

PARALLEL HIERARCHIES: A MINIMALIST ANALYSIS OF NOMINALS AND
GERUNDS

by

MARCUS PAUL BERGER

(Under the Direction of Vera Lee-Schoenfeld)

ABSTRACT

Spectrums of lexical categories in languages are well-documented phenomena. Some constructions are ‘nounier’ or ‘verbier’ than others, though they might not fit purely into the categories of nouns or verbs. While these middle-ground constructions are recognized in the literature (see Ross 1973, e.g.), their representation is less studied in modern frameworks. I build on Abney’s (1987) dissertation concerning the DP in English, and place it into a Minimalist framework. In doing so, I propose the insertion of nominal and verbal projections at varying points in the syntactic hierarchy to represent selected nominal constructions, based on parallelisms in the hierarchical structures of nominal and verbal structures. Though the parallelism is not exact, I propose a *dP* projection to aid in the symmetry, presenting evidence to complete the spectrum on the nominal end. My investigation maintains the universality of nouns and verbs while providing an analysis of nominal forms using preexisting categories.

INDEX WORDS: Minimalism, Gerunds, Lexical Categories, Hierarchy of Projections

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MARCUS PAUL BERGER

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MARCUS PAUL BERGER

Major Professor: Vera Lee-Schoenfeld

Committee: Timothy Gupton
Keith Langston

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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CHAPTER 1

INTRODUCTION

The Framework

With regard to the grammar of language, it is important to consider every type of construction with a mindset of “everything in its place, and a place for every thing”. That is to say, it is not enough to analyze only constructions that fit neatly into a pre-existing framework. It is necessary to account for the entire grammar of a language. In this work, I analyze different types of deverbative nominal structures alongside purely nominal structures. Some of these nominal structures have distinct verbal properties that need to be accounted for. The study of certain constructions whose properties seem to classify them as neither entirely nominal nor entirely verbal is by no means novel (see, e.g., Ross 1973 for early work), but has been, perhaps, understudied in modern frameworks.

It has been well established that these constructions lie somewhere on a continuum between pure nouns and verbs, but it is less clear how to account for this gradiency¹ given generally accepted syntactic models². With the advent of the Minimalist framework (Chomsky 1995, 2000, 2001, 2008), we may now look at these constructions under a new lens. This paper seeks to bring together previous influential work on the subject to provide a basis for this new analysis. I first provide an analysis of the representation of nominal structures using properties of Minimalism to account for the nominal/verbal variation in these constructions across a spectrum

¹ Throughout this paper, I use gradiency to indicate placement along a spectrum. Any other linguistic definition of gradiency is not intended in this thesis.

² That is to say, frameworks that deal with a universal dichotomy of nouns and verbs. Other viewpoints exist which are not elaborated on in this paper. See, for example, Kinkade’s (1983) *Salish Evidence Against the Universality of ‘noun’ and ‘verb’*.

of ‘nouniness’. In doing so, I refurbish Abney’s (1987) strategy of embedding verbal projections within nominal structures within a dynamically built structure where mergers and movement are based on feature checking. I draw on symmetries and asymmetries between nominal and verbal structures, such as which level of structure marks the phase edge in different constructions, to aid in the analysis. As a consequence of my analysis, I also provide an entirely syntactic and feature-driven approach to the origin of the /-ing/ morphology in gerunds and how it comes to appear in all the gerund constructions and in no others. Finally, I consider where a hard line between nouns and verbs can be drawn (if, in fact, such a line exists).

The Structure of this Analysis

In Chapter 2 of this thesis, I introduce a spectrum of nominal and verbal (or sentential) constructions which I use as a basis for my analysis throughout the paper. I also use the notion of parallel structure between nominal and verbal hierarchies to propose a new level of structure, the *dP*. I then use this as a backdrop for my own analysis of nominal structures and their representation.

In Chapter 3, I elaborate further on the properties and distribution of the *dP* projection I propose, using a more verbal construction as a means of illustrating these properties. I provide evidence for the nominal distribution of the constructions in my analysis, and introduce a subset of gerunds that Pires (2006) calls TP-Defective gerunds. Chapter 4 uses feature valuation as a means of analysis for the nominal distribution of the constructions in question, as well as for marking the gerund morphology.

Chapter 5 looks at the implications that my analysis has on the notion of phasehood and how it applies to nominal constructions, as well as other consequences my analysis brings to light, namely how different adverbs fit into the structure of Acc-ing constructions. Finally,

Chapter 6 concludes my analysis, not only summarizing relevant points that I highlight throughout the paper, but also pointing out the need for further study and analysis with regard to certain problems that I indicate in Chapters 4 and 5.

CHAPTER 2

REPRESENTATION OF SYNTACTIC PROPERTIES

A Spectrum of Grammatical Categories

In his dissertation, Abney (1987) uses a spectrum of ‘nouniness’ and ‘verbiness’ to show different environments that motivate his proposal of a DP functional head. He cites Ross (1973) in proposing the following continuum:³

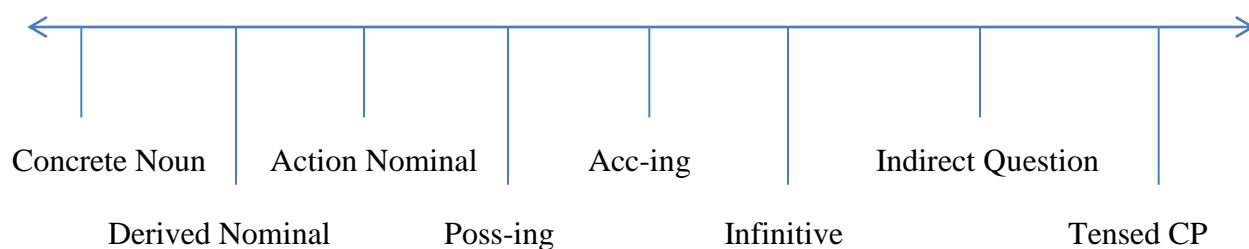


Figure 1 A Spectrum of Constructions

Examples of each point along this continuum are given below in (1):

- | | | |
|----|---------------------|---|
| 1. | a. Concrete Noun: | <u>The chair</u> bothered me. |
| | b. Derived Nominal: | <u>His movement of the chair</u> bothered me. |
| | c. Action Nominal: | <u>His moving of the chair</u> bothered me. |
| | d. Poss-ing: | <u>His moving the chair</u> bothered me. |

³ The constructions in (1) follow the spectrum given in Abney (1987), which differs slightly from Ross (1973). Ross claims that the infinitive is more verbal than the indirect question. Since I am mainly building off Abney’s work, I give his spectrum here. This does not concern my analysis however, since I am investigating only the nominal end of the spectrum.

e. Acc-ing:	<u>Him moving the chair</u> bothered me. ⁴
f. Infinitive:	<u>To move the chair</u> was an arduous task.
g. Indirect Question:	I asked <u>who moved the chair</u> .
h. Tensed CP:	<u>He moved the chair</u> .

Beginning at the left end of the spectrum with the concrete noun (1a), the next most verbal construction is the derived nominal (1b), which is manifested by the thematic arguments added to the noun and the nominal cases (genitive and *of*-case⁵) which are being assigned to arguments in the phrase, much in the same way that arguments and case are assigned in verbal phrases. The action nominal in (1c) then changes the head of the phrase from a derived noun to a gerund, which more clearly shows the verbal root since the additional /-ing/ morphology is consistent for all gerunds⁶.

The /-ing/ ending in English is a multifaceted piece of morphology, in that it has multiple uses. For the purposes of this paper, I distinguish the gerund from the present participle, which may be used adjectivally (*The dripping paint bothered me.*) or progressively (*The paint was dripping down the wall.*). Both of these represent an ongoing or incomplete action. The gerund, however, is a more nominal construction, the distribution of which is illustrated throughout this paper. Although I do not focus more on this distinction, it is important to keep in mind that the discussion will focus on the gerund, and not the present participle.

⁴ The Acc-ing construction can be marginal or, in some cases, ungrammatical for speakers of American English, especially in subject position. It is, however, accepted in other literature. Because of this, and because of its important place on the spectrum in (1), I feel it is important to include it as part of this analysis. It should also be noted that many of the grammaticality judgments throughout the paper are based on my own judgments and those whom I have asked for judgments on certain constructions. I bear full responsibility for accepting the judgments throughout.

⁵ Following Adger (2003), I assume an *of*-case, which spells out an *of* for the complement to N. I further assume that this case is valued by *n* (in a split NP analysis), consistent with the valuation of accusative case on complements to V by *v*. Adger (forthcoming) further argues for *of* phrases as complement arguments in nominal structure.

⁶ The origin and significance of the /-ing/ suffix is further discussed later in Chapter 4. Until then, for ease of explaining other parts of the paper, I assume /-ing/ to be already attached in the numeration.

The Poss-ing (the possessive + gerund construction) in (1d) goes a step further towards the verbal side of the spectrum by changing the case of its internal argument from *of*-case (nominal) to accusative case (verbal), while still maintaining the gerund ending found in the action nominal. If we further flesh out the examples of these constructions from (1c-d), we also see that this is the stage at which a modifier of the element in question changes from an adjective to an adverb. That is:

2. a. Action Nom: His frequent/*frequently moving of the chair bothered me.⁷
 b. Poss-ing: His *frequent/frequently moving the chair bothered me.

The next two elements on the spectrum, Acc-ing (1e) (accusative + gerund, compare Poss-ing) and the infinitive (1f), do not show as obvious of a progression, since both value accusative case on their external arguments,⁸ and it might appear that the only overt difference seems to be the gerund ending on the verb in (1e).⁹ I maintain (with Ross 1973, Abney 1987, Pires 2006) that Acc-ing is the more nominal for two reasons. First, it is appealing to be able to group the constructions containing gerunds together, in hopes that we can find some unifying level of structure that they all share. Secondly, the entire Acc-ing construction, unlike the infinitive, is able to receive an external theta role in a sentence (and also, as I show later, case

⁷ The gradiency of these constructions is further shown in that (2a) can place an adverb at the end of the nominal phrase, as in (2a'), with the adverb in the scope of the verb *moving*, though it may receive a more questionable reading than in (2a). (2a'') is also given to illustrate the adverb unambiguously in the scope of the nominal, rather than the verb):

- (2a') ?His moving of the chair frequently bothered me.
 (2a'') ?What bothered me was his moving of the chair frequently.

⁸ For infinitives, external arguments only appear with the overt complementizer *for*, where the accusative case is valued by C.

⁹ It is also notable that the infinitive lacks an overt agentive argument, due to the infinitive marker appearing overtly in T. An examination of the other constructions, though, will reveal that this does not mark a division on the continuum like the other properties mentioned above. Examples that are more nominal and more verbal both contain agentive arguments.

marking), similarly to how concrete nouns (and, in fact, all the nominal elements we have seen so far) are able to receive a role. The subject of the verb *bother* in (1e) is assigned an agentive role, whereas the verb *be* in (1f) does not assign an external argument. If we try to place an infinitive construction with an overt *for* in an agentive role, we get a questionable reading at best (e.g. *?For him to move the chair bothered me*). The same happens in a bare infinitive clause, which would also receive a questionable reading in an agentive position (e.g. *?To move the chair bothered me*). The infinitive construction in (1f) can only appear in constructions which do not assign an external argument role to that position. Pires (2006) further points out that Acc-ing constructions cannot occur in positions that are caseless. He specifically points out passive clause complements, like those in (3):

3.
 - a. *It was expected [Frank reading this novel].
 - b. *It was expected [Frank to read this novel].
 - c. It was expected [that Frank would read this novel].
 - d. Frank was expected [to read this novel].

For passives with an expletive subject fulfilling the EPP, the complement position needs to be filled by a finite clause, as in (3c). Since the complement does not receive case, it may be filled by a finite CP which does not require it. Acc-ing, which requires case, will not receive case in the complement position, hence the ungrammaticality of (3a). In (3b), the presence of the DP *Frank*, which requires case and does not receive it in the complement position, causes the ungrammaticality. Cases of subject raising like (3d) shows that a DP alone can fulfill the EPP on the matrix T because Spec TP is a case-valuing position, while the infinitive clause remains in the caseless complement position without a problem, proving that it shares a distribution with the

finite CP in (3c). More theoretical evidence for the distribution of Acc-ing being more nominal than the infinitive is given below.

Moving toward the most verbal elements, the indirect question (1g) values both nominative and accusative case within its CP, though it must appear as the object of a verb of inquiry. Finally, the tensed CP (1h), being the most verbal, stands on its own and does not necessarily occur as an argument of another verb. Essentially, it has no nominal qualities, just as a concrete noun (1a) has no verbal qualities. These final constructions that lie on the verbal end of the spectrum (infinitive, indirect question and tensed CP) are outside the scope of this paper, and are included here only to round out the spectrum.

Motivating Parallel Structure

As previously mentioned, this continuum deals with the varying degrees of ‘nouniness’ and ‘verbiness’ of the constructions using only nominal and sentential projections (as opposed to, say, prepositional phrases), since there are not any other phrase types that fall between pure nouns and pure verbs on this spectrum. The observation that the different types of constructions we saw in (1a-h) transition so fluidly suggests that nouns and verbs are constructed with a similar hierarchy. This has also been proposed in previous literature. Abney (1987: 25-26) states that a similarity in structure is “attractive for conceptual reasons, in addition to the empirical advantages it provides. Verb versus noun is the most fundamental opposition in grammar, and it is appealing to be able to assign the phrases built on the – sentence and noun phrase, respectively – parallel structure.”

With the nouns and verbs themselves being the building blocks of their respective phrases, it is natural that NP’s and VP’s should be the most embedded projections for concrete nouns and verbs, and that purely nominal or purely verbal phrases respectively form their

hierarchical structures from these projections. In keeping with a Minimalist framework, I look at these structures beginning with the most embedded phrases (NP and VP), and work up from there. With respect to phrasal structure, above the most embedded level of structure (NP/VP), verbs have been proposed to need a little vP in their representation, both to assign a theta role to their external argument and to value accusative case to their direct object. In keeping with Adger (2003, forthcoming), I extend this level of structure to nominal phrases as well, saying that a little nP is needed to assign a theta role to external arguments of nouns, and to assign *of*-case to internal arguments. The split NP and VP analyses provide further symmetry in the hierarchical structures of nominal and verbal phrases, as well as allow for consistent argument structure across the spectrum in (1).

Moving further up in the structure, above the little vP/nP level, the verbal structure contains a functional head, T, which bears the verbal inflection and licenses nominative case on the nominal in its specifier position. This level of structure is a crucial piece of evidence in Abney's influential dissertation, which provides arguments for an equivalent functional head D for nominal phrases. In modern theory, D assigns genitive case to the "possessor" in its specifier. This level is further motivated by the fact that only one item can appear in the respective functional head position (T and D): namely a modal verb (or the English infinitive marker) in T and a determiner in D¹⁰.

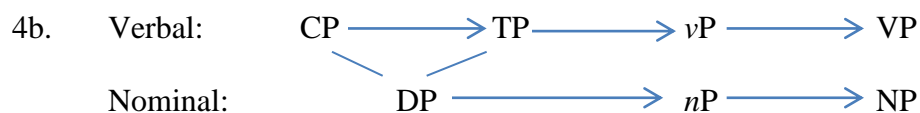
Verbal phrases also have a need for a higher level of structure, the CP, which values accusative case when it contains an overt *for* in C, serves as a key landing site for *wh*-movement, and acts as a phase boundary as discussed in Chapter 5 below. Nominal phrases, on the other

¹⁰ Certain problems have been pointed out for this analysis: namely, double modals in American Southern English (for the TP) and multiple determiners in Greek (for the DP). With the representation of these structures being a topic of debate, I maintain the equivalency of these two structures based on the evidence already presented.

hand, do not have a generally accepted projection above the DP. With all these levels of structure, (4a) below illustrates the equivalents established thus far:



Notice that if we are arguing for absolute equivalence, then there is a missing level in the nominal structure that equates to the verbal/sentential CP. Since it has been possible to motivate symmetry in the other hierarchical levels, it seems reasonable that we should be able to do the same at this level. However, while D shares many properties with T, the two projections do not behave exactly the same. DP also patterns with CP in some respects. If this were the case, a possible comparison of structures could be what (4b) shows:



Here, D shares characteristics with both T and C. TP and CP (in the verbal/sentential domain) and DP (in the nominal domain) are the basic functional projections involved across most constructions. This analysis not only accounts for the parallelisms that Abney cites between T and D, but it also accounts for analyses in which both C and D act as phase boundaries (as per Chomsky 2001, Svenonius 2004, and others). I do not believe (4b) to be the case, however. I

assume the parallelism in (4a), and propose that the ?P is a level of structure which I will call *dP*, giving a final parallelism like that in (4c):¹¹



This leaves open the question of why C and D share the property of acting as phase boundaries if they are not hierarchically equivalent structures. I return to this issue in Chapter 5.

Previously Proposed Additions to the Nominal Hierarchy

Acknowledgement of varying degrees of parallelism between nominal and verbal/sentential structures is well accepted in the literature, and some scholars have also proposed additional levels of structure in the nominal hierarchy. These proposals account for their respective issues well, however they do not help to solve the issue of the spectrum of nominal constructions at issue in this thesis.

In his dissertation, Zamparelli (2000) analyzes the Determiner Phrase as more than one single projection. He uses Italian examples with three different types of object clitic pronouns to show that each provides a different semantic contribution to the construction as a whole. Essentially, he expands DP into Strong Determiner Phrase (SDP), Predicative Determiner Phrase (PDP), and Kind Determiner Phrase (KIP). For purposes of this analysis, however, since I am dealing primarily with English, I do not split the DP into these different phrases. This sort of analysis may, however, prove necessary in subsequent cross-linguistic research, particularly with Italian.

¹¹ Megerdooomian (2008) proposes a different parallelism across nominal and verbal structures, correlating DP to AgrP. She does not, however, postulate a correlate for the CP projection, which serves as an important part of verbal structure.

Roehrs (2002) uses German as a basis for proposing an additional *dP* projection. German marks determiners and adjectives with either strong or weak inflection, with the strong inflection tending to carry more morphologically relevant information (case, number, gender). If both a determiner and adjective are present, the strong inflection must appear on one, but not both, words. Since the determiner precedes the adjective, the determiner generally carries the strong inflection (e.g. *der kleine Hund* “the small dog”). However, Roehrs points out a subclass of cases in which the adjective carries the strong inflection, and the determiner is only weakly inflected (e.g. *ein kleiner Hund* “a small dog”). In these cases, he proposes that determiners must start in a projection that he calls *dP* embedded within the DP. In this case, the determiner starts in *d* with the adjective in the Spec position of *dP*, which Roehrs posits is immediately below the DP. From the *dP*, the determiner moves into D, checking a [D] feature and allowing for the correct word order. Depending on the strength of that [D] feature, this movement occurs at different times. Determiners with a strong [D] feature (with the strongly inflected determiner and weakly inflected adjective) move before the DP is merged with a higher phrase, meaning that the features [plural] and [oblique case] are checked when the derivation is built. Determiners with weak [D] features (weak determiner with a strongly inflected adjective) remain *in situ* until the DP is merged with Spec *vP*. This is when *v* licenses strong case on the first item, which at this point is still the adjective. Then, according to Roehrs (p. 14), “after Spell-Out, the *ein*-word moves to D to check its weak [D] feature”. Crucially, Roehrs’ proposal of a *dP* projection does not reflect the position of my proposal, nor the motivation.

Svenonius (2004) assumes a split DP model similar to that of Zamparelli, but split only into two levels: a case phrase KP, and above that, a quantifier phrase QP (in addition to the lexical projections *nP* and NP). In keeping with a parallelism between nominal and verbal

structure, Svenonius assumes *nP* and *QP* to be phase boundaries (paralleling *vP* and *CP* respectively). I return to Svenonius' analysis when I discuss the implications of phasehood in Chapter 5. For now, I do not split the *DP* this way in my analysis, though I do not oppose the split model. Assuming that *KP* and *QP* are encompassed in what I call *DP* throughout this paper, the *dP* I propose appears higher than both in the hierarchy of projections.

None of these proposals, however, provide any strategies to account for the variation in nominal constructions that are the focus of this work. While I do not oppose any of these analyses, they do not influence my analysis in any way. I therefore leave out these other proposed split *DP*'s in order to focus on the level of structure I am proposing.

Having established a continuum of 'nouniness' and the equivalent structures of nominal and verbal phrases, I now start back at the most nominal end of the spectrum and show how the properties used to define the spectrum in (1) can also be used to motivate the hierarchical structures of constructions on the more nominal end. I will investigate which point on the spectrum is the most verbal construction that still contains nominal projections. I also use the external distribution of nominal phrases, as well as the gerund /-ing/ morphology to motivate my analysis.

Survey of Individual Constructions

In this section, I look individually at each construction and the features in its derivation. I then use these features to illustrate the placement of each construction on Ross' spectrum. I also use the continuum of structures as motivation for an additional level of nominal structure. After brief descriptions of each construction, I provide Minimalist derivations to show the properties that each level of structure brings to the overall phrase. In doing this, I take a slight deviation from other work that has been done in this field. Pires (2006) begins on the verbal end of the

spectrum, showing that infinitives and Acc-ing constructions (in his analysis, clausal gerunds) are verbal structures which are defective in certain areas, which makes them less sentential. I begin my analysis from the nominal end of the spectrum, showing that constructions that begin as nominals are essentially “infected” with verbal elements of structure, making them more sentential. My analysis stops at the precise point that Pires leaves off, so that both analyses meet in the middle of the spectrum. The analyses differ in various ways, in particular the analyses of the Acc-ing construction, which I discuss at length in Chapter 3.

Concrete Nouns and Derived Nominals

The concrete noun is a simple enough structure to represent syntactically. Using (1a) (repeated below) as an example, the noun appears in the NP and the determiner appears in the DP. There are no theta roles to be assigned, and there is no case valuation, at least at any level within the nominal domain.¹² The structure can thus be represented as in the tree in Figure 2 below:

¹² The phrase as a whole still needs to be valued with case (nominative in this example). I return to this in Chapter 4, when I discuss how case is valued on all types of nominal constructions.

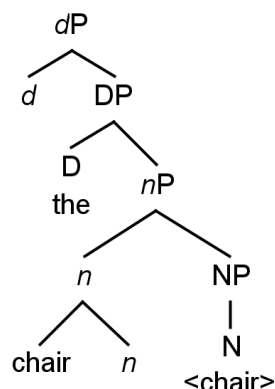


Figure 2 1a. The chair bothered me. (Concrete N)¹³

The movement of *chair* to *n* parallels movements of verbs into the little *vP* for reasons of word ordering when other elements are present. Thus, I preserve the head movement from NP to *nP* for consistency, even when word order is not an issue.¹⁴

Looking now at (1b), the head of the derived nominal phrase, *movement*, is clearly a noun derived from the verb *move*. That is to say, these forms use various types of derivational morphology to create deverbal nouns (cf. *destroy*:*destruction*, *baptize*:*baptism*, etc.). However, if derivation from one lexical class to another at least partly exemplifies a dichotomy between derivational and inflectional morphology, then one might be able to argue that */-ing/* is also derivational, as it is present in three different constructions on the continuum we are using to

¹³ Although *dP* appears empty in this Figure and in others that follow and should thus not be present for economy reasons, I explain in Chapter 4 why this projection needs to be present in all nominal constructions.

¹⁴ English does not seem to be able to show this movement for noun phrases, and the assumption that it parallels the movement that happens in verbal structure is based on the fact that *n* also mirrors the assignment of argument structure that *v* provides. Some evidence of the required movement from N to *n* might be seen by Russian:

- | | | | | |
|----|------------------------|---------|----------------|----------|
| i. | Podarenie _i | emu | t _i | knigi |
| | giving | him.DAT | | book.GEN |

Given this word order, the gerund *podarenie* moves from its origin site between *emu* and *knigi*. This movement is not possible, however, with pure nouns, e.g. *podarok* “gift”.

bridge the two lexical classes. The classification of /-ing/ and its relevance to syntactic structure, I discuss further in Chapter 4.

Another difference that separates the derived nominal from a concrete noun structure is the need for case and argument structure. For a chair movement event, in a construction that requires two arguments (as in 1b-h, excluding the concrete noun), there is a mover (Agent) and something that is being moved (Theme). Following Adger (2003), these thematic roles are assigned by both *n* and *N* to the external (agentive) and internal (theme/patient) arguments, respectively (comparable to the roles assigned by *v* and *V* in the verbal domain).

Case also needs to be valued on both the internal and external arguments. The *n* values the *of*-case on *the chair*, and the *D* values genitive case on *he*, causing it to be spelled out as *his*. The results of case valuation are shown in the tree in Figure 3 below:

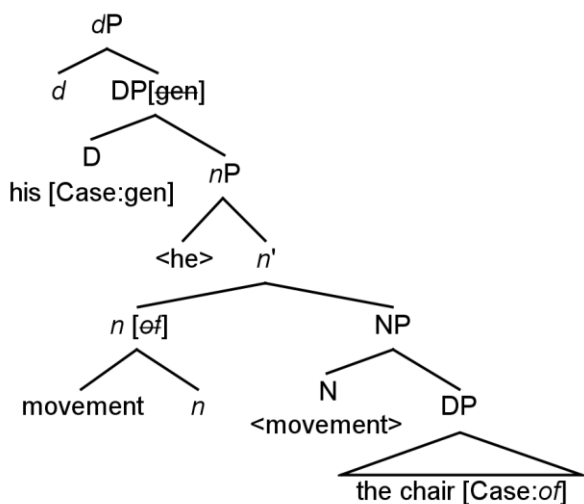


Figure 3 1b. His movement of the chair bothered me. (Derived Nominal)

Action Nominals

I briefly discussed earlier that the action nominals differ from the derived nominals in that the most embedded head begins as a verb, rather than as a noun. Because of this, I propose that at the most embedded level of structure where *moving* needs to originate, there cannot be an NP. Rather, *moving* needs to start as a VP (assuming, for now, that the gerund morphology marking occurs already on the verb in the numeration, although I rectify this in Chapter 4) before it moves up into the next highest level, here the *nP*¹⁵. The other requirements that we saw in the derived nominals earlier, however, remain the same. *His* is still valued with genitive case, so the DP needs to remain in the structure to value it. *The chair* is still valued with *of*-case, so the *nP* also needs to remain in the structure. Since we saw earlier that the NP and VP are equivalent levels of structure, we should be able to replace the NP level with a VP level. A representation is given in Figure 4.

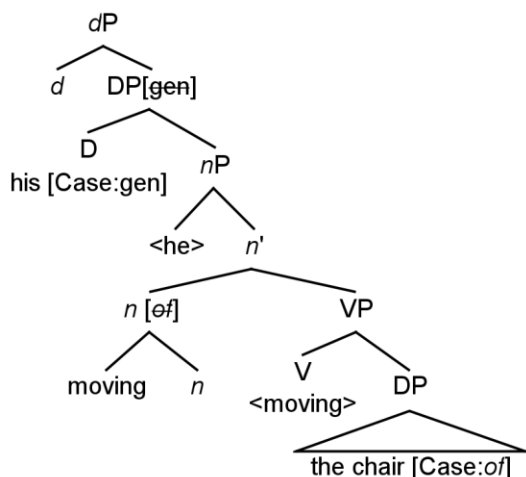


Figure 4 1c. His moving of the chair bothered me. (Action Nominal)

¹⁵ The idea of embedding verbal structure inside a nominal structure is not entirely novel. In fact, it is also used by Abney (1987) in an account of the same types of constructions.

We will see as we continue with further structures that we can easily move our way up the spectrum towards more sentential structures by replacing equivalent levels of structures so that each construction's respective features can be checked. In each case, the next highest level of structure can be changed from a nominal to a verbal phrase to account for additional verbal features.

Poss-ing

Moving further towards the verbal end of the spectrum, there is another instance of the gerund in the Poss-ing (possessive + gerund) construction. The difference in this structure from the previous action nominal structure is that *the chair* here is no longer receiving *of*-case. Rather, it is receiving accusative case (more easily visible in *His moving them bothered me.*). This means that the *nP* assigning *of*-case can no longer be present. Following the proposal from the end of the last section in which the next highest level of nominal structure is continually replaced with a verbal phrase, we replace *nP* with *vP*. This works well, since *v* would then value the accusative case needed on the object *the chair*, while still leaving D to value genitive case to *his*. Since *v* also assigns theta roles like *n* did for the derived nominal and action nominal, requirements for argument structure are satisfied as well. Figure 5 shows the syntactic representation.

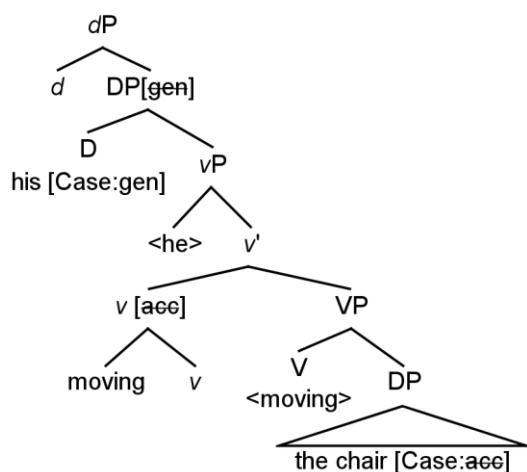


Figure 5 1d. His moving the chair bothered me. (Poss-ing)

Abney (1987) cites Ross (1973) as saying that the generally accepted cut-off between nouns and verbs is between the Poss-ing and Acc-ing constructions. This would seem to make sense, since the line would be right in the middle of the spectrum, and it would leave equal numbers of mainly nominal and mainly verbal constructions on either side. Abney, however, argues that Acc-ing constructions are actually slightly more nominal, largely for the reasons I outlined earlier (i.e. their occurrence in external argument position, and the need for case valuation). Assuming the higher level of structure *dP*, I motivate this further in the following section.

Acc-ing

The Acc-ing construction changes the subject of the action from the genitive of the Poss-ing construction to an accusative-marked noun. Up until now, the working hypothesis has been that the DP is the highest level of active structure in a nominal phrase. We know, however, that

DP has a strong genitive case feature, which is not being assigned in Acc-ing. So, if we are maintaining that the next highest level of structure changes to its verbal equivalent, then we need a TP in this position. This, on the surface, does not appear to be problematic. There is a problem, though, when we try to determine where *him* gets accusative case in this construction. It is here that I resort to the *dP*.

We saw earlier that Abney (1987: 21) states that “verb versus noun is the most fundamental opposition in grammar”. Taking this fundamental opposition to be NP and VP, it makes sense to say that, as we move higher in the equivalent structures of nouns and verbs, the levels of structure become more alike. With *dP* and CP being at the top of the respective hierarchies, it is logical to assume that they should share many properties. One of these properties of CP is that it can value accusative case, which is seen clearly in infinitive clauses with an overt *for* in the complementizer (e.g. *I arranged for him to move the chair.*).¹⁶

If *dP* and CP are assumed to be alike enough to value the same case to the subject of their respective clauses, then the accusative case on *him* can be easily accounted for. In this case, it might be tempting to say that the *dP* level does not actually exist, and that CP stands as the sole phrase at the highest level of structure. CP’s, however, allow for overt complementizers, *that* and *for*, whereas the *dP* does not (e.g. **For him moving the chair bothered me.*). Because of the extreme similarities between these projections, and since CP does not always show an overt C, it would also be easy to propose that the two are, in fact, identical pieces of structure for which I am proposing two separate identities. For now, however, I maintain that they are different levels of structure to continue the pattern of substituting one level of structure at a time. I provide

¹⁶ Other analyses for this phenomenon exist. Pires (2006), for example, assumes this accusative-marked subject to be a default case when case is otherwise not valued.

further evidence for the dichotomy of *dP* and CP in the remainder of this section and in Chapter 3 below.

Proposing two different structures also allows us to assume that a projection exists above the TP in Acc-ing constructions. Pires (2006) uses the fact that Acc-ing cannot contain an overt complementizer to suggest that these constructions do not contain a CP. He also illustrates that these embedded clauses cannot appear as indirect questions. These are both sentential properties that a CP would introduce, so being able to propose a nominal head (*dP*) can illustrate that such constructions are nominal, in the sense that they do not have these necessarily verbal/sentential properties. This distinction between *dP* and CP also results in a more pleasing symmetry between the nominal and verbal domains.

This means that the *dP*/CP level only values case in two constructions: *dP* values Acc-ing and CP values the infinitive. In all the other constructions, it is the DP/TP level that assigns its case. This means that for Acc-ing and infinitives respectively, there must be something about the TP level (since this level is consistent in both constructions) that is not allowing it to value its nominative case feature. For infinitives, this is an overt *to* that sits in the T head, but the Acc-ing has nothing overt in T. One possible solution, which seems to account for all the variables, is that there would need to be some kind of null element sitting in T that blocks anything from appearing overtly in T (compare this to the necessarily null D in plural noun constructions), and that T is non-finite, which would not allow T to value inflection on verbs. In order to encompass both properties that a null element and a non-finite T would provide, I propose that T is defective in Acc-ing constructions and that it is spelled out as \emptyset .¹⁷ This not only eliminates the motivation

¹⁷ Pires (2006) uses defective heads and domains as the basis for his analysis of infinitives and clausal gerunds on the more verbal end of the spectrum.

for Aux-to-T movement in the syntax, but it also prevents T from valuing inflection on the verb and nominative case on the external argument.

Having now motivated the need for a *dP* level of structure and the accusative case it values, I give here the structure for Acc-ing constructions as shown in the tree in Figure 6 below.¹⁸

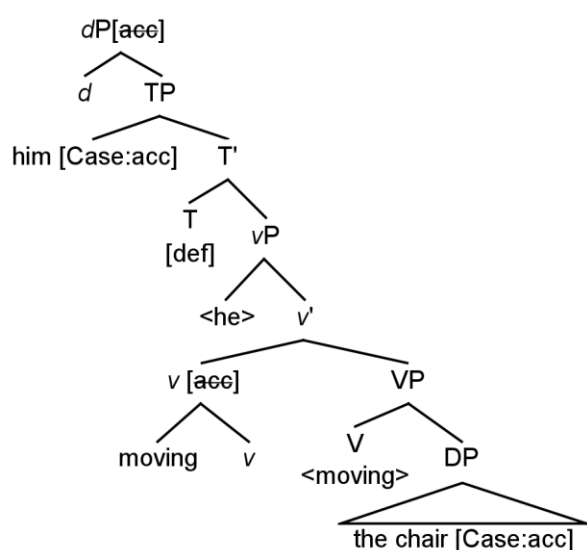


Figure 6 1e. Him moving the chair bothered me. (Acc-ing)

The remaining constructions (1f-h) contain a full verbal hierarchy, and do not play into the gradiency that I have shown thus far in this section. For this reason, their properties and features are not discussed here.

¹⁸ The tree in (1e) assumes all the projections to be present in every construction. As shown in Pires (2006), not all gerund constructions contain all these projections (see, for example, TP-defective gerunds). These are discussed further in Chapter 3.

To summarize what I have proposed thus far, I show here the Hierarchy of Projections for each level of structure that contains at least one nominal phrasal level. The replacements of nominal phrases with verbal phrases are easily visible in (5) below:

5.	Derived Nom./Concrete Noun	$dP > DP > nP > NP$
	Action Nominal	$dP > DP > nP > VP$
	Poss-ing	$dP > DP > vP > VP$
	Acc-ing	$dP > TP > vP > VP$

In this analysis thus far, I have assumed that the gerund marker /-ing/ is already attached to the verb in the numeration. In the following chapter, I investigate this idea further and provide an alternative solution, as well as an analysis for the distribution of all of these nominal constructions in necessarily case-marked positions.

CHAPTER 3

ELABORATION ON *dP* AND THE ACC-ING CONSTRUCTIONComparison of Acc-ing with the Absolute Construction

As a central point on the spectrum and as a point of contention among scholars, Acc-ing deserves further elaboration. In this chapter, I weed out all other constructions that do not fall under my analysis, and I further examine the external distribution of Acc-ing and the resulting consequences in the syntax.

My proposal thus far for the Acc-ing construction is not without intricacies which warrant explanation. Pires (2006) notes the similarity of the internal structures of Acc-ing and certain Absolute constructions in English. The distinction between them, however, is also important. Consider the Absolute constructions in (6a-b):¹⁹

- 6 a. John turned on the ceiling fan, he/him/∅ being the tallest in the room.
 b. We watched the game on Bob's TV, his/*∅ /*he being the biggest of all of ours.

Unlike the Acc-ing construction, the Absolute construction allows for a nominative pronoun or null subject to appear in subject position. Additionally, and perhaps most importantly, the Absolute clause as a whole cannot appear in a case-marked position, whereas Acc-ing necessarily does. The subject in an Absolute construction generally agrees with an antecedent with regard to case as well. In (6a) above, the nominative and null subjects are acceptable, while the accusative pronoun is acceptable possibly due to the accusative case acting as a sort of

¹⁹ Grammaticality judgments for Absolute constructions vary quite a bit across speakers, and many speakers accept accusative pronouns in many positions in sentences. *Him* in (6a) may not be acceptable to all speakers.

default case in English. The null subject of the Absolute construction, as Pires points out, is a case of obligatorily controlled PRO. To illustrate that Absolute constructions work the same with a possessive antecedent, see (6b) above.

While there is much more to be said about Absolute constructions, the brief explication here serves only to distinguish them from the constructions being investigated in the rest of this paper.

External Distribution of Acc-ing

A significant amount of ink has been spilled in the literature on the question of whether the external distribution of Acc-ing is more nominal (see Abney 1987, Potsdam, p.c.²⁰) or verbal/sentential (Reuland 1983, Pires 1999, 2006). As may be evident by my proposal of the *dP* projection, I believe Acc-ing is at least nominal enough to warrant a nominal projection in its hierarchy. To motivate this, it is beneficial to elaborate on the qualities of Acc-ing that serve as points of contention in its categorization and distribution type.

Verbal/Sentential Properties of Acc-ing

Reuland (1983) provides a cornerstone work in the treatment of gerunds. In it, he provides a series of characteristics of the Acc-ing construction, which he uses as a basis for characterizing Acc-ing as (essentially) an empty CP. This framework has been adopted and slightly changed in more recent work. Pires (1999, 2006) argues that Acc-ing, as a Clausal Gerund (CG), projects a bare TP with no CP above it (contra Reuland). This is shown by the examples in (7), taken from Pires (2006).

7.
 - a. Mark prefers that Mary travel with him.
 - b. Mark prefers (*that) Mary traveling with him.

²⁰ Thank you to Eric Potsdam (p.c.) for his input regarding the nominal distribution of Acc-ing.

These examples show the inability of Acc-ing in (7b) to allow an overt complementizer, which makes sense if there is no C for a complementizer to appear in, whereas the tensed CP in (7a), of course, does allow for an overt complementizer. Further evidence for the lack of a CP projection comes from C being a phase boundary. Consider (8).

8. a. What_i did she record [herself saying t_i]?
 b. I know who_i Sven doesn't like [me dating t_i].
 c. *Sven doesn't know [who_i dating t_i].
 d. Sven doesn't know [who_i to date t_i].

Both (8a) and (8b) use *wh*- extraction out of an embedded Acc-ing clause, an operation which would still be possible if there were a CP phase boundary intervening. However, (8c) illustrates that partial *wh*-extraction is not possible for Acc-ing constructions, whereas it is for infinitive constructions, as in (8d). The fact that the infinitive construction in (8d) must have an intermediate landing spot means that there must be a CP for it to land in. Since the Acc-ing construction does not allow for that, there is still no evidence that an intermediate CP exists, given that the lack of a CP also allows for free movement out of the embedded clause without needing to escape through a specifier position.²¹

My analysis agrees with Pires in the need for a TP in the Acc-ing construction (see above) to capture all the verbal properties, as well as in the absence of a CP. The *dP* that I propose to be part of the construction must necessarily not act as a phase boundary, since items being extracted (see (8c)) cannot land in an “escape hatch” in *dP* like they would be able to in a

²¹ This corroborates with Exceptional Case Marking (ECM, or Raising-to-Object) constructions, in which a *wh*-phrase can be extracted without stopping at an intermediate landing site.

- i. Sven knows who [he wants to win].
 ii. *Sven knows he wants [who to win].

These facts are accounted for if ECM-complements are TP's, not full CP's (see Adger 2003, e.g.).

phase boundary like CP (8d). The issue of phasehood as a consequence of my analysis is discussed further in Chapter 5. I adopt the notion of a TP being present and serving as a verbal feature of Acc-ing. The apparent lack of a CP based on the evidence above leaves a space for its nominal equivalent *dP* (see also (4c) above) to account for the nominal properties of Acc-ing, which I discuss in the following sections, without detracting from the verbal properties.

Nominal Properties of Acc-ing

Aside from the verbal properties that Pires notes about the Acc-ing construction, he also mentions some nominal properties that Abney (1987) points out. The most apparent of these is the aforementioned necessity of Acc-ing to appear in case-marked positions in sentences, as pointed out above. This is shown in (9).

9. a. Andrew favored [Heidi keeping the windows open].
 b. *Andrew favored [Heidi to keep the windows open].

The ungrammaticality of (9b) shows that more verbal constructions, like infinitives, cannot appear in positions that receive case like the Acc-ing construction in (9a), recapitulating example (3) from Chapter 2. Additionally, the external distribution of Acc-ing constructions is more nominal than verbal. I give several examples in the paragraphs that follow, though this is by no means an exhaustive list of Acc-ing's nominal distribution. I provide an analysis in Chapter 4 of how case is valued for Acc-ing and other (at least partially) nominal constructions, especially given their varying degrees of 'nouniness'.

Acc-ing constructions also cannot serve as the complement of adjectives in the way that CP's can, as in (10):

10. a. John was relieved that Sally returned home.
 b. *John was relieved Sally returning home.
 c. *John was relieved Sally's return.

The CP in (10a) is able to stand as a complement to the adjective *relieved*, whereas the Acc-ing construction in (10b) patterns with the derived nominal in (10c) as being ungrammatical. This evidence is a sort of extension to Acc-ing having to appear in a case-marked position. The adjective does not have case to value any case feature on a nominal.

Perhaps the most telling evidence for Acc-ing's nominal distribution comes from coordination. Coordination is a process that necessarily combines two identical projections. If Acc-ing were headed by a verbal projection, we should not be able to coordinate it with a nominal construction. Consider (11):

11. a. The broken furniture and him not cleaning his room (both) make a bad impression.
 b. *??The broken furniture and that he doesn't clean his room (both) make a bad impression.²²

In (11b), it is at least questionable, if not ungrammatical, to coordinate the concrete noun phrase with the CP. The fact that the Acc-ing coordinates well with the concrete noun phrase in (11a) suggests a nominal distribution, especially when directly compared with (11b).

²² Abney (1987) and Pires (2006) suggest a possible verbal property of Acc-ing with respect to coordination, namely that, like a full CP, the coordination takes singular agreement with the verb, whereas more nominal elements trigger plural agreement. These examples are from Pires:

- i. a. That John came and Mary left bothers/ (*bother) me.
 b. John coming (so often) and Mary leaving (so often) bothers/ (*bother) me.
 c. John's arrival and Mary's departure (*bothers)/ bother me.

These grammaticality judgments may be a topic of debate, however. For me personally, the plural agreement *bother* sounds better in (ib). In fact, this agreement issue may be why (11b) above receives a less than perfect grammaticality judgment, since a coordination of nominal constructions takes plural agreement, and coordination of verbal constructions takes singular agreement.

As a sort of summary, Ross (1973) best shows that in many senses, Acc-ing has nominal properties that are not shared by infinitives (the next most verbal construction), and many verbal properties that are not shared by Poss-ing (the next most nominal). It could be easily argued that Acc-ing fits into either domain. While I do not propose that Acc-ing is an out and out nominal construction, I hope to have shown that there is enough evidence to show that its highest projection should be nominal, and that my analysis accounts for all of the nominal and verbal properties of Acc-ing incorporating *dP* and TP respectively.

TP-Defective Gerunds

There is a certain class of verbs that behaves notably differently from the constructions presented thus far. These are aspectual verbs such as *start*, *finish*, and *continue*, as well as verbs like *try* and *avoid*. As Pires (2006) points out, these are verbs that license complements that show evidence of not containing a TP projection²³. These verbs, when they appear in a matrix clause, license embedded gerund clauses (which Pires calls TP-Defective gerunds) that are unable to differ in tense from their embedded clause ((12a), taken from Pires (2006: 21), his example (3a))²⁴, and also do not permit a lexical subject in the embedded clause ((12b), Pires' example (8a)):

12. a. *Bill tried today [talking to his boss tomorrow].²⁵
 b. *Clark tried [Mary taking care of the finances].²⁶

²³ Other analyses of these types of verbs include Fukuda (2008) and Wurmbrand (2001, 2011). These analyses use AspP (Aspect Phrase) to account for the aspectual nature of the verb. I maintain Pires' analysis here, since it accounts for the properties of these verbs using features already present in generally accepted functional projections.

²⁴ Though the repetition of the different time adverbials might make the sentence awkward, the unacceptability is still captured when *today* is deleted, since the tense difference is still present without it.

²⁵ I revisit these temporal adverbials in Chapter 5, showing that they may not be a good test for showing the presence or absence of a TP projection.

²⁶ One reader has suggested that *try* can, in some instances, take a lexical subject, as in *Let's try Mary taking care of the finances and John taking care of the publicity*. This seems to be fine when there is contrast in the subject of the embedded clause.

If these constructions lack a TP, then they certainly also lack a *dP* projection. This follows logically, especially for the lack of a lexical subject, since the analysis presented thus far has the subject moving into Spec TP, with its case assigned by the *dP*. A problem does surface, though, with regard to where the gerund morphology is supplied (assuming, as I do, that the morphology is supplied as part of the syntactic derivation). The analysis I present in Chapter 4 proposes that this morphology is supplied by *dP*. Since TP-Defective gerunds lack a *dP* projection, there must be a different analysis for this subclass of verbs which appear to only license a *vP*, a point that I also return to in Chapter 4.

CHAPTER 4

FEATURE VALUATION

Valuing Inflection

Both nominal and verbal structures have unvalued features whose valuation is necessary for a complete derivation. In this chapter, I focus on inflection ([Infl:___]) in the verbal domain and case ([Case:___]) in the nominal domain. I show that, in building the derivation for all the structures in this paper, these features need to be valued at different levels of structure to account for the nominal and verbal properties of each construction.

In his dissertation, Abney (1987:105) notes that the gerund “has a griffon-like structure. It’s ‘forequarters’ (i.e. its external distribution and its subject) are that of a noun phrase, while its ‘hindquarters’ (its complement structure) are that of a verb phrase”. Following this metaphor, then, this chapter looks further into constructions containing gerunds and accounts for how many verbal features (the hindquarters of the griffon) and how many nominal features (the forequarters of the griffon) are present in each structure, and when these features are present at the various levels of projection.

Until this point, we have used a simple solution to the problem of the origin of the gerund morphological marker in order to show the changes in the Hierarchy of Projections more clearly by simply treating it as though it were already attached to the verb. It could be possible that each verb in English has two forms in the lexicon: a bare verb and a nominal gerund form. This, however, could be fairly taxing on the memory, and would predict multiple nominal forms which correspond to many verbs (e.g. *movement, motion, moving*). Since the morphology of the gerund

is consistent across all verbs, I propose instead that there is a gerund feature that supplies the /-ing/ morphology for gerunds. A feature valuation rule like this would be less taxing on the memory and more economical for the derivation as a whole. It would be necessary then to find the place where the gerund marker originates, and make sure that this placement holds across all the gerund constructions discussed throughout this paper, namely the action nominal, the Poss-ing, and the Acc-ing.

One possibility would be to say that it occurs as a part of Spell-Out. Once the verb that is becoming a gerund has moved into its final position, some feature on that phrase spells out the verb as a gerund. This, however, presents a problem for what I have proposed so far. For action nominals, the verb moves into *nP*, whereas for Poss-ing and Acc-ing constructions, the verb moves into *vP*. Although these two levels of structure share certain properties (e.g. the ability to assign theta roles), there is no further motivation to suggest that they are both able to assign the same gerund marker. If *v* and *n* do not value the same case to their internal arguments, there is no reason to assume that they both consistently assign the gerund marker in such constructions. Additionally, the *nP/vP* level is only one level higher than what I have claimed to be fundamental opposites in language (NP and VP). Therefore, we might look to a higher level of structure to provide the answer.

Looking back to the Hierarchies of Projections given in (5) above, we see that there are indeed two levels of structure that are consistent among the action nominal, Poss-ing, and Acc-ing: the *dP* and VP. It is appealing to include the *dP* as part of this analysis as well, not only because it is consistent across all the gerund constructions, but because it is a nominal projection, which explains why all gerund constructions still have the nominal property of appearing in positions of sentences which have an external argument and receive case. One might be hesitant,

at first, to say that /-ing/ is a feature on *dP*, since *v* falls outside of the search space of the probe on *d*. The T head below *d*, however, would then inherit the case to value on *v* (in the sense of Richards 2007, Chomsky 2008).

On the other hand, /-ing/ has some strong traits that are characteristic of syntactic features. It cannot attach to just anything. It needs to attach to a verb. This means that the VP needs to be present in order to provide a verb for the gerund marker to attach to. The only structures that contain a *dP* and VP in the same hierarchy are precisely the structures that contain gerunds. Thus, whenever a construction contains both of these levels of structure, the verb moves from V to the *n/v* where the gerund /-ing/ marker presumably attaches. It is apparent that the appearance of the /-ing/ suffix is sensitive to the syntax, requiring the presence of two specific levels of structure, and that it determines the shape of a word in English, both of which are properties of features in Minimalism.

I am proposing, then, that /-ing/ is a feature (say, [ing]), probably valuing the inflection feature [Infl:_] on the verb, since that uninterpretable feature is inherently present on verbs, and in the case of gerunds, it would be otherwise unvalued. This makes sense, since any other inflectional morphology would come from T, though my earlier proposal of a defective T would prevent this from being a problem. This is also an issue for only the Acc-ing, since it is the only one of these constructions with a T projection. If an [ing] feature is not valued by T, and if T is not assumed to be a phase (i.e. the derivation is not complete at this point), then the [Infl:_] feature remains unvalued at the time *dP* is merged. This should also hold given that, for the Acc-ing construction, the [Case:_] feature on the external argument of Acc-ing also remains unvalued until *dP* is merged.

For verbal phrases, the [Infl:_] feature is introduced at the vP level. In order to also account for the action nominal, it needs to have the ability to be present when that level appears as an nP . It should suffice to say that the feature [Infl:_] is also present at the nP level for action nominals, and is triggered by a V moving into it.

This idea calls for a new kind of feature checking that crosses the interface with morphology. This is a slightly more syntactic approach than other theories that have attempted to bridge this interface (e.g. Distributed Morphology). Because of the “program” nature of Minimalism, however, there is room for small changes in order to account for how language is ideally represented. Taking Acc-ing as an example, we can give a full depiction of the proposals presented in this paper in the tree in Figure 7 below, which shows a full valuation of the features I have discussed thus far:

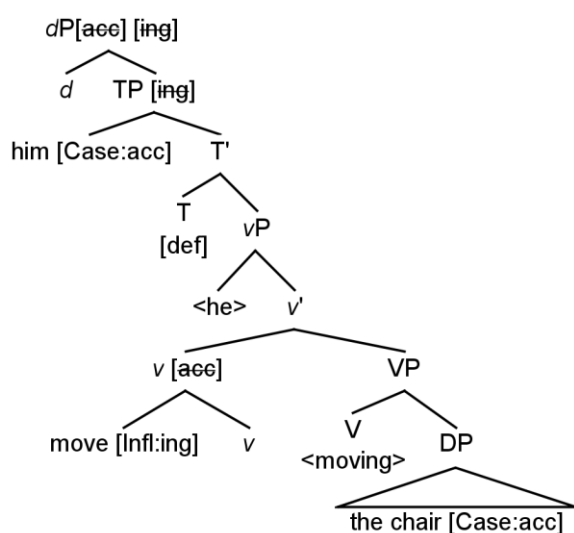


Figure 7 Acc-ing with Valued [Infl:___]

TP-Defective Gerunds Revisited

Earlier, I hinted that this analysis of [Infl:_] being valued as a gerund is a problem for TP-Defective gerunds, since the projection that values this feature with [ing] (i.e. *dP*) is not present. Given this, it is interesting to note that verbs that introduce TP-Defective gerunds cannot appear in every construction between the derived nominal and the infinitive on the spectrum, shown below in (13):²⁷

- 13
- a. He continued his protestation of the new addition. (Derived Nominal)
 - b. He continued his protesting of the new addition. (Action Nominal)
 - c. ?He continued his protesting the new addition. (Poss-ing)
 - d. *He continued him protesting the new addition. (Acc-ing)
 - e. He continued to protest the new addition. (Infinitive)

Since the infinitive in (13e) necessarily does not project an overt subject (which was shown earlier in the example *?For him to move the chair bothered me*), and since infinitives necessarily project a T head for the English infinitive marker to appear in, it is clear that anything more verbal than Acc-ing cannot be TP-Defective in the same way as Clausal Gerunds. So, in (13d) (and possibly also in (13c)), the overt presence of the lexical subject in the embedded clause is the cause of the ungrammaticality. The other constructions (13a-c) do not otherwise contain a T projection, and thus do not fall into a TP-Defective category²⁸. The inability of these specific verbs to project a subject indicates that these verbs form a class of exceptions to the typical

²⁷ This does not include Acc-ing constructions which show a PRO in subject position.

²⁸ While (13c) is acceptable for me personally, other readers are hesitant to grant it complete grammaticality.

representation.²⁹ Thus, when these constructions reach what would be the TP projection, Merge of that level is replaced instead by Merge of the aspectual verb in the matrix clause.

I propose, then, that this small subclass of verbs (*start, finish, try, etc.*) also come with the feature [ing] that they value on the [Infl:___] of their complement clauses. Since, as I proposed earlier, these clauses lack a CP, and thus a phase edge, their derivations do not have to be complete before they reach the matrix clause. That is, there can still be unvalued or unchecked features (a property of phases which I discuss further in Chapter 5). Since these clauses have a defective T, and there is no *d*, the [Infl:___] on *v* in the embedded clause, then, remains unvalued until it is valued by the [ing] feature on the licensing verb in the matrix clause. In all other cases of gerunds besides these, however, the [ing] feature is still valued on [Infl:___] by the *d* in the embedded clause.

Valuing Case

In the same way that I use [Infl:___] to account for verbal properties of gerunds, I also use feature valuation for nominal properties of all the constructions in my analysis, namely [Case:___]. In Chapter 3, I discussed the nominal properties of Acc-ing, the most verbal of the constructions I am analyzing. Acc-ing is the most verbal structure that must necessarily appear in a case-marked position, which means that there must be some level of structure on which an uninterpretable case feature can be valued. I am proposing that the *dP* projection has that capability.

Since case is an inherently nominal feature, it should consistently appear with a nominal projection. Across all the trees in Chapter 2 above, the only projection that is consistent across all the constructions that appear in case-marked positions is *dP*. Notably, this is also a nominal

²⁹ I focus here on Pires' (2006) test of overt lexical subjects being unable to appear in TP-Defective gerunds. I show in Chapter 5 that his other main test, namely the inability of TP-Defective constructions to show differing time adverbials, may not be as good as a test.

projection. I am proposing that not only is the *d* head important for assigning accusative to the subject of Acc-ing constructions and valuing [Infl:___] on V, but it also carries an unvalued case feature [Case:___]. Working under the assumption that *dP* is a projection that appears in all nominal constructions, it then acts as a consistent projection on which case can be valued. With this new addition to the framework and using (1e) as an example, the representation would appear as Figure 8 below:

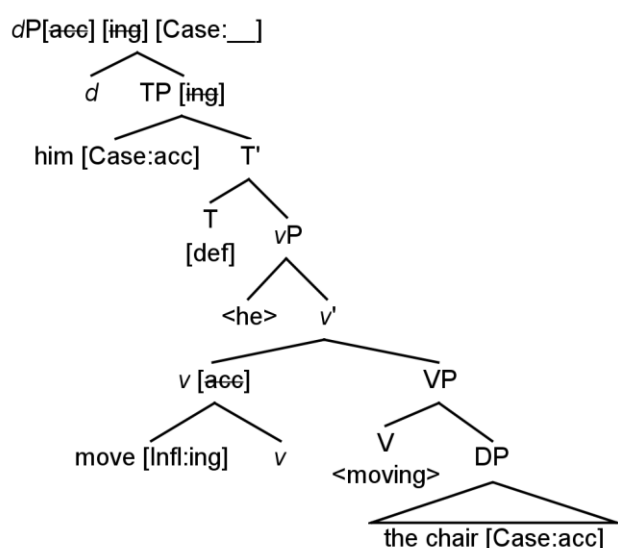


Figure 8 Acc-ing with Valued [Case:___]

In this representation, I have even replaced the most embedded phrase *the chair* with a *dP* (shown in earlier figures as DP), since I now assume this level to be necessary for all nominal case assignment. That is, case valuation on nominals always occurs at the *dP* projection, which makes *dP* a necessary projection on all nominals (as I have assumed throughout), though nothing

appears overtly in it. Having built a complete framework for these nominal constructions, I now investigate the consequences this analysis has on how phase-defining projections are viewed in the syntax, and also highlight certain problems that my analysis accrues with respect to time adverbials.

CHAPTER 5

CONSEQUENCES OF THIS ANALYSIS

Implications for Phasehood

A significant consideration for any proposal of additional structure to the syntax is whether the additional level is phase-defining or not, and how it fits into previous accounts of phase-defining categories of the nominal and verbal domains. The idea that syntax is built cyclically has been proposed by syntacticians for decades. In its most recent instantiation (Chomsky 2000, 2001, 2005, 2008), the idea of the syntactic phase has been worked into the Minimalist framework. That is, as the derivation is being built, features are checked and valued along the way. As soon as a phase-defining head is merged, all the uninterpretable features in the complement to the phase-head must be checked and valued, so that this complement can be spelled out and become impenetrable to any further operation of the syntax that would be caused by further heads being merged. If features are left unchecked or unvalued when a phase-defining head is reached, the derivation will crash. The phase-defining head which is merged to spell out the phase is known as the trigger.

Much work has been done in the past on phases in verbal/sentential phrases, but phasehood in nominal phrases is significantly less studied. Each phase contains a phase-defining phrase, which includes its head, any adjuncts, and its specifier(s) which remain accessible to operations outside of that phase. This is known as the phase 'edge'. Anything more embedded than this is not accessible to operations higher than the trigger. Items within a phase have the ability to become accessible if they can move to this phase 'edge'. This concept is known as the

Phase Impenetrability Condition (PIC). For my work, I accept the definition given by Chomsky (2001, citing Chomsky 2000), given here in (14), and assuming HP to be a strong phase³⁰ with a head H:

14. The domain of H is not accessible to operations outside HP; only H and its ‘edge’ are accessible to such operations.

The most widely accepted strong phase-defining categories for the verbal domain are CP and *v*P (Chomsky 2000 etc., Svenonius 2004, Lee-Schoenfeld 2007, et alios). Alternatively, Gallego (2005) argues that the phase-defining head in Romance languages is not *v*P, but rather TP.

For nominal phrases, Chomsky (2001) writes: “Considerations of semantic-phonetic integrity, and the systematic consequences of phase identification, suggest that the general typology should include among phases nominal categories”. While Chomsky does not elaborate much further on this topic, I assume (with Haegeman 2004, Lee-Schoenfeld 2007³¹, Radford 2009) that D also serves as a phase boundary³². As stated in Chapters 2 and 3 above, this analysis, in conjunction with my analysis of *d*P, does not provide for absolute parallelism between nominal and verbal/sentential structures³³.

If this is assumed, however, we encounter a slight problem. Appealing first to the [Infl:___] and [ing] features that we have proposed for gerund structures, the derivation is complete at the *d*P projection. In this case, the [Infl:___] feature at the *v*P/*n*P level is not valued

³⁰ I assume for this work that “phase” refers only to strong phases.

³¹ Lee-Schoenfeld assumes that D is only a phase boundary when D is “saturated”, meaning that all of its argument positions must be filled for it to act as a phase.

³² Another analysis by Wurmbrand (2011) suggests that the highest level of a given clause is phase-defining. Given my analysis, this would be *d*P, though I show below that it cannot be the case that *d*P is a phase boundary.

³³ For a discussion of other proposals of which projections are phase-defining, see Svenonius (2004).

until the *dP* level is merged. Once that feature is valued, all the features on that head should be checked, and it is spelled out. If this is true, then phrases that contain a gerund would not be spelled out until the phase-defining head *d* is merged. However, when *dP* is merged, it is merged with an unvalued [Case:___] feature. As I showed earlier in (8), however, *d* does not have the ability to act as an intermediate landing site for cases of extraction. There are properties, then, that show that *d* should act as a phase and other that show that it cannot.

There is much more to be said about the role of phasehood with respect to the constructions on this continuum, and it is my hope that further analysis will reveal the accuracy of these claims. While theory may predict one outcome, empirical evidence will reveal the true nature of the beast.

Adverbial Modifiers

Having built the basic structure of these nominal constructions, I now elaborate on how and when different adverbial and adjectival modifiers appear with these constructions. In Chapter 2, I show in (2) (repeated here) that adverbs are acceptable starting in Poss-ing and anything more verbal than Poss-ing. More nominal constructions (action and derived nominals and concrete nouns) cannot take adverbial modification, but must take adjectival modification instead. Conversely, anything more verbal than Poss-ing cannot take adjectival modification, but must be modified adverbially.

- | | | |
|----|----------------|---|
| 2. | a. Action Nom: | His frequent/*frequently moving of the chair bothered me. |
| | b. Poss-ing: | His *frequent/frequently moving the chair bothered me. |

Given this information, it is apparent that the AdvP which hosts the adverb appears with whatever verbal projection is introduced in the Poss-ing construction, namely *vP*, and does not

occur in the action nominal construction, where we instead find *nP*. Assuming the canonical AdvP for English verbal constructions is between TP and *vP*, the AdvP appears only in constructions in which the next lowest projection, *vP*, also appears. This seems to provide evidence that modifier phrases are merged based on the type of projection that was merged last. Thus, for Poss-ing, since the modifier phrase is merged after *vP* and since *vP* is verbal, AdvP is merged. In an action nominal construction, a modifier merged above *nP* would be an AdjP, since *nP* is nominal, as evidenced by (2a) above.

This analysis does not seem to hold true for time adverbials, however. Recall that this was a test that Pires (2006: 71) shows to hold true for TP-Defective gerund constructions, saying that “they do not allow the occurrence of embedded temporal adverbials distinct from the matrix clause” because they “still need to have a TP dominate them”. The examples in (15) however seem to show that all of the constructions in this thesis, regardless of whether they project a TP allow for differences in time adverbials:

15. a. Corey’s examination of the frog yesterday sickened him today. (Der. Nominal)
 b. Corey’s examining of the frog yesterday sickened him today. (Act. Nominal)
 c. Corey’s examining the frog yesterday sickened him today. (Poss-ing)
 d. Corey examining the frog yesterday sickened him today. (Acc-ing)

Following Pires, temporal adverbials “adjoin to or are licensed by TP”. It should not be the case that there can be a difference in time adverbials between the nominal clause and the matrix verb in (15a-c), especially given that the analysis I have presented shows that only Acc-ing, and no other construction, projects a TP. Thus, Acc-ing should be the only construction which would allow this difference.

TP-Defective gerunds should not allow for this time differential. However, if the TP projection is only present in the Acc-ing construction, it is not clear how the other constructions (Derived Nominal, Action Nominal, Poss-ing) are able to show time differentials in (15) above. The different time adverbials do not necessarily reflect the tense of the clause they appear in. Perhaps this test cannot be reliably used on its own to identify TP-Defective gerunds, especially since tense is not inflected on the verbs of nominal embedded clauses ([Infl:___], as I have proposed, is valued by an [ing] feature instead). While further analysis of how exactly temporal adverbs fit into the picture is outside the scope of this paper, it is noteworthy to point them out as a necessary point of further research.

CHAPTER 6

CONCLUSION

This analysis has fairly exhaustively examined the constructions along the nominal/verbal spectrum. I hope to have shown that the equivalent structures of nominal and verbal phrases can be used to create correspondences between them. By individually replacing these correspondences, I have shown how we can move along a continuum from more nominal elements to more verbal elements, using the features they assign as a motivation for nominal and verbal projections in the hierarchies. To do this, I have used equivalent structures, as well as further motivations, to propose a new level of structure: the *dP*. I then used the structures we had built to propose the origin of the gerund marker [ing] in *dP*. The [ing] feature I proposed is able to assign inflectional morphology to the [Infl:___] feature on the verb in cases of the gerund, as it was not previously valued due to the defectiveness of T (specifically in Acc-ing constructions). In the same way, I proposed that the accusative case for the subject of an Acc-ing construction must also be valued by *dP*.

In Chapter 5, I introduced certain consequences of my analysis that should be the subject of future research to be done in the area. I showed that, given the generally accepted view of phase boundaries as bundles of completely checked and valued features, nominal constructions in my analysis do not fit a widely proposed analysis of DP (or, in fact, any nominal phrase) as a phase boundary. I also showed that time adverbials pose a problem with respect to their ability to show time differentials in any construction, even those lacking a T head. This is especially a problem for how my analysis deals with TP-Defective gerunds.

While the analyses presented here are primarily Anglocentric, the principles of Universal Grammar predict that these properties should be represented in some manner in other languages, though their precise manifestation is yet to be determined. This, as well as the issues presented in Chapter 5, provide for a variety of future research projects on the topic. For the time being, however, I hope to have been successful in extending previous analyses of English (more or less) nominal phrases into a Minimalist framework.

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