

# On the Pleonastic Nature of the Perfect Gerund in English\*

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## 1. Finite/Non-finite distinction

The most traditional distinction of English verb forms is made in Huddleston and Pullum (2002) as is shown in the diagram below, which is slightly modified for the ease of comparison with Stowell's (1982) notion of tense interpretation.

TENSE	VERB FORM	CONSTRUCTION	FINITENESS
+Tense	primary form	indicative	+Finite
		{ plain form }	
-Tense	{ gerund-participle past participle }		
		{ infinitival }	-Finite

The basic intuition behind this is that the clauses are divided depending on whether or not verbs are marked by tense (present and past) and whether

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\* This is a modified and extended version of the paper read at the KACL meeting (January 2007, Konan University) and at the general meeting of the Kansai Branch of the Literary Society of Japan (December 2008, Kwansei Gakuin University). I thank all the participants for their comments; Joseph Emonds, Henk van Riemsdijk, Minoru Fukuda, Seiki Ayano, in particular. This paper is supported by the Grant-in-Aid for Scientific Research from Japan Society for the Promotion of Science (C) 18520394.

or not case marking is possible. That is, a verb is tensed when it comes with a tense morpheme (present or past tense) while it is tenseless (unspecified with respect to tense) when it is not marked with any tense morpheme. On the other hand, the clause is finite when its subject is marked with nominative case while it is non-finite when its subject is otherwise marked. Notice that no distinction can be made in this type of classification with respect to the [-Tense] [-Finite] verb forms; infinitival, gerund-participle and past participle – all of which are verb forms endowed with equal status. There are undeniable syntactic and semantic differences between the gerund and the infinitive forms, in which we are particularly interested in the present paper. For example, the control infinitive and the gerund behave differently with respect to the temporal interpretation; the ECM or Raising infinitive is also different from the control infinitive with respect to temporal interpretation. Based on these obvious disparities, we have to conclude that the Huddleston-Pullum paradigm is insufficient for the understanding of the syntactic and semantic behaviors of the gerund and the infinitive in English.

On the other hand, Stowell (1982: 561-70) showed a different view of the classification of the non-finite clauses (also see Reuland (1982)). The following table is the basic paradigm presented by Stowell.

	+Tense	-Tense
+Finite	indicative	?
-Finite	Control	ECM/Raising, Gerund

On this account, the tense domain is concerned with the independent temporal interpretation; that is, a clause is tensed (+Tense) if it bears an independent temporal interpretation, and otherwise it is tenseless (-Tense). On the other hand, the finite domain corresponds to the Huddleston-Pullum distinction of Tense; that is, a verb form is finite if it is tense-marked as

present or past, and otherwise it is non-finite.<sup>1</sup>

## 2. Temporal interpretation and the structure of the gerund

Stowell argues that gerunds are [-Finite]/[-Tense]. This means that they do not bear their own temporal interpretations; rather, the interpretation is entirely parasitic on the semantic nature of the matrix predicates. However, if [+Tense] is responsible for Null Case licensing of the subject of the control infinitive (Martin 2001), then problems immediately arise with respect to where the gerund is identified in the box on the previous page. Given that it can go with the PRO subject (PRO-ing), then it should be [+Tense]. Moreover, Martin tentatively assumes, in passing in his footnote, that it is [+Tense], which means that the temporal interpretation of the gerund is independent from the matrix tense. But we easily find cases where the interpretation of the gerund is dependent on that of the higher clause, as Stowell points out.

Stowell assumes that the [+/- Tense] distinction reflects the presence of independent temporal interpretation and hence the presence of the T position in the syntactic structure gives rise to the independent temporal interpretation. I instead assume that the temporal interpretation is not always dependent on the presence of the T node in the structure. Before going on to develop my idea, let us consider a sentence like *He has visited the museum*. The present perfect is represented as [E—R,S] in the Reichenbachian system. It describes the situation of the past event (E) of visiting the museum which is viewed from the time (R) that is simultaneous with the Speech Time (S). Based on empirical and theoretical reasons, it has been proposed that “the

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1 Notice incidentally that the [+Finite]/[-Tense] box is not supplied with a value. The point is what it means when we say that there is a tense-marked clause without an independent temporal interpretation (the sequence-of-tense (or backshift) cases might fall under this category). Another problem arises with respect to the categorization of the imperative and subjunctive clauses, although this is beyond the concerns of Stowell.

relation among the three points be split into two distinct relations, one between R and S ... and the other between E and R" (Giorgi and Pianesi (1997: 27)). The example just cited is assigned the temporal interpretation [E—R,S] through the combination of the two distinct relations, [R,S] and [E—R]. Notice that the relation in which the visiting event occurred prior to the Speech Time (now) is indirectly achieved through the mediation by the R point. This serves to make the present perfect distinct from the past tense (*He visited the museum*) in which the visiting event is viewed as simultaneous with the past time.<sup>2</sup>

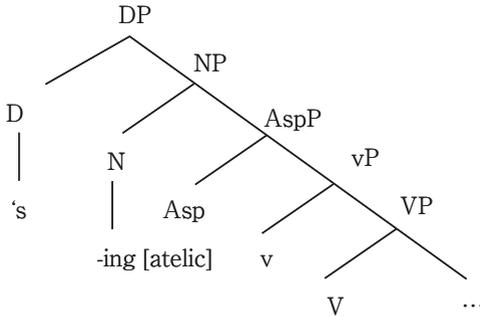
I shall extend the temporal interpretation to the gerund structure. The sentence that includes a gerund complement has only one T-projection in the matrix clause, which is responsible for the determination of the matrix clause tense interpretation. Notice that I assume that the gerund does not have a T projection in its internal structure. Although the tense interpretation (the determination of the R-S relation) does not take place in the gerund complement, nevertheless I assume that the E, R relationship is determined in the gerund complement. The simple gerund and the perfect gerund are assigned an [E,R] (simultaneous) interpretation and an [E — R] (anterior) interpretation, respectively. However, the interpretation of the gerund is actually fixed by the nature of the matrix predicates. Finally the full temporal interpretation of the entire sentence is brought about by the combination of the E,R,S relationship of the matrix clause with the E,R relationship of the gerund complement. The combining procedure between the two clauses is

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2 Giorgi and Pianesi (1997) argue that there are two tense positions available for the temporal interpretations: T1 for the S,R relation and T1 for the E,R relation. Each of them is followed by their respective VP complement (i.e. their T criterion) and each of the T-VP pairs is further dominated by AgrPs (T1 dominated by AgrsP and T2 dominated by AgroP, more concretely). Hence we obtain the two successive Agr-T-V conglomerations in the structure. Although it is unclear how this idea can be incorporated into the current generative framework in which we take the Aspect Phrase into consideration, the separate treatment of the temporal interpretations (the S,R and E,R relation) is undoubtedly viable.

mediated by the R position. In this sense, it looks like a sequence-of-tense interpretation or the bound tense interpretation of the finite clause complement. In other words, the gerund complements are bound or parasitic to the matrix finite clause.

With this much in mind, I propose the following basic structure of the gerund.<sup>3</sup>



There are some facts that support this assumption. First, the gerund is taken as continuative in the face of the following fact, as Pustejovsky (1995) suggests.

- (1) a. Destroying the memo took an hour. (imperfective reading)  
 b. \*the destroying was widespread. (result reading)  
 c. the destruction was widespread.  
 d. \*the arriving of John  
 e. the arrival of John

Pustejovsky points out that “there is no interpretation of *-ing* nominalization as the result of an event, as there is with *-ion* and other nominalization.” This

3 This is an extension of the proposal made by Fu, Roeper and Borer (2001) with regard to the internal structure of the derived nominal, as was discussed in Arimura (2008). As I discuss later, there is some aspect of the gerund that shares with the derived nominal. In the case of the derived nominal, the head N dominates something like *-tion*.

interpretation of the gerund is further corroborated by the observation made by Quirk et al. (1985).

- (2) a. He began to open all the cupboards.  
 b. He began opening all the cupboards.

They point out that native speakers' preference of (2b) over (2a) can be explained by considering that the gerund (their participle) contains the progressive aspect: the gerund with the progressive aspect, but not the infinitive, is compatible with the "multiple activities" expressed by the universal quantifier *all* plus plural nouns (*all the cupboards*).

Moreover, there is a fact which suggests that the subject of the gerund is base-generated in the Spec,DP position, rather than going through the processes of raising from the internal VP to TP.

- (3) a. Everyone('s) not smiling bothered me.  
 b. Everyone did not smile.

Whereas there is scope ambiguity in the finite clause (3b) (i.e. *every* > *not*, *not* > *every*), there is no such ambiguity in (3a) where the quantifier always takes scope over the negative *not*. This lends support to the analysis in which the subject of the gerund is taken to occupy the Spec,DP position from the beginning. This strongly argues for a non-sentential analysis of the gerund: if it has a sentential architecture, then (3a) should exhibit the same ambiguity as (3b).

In what follows, we shall be concerned with how the temporal interpretation is assigned to the gerund complement. Consider a gerund phrase like *visiting his uncle*. It is automatically assigned a simultaneous interpretation [E,R] because it is a simple gerund. If the gerund is perfective *having visited his uncle*, the interpretation is necessarily anteriority; that is [E\_\_R]. Thus I

assume that the gerund interpretation is assigned on the basis of whether it is simple or complex (perfect). On the other hand, as noted earlier, the gerund interpretation is bound to the matrix verb. Every complement-taking verb has a particular temporal orientation with respect to the following complement clause as its internal semantics. For example, verbs like *regret*, *resent*, *deny* or *report* have either the past or present orientation whereas verbs like *recall* or *forget* have the past orientation. On the other hand, the gerund that follows verbs like *try* or *attempt* can be interpreted as expressing either an unrealized future event as in “*John isn’t here. Try phoning his home number*” (OALD) or as an event simultaneous with the Speech Time as in *John tried working hard*.<sup>4</sup>

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4 This means that it is not correct to consider that gerund carries a factive presupposition as opposed to the *to*-infinitive. The presence or absence of presupposition is not determined simply in terms of the category. In the case noted in text, “*John isn’t here. Try phoning his home number*,” it has no presupposition with regard to whether or not the interlocutor actually phones his home number at the moment of speech. Similar cases are found even when the perfect gerund is involved as in (i).

(i) a. “I would consider this a dream job,” he says. “I would have never *imagined having been approached* about something like this and been paid a salary. I was really surprised.”

(<http://jasonjenicke.com/News/LawrenceJournal2.htm>)

b. But the satisfaction is also greater when you can *consider having been* part of the rise of certain brands.

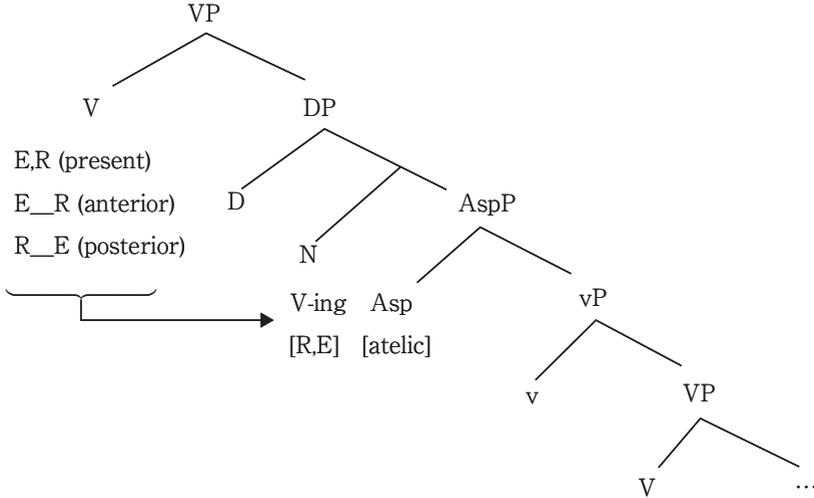
([www.europastar.com/europastar/magazine/article\\_display.jsp?vnu\\_content\\_id=1003552985](http://www.europastar.com/europastar/magazine/article_display.jsp?vnu_content_id=1003552985))

The verbs *imagine* and *consider* are typical non-factive verbs. In (ia) the speaker, offered a job still better than he had thought, talked about the imaginary situation that could not have occurred to him. On the other hand, the verbs *remembered* and *forgot* carry a factive presupposition independently of the presence of the perfect gerund as in *John remembered (or forgot) bringing the wine*. In this case, there is a clear presupposition that John actually brought the wine. Thus, presupposition is mainly a matter of the semantic nature of the higher predicate. The same reasoning applies to the (ib) case too.

As to the factivity of the gerund, Cornilescu notes that the gerunds carry a definite presupposition when they occur as “subjects of causative verbs, or causative psychological verbs” as in (ii) or “event-taking predicates” as in (iii).

(ii) a. Mary’s having won the competition is a fact / a possibility I hadn’t thought of.  
b. John’s hitting Mary made her mad.

The relation between the internal semantics of the matrix verb and the E,R interpretation looks like the following, where the three ER relations are intended to be the inherent semantics of the higher verb V.



An interesting aspect of the temporal interpretation of the gerund in English is that the interpretation that is internally assigned to the gerund can be modified by the semantic information encoded in the matrix verb. I call this modification by the higher verb “coercive.” Let us look at the following familiar examples.

- (5) a. I still now regret missing the train.
- b. John resents revealing the secret.

The gerund is internally assigned an [E,R] interpretation because the verbal

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- c. Pulling the little girl's hair infuriated her.
  - d. His having lost his driver's license once made John an especially careful driver when the cops were around.
  - (iii) a. Building the Panama Canal took longer than expected.
  - b. Gathering pecans in central Texas starts in September.

form is simple. However, the verb class of *regret* which requires the complement to be interpreted as anterior with respect to the time defined in the matrix clause, has a “coercive” function of modifying the interpretative relation [E,R] to [E\_\_R]. But this coercive function occurs when the root verb of the gerund belongs to the stage-level or non-stative class. In these cases, it is impossible to assign the simultaneous interpretation. Or alternatively this aspect of the interpretation of the activity verbs prevents the gerund of the activity nature from having the simultaneous interpretation.

This is an unusual property of the English language. Given a sentence like *John walks his dog*, we cannot describe John’s activity of walking his dog that is ongoing simultaneously with the present and, if we intend to express this situation, we have to use a progressive form *John is walking his dog*. Therefore the sentence in question can only be interpreted as expressing his habitual or generic activity as in *John walks his dog every morning*. Moreover the same is true in the case of the embedded finite complement clause that contains a bound tense. For example, given a sentence like *He told me that he walked his dog*, it can only be interpreted as expressing the habitual or generic activity in the past. In order to account for the bound nature of the clause, we may assume either that there is no S specification because the Speech Time is deictic by definition or that the embedded Speech time is specially marked in some way or other. If so, the embedded sentence is assigned an interpretation relative to the R points in the matrix and in the embedded sentence. In other words, the R points in the finite *that*-clause has to be matched with that in the matrix sentence. Notice that this situation is quite the same as that obtained in the gerund interpretation I proposed above.

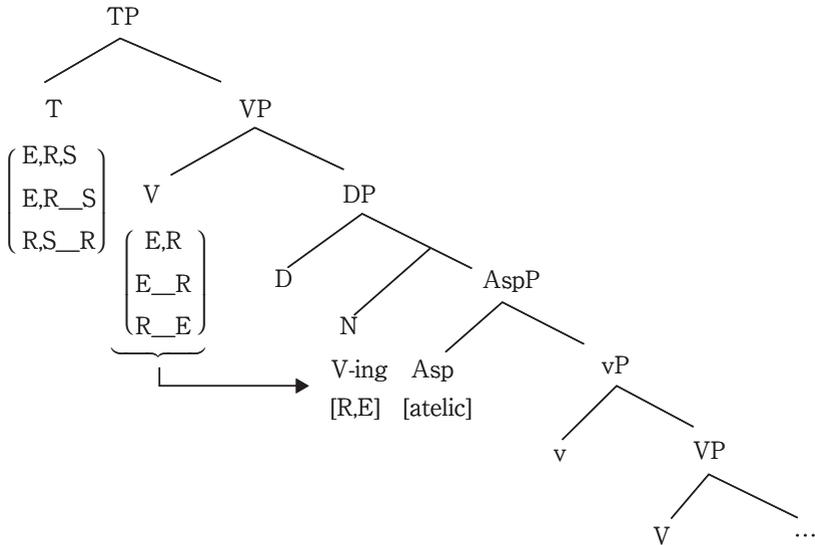
The situation changes when the gerund is of the stative verb class. The change of *missing the train in* (5 a) or *revealing the secret in* (5 b) to the stative *being a vegetarian* need not change the original temporal framework of [E,R]; that is, *John resents/regrets being a vegetarian* can mean that he is now

a vegetarian, although it can also be interpreted as meaning that he was a vegetarian in the past (as we shortly discuss in section 3). Again the same is true in the case of the finite complement with a bound tense. For example, as sentence like *He told me that he lived in Paris* can be interpreted as the state that is ongoing at the time when he told me (i.e. the R point in the matrix clause).

Now let us examine how the entire temporal interpretation of the gerund proceeds. Consider the following sentence.

- (6) a. John regrets missing the train.  
 b. John regretted missing the train.

The entire TP would look like as follows.



When the matrix clause is in the present tense, the temporal interpretations of the matrix and the gerund are: Matrix: (*regret*) [E,R,S] and Gerund: (*missing the train*) [E\_R] (due to the coercive function noted above). The

two interpretations are mediated by the R to derive a well-formed gerund interpretation [E\_\_R,S]. That is to say, both clauses share the R point. This mode of interpretation might seem to show that the interpretation of the sentence (6 a) looks like the present perfect, rather than the simple past. However, The [E\_\_R,S] relation obtained in the case of the present perfect and in the case of the gerund (6a) is not the same. The event of the present perfect is relativized with respect to the Speech Time (now) while the event of missing the train (6a) is relativized to *regret*. On the other hand, the past tense of the matrix renders the gerund as if it were past perfect: Matrix: (*regretted*) [E,R\_\_S] and Gerund: (*missing the train*) [E\_\_R] (again due to the coercive function noted above). The combination of both interpretations produces the gerund interpretation [E \_\_ R \_\_ S]. Similar algorithms apply to other cases where the matrix is future. Thus this line of reasoning explains the temporal interpretations of the gerund.<sup>5</sup>

### 3. The perfect gerund

Now we turn our attention to the perfect gerund, of which the following is the most representative.

(7) a. I always regret his having given up his profession.

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5 Note that my explanation is confined to the V-Complement sequence. In this particular case the higher verb is able to bind the lower predicate and hence we are tempted to argue that the c-command is the operative notion in the temporal interpretation of the gerund. However, we also notice the case where the gerund occurs as the subject and the matrix predicate follows it as in (i).

(i) Mary's sending an invitation card to him was very regrettable.

It is clear that the predicate *regrettable* requires the gerund in subject position to be temporally anterior to the matrix clause, but the binding relation cannot be established because of the failure of c-command. Given this fact, we should better say that the temporal interpretation is not determined on the basis of the syntactic c-command relation.

- b. I'm sorry for having not given detailed instructions.

It is clear that the perfect gerund expresses the time anterior to the time specified in the matrix clause: in (7a) I now regret the time when he gave up his profession in the past and in (7b) I now feel sorry about the past fact of not giving detailed instructions to some unspecified person(s). The past time interpretation is provided by the gerund auxiliary verb *having* whose inherent semantic function is to assign the [E\_\_R] relation to the embedded gerund complement. The entire semantic interpretation proceeds as given in the previous section. Since the main clause is in the present tense, it is interpreted as [E,R,S]. Combining the gerund interpretation with the main clause interpretation results in the temporal frame [E\_\_R,S] that identifies the activity in the gerund as “past-in-present.”

But this interpretation produces the same effect as we saw in the previous section. That is to say, the sentences express the same thing as the following sentences without the perfect auxiliary verb.

- (8) a. I always regret his giving up his profession.  
 b. I'm sorry for not giving detailed instructions.

The time of the gerund complement, which is a simple form, is interpreted as anterior to the time specified in the matrix clause, as discussed in the previous section. But notice that this interpretation follows from the internal semantics of the main clause predicates, *regret* and *sorry*, which coercively modify the temporal interpretation frame of the gerund. The verb *regret* requires, and the predicate *sorry* allows, the complement to be anterior to the matrix clause. Therefore, the anterior interpretation in (8) is entirely predictable from the nature of the higher predicates without recourse to the perfect gerund auxiliary verb *having*. In this sense, the auxiliary verb form *having* may well be called “redundant” or even “pleonastic”. The pleonastic

nature of the perfect gerund is striking in the following example which is part of the “NSW Health Surveys 1997 and 1998 , Oral health,” and which is concerned with the analysis of the questionnaire from the respondents. We notice that the perfect gerund is chosen as a stylistic variant from the possible alternatives.

- (9) Among dentate respondents, the vast majority (88.2%) reported *visiting* a dental professional in the previous 5 years. Most (70.4%) reported a *visit* in the previous 2 years and half (50.2%) reported a *visit* in the previous 12 months. More males (53.1%) than females (46.5%) reported *that they had not visited* a dental professional in the previous 12 months. This difference was most evident among the younger age groups. Male (60.7%) and female (52.2%) respondents aged 25-34 years were most likely to report *that they had not visited* a dental professional in the previous 12 months... Respondents from rural health areas (55.1%) were less likely to report *having visited* a dental professional in the previous 12 months than residents of urban areas. ... Respondents who lived in areas classified as “very remote” (56,8%) were most likely to report not *visiting* a dental professional in the previous 12 months.

([www.health.nsw.gov.au/PublicHealth/surveys/hsa/9798/oral/oral\\_intro.pdf](http://www.health.nsw.gov.au/PublicHealth/surveys/hsa/9798/oral/oral_intro.pdf))

The verb *report* is ambiguous with respect to the interpretation of the embedded complement; that is, the time of the complement can be either simultaneous with or anterior to the time specified in the verb. In the example above, the verb takes three types of complement; gerund complements, finite *that*-clauses and DP complements. Here we notice that there is no discernible semantic difference between the simple gerund and the perfect gerund (or the finite clause or a simple DP, for that matter).

Although the pleonastic nature of *having* is strikingly clear in the cases

where the root verb of the gerund form is of the class of activity verbs or stage-level predicates, the perfect gerund form appears to be necessary in the cases of stative (or individual-level) predicates as is argued by Quirk et al. (1985). Quirk et al. (1985: 1191) say that “the past time interpretation of the gerund of the simple form is possible ‘mainly’ with the verbs of dynamic,” noting the following contrast.

- (10) a. I admit knowing him.  
       b. I admit having known him.

It is true that the stative gerund in (10 a) predominantly favors the simultaneous interpretation when it is in the simple form and that the perfect form is apparently necessary as in (10b) when one wants to talk about the past state. However, this is not always the case. The Internet research reveals the following cases.

- (11) a. The Pentagon claims they “didn’t know” that Flight 77 was “coming our way” when they later admit *knowing* about the hijackings *fifty minutes before it crashed*, and have the most sophisticated radar facilities at their disposal.  
       (http://www.waronfreedom.org/activists/911flyer-outside.doc)
- b. Both Schroeder and trial counsel admitted *knowing* of Repinski’s statement *before trial* and that certain witnesses could place Repinski with Batchman.  
       (http://www.wisbar.org/res/capp/z1997/97-2700.htm)

The gerund *knowing* in (11 a) co-occurs with an unambiguously past adverbial *fifty minutes before it crashed* and hence the interpretation is located in the past and additionally the previous occurrence of *didn’t know* may be a further clue to the past time interpretation of the gerund. In (11b)

there is a past time adverbial *before trial* which helps anchor the time of the gerund to the past time. In both of these cases, the simple gerund form *knowing* can readily be replaced by the complex perfective form *having known* without a risk of meaning change. The same applies to the following cases, where the matrix predicate is *cannot help*.

- (12) a. While all these mental shifts are both desirable and necessary I cannot help *being troubled* by the processes of engagement.  
([www.pambazuka.org/en/category/panafrican/28386](http://www.pambazuka.org/en/category/panafrican/28386))
- b. We can't help *having been* born here and not there; we can't stop eating or drinking or shopping. But if people in our street didn't have enough to eat, we would share our food with them.  
([www.guardian.co.uk/world/2005/sep/07/millennium.internationalaidanddevelopment10](http://www.guardian.co.uk/world/2005/sep/07/millennium.internationalaidanddevelopment10))
- c. We cannot help *being born* black, white or yellow, any more than we can decide the faith into which we are born.  
([www.dawn.com/weekly/mazdak/20050108.htm](http://www.dawn.com/weekly/mazdak/20050108.htm))

This predicate seems to take a gerund complement whose interpretation is simultaneous with the time specified in the matrix clause as in (12a). When there is a disparity between the time of the matrix clause and the gerund complement, the perfect gerund is used as in (12b). However, even in this case, the simple gerund is enough as the example (12c) indicates. Because the predicate of the gerund itself (i.e. *be born*) already has the past time orientation, it is impossible to interpret the gerund as indicating the time simultaneous with the present time of the matrix clause.

The examples above suggest that the perfect gerund *having* is nothing but a pleonastic element, but there seems to be a limited range of area in which only the complex form is possible.

- (13) a. After being stretched on the rack, he confessed to having practiced black magic *since he was twelve years old*.  
([en.wikipedia.org/wiki/Peter\\_Stumpp](http://en.wikipedia.org/wiki/Peter_Stumpp))
- b. Defendant gave a statement to the police in which he admitted having known Crisp *for about seven months*.  
([vlex.com/vid/20463261](http://vlex.com/vid/20463261))

In these cases, the perfect *having* seems to best co-occur with the indefinite time adverbials, the *since*-clause in (13a) and the *for*-phrase in (13b) which typically come with the present perfect form. However, the co-occurrence with such indefinite time adverbials does not uniquely characterize the perfect gerund.

- (14) a. In their complaint, the Catawbias admit *being* out of possession *since 1840*.  
([bulk.resource.org/courts.gov/c/F2/865/865.F2d.1444.82-1671.html](http://bulk.resource.org/courts.gov/c/F2/865/865.F2d.1444.82-1671.html))
- b. I confess to *being* a weather nerd *for a long time*. I remember playing as a weatherman back in elementary school.  
([www.toddsuomela.com/2006/06/weather-watching.html](http://www.toddsuomela.com/2006/06/weather-watching.html))

From these examples, we may conclude that the simple gerund expands its territory to the cases where the complex gerund form may well be expected. Given that the finite present perfect cannot be avoided under the presence of the adverbials in question (*I have known/\*know him since 1990*), these adverbials do not isolate the perfect gerund as a sole possibility.

In this section we have seen the contexts where the perfect gerund is possible but not uniquely required. It is now safe to say that the perfect gerund *having* is pleonastic – pleonastic because it is entirely predictable from the semantics of the higher predicates, on the one hand, and because no meaning change is expected if it is deleted, on the other. The lack of *having*

causes no change of meaning: it makes no semantic contribution to the sentence at all. In this sense, the perfect gerund is a costly existence, which we would like to avoid as much as possible. Hence, I propose the following economy condition.

(15) Avoid *having* as possible as you can.

This reminds us of Chomsky's (1981) "Avoid Pronoun Principle", which says that in the case where PRO (unpronounced infinitival subject) and an explicit lexical pronoun are equally possible, precedence should be taken over the former. It is taken as "a conversational principle of not saying more than is required" (Chomsky 1981: 65).

But how could we account for Quirk et al.'s (1985) intuition with regard to the sentence (10 a) to the effect that the stative gerund is preferably interpreted as simultaneous rather than anterior with respect to the time of the matrix clause? We may suggest that there is no reason why it has to be interpreted as anterior. Since English stative verbs allow for the simultaneous present interpretation, the most natural way available for (10a) is to utilize the "default" interpretive mechanism (i.e. to interpret it as simultaneous) as opposed to the case of the dynamic activity verbs. In the case of dynamic activity verbs, we have to utilize what I referred to as a "coercive" modification of the temporal interpretive schema already assigned to the gerund internally. It makes an intuitive sense to argue that the coercive function is costly; if we you do not have to use it, do not use it. Based on this, we notice that the use of *having* is still more costly than the coercive interpretive mechanism because it has a morphological manifestation and demands an extra burden of pronunciation on the speaker.

Thus we arrive at what we might call a economy (or markedness) hierarchy in interpreting (10a, b).

- (10a) I admit knowing him.
- I. Most natural: simultaneous interpretation, resulting in [E,R,S].
  - II. Costly: anterior interpretation by coercively modifying [E,R] to [E\_\_R] (required by the context), resulting in [E\_\_R,S].
- (10b) I admit having known him.
- III. Most costly: anterior interpretation by using the morphologically realized *having*, resulting in [E\_\_R,S].

This should be contrasted with the interpretation of the dynamic activity gerunds (8a) and (7a).

- (8a) I always regret his giving up his profession.
- I. Most natural: anterior interpretation by coercively modifying [E,R] to [E\_\_R], resulting in [E\_\_R,S] (necessitated by the semantic property of the activity verbs).
- (7a) I always regret his having given up his profession.
- II. Most costly: anterior interpretation by using the morphologically realized *having*, resulting in [E\_\_R,S].

Thus, we can see that the perfect gerund *having* is an entirely costly, pleonastic and (in some cases) even unnecessary existence from the semantic view point.

#### 4. A brief comparison with the infinitive

Although the gerund is temporally interpreted solely on the basis of the semantic nature of the higher predicate as we have seen thus far, this bound nature of the non-finite clause is also observed in the cases of the ECM/Raising construction (as in *I believe him to be successful./He appears to be successful.*). The time specified in the matrix clause determines that of the infinitival clause; in other words the temporal domain cannot be differently

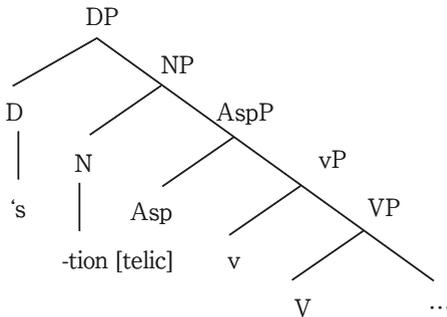
specified in the matrix and infinitive clauses (i.e. *I now believe him to be successful in 1995* does not make any sense). When the time is different from that of the matrix clause, the infinitive clause must take the form of the perfect infinitive (as in *I now believe him to have been successful in 1995*). This means that the simple form and the complex perfect form of the ECM/Raising infinitive are different from each other in terms of the temporal interpretation. In other words, the perfect infinitive has its own unique semantic function as opposed to the perfect gerund that we discussed thus far. More specifically we argue that the “coercive” modification of the temporal frame of the gerund does not occur in the case of the simple infinitive. There is no room for the simple infinitive in the ECM structure *I believe him to be successful* to be interpreted as anterior to the time specified in the matrix clause by any means.

Now we would want to ask what makes the difference between the ECM/Raising infinitive and the gerund. I deduce this difference from the difference of the internal syntactic structures. I assumed in section 2 that the gerund contains the DP structure. I argue that the nominal structure allows for more freedom of interpretation than the sentential structure. Let us consider following examples.

- (16) a. ... Sister Frances was one of the women in the Order who *regretted* the *decision* in the late 60s to adopt a more modern form of dress.  
(<http://www.australiantelelevision.net/as/series3.html>)
- b. Few studies exist that simultaneously examine historical cases in detail and *attempt* the *construction* of theory.  
(<http://www.jstor.org/pss/3787100>)
- c. Professor Frost *remembered the construction* of the “field by the school”, but in this case the school was the Amenia Seminary.  
([ameniany.gov/Orgs/AHS/Seminary ball field.doc](http://ameniany.gov/Orgs/AHS/Seminary%20ball%20field.doc))

(16a), for example, says that the women regretted in the past (T1) that she had made a decision in the late 60s (T2). This allows us to believe that the temporal interpretation is required in the case of the complex event nominal in the sense of Grimshaw (1990). On the contrary, an independent NP *the decision in the late 60s* alone only expresses what occurred in the late 60s, but its complete temporal meaning is left incomplete until it is combined with the higher tensed predicate. In the remaining cases almost the same could be said: the temporal interpretations given to the derived nominal are the simultaneous reading in (16b) and anterior reading in (16c) respectively. We should note that the interpretive versatility in the case of the (derived) nominal is similar to that of the gerund case. Thus this versatility, I assume, is due to the lack of the T-projection in the structure.

I argued elsewhere that the derived nominal has the following internal structure, basically following Fu, Roeper & Borer (2001) or Fu, Roeper and Borer (2001) (see also Abney (1987), Alexiadou (2001), Alexiadou (2007)).



This structure is almost parallel to the structure given to the gerund in section 2 above. The DP internal configuration (and hence the lack of a T-projection) allows for the interpretive versatility of the gerund and the derived nominal. Correspondingly, we may argue that the ECM/Raising construction lacks the internal DP structure and the presence of a T-projection allows for the strict temporal interpretation.

### 5. On the past perfect *had*

The pleonastic nature of the perfect auxiliary verb is not only observed in the non-finite gerund contexts but also it shows up even in the finite-clause domains. Consider the following examples taken from Google.

- (17) a. More males (53.1%) than females (46.5%) reported that they *had not visited* a dental professional in the previous 12 months.  
 b. 70.5% and 64.2% of respondents from these countries, respectively, reported that they *did not visit* a dental professional in the previous 12 months.  
 ([http://www.health.nsw.gov.au/public-health/nswhs/oral/oral\\_intro.htm](http://www.health.nsw.gov.au/public-health/nswhs/oral/oral_intro.htm))

The verb *report*, as we already noted above, requires the temporal interpretation of the complement clause to be either simultaneous or anterior with respect to the time expressed in the main clause. The context in (17) clearly points to the latter interpretation, given that the original source is concerned with the orthodontic report about the patients who were examined by the “dental professionals.” On this point, Allen (1966: 169-70) says that the perfect *have* can be omitted in certain circumstances, citing the following example.

- (18) a. I located the spot near Sedan where Gordon’s machine *fell*.  
 b. I was studying a French history I *bought* for one franc from a book stall by the Seine.  
 c. I supposed he *wrote* you.

In each case, the temporal relation between the two clauses suggests that the italicized verbs in (18a-c) could be rendered in the past perfect forms, *had*

*fallen*, *had bought*, and *had written*, respectively. Allen says “many educated speakers of English regularly omit *had* from included [i.e. embedded, K.A.] clauses in sentences where there is little danger of ambiguity.” On the other hand, Quirk et al. (1985: 191) talk about the “neutralization” of the perfect and the simple past in the complement of the factive verb, apparently the same phenomenon that is observed in the gerund complement.

- (19) a. I was sorry that I (had) missed the concert.  
 b. She regretted that she (had) abandoned the plan.

In these cases, the perfect auxiliary verb is entirely an option.<sup>6</sup>

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6 It is often pointed out that a certain set of adverbials contribute to the omission of the past perfect *had* because the relation is already built in the adverbials (*as soon as*, *after* or *before*). However, Huddleston and Pullum (2002: 147) noted that the omission depends on the nature of the verbs in the adverbial clause.

- (i) a. She left the country after/as soon as/before he had spoken to her.  
 b. She left the country after/as soon as/before he spoke to her.  
 (ii) a. She left the country as soon as she (had) completed the thesis.  
 b. She left the country as soon as she had written/wrote the thesis.

They argue that “the temporal relation between her leaving and his speaking to her is effectively the same in (ib) as in (ia), being indicated by the preposition.” They argue that the perfect *had* in (iib) cannot be deleted as opposed to (iia). According to them, the difference lies in the nature of the predicate used in the adverbial clause; completion of a thesis in (iia) can be simultaneous with the point stated by the past time of leaving the country, whereas “thesis writing situation in (iib) is too long to be compared with the country leaving.” The difference between *complete the thesis* and *write the thesis* seems to be aspectual in the sense of Vendler (1967); the former is an achievement verb that has no duration whereas the latter is an accomplishment verb that takes time and produces some outcome. Then we would like to ask whether the same holds with other verb classes:

- (iii) a. He was shot down before he *had run* twenty paces [activity verb]  
 (historicaltextarchive.com/books.php?op=viewbook&bookid=13&cid=13)  
 b. ... before he *had been* in office a month, he caught a cold that developed into pneumonia. [state verb]  
 (www.whitehouse.gov/history/presidents/wh9.html)

However, I suspect that the interpretive mechanism operative in this “neutralization” fact in the past perfect cases is not the same as that observed with respect to the perfect gerund. I should like to argue that the presence of the T-projection in the finite contexts makes a difference. That a clause has a T-projection means that its temporal framework can contain the S point (that is, the Speech Time, which is deictic by definition). For example, in the case of the simple past in (19a), *I was sorry that I missed the concert*, the tense specification of both matrix and complement clause is past with respect to the Speech Time; that is, both have the temporal relation [E,R\_S]. The S point in the complement is deictic. But the temporal relation of the mental state of feeling sorry and the fact of missing the concert cannot be simultaneous because the verb *miss* is a non-stative verb; it should be impossible for us to feel sorry about the present act of missing the concert. Therefore we are only left with the interpretation in which I was sorry about the previous event of missing the concert (that is, the temporal frame is modified as [E\_\_R\_S] in the complement sentence). Notice that this interpretation is produced by coercively modifying the complement simple past – a process that is the same as that we observed in the gerund in the previous section. On the other hand, in the sentence *I was sorry that I had missed the concert*, where the past perfect occurs, the complement sentence is assigned a temporal interpretation [E\_\_R\_S], but the temporal relation cannot fully be determined until the R point is fixed by the recourse of the R in the relation [E,R\_\_S] of the matrix clause. This situation is quite the same as that holding in the case of the perfect gerund under consideration. Notice that the two resulting interpretations are the same even though the routes are different. Hence the perfect *had* is also taken as pleonastic because there is an alternative, more

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According to Huddleston and Pullum, the past perfect auxiliary verb *had* could not be deleted in these cases, because running twenty paces and being in office takes “too long to be compared” with the activity mentioned in the matrix clause. But I should leave this topic for further research because the full investigation into the finite domain is beyond the present paper.

economical, way of saying the same thing. Here also arises a possibility to extend (14) to the finite past tense domain although I leave this topic unsettled until more research is made.

## 6. Conclusion

To conclude this paper I should like to say that the perfect gerund *having* is a pleonastic element that duplicates what is predicted by the nature of the predicates of the higher clause. I proposed that the nature of the higher predicate has temporally a very strong influence over the embedded gerund complement: it is assigned an ability to change the framework that has been established in the gerund complement. I called this a “coercive” modification of the temporal frame by the matrix predicate.

I also introduced an economy consideration about the interpretations of the gerund complements, paying attention to the distinction between the stage-level predicates and the individual-level predicates. I showed that the English particular interpretive system of the present tense comes into play in the interpretation of the perfect gerund. The combination of the economy hierarchy and the peculiar interpretive mechanism of the present tense lead us to a better explanation of the gerund interpretation. The economy principle tells us that we need not pronounce what can be left unpronounced; pronunciation puts an extra physical burden. More concretely, there is an economy principle that says “Avoid *having* as much as possible”, because there is another more economical mode of expression: the simple gerund.

I noted the existence of another pleonasm where the past perfect is involved. Although the extent may be more limited than the gerund cases, grammarians have noted the pleonastic *had* in the literature. I pointed out that the same process of modifying the temporal frame of the complement sentence takes place in this finite domain too. This possibility makes the past perfect redundant. Pronouncing the past perfect auxiliary verb *had* does not merit effort because the same meaning can be expressed by the simple form.

### Appendix – a perfect curiosity?

In this appendix I shall be concerned with the cases in which I fail to understand why the perfect auxiliary has to be used to the exclusion of the simple form. For example, Huddleston and Pullum (2002: 148) notice the pleonastic nature of the infinitival perfect *have* in (20c).

- (20) a. I should/would have liked to meet her.  
       b. I should/would like to have met her.  
       c. I should/would have liked to have met her.

According to Huddleston and Pullum, the a-version is the default case to express an unrealized past event of meeting her and the b-version is an outcome of the lowering process producing little difference of meaning, whereas the infinitival *have* in the c-version is “pleonastic in that it does not express a second anteriority relation” – a phenomenon that is typically observed in the infinitival complement whose higher predicates are *meant*, *thought*, *hope*, *want*, *long* or *intended* (“past-tense transportation” according to Huddleston (1977)). The second anteriority relation in (20 b) would be manifest more prominently in a sentence like *I should like to have finished it by the end of the week*, whose meaning is “I should like to be in the situation of having finished it.” Curme (1931: 470) also talks about the perfect infinitive which follows the pluperfect form as in (21).

- (21) a. He would have liked to have *hugged* his father.  
       b. I had hoped to *have procured* you some oysters from Britain.

Curme annotated the perfect infinitive as “instead of the correct *procure* or *hug*” in these examples. These uses seem to be decidedly redundant from the

present-day feeling.<sup>7</sup>

The cases (20c) and (21) we have examined up to now are concerned with the pleonastic perfect infinitive, which is normally triggered by the past tense context in the matrix clause, but the same seems to apply to the gerund cases, to a lesser extent though. I find several cases in which I fail to understand the motivation for the use of *having* given the semantic nature of the higher predicates.

- (22) a. I would have thought you'd be too embarrassed to *continue having been* caught not knowing the function of a grand jury and then not knowing about the Iraq Liberation Act of 1998.  
([thinkprogress.org/2006/09/03/libby-pardon-2/](http://thinkprogress.org/2006/09/03/libby-pardon-2/))
- b. As a result, we are in the process of renovating our offices. *We look forward to having completed* offices in spring of 2008, along with improved fabrication area!  
(<http://www.woodgraphics.com/HTML/index.html>)
- c. I particularly *enjoyed having been* given a greater acquaintance with the writings of Malpighi, Albertini, and Vieussens.  
(<http://jhmas.oxfordjournals.org/cgi/reprint/XXXVII/2/246.pdf>)
- d. If anything, this actually makes me think more highly of Laura Bush, in the hopes that could not *avoid having been* positively affected by the tragic and irreversible consequences of her actions.  
(<http://www.metafilter.com/mefi/4024>)

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7 But Curme (1931) is careful in not stigmatizing all the forms of (21) as “incorrect” but observing that they are accepted when “it is desired to indicate that the intention at the time was that a contemplated act should take place prior to another act that is mentioned in connection with it (p. 472);

(i) *I had meant to have visited* Paris and *to have returned* to London before my father arrived from America.

We could update Curme’s idea by saying that the perfect infinitive should not be used in these contexts unless motivated by the semantic considerations.

Notice the nature of the higher predicates: (a) *continue*, (b) *look forward to*, (c) *enjoy*, and (d) *avoid*. For example, as for *avoid*, Kiparsky and Kiparsky (1971) mention an ungrammatical perfect form like \**He avoided having got caught*. If so, what grammatical meaning does (22 d) have at all? If these apparently superfluous uses of the perfect gerund are actually acceptable at all, what difference is there with respect to the simple form (*I particularly enjoyed being given a greater acquaintance with the writings*) ? Or does it carry a special meaning that is missing in the simple gerund? For example, is it the case that (22 c) means something like “I particularly enjoyed the situation in which I had previously been given a greater acquaintance with the writings” – a situation different from that expressed by the non-perfect form, meaning “I particularly enjoyed [T1] the situation in which I was [T2] give a greater acquaintance with the writings” with [T1] = [T2]? It seems to me that there is no particular difference of meaning that could solely attributed to the perfect gerund. Although I have not made enough research into these apparently peculiar cases, it seems that these cases are another manifestation of the pleonastic nature of the perfect gerund.

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