{AGRS_P} \text{He}_k \text{ is } [_{TP} [_{AGRO_P} [_{VP} \text{believed } [_{TP} t_k' \text{ to } [_{AGRO_P} [_{VP} t_k \text{ be } [_{+L, -T}] [_{+L, -T}] [_{+L, +T}] \text{ honest }]]]]]]]]$.

- As for POSS-ing, I basically follow the previous analyses discussed in 4.1, and tentatively assume its structure as in (73).



By adopting the VP internal subject hypothesis, the subject *his* is base-generated in [Spec, VP] and raises to [Spec, DP] to have its genitive Case checked according to the Spec-head agreement with D within the construction. V-ing is introduced in the derivation in fully inflected form as is expected in the Minimalist Program, and it raises to D to check its [+N] feature at LF. Consequently, the categorial label of this structure is DP. I will discuss the derivation later in this section in comparison with ACC-ing.

As for ACC-ing on the other hand, with the discussions so far, I propose that there exist two types for those which have generally been analyzed as ACC-ing as a whole: (i) the accusative Case of the subject is checked within the construction, and (ii) the accusative Case of the subject is checked with the matrix verb. The explanation for the existence of two different constructions itself has already been noted and has been the widely accepted matter. However, it has not been explicitly discussed in respect of Case checking. I believe that it is not trivial to try to analyze the same phenomenon in the theory of feature checking.

What has made it difficult to analyze ACC-ing is not only the intricate relation between NP[+ACC]+V-ing and matrix verbs, but also the complicated historical development of the construction itself involving V-ing. Taking these into account, I propose here that the feature change of V-ing is most crucial for deriving the aforementioned first type of ACC-ing with the accusative Case of its subject checked within the construction.

6.1 Proposal: Feature Change of V-ing

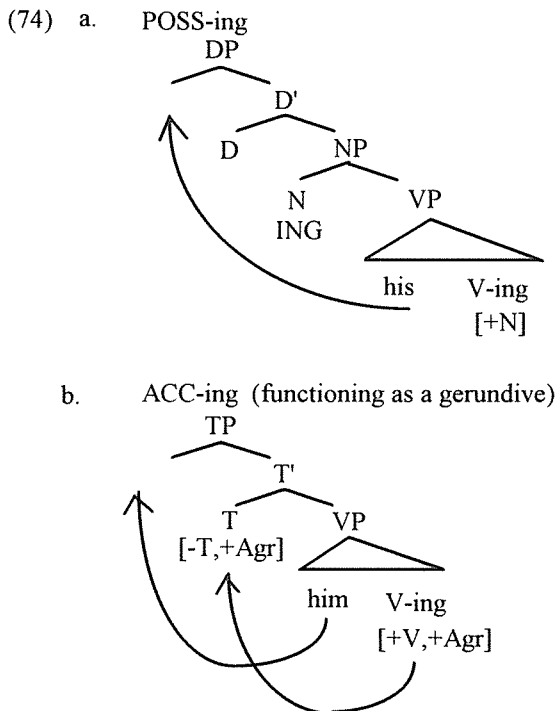
First of all, we postulate the idea that the function of the *-ing* suffix differs between POSS-ing and NP[+ACC]+V-ing including the ones conventionally regarded as ACC-ing. In POSS-ing, the feature [+N] plays an important role making the whole construction a DP. On the other hand, in NP[+ACC]+V-ing, the function of *-ing* is more of the verbal suffix with the feature [+V], therefore, the whole construction does not necessarily project up to a DP. In order to compare the structure of ACC-ing with other syntactically similar constructions, we consider the NP[+ACC]+V-ing to be a TP.

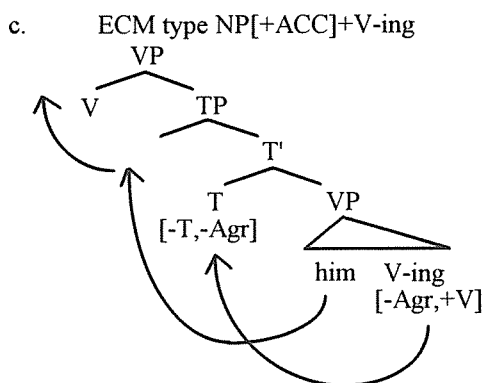
However, the feature change of V-ing possessing both nominal and verbal

properties is not explicable only on the level of the categorial change because there exist differences between the ones subsumed under the class of gerundives (ACC-ing) which do not allow passivization and the others allowing passivization. As we have repeatedly pointed out, the difference observed between them should indicate the expected difference in Case checking mechanisms. We propose here that the feature $[\pm\text{Agr}]$ independently affects the feature checking which occurs within the construction involving V-ing.

The previous analyses I have examined so far claimed that the constructions generally called ACC-ing should be analyzed conclusively in either approach, and that the constructions occurring after perception verbs are syntactically unrelated constructions. However, the more natural approach toward NP[+ACC]+V-ing seems to me to be the one taking both approaches into consideration. In other words, while some constructions deserve being called ACC-ing in the traditional sense in contrast with POSS-ing in the same class of gerundive ones, other constructions are different from the gerundive constructions. Moreover, what induces such a disparity is only the difference in the feature $[\pm\text{Agr}]$. By making a distinction between these two types of constructions, I propose that the first type of construction is the true verbal gerundive construction which originally developed along with POSS-ing, and the second type is not a gerundive construction, and its behavior is closely related to that of the ECM construction.

Then I assume the following structures to support this view:





In (74a) the *-ing* suffix of V-ing functions as a nominalizer as I first postulated in the beginning of this section, and it eventually determines the categorial status of POSS-ing as DP.

In (74b-c) the *-ing* suffix of V-ing functions as a verbal inflection and does not function as a nominalizer as in POSS-ing. This idea is incompatible with the one treating all gerundive constructions under the category DP following Abney (1987); however, it goes fairly well with the ones that analyze ACC-ing as a clause following Reuland (1983). Moreover, the idea I adopt here potentially covers the perception constructions that have often been regarded syntactically different constructions.

With the changes in the feature specification of V-ing, Case checking of the subjects of these constructions differs. First, in (74a) the subject *his* is base-generated in [Spec, VP] receiving a theta-role of agent, and it raises to [Spec, DP] for the Case requirement. Genitive Case of *his* is checked in [Spec, DP] position with the feature of D in the same manner which is generally assumed for ordinary noun phrases. Secondly in (74b), the embedded subject *him* is also base-generated in [Spec, VP] position receiving the same theta-role as *his* in POSS-ing. It raises to [Spec, TP] for T to check its strong EPP feature. Then, the accusative Case of ACC-ing is checked in that position ([Spec, TP]) with T specified as [-T, +Agr]. The feature [+Agr] of T in this case is the result of the feature of V-ing specified as [+Agr]. Lastly in (74c), the derivation is the same with the one in (74b) up to the checking of EPP feature of T. However, the accusative Case of the subject of the ECM type NP[+ACC]+V-ing construction cannot be checked if it remains in [Spec, TP] since T specified as [-T, -Agr] has no ability to check Case. Therefore, it raises to the matrix V to be checked its accusative Case with the matrix V. In this case, V-ing is not specified as [+Agr], and T cannot be specified as [-T, +Agr] as with ACC-ing. Instead, it is specified [-T, -Agr] as with the ECM constructions.²⁸

With the above mentioned categorial specifications, the differences observed between POSS-ing and ACC-ing in 2.2 and the ones between ACC-ing and ECM

²⁸ We need to clarify the relationship between the verbal gerunds, the ECM type NP+V-ing and the complements which are generally analyzed as Small Clauses such as (i).

(i) We believe [him a genius].

The accusative Case of a subject of a small clause is considered to be checked with a matrix verb.

constructions discussed in 5.1 are explicable. First, we consider the difference between POSS-ing and ACC-ing. As for the difference in syntactic properties, the degraded status of ACC-ing compared to POSS-ing in the distribution as a noun phrase indeed reflects the categorial difference between a DP and a TP. Abney (1987) admits that the only noun phrase property of ACC-ing is its external distribution, which has not yet received consensus. The marginal status of ACC-ing in its external distribution can be considered favorably from either side, and claiming ACC-ing to be a TP here in the present discussion should not be so ad hoc. Then, the semantic difference between POSS-ing and ACC-ing on the basis of definiteness should also be clarified. While POSS-ing is a DP requiring definite interpretation, ACC-ing is not relevant to the matter.

Second, we need to explain the difference between the ACC-ing and the ECM construction. Since we claim the categorial status of them to be the same as a TP, the observed difference should be explained by something other than categorial difference, and the remaining possibility is the difference in Case checking of their subjects.

6.2 *Relationship with Matrix Verbs*

In order to capture the real status of ACC-ing, we pointed out the possibility of considering the construction in a form of NP[+ACC]+V-ing as a whole. As I mentioned in the introduction, there are broadly two types of NP[+ACC]+V-ing constructions in the complement position. The typical examples are repeated as follows:

- (75) a. I like [him calling me Aunt Jane]. (verbal gerund)
 b. I saw [him giving a sign to the catcher]. (perception complement)

So far, we have left unclear the distinction between these two types of constructions. Here, I tentatively call them *Group I* and *Group II*, respectively.

- (76) *Group I*: bear, detest, dislike, dread, fancy, hate, like, loathe, love, mind, miss, regret, resent, stand, forget, imagine, recall, remember, ...
Group II: Verbs of Perception: see, hear, smell, perceive, behold, witness, notice, feel, observe, overhear, spot, spy, watch, listen to, look at, ...
 Verbs of Encounter: catch, discover, find, leave, ...
 Verbs of Coercive meaning: get, have, ...

The verbs belonging to Group I take gerundive constructions, and importantly, they are the ones that possess the genitive counterparts as well. As we have repeatedly pointed out, they are traditionally considered not to allow passivization. On the other hand, the verbs in Group II also take the NP[+ACC]+V-ing, but not the genitive counterparts. They only take the accusative subjects in the case of V-ing type of complementation, and they show characteristics similar to ECM constructions.

For example, passivization with this type of verbs is considered to be regular as it is with ECM constructions.

- (77) a. He was seen crossing the street.
 b. The rain could be heard splashing on the roof.
(Quirk et al. 1985: 1207)
 c. Tom was watched playing the puppets by the children.
(Suzuki and Yasui 1994: 361)
 (78) The guards had been {seen / spotted / ?watched / *looked at} searching the building.
(Quirk et al. 1985: 1207)

Some verbs may not allow passivization as in (78). This restriction is often considered to be due to some semantic constraint, such as the generalization that the passivized sentence of perception constructions require the reading of “accidentability”. Therefore, by following this generalization, one could state that the verbs which do not meet this semantic requirement do not allow passivized sentences.

Other than the typical perception verbs which have to do with sight, there are more problematic cases as the following:

- (79) a. I felt him touching my shoulder.
 b. *He was felt touching my shoulder.
 (80) a. The breeze could barely be felt blowing through the window.
 b. The shock waves of the quake were felt coursing through the ground in all directions.

There may be another semantic restriction on these sentences. In (79) passivization is not allowed. While “the breeze” and “the shock waves” themselves can be the direct objects of perception as a whole, “he” in the first case is not.

Finally, the verbs of encounter and verbs of coercive meaning also take NP[+ACC]+V-ing complements, and their behavior is not the same with the verbs belonging to Group I. Just as perception type, they do not allow genitive counterparts but allow passivization as in (81).

- (81) a. Finally we found {*his / him} lying under a tree.
 b. Finally he was found lying under a tree.

In most part, the accusative subjects of NP[+ACC]+V-ing complements appearing after Group II verbs check their accusative Case with the accusative feature possessed by the matrix verbs and undergo passivization. Therefore, I consider that the passivization is a regular syntactic behavior with perception verbs and tentatively assume that the exceptions observed above result from the relevant semantic constraints.

However, the empirical facts are more complicated than we expect. If we favor the Case checking mechanism within the construction for ACC-ing as was discussed in 5.1, the relationship between the classification of verbs (Group I and Group II) and the ways to check Case of the subjects becomes straightforward. And here a problem

arises. As for some verbs, which are thought to belong to Group I, passivization can be applied to them without making the resulting sentences ungrammatical. The examples are as follows:

- (82) a. We remember {his / him} kissing Mary.
 b. *He is remembered kissing Mary.
 c. People retain many different images of the late Glenn Gould, but surely he is most often remembered playing Bach on a magnificent grand piano in front of a capacity crowd.
- (83) a. Many interviewers hate {his / him} being so obnoxious during interviews.
 b. *He is hated by many interviewers being so obnoxious during interviews.
 c. As a politician, he was always best liked working a big crowd.
- (84) a. We {imagined / pictured} {Mary's / Mary} getting married to John.
 b.?? Mary was {imagined / pictured} getting married to John.
 c. She was wearing a tawdry blouse that could be most easily {imagined / pictured} adorning the scrawny frame of a sixteen year old Bon Jovi groupie.
 d. She possessed a physique that could scarcely be {imagined / pictured} executing the delicate movements of ballet, but there she was performing a perfect pirouette.
- (85) a. I visualized {his / him} playing the guitar on the stage.
 b.?? He was visualized playing the guitar on the stage.
 c. The last scene of the play is most readily visualized taking place in a cemetery.
 d. The general character of the function is most easily visualized assuming the form of a curve on a two-dimensional graph.

Although these verbs above belong to Group I, passivization is allowed in some cases. In such cases, the meanings of the verbs *remember* and *hate* are slightly different from the ones used in (a) sentences. As for (84) and (85), the verbs clearly share the meaning with perception type verbs. While perception verbs are used in perceiving the actual event, the verbs in (84) and (85) are used to evoke the past or a possible event in one's mind, and in these cases, the passivization is possible and the accusative Case should be checked with the matrix verbs. What is interesting about these examples is the grammaticality of (b) sentences. While the first two examples (82) and (83) explicitly do not allow passivization, it is not so explicit with the two verbs in (84) and (85) which are semantically close to perception verbs.

With the discussions so far, I conclude that the verbs taking NP[+ACC]+V-ing complements are basically divided into two types: (i) gerundive ACC-ing in parallel

with POSS-ing and (ii) ECM type constructions. Furthermore, the generally accepted ACC-ing is divided into two types: (i) true gerundive ACC-ing and (ii) ECM type.²⁹ The existence of both types after the same matrix verbs reflects the difference in meaning and the difference in the feature specification of [Agr].

6.3 *Historical Perspective and Its Implication for Case Checking Theory*

Historical development of the construction often becomes quite effective in understanding its present-day syntactic behavior, and it surely makes us look at the same phenomena from a different point of view. The gerundive constructions are no exception. Another empirically persuasive support for the analysis that the accusative Case is checked within the construction can be found in its historical development.

The historical development of the gerundive construction is often said to be based on the history of its acquiring verbal properties. There is a good reason for one to use such an expression, which we are shortly going to reveal. In the course of the development we could assume that ACC-ing developed slightly after POSS-ing. Our assumption that there are different feature specifications of V-ing corresponding to each type of NP+V-ing construction (POSS-ing, ACC-ing and other ECM type NP[+ACC]+V-ing) is compatible with the development of the gerundive construction.

6.3.1 Overview First of all, we need to clarify the development of verbal gerunds in contrast with nominal gerunds. There are a few different explanations for the occurrence of the verbal gerunds; however, the most prevailing explanation is the one focusing on the interaction with *present participles*.

According to the OED, Araki and Ukaji (1984), Tajima (1985), Koma (1987), Denison (1993) and among others, *-ing* was the suffix forming verbal derivatives which subsequently developed in various directions. The most widely accepted view is its interaction with the present participle. The derivational suffix *-ing(-ung)* was already present in Old English and it was used to derive an abstract noun from a verb. This derivational morpheme came to be used together with the inflectional morpheme *-end(e)* with adjectival inflection representing the present participle use of the verb. According to Denison (1993), the function of the verbal suffix, *-end(e)*, was to denote *progressive*, and the same function was also observed with nominal suffix, *-ing*, after the preposition, especially in Middle English with *in*. The blending of the two suffixes is considered to have occurred in Middle English. The morphological form of the suffixes were unified as *-ing*, and it received some verbal property maintaining its original spelling.

After the suffix gained some verbal property, it began to be used in the construction that in the end is now referred to as the verbal gerund. In the next subsection, I introduce in some detail a few previous analyses on the development of the gerundive construction from the historical perspective.

6.3.2 From Nominal to Verbal: from POSS-ing to ACC-ing According to a

²⁹ Taylor (1996) observes a similar phenomenon. For details, see Chapter 10 of Taylor (1996).

thorough study of the syntactic development of the gerund in Middle English by Tajima (1985), it is concluded, with considerable data as evidence, that the gerundive construction gained the following verbal characteristics step by step:

- (86) (i) it can be modified by an adverbial adjunct (instead of an adjective)
 - (ii) it can govern an "accusative" or direct object
 - (iii) it can take a subject in the common case (instead of the genitive)
 - (iv) it can show tense and voice by means of compound forms
 - (v) it can govern a predicative or complement
- (Tajima 1985: 1-2, order changed)

Investigating each property further, he makes six distinct processes explicit for (ii) and three distinct ones for (iii) as follows. Surprisingly enough, the order of the first occurrences of the steps correspond to the gradience of the variants of the gerundive construction in terms of the nominal and verbal properties which are conventionally accepted. For details, see Tajima (1985):

- (87) (ii) objective genitive + gerund
 - object + gerund
 - gerund + of NP
 - the + gerund + of NP
 - gerund + object
 - the + gerund + object
- (iii) genitive Case
 - common Case noun
 - objective Case pronoun

His work is also supported in a different approach. Ito (1996) gives the result of the examination of the occurrence of the gerundive constructions in prepositional phrases in ME period by using the Helsinki Corpus. She concludes that she gained a result similar to Tajima's (1985) and even admits that Tajima (1985) gives a more detailed result for the MEI period (1159-1250).

On the other hand, there is an analysis which brings about different results. For instance, Amano Ito (1995) explicitly clarifies the categorial status of the gerundive constructions in the framework of generative grammar with a slightly different result from the one obtained by Tajima (1985). According to Amano Ito's study, POSS-ing and ACC-ing both originated in PRO-ing which developed in ME beforehand. As for the difference in the Case realization of the subjects, she claims that two different mechanisms were introduced at that point. Assuming the Extended DP structure for POSS-ing and PRO-ing and the structure IP for ACC-ing, she explains the difference in the Case realization of the subjects for all the verbal gerunds including PRO-ing. As for the genitive Case in POSS-ing, the Case assigning ability of INFL gained the positive value and came to be able to assign genitive Case to the subject. On the other hand, regarding the accusative Case in ACC-ing, the mechanism of DP deletion similar to S'-deletion is stipulated, and the accusative Case is assigned by a matrix verb in the same manner as the one observed in an ECM construction.

Although her analysis is attractive in that it differentiates the categorial status and the Case assigning mechanism between POSS-ing and ACC-ing, two problematic facts still remain unexplained. The first is the fact that it is impossible to apply passivization to true gerundive ACC-ing. If the assignment of accusative Case of the subject as well as the categorial status (= IP) of ACC-ing is the same with that of an ECM construction, the syntactic differences empirically observed require additional explanations. Secondly, in her study, it is claimed that both POSS-ing and ACC-ing developed from PRO-ing in Modern English. Apart from this claim, there is also the fact that ACC-ing, which is assumed to have appeared earlier than POSS-ing, had the subjects of the form in common Case and the ones with pronominal subjects in accusative Case did not appear until the middle of the 20th century. On the contrary, the genitive Case in pronominal form has been used since 16th century. This wide gap between the two different Case realizations of the pronominal subjects is not explicable straightforwardly. However, if we follow Tajima (1985), the problem will be settled and the natural development of the verbal gerund prefers the one with POSS-ing preceding ACC-ing.

According to Tajima (1985), the first occurrences of each type are also in order. As for the contrast between POSS-ing and ACC-ing, it seems that POSS-ing was the first to appear. What is interesting to note here is the fact that the first occurrence of the common Case noun is observed earlier (in 1325, or even earlier, as approximately around 1200) than the pronominal subjects in the objective Case (around 1400). Moreover, the latter were not current until after 1800. With the discussions above, we conclude that nominal gerunds preceded verbal gerunds, and POSS-ing preceded ACC-ing. Then, I assume that ACC-ing developed a little later than the development of POSS-ing with the common Case subjects as the one to relate each construction, to gain more verbal properties and to be closer to the other embedded clauses.³⁰

If the development of gerund reflects its process of acquiring verbal properties step by step, we can restate its history in relation with the feature specification of *-ing* in (88). The participial usage of *-ing* independently existed as in (89) is in parallel with (88ii).

- (88) (i) a nominalizing suffix with [+N] forming V-ing in the lexicon:
Derived Nouns, Nominal Gerunds
- (ii) a nominalizing suffix with [+N] forming V-ing, which is checked in the syntax:
POSS-ing
- (iii) a verbal inflectional suffix with [+V, +Agr] forming V-ing in the lexicon:
ACC-ing

³⁰ The status of the common Case is not clear. The distinctions between nominative, dative, and accusative were lost in Middle English and the common Case of an ordinary noun corresponded to both objective and subjective form of a personal pronoun. Moreover, the dropping of 's from the genitive form was often observed, which makes it difficult for us to distinguish it from the common Case.

- (89) a verbal inflectional suffix with [+V, -Agr] forming V-ing in the lexicon:
ECM type NP[+ACC]+V-ing

7 CONCLUSION

In this paper we examined English gerundive constructions, especially POSS-ing and ACC-ing, by paying special attention to the difference in the Case of their subjects. By summarizing the previous analyses and by investigating other possibilities through the discussion, first I tried to relate the syntactic phenomena with the semantic interpretations. As for POSS-ing, I basically accepted the previous analyses and considered the categorial status of it to be DP. On the other hand, for ACC-ing I claimed that there is a possibility of its categorial status being TP, and that there exist two types of Case checking mechanisms: (i) Case checking within the construction and (ii) Case checking with a matrix verb. As for (i) type, by using tense and agreement features, I proposed the following:

- (66) A Tense is able to check the Case feature [+ACC] of a DP in [Spec, TP] position, iff that tense is specified as [-T, +Agr].

I supposed that both approaches suggested are correct up to a certain point, especially if we try to generalize the whole NP[+ACC]+V-ing constructions under the syntactically consistent mechanism. By giving some additional data relating to the behavior of ACC-ing, I proposed the idea that the constructions are indeed two way ambiguous. Then such ambiguity could be related only to the difference in the feature specification of [Agr]. Finally, I discussed the historical development of the gerundive constructions in terms of the change in the feature specification of V-ing in support of the proposal.

Finally, I must admit that this paper leaves many problems unresolved. The status of PRO-ing should be made clear in terms of Case. The relation with the other similar constructions such as the ones called *converbs* and *free adjuncts* needs to be investigated and clarified. The issue of *tensedness* and *finiteness* is still not clear. At present I would like to leave these matters for future study.

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