

# The Syntax of Possessors in the Nominal Phrase: Drawing the Lines and Deriving the Forms

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“Where do you come from?” said the Red Queen. “And where are you going? ...”  
Alice ... explained, as well as she could that she had lost her way.  
“I don’t know what you mean by *your* way,” said the Queen:  
“All the ways about here belong to *me*...”

Lewis Carroll, *Through the Looking Glass*

This paper addresses the question of the ontological status of *Possessors* in natural language. Is this a natural grammatical category or in some other way a meaningful analytic concept? If so, how is it best characterized? There are many conceivable approaches to the question. Ours will be an unapologetically syntactic approach. Moreover, we will not attempt anything like a universal definition. The present discussion focuses on a case study, Contemporary Standard Polish (a West Slavic language), with a few comparative observations relating the discussion to English.

The first section of this paper introduces the problem by proposing a (morpho)syntactic definition of Possessors as the set of syntactic constituents assigned structural case by the functional category Determiner. After outlining some assumptions of syntactic structure and case marking in section 2, we discuss the geometry of nominal phrases, taking up first those headed by process nouns (section 3) and then those headed by referential nouns (section 4). The special morphology of the possessive pronoun and its consequences are addressed in section 5.

## 1. Introduction

She went on and on, a long way, but wherever the road divided,  
there were sure to be two finger-posts pointing the same way,  
one marked “TO TWEEDLEDUM’S HOUSE,”  
and the other “TO THE HOUSE OF TWEEDLEDEE.”

Lewis Carroll, *Through the Looking Glass*

Possessors in nominal phrases present a many-to-many relation between meaning and form. We provisionally define Possessors in English as a class of syntactic constituents which may (but need not) take the prenominal form used to express possession in its narrowest sense of ownership; that is, a Possessor may be expressed by the ‘Saxon Genitive’ if lexical, or a dedicated possessive form if pronominal. Our definition is a morphosyntactic one and does not require that a

given instance of a Possessor actually express ownership. Some examples of English Possessors are given in (1), where we illustrate the many-to-many relation between semantic function (distinguished in the rows) and morphosyntactic expression (distinguished in the columns):

(1)

|                              | <i>Prenominal<br/>'Saxon Genitive'</i>  | <i>Postnominal<br/>Periphrastic Genitive</i>      | <i>Postnominal<br/>Double Genitive</i> |
|------------------------------|---|---|--|
| <i>Possession</i>            | Bill's book                             | ?the book of Bill                                 | the book of Bill's                     |
|                              | the ship's funnel                       | the funnel of the ship                            | —                                      |
| <i>Description</i>           | the cow's milk                          | the milk of a cow                                 | —                                      |
|                              | ten day's absence                       | an absence of ten days                            |  |
|                              | this week's events                      | the events of this week                           |  |
| <i>Inherent<br/>relation</i> | Bill's sister                           | the sister of Bill                                | the sister of Bill's                   |
|                              | Bill's nose                             | the nose of Bill                                  | the nose of Bill's                     |
|                              | the earth's interior<br>the roof's cost | the interior of the earth<br>the cost of the roof | —                                      |
| <i>Subject</i>               | Verdi's opera                           | the opera of Verdi                                | the opera of Verdi's                   |
|                              | the king's policy                       | the policy of the king                            | the policy of the<br>king's            |
|                              | this dog's life<br>Bill's departure     | the life of this dog<br>the departure of Bill     | —                                      |
| <i>Object</i>                | the king's portrait                     | the portrait of the king                          | —                                      |
|                              | Bill's capture                          | the capture of Bill                               |  |

By definition Possessors do not include those types of phrase which are expressed only by the postnominal periphrastic genitive:

(2)

|                       | <i>Prenominal<br/>'Saxon Genitive'</i> | <i>Postnominal<br/>Periphrastic Genitive</i>                             | <i>Postnominal<br/>Double Genitive</i> |
|-----------------------|--|--|--|
| <i>Description</i>    | —                                      | a book of great<br>importance  | —                                      |
| <i>Quantification</i> | —                                      | a bottle of water<br>a pound of flesh                                    | —                                      |
| <i>Object</i>         | —                                      | a singer of popular songs<br>a statement of the facts<br>a love of power | —                                      |

These arrays of data illustrate the complexity of the question, for it is not clear what accounts for the mapping between semantic function and morphosyntactic expression.

For Polish, as for English, we take the possibility of a prenominal form to be diagnostic for Possessors. The morphosyntactic picture is simpler in Polish, which has (only) two formal means of expressing Possessors: the adnominal genitive and the possessive adjective (derived from a noun or pronoun):

(3)

|                          |                               | <i>Adnominal Genitive</i>  | <i>Possessive Adjective</i> |
|--------------------------|-------------------------------|--|-----------------------------|
| <i>Possession</i>        |                               | dom ojca ‘father’s house’  | ✓                           |
| <i>Inherent Relation</i> | <i>Inalienable possession</i> | ciocia ojca ‘father’s aunt’<br>szpony orła ‘the eagle’s talons’  | ✓                           |
|                          | <i>Part:whole</i>             | krawędź stołu ‘the table’s edge’<br>wieża kościoła ‘the church’s tower’  | ✓                           |
|                          | <i>Bearer of property</i>     | dobroć matki ‘the mother’s kindness’<br>jakość pracy ‘the quality of the work’<br>prędkość samochodu ‘the car’s speed’ | ✓                           |
|                          | <i>Source</i>                 | ślady wojny ‘the traces of war’  | ✓                           |
| <i>Subject</i>           | <i>Result</i>                 | słowa ojca ‘the father’s words’<br>opera Verdiego ‘Verdi’s opera’  | ✓                           |
|                          | <i>Simple event</i>           | podróż ojca ‘father’s trip’  | ✓                           |
|                          | <i>Process</i>                | rżenie koni ‘the horses’ neighing’   | ✓                           |
| <i>Object</i>            | <i>Result</i>                 | portret chłopca ‘a portrait of the peasant’  | ✓                           |
|                          | <i>Simple event</i>           | zakup samochodu ‘the purchase of a car’  | ✓                           |
|                          | <i>Process</i>                | karmienie psów ‘the feeding of the dogs’   | ✓                           |
|                          | <i>Agent</i>                  | namiastka Janka ‘Janek’s replacement’  | ✓                           |

Moreover, Polish is the simplest of the Slavic languages on this point, because nominal possessive adjectives are not productive. Lexical exceptions aside (see section 5), the morphosyntactic expression of Possessors in Polish is distributed as follows:

- (4) a. A pronominal Possessor is expressed by a possessive adjective;  
b. A lexical Possessor is expressed by an adnominal genitive.

We assume that condition (4b) giving the adnominal genitive as the output represents the default expression of a Possessor, with a marked morphological adjustment rule accounting for (4a).

As in English, Polish exhibits adnominal genitives which are not expressible by pronominal forms. This is seen in the impossibility of substituting a pronoun for a lexically-headed Noun Phrase:

(5)

|                       | <i>Adnominal Genitive</i>  | <i>Possessive Adjective</i> |
|-----------------------|--|-----------------------------|
| <i>Description</i>    | człowiek dobrej woli ‘a person of good will’<br>pole bitwy ‘battlefield’<br>obóz jeńców ‘a prisoner-of-war camp’<br>dzień odjazdu ‘day of departure’<br>czasy okupacji niemieckiej<br>‘the time(s) of German occupation’ | —                           |
| <i>Quantification</i> | kilo chleba ‘a kilo of bread’<br>szklanka wina ‘a glass of wina’   | —                           |
| <i>Object</i>         | pragnienie wolności ‘the desire for freedom’   | —                           |

Partee and Borshchev (2000) explore an aspect of the many-to-many mapping between function and expression by focusing on the semantic properties of Possessors. They note that Possessors seem to fall roughly into two categories: modifier-like and argument-like. They then proceed to distinguish two families of approach to the question: *uniform* and *splitting* approaches. Our focus here on the morphosyntactic form of Possessors leads to a splitting approach. In particular, we will propose distributional arguments for the syntactic typology of adnominal genitives displayed in (6a,b):

(6)

| (a)      | (b)        | (c)               | (d)                                |
|----------|------------|-------------------|------------------------------------|
| Argument | Complement | Quantification    | Selected<br>(inherent case)        |
|          |            | Object            |                                    |
|          |            | Inherent relation | Structural case<br>(assigned by D) |
|          | Object     |                   |                                    |
|          | Specifier  | Subject           |                                    |
| Modifier | Adjunct    | Possession        | Semantic case                      |
|          |            | Description       |                                    |

The semantic functions assumed in (3) and (5) are given in column (6c) in their relation to grammatical function (6a,b). Our objective is to demonstrate that morphological case for nominal phrases performing these grammatical functions is licensed by the corresponding operations shown in column (6d). Since Possessors in Polish are defined by (4) as permitting expression by pronominal possessive adjectives, and possessive adjectives result only in positions assigned structural case by the functional category D(eterminer) (cf. (3)), it follows that Possessors as a syntactic construct are those categories assigned structural case by D. The fact that other nominal satellites may also take the form of the genitive is essentially a coincidence: descriptive adjuncts and selected complements can appear in a variety of grammatical cases. Those in the genitive happen to be homophonous with Possessors. The various occurrences of the genitive should not be conflated, even for the purposes of semantic analysis. On our analysis, then,

Possessors are not a semantic, configurational, or morphosyntactic class detectable in superficial linguistic form, but rather simply the set of nominal satellites assigned a structural case whose default expression (for lexically-headed phrases) is the genitive case. The suppletive spell-out of this structural case for pronouns is the only morphological diagnostic we have to distinguish this set of genitive expressions from others. This morphological fact is the reason for the murkiness of the notion Possessor.

## 2. Assumptions of syntactic structure and case marking

... Ah well! ... the moral of that is –  
'Take care of the sense, and the sounds will take care of themselves'

Lewis Carroll, *Alice's Adventures in Wonderland*

In this section we outline some assumptions of case marking and syntactic structure which will be essential for the ensuing analysis. In particular, we define and illustrate the syntactic operation *Agree*, per Chomsky 2000, 2001a, 2001b. While Chomsky proposes this operation to account for the basic clause-level phenomena of subject/object case marking and predicate agreement, we will extend it to the level of the nominal phrase.

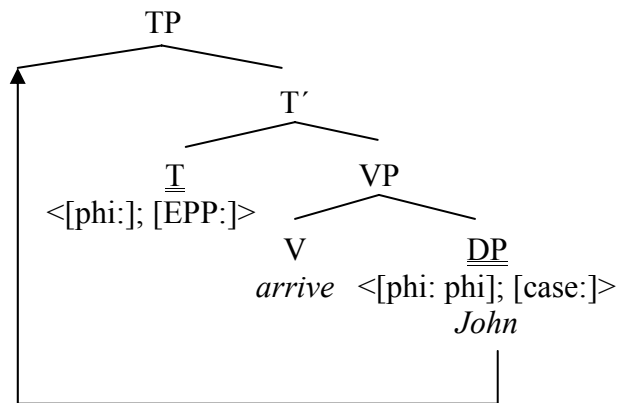
We begin with a set of definitions:

- (7) a. Features consist of a type and, optionally, a value.  
An example of a feature with a type but no value, an *unvalued* feature, is [case:]. A feature with both type and value, a *valued feature*, is [case: nominative].
- b. Two features associated with different syntactic objects *match* if they contain the same type, regardless of their value.
- c. A category is *active* if it contains an unvalued feature.
- d. Two syntactic objects A and B undergo the operation *Agree* iff:
  - B is in the *search space* of A; for our purposes, we take this to mean that B is c-commanded by A and is not contained in any other syntactic object c-commanded by A. A is called the *probe* and B – the *goal*.
  - A and B contain at least one pair of matching features.
  - Both A and B are active.
- e. On the application of *Agree*, an unvalued matching feature on either probe or goal is assigned the value of its counterpart on the category it *Agrees* with.

- f. The functional categories T and *v* assign a (structural) case (nominative and accusative, respectively) on the application of Agree.<sup>1</sup>

Consider the following example of an unaccusative predicate, based on an intransitive verb whose superficial subject originates as its complement (Comp-of-V):

- (8) ‘John arrived’



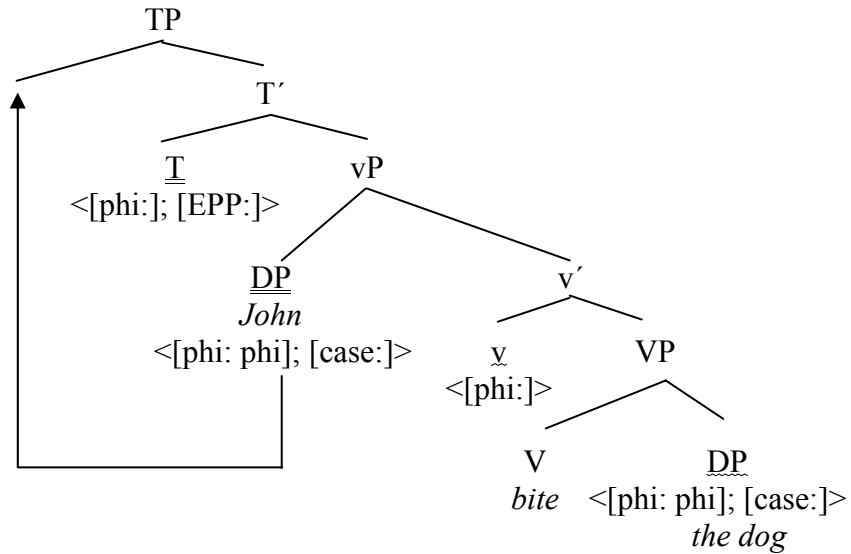
The operation Agree applies cyclically from bottom to top. The T(ense) node representing predicate agreement is active because it has unvalued features for person, number, and gender (7a,c); we abbreviate this set here as *phi* (‘formal’) features. The nominal phrase *John* (represented here as a D(eterminer) Phrase) has inherent *phi*-features (in this case, third person, singular number, and masculine gender), but an unvalued case feature (rendering the phrase active). Since both T and DP are active, they contain matching features (the *phi*-features) (7b), and the DP is in the search space of T (7d), Agree applies to the two: the *phi*-features of goal DP are copied onto the corresponding unvalued features of probe T (7e), and T assigns the value Nominative to the case feature on DP (7f). While Agree does not per se entail movement, T is further associated with an unvalued feature descriptively called the *EPP feature*, which is satisfied when its specifier position is filled.<sup>2</sup> Correspondingly, on the application of Agree, the DP is moved to Spec-of-T.

Now consider a transitive construction. By assumption, a transitive predicate is associated with a functional category ‘small *v*’ containing the lexical verb and its complements; the eventual subject of the verb is merged as Spec-of-*v*:

<sup>1</sup> It might seem logical for T and *v* to be associated with valued case features, because case could be copied onto their goals by the definition of Agree. While this would work mechanically, it is ruled out in principle: valued features can be inserted when introduced in syntactic structure only if they are interpretable at Logical Form, but case is not.

<sup>2</sup> ‘EPP’ refers to the ‘Extended Projection Principle’, which plays no role in the current theory. The term is invoked only to refer to a requirement that the specifier of a category be filled.

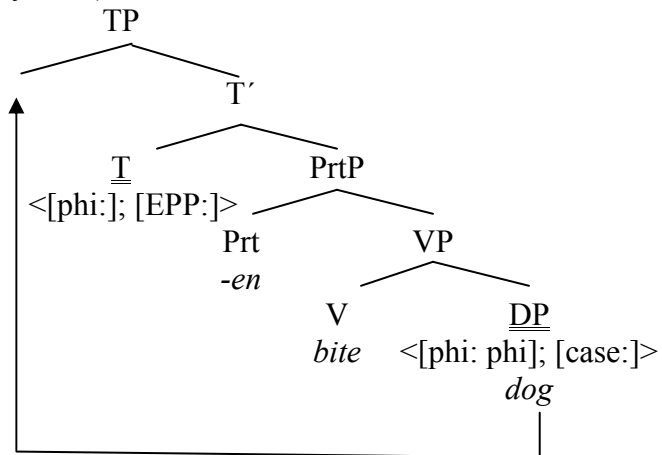
(9) 'John bit the dog'



The category *v* resembles T in having unvalued phi-features, but differs in a) not requiring an EPP feature, and b) assigning the accusative on Agree instead of the nominative. The probe *v* Agrees with the goal DP as T Agreed with DP above, but a) in the absence of the EPP feature, there is no movement, and b) DP is assigned the accusative case. T is then free to Agree with the Spec-of-*v* precisely as it Agreed with Comp-of-V above, despite the difference in configurational structure. This sort of 'promiscuity' in selecting a goal for the probe is a key property of structural case assignment.

Finally, in a passive structure, the category *v* is replaced by the functional category *Prt* (Participle), which has no agreement (or ECP) features and assigns no case:

(10) 'The dog was bit (by John)'



Now, despite the similarity of the underlying structure to (9), T Agrees with Comp-of-V, as in (8), because in the absence of *v* (with its specifier), T is the closest probe to the goal DP.

Each of the clause-level scenarios just outlined will, we propose, find its reflection in nominal phrase structure.

### 3. The geometry of the process nominal phrase

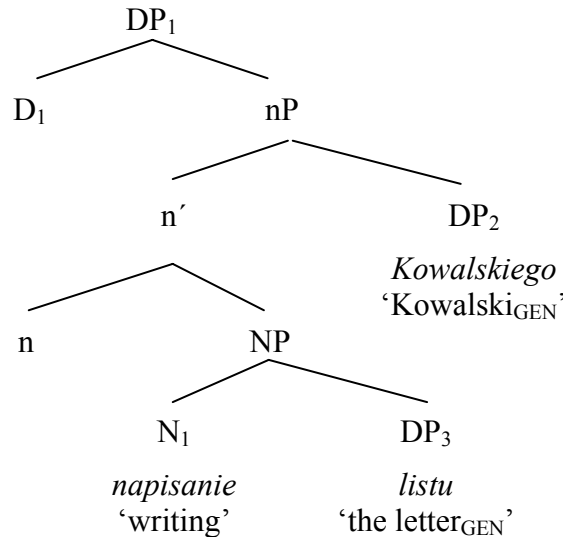
In Polish, there are two morphological kinds of process noun, illustrated in (11) and (12). *Verbal nouns*, displayed in (11), are formed by a regular suffixation process with one of three allomorphs, {-eń-}, {-ń-}, or {-ć-}, depending on the verb stem (parallel to the past passive participle); *action nouns*, displayed in (12), are formed by any of a variety of non-productive means. (11a/12a) represent unaccusative deverbal nouns; (11b/12b) represent transitive deverbal nouns; and (11c/12c) represent deverbal nouns governing a complement in an oblique case.

- (11) a. Całe kontynenty są nieświadomi [istnienia naszego kraju].  
entire continents are unaware [existence our<sub>GEN</sub> country<sub>GEN</sub>]  
'Entire continents are unaware of [the existence of our country].'
- b. Niniejszą listę można używać wyłącznie w celu  
this list one-can use only for purpose  
[odnalezienia prywatnych znajomych].  
[finding personal<sub>GEN</sub> friends<sub>GEN</sub>]  
'This list can be used only for the purpose of [finding personal friends].'
- c. kierowanie autem  
driving automobile<sub>INST</sub>  
'driving an automobile'
- (12) a. Omawiano możliwość [powrotu Polaków z ZSRR do Polski].  
it-was-discussed possibility [return Poles<sub>GEN</sub> from USSR to Poland]  
'The possibility of [the return of Poles from the Soviet Union to Poland] was discussed.'
- b. [Kolejny odczyt licznika] nastąpi za pół roku.  
[next reading meter<sub>GEN</sub>] will-occur in half year  
'[The next reading of the meter] will occur in six months.'
- c. Fascynacja młodzieży kulturą starożytną ...  
fascination youth<sub>GEN</sub> ancient<sub>INST</sub> culture<sub>INST</sub>  
'The fascination of young people with ancient culture ...'

The genitive satellites of the head noun in (11) and (12) are arguments of that head. The argument structure of the process noun *odnalezienie* 'finding', for example, is identical to that of the corresponding verb *odnaleźć* 'to find'. In our analysis, we assume the *Determiner Phrase hypothesis*, standard in much current work. In addition to assigning the referential properties to a nominal phrase which

make it eligible to be an argument (Longobardi 1994; see also Rappaport 2001), the functional category D performs certain grammatical duties. It is analogous to  $v$  and T in assigning case (genitive in Polish) under Agree; it also expresses agreement in certain languages (e.g., Hungarian and Turkish) with the element it assigns case to. We assume moreover a functional category ‘small  $n$ ’, which transitivizes nouns, just as ‘small  $v$ ’ transitivizes verbs (cf. (9)). On these assumptions, we can construct a nominal phrase with configurational structure (13). But while its clausal counterpart *Kowalski napisał list* ‘Kowalski wrote the letter’ with structure analogous to (9) is grammatical, (13) is not:

(13)



If subject genitives and object genitives associated with process nouns represent two distinct syntactic positions (Spec-of- $n$  and Comp-of-N, as displayed in (13)), we would expect that they would co-exist. However, handbooks of Polish grammar and style state categorically that such constructions are completely ungrammatical; cf.:

(14) a. \**napisanie listu Kowalskiego*  
 writing letter<sub>GEN</sub> Kowalski<sub>GEN</sub>  
 ('Kowalski's writing of the letter')

b. \**zagłada miasta barbarzyńców*  
 destruction city<sub>GEN</sub> barbarians<sub>GEN</sub>  
 ('the barbarians' destruction of the city')

Our analysis makes it possible to account for this fact in a straightforward way, as follows.

We are assuming that D is analogous to T in assigning structural case when it Agrees with another category. Unlike  $v$  in a clause, however,  $n$  does not assign case. The basic idea is that there is only one assigner of structural case in the Polish nominal phrase, D, and it is indifferent to whether it assigns this case to

Spec-of-*n* or Comp-of-N, just as T assigns case promiscuously to Spec-of-*v* or Comp-of-N (cf. (9) and (10)). (In both cases, the definition of search space identifies the goal as the higher of the two.) If two nominals with the unvalued feature [case:] are merged with a process nominal, only one can be assigned case. A clause based on a transitive predicate differs from a nominal phrase in having two assigners of structural case (T and *v*), as opposed to only one (D, not *n*).

There are *prima facie* cases of clearly acceptable double adnominal genitives with process nominals:

- (15) Ci, którzy dążyli do [pozbawienia Polaków wolności] ...  
 those who aspired to [depriving Poles<sub>GEN</sub> freedom<sub>GEN</sub>]  
 ‘Those who aspired to [the deprivation of Poles of (their) freedom] ...’

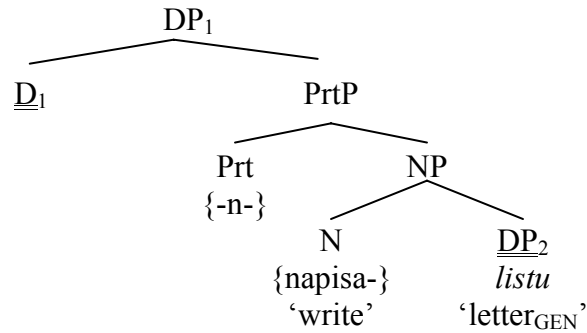
The difference between (15), where a double adnominal genitive is permitted, and (14), where it is not, is that the verb underlying the process nominal in (15) takes the genitive case for the second complement (*pozbawić kogo czego* ‘to deprive someone<sub>ACC</sub> of something<sub>GEN</sub>’). This choice of case is motivated by the semantic relation of the complement to its head, as determined by the lexical meaning of that head. This phenomenon has been called *inherent case marking*, meaning not only that the source of case marking and thematic role on that nominal are the same (the head noun), but also that the choice of case is related to the thematic role assigned. We assume that inherent case is *selected*, that is, the lexical representation of the head specifies that it must combine with arguments assigned a particular thematic role, and that such arguments must take a particular form. Thus, the second complement genitive in (15) represents inherent case and is licensed by selection. This is the same mechanism which assigns the oblique instrumental case to a complement in nominal phrases such as (11c/12c).

As is well-known, the Agent of a process nominal can be expressed by an oblique agent expression, taking the same form that is found in a passive clausal structure (a Prepositional Phrase headed by *przez* ‘by’. In both constructions, the Agent can be internalized, made implicit, and expressed as an oblique constituent (cf. Grimshaw 1990 and Babby 1997):

- (16) a napisanie listu przez Kowalskiego  
 writing letter<sub>TGEN</sub> by Kowalski  
 ‘the writing of the letter by Kowalski’  
 b. zagłada miasta przez barbarzyńców  
 destruction city<sub>GEN</sub> by barbarians  
 ‘the destruction of the city by the barbarians’

The parallel with the passive suggests a model for the nominal phrase in which we replace *n* by Prt:

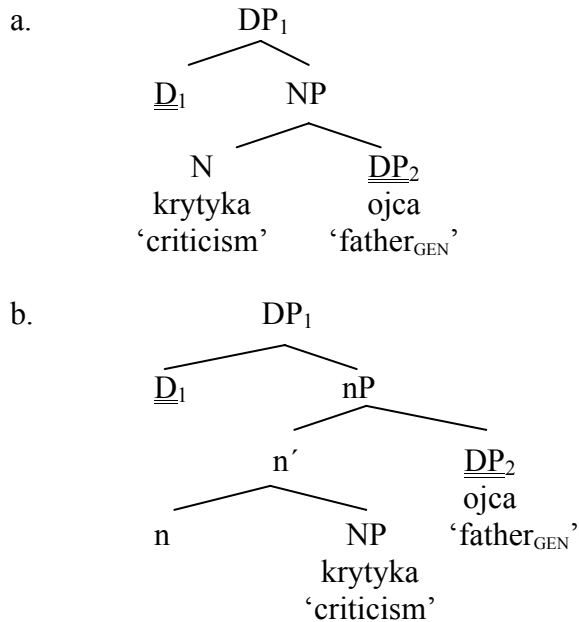
(17) ‘the writing (of) the letter<sub>GEN</sub>’



D<sub>1</sub> Agrees with DP<sub>2</sub>, assigning the latter structural genitive case. There is no Agent argument, because there is no *n* to introduce/select it. In Grimshaw’s terms, there is an Agent participant, but it is never mapped into a syntactic argument. An oblique expression (*przez Kowalskiego* ‘by Kowalski’) can be exploited to express the agent.

Consider further such well-known examples of ambiguity as (18): the differing interpretations follow from whether or not small *n* is selected to transativize the noun and support an agent argument (analogous to *v*):

(18) krytyka ojca ‘criticism of the father<sub>GEN</sub>’ (ambiguous, with both subject and object interpretations)



In the absence of *n* (18a), the adnominal genitive has an object interpretation; in the presence of *n* (18b), this same phrase has a subject interpretation.

#### 4. The geometry of the referential nominal phrase

4.1. *Concrete and abstract nouns* Referential nominal phrases such as those in (19) headed by concrete and abstract nouns can combine with two adnominal genitives (see similar discussion of Russian in Englehardt and Trugman 2000); the two phrases must occur in the order given:

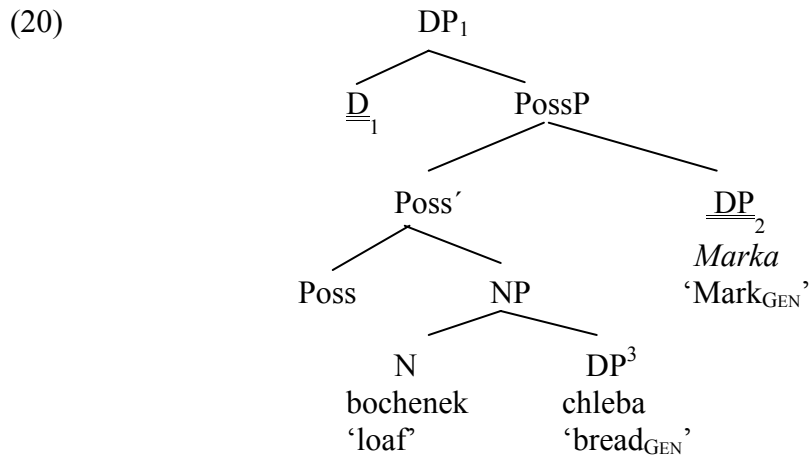
- (19) a. bochenek chleba (Marka)  
loaf bread<sub>GEN</sub> (Mark<sub>GEN</sub>)  
'(Mark's) loaf of bread'
- b. galeria sztuki (Małgorzaty Kowalskiej)  
gallery art<sub>GEN</sub> (Margaret<sub>GEN</sub> Kowalska<sub>GEN</sub>)  
'(Margaret Kowalska's) art gallery'
- c. wolność wyboru (Polaków)  
freedom choice<sub>GEN</sub> (Poles<sub>GEN</sub>)  
'(Poles') freedom of choice'

We take the inner adnominal genitive to represent a complement of the head Noun; adnominal complements can be in the dative, instrumental, or genitive, and these happen to instantiate the last option. The choice of case is motivated by the semantic relation of the complement to its head, as determined by the lexical meaning of that head, and thus represents inherent case marking (cf. (15) above).

The outer adnominal genitive in (19), on the other hand, is licensed differently than is the first. A Possessor is clearly not implicated in the argument structure of the head. The theory requires that every referential NP be assigned a thematic role, so we assume that a referential noun may be selected by a category *Poss(essor)*, which assigns the required thematic role of Possessor. In this respect, Poss is analogous to the *v* assumed in clausal structure in selecting a specifier and assigning it a thematic role, but not case (cf. Babyonyshev, this volume).

How then to assign case to the Possessor in (19)? Poss could conceivably select the genitive case for its specifier, but this would suggest that it is an accidental fact that Possessors are assigned the same case as the direct arguments of process nouns, as discussed in detail in the previous section (cf. *istnienie naszego kraju* 'the existence of our country<sub>GEN</sub>', *napisanie listu* 'the writing of the letter<sub>GEN</sub>'). But this in fact is a linguistically significant generalization, because it applies to English and many other languages as well, *mutatis mutandi*, and so hardly seems like an accidental homophony. In order to capture this generalization, we attribute the genitive of possession to the same source as that for the subject and object genitives: structural case assigned by D. All of the Possessor expressions in (19) may be replaced by possessive pronouns (e.g., *Marka/jego bochenek chleba* 'Mark's/his loaf of bread'), so that this conclusion supports our hypothesis stated in section 1: possessive pronouns are possible where D assigns structural case.

Thus, while Poss assigns the second adnominal genitive in (19) its thematic role, D is the source of the genitive case. The structure of, say, (19a), then, may be displayed as follows:



The head noun *bochenek* 'loaf' selects a theme, expressed by DP<sub>3</sub>, with a valued case feature [case: Genitive]. This is an instance of inherent case, as both the case value and thematic role are licensed by the head N. DP<sub>2</sub> is assigned the thematic role Possessor by its head Poss, but structural case by D<sub>1</sub>. DP<sub>2</sub> has an unvalued case feature [case:], valued as [Genitive] when D<sub>1</sub> Agrees with it. Since the category assigning case is not the source of the thematic role, this is an instance of structural case assignment.

Note that the D selecting a process nominal does not differ from one selecting a referential nominal: in neither instance does it assign a thematic role, and in both it Agrees (and assigns the genitive to) the closest DP, independently of the assignment of thematic roles, which are licensed by different heads (Poss or N) and may perform different syntactic functions (specifier or complement). Recall that this was the approach to the active:passive contrast in English clauses, sketched in section 2.

4.2. *Result nouns* What we have said for concrete and abstract referential nouns also applies to result nouns, illustrated in (21). This is natural because result nouns, like the head nouns in (19), are referential nouns:

- (21) a. poczet królów (Matejki)  
 gallery kings<sub>GEN</sub> (Matejko<sub>GEN</sub>)  
 '(Matejko's) gallery of kings'
- b. opis zachodu słońca (Mickiewicza)  
 description setting sun<sub>GEN</sub> (Mickiewicz<sub>GEN</sub>)  
 '(Mickiewicz's) description of the sunset'

In contrast to (19), the second adnominal genitive in (21) designates something akin to an agent, identifying one who performed an event which led to the result

denoted by the noun. We will treat this indirect, or *Quasi-agent* interpretation, as a special case of the Possessor thematic role, rather than as an argument of the head noun (merged as Spec-of-*n*). We justify this as follows. In conceptual, semantic terms, the notions of Possessor and Quasi-agent are not mutually exclusive: one could easily speak of a portrait of X painted by Y and belonging to Z. But a third adnominal genitive as in (22) is completely impossible.

- (22) \*portret damy z gronostajem Leonarda da Vinci Księcia Czartoryskiego  
 portrait lady<sub>GEN</sub> with ermine Leonardo da Vinci<sub>GEN</sub> Prince<sub>GEN</sub> Czartoryski<sub>GEN</sub>  
 ('Prince Czartoryski's portrait by Leonard da Vinci of the lady with an  
 ermine')

This should be possible if the 'lady with an ermine' and 'Leonardo da Vinci' are arguments of N (in Comp-of-N and Spec-of-*n* positions, respectively), and 'Prince Czartoryski' is a Possessor (Spec-of-Poss). We take the notion of Possessor to be broad enough to encompass both notions of Possessor and Quasi-agent, so that alternate interpretations are the result of simple lexical vagueness, rather than of structural ambiguity. The syntactic structure of (21), then, is identical to that of (19), displayed in (20). The functional category *n* combines with a process noun, but not with a referential noun and thus is unavailable in (22) to support an argument. In fact, the ungrammaticality of (22) is overdetermined, being ruled out by case considerations as well: while the complement 'lady with an ermine' is assigned inherent case and thematic role by the head noun 'portrait', the remaining two genitive satellites compete for but a single source of thematic role (Poss) and a single source of structural genitive case (D).

The partition between structural and inherent genitive case assignment within the nominal phrase accounts for the co-occurrence restrictions among types of adnominal genitive phrases, well-known in the literature. Selected complements may co-occur with a Possessor, but various Possessors cannot co-occur with each other or with non-selected complements, because of excessive competition for the limited number of thematic roles and sources of structural case available in nominal structure.

There is yet another category of genitive satellites in the nominal phrase. We take *semantic case marking* to be a lexical process inserting adjunct noun phrases with a valued case feature and a modificational semantic function (see Rappaport 2000). Such an adnominal genitive, illustrated in (23a), can co-exist with an unselected complement (23b) or Possessor (23c), because it does not compete with either for case or thematic role. Since such a genitive adjunct does not receive its genitive case from D, it cannot be expressed by a possessive pronoun (23d).

- (23) a. towary dobrej jakości  
 products good<sub>GEN</sub> quality<sub>GEN</sub>  
 'good quality products'

- b. zagłada miasta zastraszających rozmiarów  
destruction city<sub>GEN</sub> frightening<sub>GEN</sub> dimensions<sub>GEN</sub>  
'the destruction of a city on a frightening scale'
- c. galeria sztuki Małgorzaty Kowalskiej światowej sławy  
gallery art<sub>GEN</sub> Margaret<sub>GEN</sub> Kowalska<sub>GEN</sub> world<sub>GEN</sub> fame<sub>GEN</sub>  
'Margaret Kowalska's world-famous art gallery'
- d. \*dobra jakość i jej towary  
good quality and its products  
( 'good quality and its products' )

The essence of structural case assignment is its divorce from the assignment of thematic role. We have proposed that the functional category Determiner assigns structural case promiscuously to noun phrases assigned thematic role by the category Possessor, as well as to those merged as direct arguments of a noun. We have distinguished this mechanism of case assignment from inherent case assignment, which is a selectional restriction imposed by a governing lexical item and associated with its assignment of a thematic role to its complement, and from semantic case assignment, which is a lexical process productively deriving modifiers. This typology accounts for the observed co-occurrence restrictions.

## 5. Possessive pronouns (in brief)

*5.1. Special properties* It has been assumed here, following Rappaport (2000, to appear), that possessive pronouns are syntactically associated with an adnominal genitive phrase. That is, *mój pokój* 'my room' is the result of a morphological rule which applies to *\*pokój mnie* 'the room (of) me<sub>GEN</sub>', adding agreeing morphology which then in Polish places the pronoun as the default in prenominal position. Analogues among lexical nouns are less productive in Polish than in any other Slavic language, but there is the parallel of *pokój matki* 'the room (of) mother<sub>GEN</sub>' alongside *matczyn pokój* 'mother's room'.

As surveyed in section 1, some adnominal genitives in Polish allow for paraphrase by possessive pronouns (3), while others do not (5). As summarized in (6), and illustrated by the ensuing discussion, this distinction is isomorphic to the distinction, respectively, to that between structural case assigned by D, on the one hand, and semantic or inherent case, on the other. That is, only the structural genitive assigned by D can be spelled out as an possessive adjective. We will assume that at the syntactic level the case assigned by D is a "possessive case", which is spelled out mostly via a syncretism with the genitive, but suppletively for pronouns with the morphology of a possessive adjective (4).

Possessive pronouns in combination with process nominals merit three special observations.

First, a possessive pronoun in combination with the genitive complement of a process nominal is not expected from the analysis as developed so far. For example:

- (24) jego/twoje nastawianie radia  
his/your tuning radio<sub>GEN</sub>  
'his/your tuning the radio'

We have assumed that a) possessive pronouns correspond to adnominal genitive phrases, and b) such genitive phrases are converted into possessive pronouns in the morphology. Furthermore, the underlying Possessor phrase competes with the complement for the same source of genitive case assignment: D. Both, then, should not be possible.

In fact, possessive pronouns in phrases such as (24) are grammatical, being characteristic of informal speech, if stylistically marked in the literary language; much preferred is the passive-like construction mentioned above:

- (25) nastawianie radia przez niego/ciebie  
tuning radio<sub>GEN</sub> by him/you  
'the tuning of the radio by him/you.'

In order to combine with a genitive complement of a process nominal, such a possessive pronoun would have to have its own source of the genitive case; that is, it would have to be inserted with a valued case feature in this position, a form of semantic case. As a result, D would be free to Agree with the complement NP. The fact that (24) is stylistically marked suggests that this lexical source of the genitive case is itself a marked option.

Second, first and second person possessive pronouns in combination with process nouns are associated with restrictions not shared by possessive pronouns in the third person. For example, in (24) above the third person pronoun is more natural than is a second person pronoun. Also, only possessive pronouns in the third person can denote the semantic role of Theme, associated with insertion in the syntax as Comp-of-N and raised by a passive-like operation within the nominal phrase:

- (26) a. ich zrozumienie  
their understanding  
'understanding them'
- b. \*moje zrozumienie  
my understanding  
(‘understanding me’)

It is likely that the distinction has a historical basis in the fact that third person possessive pronouns, while preposed, do not exhibit agreement morphology and

more closely (if not perfectly) resemble the adnominal genitive form we propose that they are derived from.

Finally, the use of the possessive pronoun (when possible at all) is associated with a semantic shift: the action is interpreted as a characteristic of the subject, an attribute, rather than denoting a process in which that Possessor is the agent. Moreover, there are contexts in which the possessive form is required in order to elicit a manner interpretation (see Paducheva 1984 for similar observations about Russian):

- (27) a. \*Podziwiam [ujęcie tego tematu Piotra/przez Piotra].  
I-admire [approach this<sub>GEN</sub> topic<sub>GEN</sub> Peter<sub>GEN</sub>/by Peter]  
(‘I admire [Peter’s approach to the topic]/[the approach by Peter to the topic].’)
- b. Podziwiam [jego ujęcie tego tematu].  
I-admire [his approach this<sub>GEN</sub> topic<sub>GEN</sub>]  
(‘I admire [his approach to this topic].’)

Each of these facts constitutes a challenge for the analysis as developed here, in some way distinguishing the possessive pronoun combined with process nominals from that combined with referential nouns. It would be our expectation that these restrictions are morphological ones, involving either restrictions on the spell-out for pronouns of the ‘possessive case’ assigned by D or on the possibility of inserting a lexical possessive pronoun (with valued feature [case: genitive]). Such language-specific details which remain to be worked out lie outside the conceptual scope of this paper and must be left unresolved here.

*5.2. Referential versus process nominals* It follows from our analysis that a possessive pronoun expressing the Possessor of a referential nominal (including the Quasi-agent of a result nominal) has a different structural origin than does the same form expressing the ‘subject’ of a process nominal: the former is merged as Spec-of-Poss, while the latter is merged as a Spec-of-*n* (if transitive) or Comp-of-N (if intransitive). Interestingly, there is independent justification for this distinction. The required constructions are difficult to work with in Polish, because of the marginal grammaticality of crucial examples (cf. (24) above). We may turn to Russian to develop this argument, however, because Russian is analogous in all relevant respects to Polish except that possessive pronouns in combination with process nominals are more acceptable than in Polish. The unambiguous (28a) with a process nominal contrasts with the ambiguous (28b), headed by an referential nominal:

- (28) a. Oni<sub>i</sub> udivilis' [naše<sub>j</sub> otpravke detej k svoim\*<sub>i,j</sub> roditeljam].  
 they were-surprised-at our sending children to self's parents]  
 'They were surprised at [our sending the children to \*their/✓our parents].'
- b. Dissidenty<sub>i</sub> čitali [naši<sub>j</sub> stat'í o sebe<sub>i,j</sub>]  
 dissidents read our articles about self  
 'The dissidents read [our articles about themselves/ourselves].'

In a binding theory analysis such as that presented in Rappaport 1986, the binding domain is delimited by the presence of a SUBJECT; these data indicate that the notion SUBJECT includes Spec-of-*n* (present in (28a) and ruling out coreference of the anaphor with the clause subject), but not Spec-of-Poss (permitting coreference with the clause subject). The essential distinction is captured by limiting the binding domain to a *Complete Functional Complex*, the minimal phrase containing all the arguments of the head of the phrase containing the anaphor. That phrase, of course, includes Spec-of-*n*, but not Spec-of-Poss.

## 6. Conclusions

The function of the genitive is defined as the result of a transposition of a verbal syntagm into a nominal syntagm; the genitive is the case that, between the two nouns, assumes for itself alone the function that in an utterance with a personal verb falls to either the nominative or the accusative.

All the other uses of the genitive ... are derived from this,  
 as subclasses with a specific semantic value.

(Benveniste 1971/1962)

Table (6) in section 1 summarizes the possible sources of adnominal genitives and displays our results for Polish: nominal satellites which can take the form of a possessive pronoun are those which are assigned structural case by D. While the capacity to appear in this morphological form was our first approximation of what a POSSESSOR is, a more linguistically cogent definition is the principle of case assignment. While clauses have two structural case assigners (T and v), nominal phrases have but one (D). It is even possible to view the case assigned by D as properly constituting a distinct *possessive* case, which is syncretic with the genitive case in many morphological contexts, but not all. It may appear that this approach reduces the case assignment of D to inherent case (associated with semantic role), but that is ruled out by the fact that D assigns its case promiscuously to phrases not necessarily its arguments and characterized by a range of semantic functions. These are characteristics of structural case, syntactic in its essence, rather than inherent case, a lexical phenomenon.

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