This paper is an attempt to give a simple and unified analysis of English gerund in the framework of Pesetsky and Torrego (Henceforth P&T). English gerunds have several peculiar properties: as for their distribution, they behave like Determiner Phrases (DPs), while they clearly contain Verb Phrase (VP) structures as part of their internal structure. The hybrid characters have attracted a lot of researchers’ attention, and various analyses of gerundive constructions have been proposed consistently in the history of generative grammar. These previous analyses, however, will not be considered to be so simple or unified.

This paper will show that if we incorporate P&T’s proposal concerning structural case, we will be able to give a simpler, more unified analysis of gerunds in English. Of course, the paper of this length cannot give a comprehensive examination of the construction, but if we are on the right track, our analysis may be taken to be some support for P&T’s hypothesis.

In section one, we will review the latest proposal regarding the structures of gerunds, and we argue that Acc-ing must also be assumed as dominated by DP. Then we show that some DPs are never assigned any case in syntax, but must be supplied a “default case” by morphology. Section two is an elucidation of a theory of syntax without an abstract case system. This theoretically improved theory, in addition to the idea of default case, enables us to present a simpler unified analysis of English gerundive constructions in Section three.

The final section, Section four gives a brief summary and explores the consequences of a new analysis of gerund.

In the first half of this subsection we will present the latest proposal of the structures of gerundive construction in the framework of the Minimalist Program. The second half will show that there still remain a few serious problems with the proposal.

Miller proposes the following structures for Acc-ing and Poss-ing, respectively.
According to Miller, Acc-ing is almost the full clause, but lacking C, and the Poss-ing is Acc-ing plus nominal heads N and D. In other words, Acc-ing is a bare TP, while Poss-ing is a “nominalization” or conversion of Acc-ing.

The proposed structures are consistent with the traditional view of gerunds, which holds that Acc-ing is clausal, while Poss-ing has a nominal structure. (cf. Reuland) So nothing seems to be wrong with the structures, but they make several wrong predictions.

The most serious problem about structure (Ⅰ) is that the whole gerund, rather than only the DP subject of Acc-ing, will be subject to A-movement.

(a) Jane remembered [there being a juggler on stage].
   b. *There was remembered [being a juggler on stage].
   c. [There being a juggler on stage] was remembered.

(Schütze)

(a) Jane believes [Bill to know the answer].
   b. Bill is believed [to know the answer].
   c. *[(For) Bill to know the answer] is believed.

(ibid.:)

The verb remember takes an Acc-ing complement. The subject there cannot be raised to the matrix subject position (Ⅲ), but the Acc-ing as a whole can be moved to be the matrix subject (Ⅰ). This situation is the direct opposite of that of ECM complement, as we can see in (Ⅰ).

Next, consider (Ⅰ). Whatever the mechanism is, the ECM subject position is a “case-marked” position. If we assume the structures shown above for gerunds, then we can predict that the entire Acc-ing cannot appear as an ECM subject. This prediction is not borne out.

(a) John likes [Frank’s cooking supper] to be controversial.
   b. John likes [Frank cooking supper] to be controversial.

(Schütze)

(Ⅲ) clearly suggests that Acc-ing is dominated by the DP, just like Poss-ing.
Finally, for whatever reason, ordinary clauses such as *that*-clauses and infinitives are excluded from the cleft focus position or the subject position involved in Subject-Aux Inversion.

(a) a. *It’s [that he wants to quit school] that Fred told us.
   b. *It’s [to submit her manuscript to Fortune] that Alice intends.
   (McCawley:)

(b) a. *Did [that John showed up] please you?
   b. *Would [for Bush to be elected] be horrible?
   (ibid.:)

If Acc-\-ing has the suggested structure (\(\mathcal{A}\)), it will not easily occur in these positions. This is not true.

(\(\mathcal{A}\)) It’s [John kissing Mary] that would upset me.
(\(\mathcal{A}\)) Would [Mary kissing John] annoy you?
(

Portner:)

We have seen three problems related to the structure of Acc-\-ing proposed by Miller. The problems arise from the assumption that Acc-\-ing’s are bare TP’s. If we instead hypothesize that Acc-\-ing is not just a TP, but is also dominated by DP, then there is no problem. If they are DP’s, then their DP-like syntactic behavior is an automatic consequence.

If Acc-\-ing’s are DP’s like Poss-\-ing’s and their subject is not licensed externally (not “governed” externally, if we use the Government and Binding Theory (GB) terminology), the accusative case on the subject will not be checked and the derivation will consequently crash. In the next subsection we will tackle the problem of how to avoid this dilemma.

We seem to have fallen into a serious dilemma. We have seen in the last subsection, that Acc-\-ing behaves like a DP, but if it is a DP, we will have no way to give its subject the accusative case. So far, we have tacitly assumed that all DPs, at least argument DPs, must be assigned case. Schütze argues, however, that there are many environments in which no case could be assigned.

In fact, there are environments which Schütze calls “default case” environments. He does not maintain that all of the environments should be dealt with by this “default case,” but he says it is clearly desirable to supply the default Accusative case to the nominal elements in question. We have seen in the last subsection, that Acc-\-ing behaves like a DP, but if it is a DP, we will have no way to give its subject the accusative case. So far, we have tacitly assumed that all DPs, at least argument DPs, must be assigned case. Schütze argues, however, that there are many environments in which no case could be assigned.

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feature, ACC in English, by the morphology.” (Schütze)

default case environments (ibid.:)

a. What? Her/*She cheat on you? Never!
b. Her/*She in New York is what we must avoid.
c. Him/*He tired, they decided to camp for the night.
d. Him/*He liking beans surprised them. Him/*He liking beans, they bought some.
e. It was us/*we. There’s me/*I. The murderer is her/*she.
f. Me/*I, I like beans. Judy thinks that the best student, her/*she, should be president.
g. Me/*I too. Me/*I neither. Me/*I next!
h. Everyone but them/*they gets on John’s nerves. Students smarter than her/*she get no scholarship.

The Jets did that, not us/*we.
i. Who did it?--Me/*I.
j. We can’t eat caviar and him/*he (eat) beans.
k. Us and them/*We and they are gonna rumble tonight.
l. The real me/*I is/*am finally emerging. Lucky me/*I gets/*get to apply for a Green Card. How much would us/*we with insurance have to pay?

Schütze’s argument is very convincing, and “default case” system is an elegant and necessary one. Hence his system will be adopted in the following discussion.

Some might say that in the cases of gerund (default), we can assume that there is a special INFL present, that is, the morpheme -ing, which is responsible for the Accusative case checking. In fact, what Reuland proposed for NP-ing constructions is a case-marking system along these lines. The case transmission analysis like Reuland could not be adopted in the Minimalist framework. Even if it was formulable in our framework, several problems would arise: Why the case of the subject is always in accusative, even when the gerund appears in non-accusative environments? Furthermore, this analysis presupposes two different -ing’s for Acc-ing’s and Poss-ing’s, so it can never be a unified analysis.

In this section, we will elucidate the proposal made by P&T. Their proposal, combined with the default case system, will enable us to give a surprisingly simple picture of English gerund structures.

P&T try to dispense with abstract case per se, since abstract case, being a purely formal feature, seemingly has no interpretation. It is an obvious fact, however, that not only English but many other natural languages have an abstract case system. P&T suspect that cases seem to be uninterpretable on D, but
they are in fact an interpretable feature on some other head, which they assume to be T. If case feature is
replaced by Tense feature, we can eliminate at least one of those features that have no semantic value from
the theory of syntax.

First, they observe the fact that nominative case and subject agreement have a close relationship with
each other. Then they suggest that just like subject agreement has some interpretation for D, nominative case
is interpretable on T. Hence, their key proposal: nominative case on DP is actually an uninterpretable variant
of a tense feature (uT).

Their analysis will be briefly summarized below. P&T first investigate the distribution of auxiliary
fronting in interrogative and other clause types, and the behavior of that and for in embedded CPs. They find
that nominative case on subject and subject agreement on T are closely related.

(□) T-to-C asymmetry in matrix questions (Koopman □□□□)
[nonsubject wh □ “optional” T-to-C movement]
  a. What a nice book Mary read ___! (exclamative)
  b. What did Mary read ___? (interrogative)
    [subject wh □ no T-to-C movement]
  c. Who ___ read the book?
  d. *Who did ___ read the book? /*What a nice person did ____ read the book!

As an illustration, observe the contrast shown above (□). When the nonsubject wh undergoes local wh-
movement, T-to-C movement occurs optionally, so the T element (e.g. did) may or may not appear. On the
other hand, T-to-C movement is never observed in the case of subject wh-movement, hence the
unacceptability of (□d).

The contrast between (□b) and (□d) shows that when nominative subject occupies the specifier
position of CP first, T cannot move to C. This is accounted for in this way: In each case, the matrix C bears
both [uT(+EPP)] and [uWh(+EPP)] on their assumption. In (□b), the closest bearer of uT and that of wh are
different, so wh-movement of the object and T-to-C movement of did both occur. In (□d), on the other
hand, the closest bearer of uT (the nominative subject) happens to be the closest bearer of wh, so only the wh-
movement of the subject occurs. By some kind of economy consideration, the other movement (T-to-C)
ever takes place. Cf. Economy of movement (P&T □□□□ □□□□).

The same paradigm can be seen in the Belfast dialect of English. The only necessary assumption is that
the embedded declarative clause contains both [uT(+EPP)] and [uWh(+EPP)]. Then the following contrast
can be explained in exactly the same way.
Belfast English (P&T citing Henry)

[nonsubject wh (optional) T-to-C movement]

a. Who did John say [did Mary claim [had John feared [would Bill attack ___]]]?  
   [subject wh no T-to-C movement]

b. Who did John say [ ___ went to school]?  
c. *Who did John say [did ___ go to school]?

At this point, P&T notice the strong resemblance between the “did-trace effect” ((a), (b)) and the that-trace effect (c).

That-trace effect (Perlmutter)

[nonsubject wh optional that]

a. What do you think [Mary read ____]?  
b. What do you think [that Mary read ___]?  
   [subject wh no that]

c. Who do you think [___ read the book]?  
d. *Who do you think [that ___ read the book]?

That is usually considered to be an element of C, but if it can be taken to be an element of T like did, then did-trace effect and that-trace effect are one and the same effect. So they made a proposal in (d).

Nature of English that (P&T)

That is not C, but a particular realization of T moved to C.

may seem a rather ad hoc stipulation concerning the complementizer. In fact this proposal has a wider explanatory value. First, it can offer an analysis of the optionality of that in declarative complement clauses.

Apparent optionality of that in complement CP (ibid.)

a. Mary expects [cp [that] [C, t] [TP Sue will buy the book]].  
b. Mary expects [cp [Sue, t] [C, t] [TP t-T will] [TP t-Sue] [T will] buy the book]].

In non-wh complements, the head C contains only uT, which can be eliminated either by T-to-C movement or subject movement to Spec, CP. When T-to-C movement occurs, we have a that-clause. If the subject itself moves to Spec, CP, there will be a that-less clause.

Second, the non-omissability of that in subject clauses can be accounted for under the hypothesis (e).

That-omission asymmetry (cf. Stowell)


The contrast between (c) and (d) can be explained in the following way. Clausal subjects must be “nominative,” which means in P&T’s framework that they have to contain some instance of T in their head. The clausal subject in (c) has that in its head, so it can count as “nominative.” The subject clause in (d), however, contains no T moved to C as its head, hence it is not nominative.

Further confirmation of the plausibility of analyzing that as T comes from nonfinite clauses. For in for-to infinitives is an obvious counterpart of that in declarative finite clauses. So, for can be taken as another instance of T moved to C. The existence of for-trace effects and a for-omission asymmetry confirms this analysis.

If for is another instance of T moved to C, the above phenomena can be explained in exactly the same way as the that-trace effects and that-omission asymmetry.

P&T offer a conceptually attractive theory of abstract case, in which case feature is not an independent entity in the grammatical theory, but an uninterpretable Tense feature on the D. I would like to show in this section that incorporating P&T’s hypothesis into the analysis of English gerund, a simpler, theoretically desirable picture of gerundive constructions will appear.
Various attempts have been made to explain the peculiarities of gerund in the history of generative grammar. To mention a few, Abney, Reuland, Milsark, and Miller. Usually, gerundive constructions are divided into two types, Poss-ing’s and Acc-ing’s. This division is based on the case assigned to the subject of the clausal gerunds. Poss-ing’s are those gerunds in which their subject gets genitive (or possessive) case, while Acc-ing’s are somewhat similar to ECM complements, and their subject gets its accusative case from outside.

Poss-ing’s are clearly DPs, at least judging from their external syntactic behaviors. Therefore, whatever the mechanism of genitive case assignment, there has been a consensus that the subject of Poss-ing is assigned (or checked for) their case, similar to the way the specifiers of ordinary DPs get their genitive case.

On the other hand, we have never been of one opinion about the case-checking system of the subject of Acc-ing’s. Some (e.g. Miller) say Acc-ing’s are just like ECM complements, and using the GB terminology, their subject is governed from outside and assigned accusative case. Others (e.g. Reuland) maintain that accusative case is not directly assigned to the subject, but it is first given to the morpheme -ing and then transmitted to the subject.

These previous analyses of gerunds (both Poss-ing and Acc-ing) cannot be adopted as they are. As for Poss-ing’s, possessive case must be reformulated as an uninterpretable Tense feature, so that it will conform to the general framework of P&T.

Acc-ing’s have a harder problem to solve. Acc-ing’s have generally been considered more like ordinary clauses (i.e., tensed finite clauses and for-to infinitives), rather than typical nouns. This is not true. As we have seen in section they behave just like Poss-ing’s. So, if Poss-ing’s are DP’s, then Acc-ing’s must also be DP’s.

Furthermore, if they are DP’s, the subject will not be assigned any case from outside, whatever the internal structure of Acc-ing’s. DP’s are strong “islands.” Thus we have fallen into a serious dilemma. The distribution of Acc-ing’s strongly suggests that they are DP’s, but if they are DP’s then we have no way to assign their subject accusative case.

What I would like to show in this section is that a unified, simpler analysis of gerundive constructions can be given, if P&T’s theory is combined with the default case system by Schütze. In this analysis, the only difference between Poss-ing’s and Acc-ing’s is reduced to the presence or absence of [uT] on the subject DP.

First, the internal structure of Poss-ing is proposed. Then this section will show that if we subtract just one feature from Poss-ing, we can get Acc-ing.
P&T make several suggestions about the structure of genitive case assignment. But they do not show the definite and clear picture of genitive case assignment. The following analysis is therefore not exactly theirs, but it is almost an automatic consequence of their theory of abstract case, so we are certain that they will agree on the structure of Poss-ing’s given here.

Let us assume that genitive case is another instance of $uT$ on D.

\[(\text{The nature of genitive case})\]

Genitive case (like nominative and accusative) is an instance of $uT$ on D. This uninterpretable feature must be checked within the DP phase. Different proposals are made concerning the possessive morphology. P&T propose that “‘s, the, and a are not instances of D, but belong to a category that we may call R (“article”)” (p. 224), while P&T suggest “possessive morphology ... is a product of a nominal T’s” (p. 238).\(^1\)

RP of P&T is not clearly defined. This is probably because what is important for P&T is that ‘s is not an instance of D, but a member of a lower head. As far as our discussion is concerned, this RP can be safely replaced by the nominal T of P&T. Now Poss-ing will have the following structure.

\[(\text{Poss-ing})\]

\[
\begin{align*}
\text{DP} & \rightarrow \text{[D, } uT(-EPP), iD] \\
\text{TP} & \rightarrow \text{[DP, } iD, i]\scalebox{0.75}{[T, jT, j]} \scalebox{0.65}{(+EPP)]} \\
\text{VP} & \rightarrow \text{[DP, } i] \scalebox{0.75}{[v VP)]}
\end{align*}
\]

Nominal T, like verbal T, has an interpretable Tense feature ($iT$), and an uninterpretable $u$-features ($uD$), which includes (+EPP) subfeature. This $uD$ agrees with $iD$ in the subject DP, and as it contains (+EPP) feature, the DP is raised to the specifier position of the nominal TP.

The raised DP is checked by the nominal T, so it has possessive morphology (‘s). The D head of the topmost DP has of course $uT$, but it is (-EPP), so no movement results. This D is phonologically empty.\(^2\)

Now consider what happens if the subject DP of Poss-ing lacks $uT$ feature. There must be no nominal T in these cases. If there is one, its $uD$ (+EPP) must be checked, but cannot be. For the subject DP now lacks $uT$, so it is not an active goal any more. Or put differently, the subject DP does not meet the “Match condition.”

\[(\text{Match Condition})\]

If a head H enters an Agree relation with a set of phrases K, each syntactic feature of H must be present on some member of K (not necessarily with the same value, including value for EPP) (P&T)
Then the resulting structure will look something like (Ⅲ), which I propose to be the structure of so-called “Acc-ing.” The subject DP, lacking $uT$, receives no “case” in syntax. The morphology component will take care of this caseless DP, and the default case kicks in.

(Ⅲ) Acc-ing

\[
\begin{array}{c}
\text{DP} \quad [D, uT(-EPP), i]\quad [\text{DP}, i] \quad \text{(default Acc)} \quad [v \ VP]\end{array}
\]

Now we can explain why it is always accusative DP that appears as the subject of Acc-ing, even when the gerund is in the subject position of finite tensed clause, or in the absolute position where apparently no case is assigned. The subject DP never gets case in syntax, so it is always assigned a default accusative case feature in morphology.

We have proposed that according to the framework of P&T Poss-ing will be given the structure of (Ⅲ), while Acc-ing will have the structure of (Ⅲ). Acc-ing is minimally different from Poss-ing in that the subject DP of the former lacks $uT$ feature. Everything else follows from this difference.

Further, our analysis can give an account for some mysterious properties concerning the gerund. First, observe the following contrast between Poss-ing and Acc-ing.

(Ⅲ) a. [There being five people in the room] bothered me.

b. *[There’s being five people in the room] bothered me.

(Portner Ⅲ)
supplied in the morphology the default accusative case.

Next, examine carefully the structure of Acc-ing (4) in the last section. Notice that this structure is not limited to Acc-ing. The head D carries as its complement vP, but the vP can be replaced by PP or any other “small clauses.”

(4) a. [Her/*She in New York] is what we must avoid. (= (5b))
    b. [Down the hill] will roll the ball.
    c. [In the center of the room] sat a frog. (P&T 576–578)

The pronoun her in (4a) is in fact caseless, but the default case is assigned to it in the morphology. This explains why the pronoun is in the accusative case, rather than in the nominative case. (4b) and (4c) are the examples of locative inversion. P&T (576–578) suggest that argumental locative PPs, such as Down the hill and In the center of the room, must bear uT, since their behavior is entirely like that of nominative DPs. Though they do not give any definite structure for this construction, it is in conformity with their analysis to treat the small clause subject and locative PP subject as having the structure shown in (6).

Third, Portner argues that a variety of contrasts between Poss-ing’s and Acc-ing’s can be accounted for semantically, that is, if we assume that “Acc-ing’s are indefinite and Poss-ing’s are definite.”

(5) a. Which city do you remember him describing?
    b. *Which city do you remember his describing?
(6) a. Which man did he take a picture of?
    b. ?Which man did he take the picture of?

(Portner 579–581)

He maintains that the unacceptability of (5b) comes from the same reason as the infelicitousness of (6b). Portner suggests that the definiteness may be derived from the possessive morphology. Possessive morphology gives rise to definiteness in the noun phrase. This seems to be a correct generalization, but it is not immediately clear why ’s is related to definiteness.

In our analysis, in contrast, we can assume that nominal T is the source of definiteness. If we can establish the connection between the nominal T and the definiteness phenomena, we will be able to account for the contrasts syntactically.

Finally, but rather speculatively, we can propose that PRO-ing might be analyzed only as Acc-ing. So far we have not discussed the structure for PRO-ing. This is partly because there is no wide agreement on what PRO is, or more largely because the control problem is not settled at all.

I would like to show what can be said about the properties of PRO under the framework of P&T 576–578.
PRO is generally assumed to be caseless. We exclude null case from our consideration. This means in our framework that PRO lacks *uT just like expletive there. We have seen in (1) that there cannot appear in Poss-ing construction, but only in Acc-ing construction.

(1) PRO-ing is an Acc-ing.

(2) makes several interesting predictions. For example, it is predicted that PRO-ing does not show any definiteness effect. Whether these predictions are borne out or not should be an important topic for the future research.

English gerunds are usually classified into three groups: that is Acc-ing, Poss-ing, and PRO-ing. This classification is based on the case assigned to their subject.

The structures shown in the text are slightly different from those Miller in fact proposes. For example, we have changed his MP to TP in our structures. Nothing hinges on this decision; the modifications were made just for the ease of presentation.

Although Hornstein and Lightfoot (2000: 50), Johnson (2000) say that Acc-ing is not allowed as an ECM subject, “neither I (i.e., Schütze: MY) nor numerous other native speakers I have consulted find any contrast here (i.e., between (a) and (b): MY)” (Schütze 2000: 50).

Notice that Acc-ing’s in these sentences are put in a “less definite” environment. It is usually assumed that though Poss-ing’s can appear in the cleft focus position and be involved in Subject-Aux Inversion, Acc-ing’s cannot.

(i)  a. *It was [John kissing Mary] that upset everyone.
    b. It was [John’s kissing Mary] that upset everyone.

(ii) a. *Did [Mary kissing John] upset her parents?
     b. Did [Mary’s kissing John] upset her parents?

(Portner 2000: 100)

Portner argues that what is wrong about (ia) and (iia) is that the Acc-ing is put in too definite an environment.

Schütze admits that in some cases (especially, (2000: 1, e, j, and k)) NOM subjects can appear instead of default ACC subjects. This fact, however, is a further confirmation of the default case system, since we find no other environments allowing such “vacillation” between Accusative and Nominative.

P&T 2000 explore the possibility of extending their analysis of nominative case as *uT on D to
accusative case, and propose (i). Since this extension is not directly relevant to our discussion, it will not be dealt with in this paper.

(i) The nature of accusative case

Accusative case (like nominative) is an instance of $uT$ on D.


- Though P&T (2000) do not touch upon this, but the mechanism is not entirely clear for eliminating the uninterpretable feature $uT$ on C by another uninterpretable feature $uT$ on the subject. The hidden assumption will be that once checked by an interpretable feature, even an uninterpretable feature can be a checker of other uninterpretable features. Notice that the $uT$ on the subject Sue is already checked by $iT$ on will.

- For the ease of presentation, I am using the terminology of GB. In what follows, I will show that the subject of Acc-ing’s is never assigned accusative case, but it is caseless. Furthermore, I will propose that genitive case is another instance of $uT$ on D, like other structural cases.

- P&T (2000) assume that there are two kinds of T, that is, $T_s$ and $T_o$. $T_o$ is newly introduced to their system in order to accommodate the accusative case as $uT$ on D. In P&T (2000) it was suggested that $T_s$ is responsible for both the nominative and accusative case checking, and no $T_o$ is assumed. Since we are mainly concerned with $T_s$, and do not deal with $T_o$, $T_s$ will hereafter be called just T in this article for ease of presentation.

- The fact that Poss-ing, or more generally DP_s, is introduced by the empty head might be another similarity between DP and CP, as suggested by P&T (2000).

- DP without $uT$ will be problematic if the Argument Tense Condition must always hold.

(i) Argument Tense Condition (Case Filter)

An argument must bear T ($uT$ or $iT$). (P&T 2000: 244)

If this condition should be strictly observed, the subject DP of Acc-ing cannot be an argument, as it lacks any Tense feature in our analysis.

My suspicion is that although the condition is a correct generalization and almost always holds, it is just a generalization derived from deeper conditions. Most of the cases, if the derivation includes an argument without T, it will crash. In some cases, however, the derivation will go through even if it contains a T-less argument. Acc-ing, and other default case environments will be such rare cases.

Presently I have no idea how we should disallow bare VPs, e.g., VPs without the morpheme -ing, from
the structure ( )


Hornstein, Norbert and David Lightfoot. "Predication and PRO. Language 60.4.


