TURKISH NOMINAL COMPOUNDS

Hitay Yükseler

In this paper, I look at two types of nominal compounds in Turkish, but concentrate on 'possessive compounds' only. Based on syntactic and semantic properties, I argue that these compounds have NP-Gen NP-Poss structure not N N-Poss structure as traditionally has been accepted.

O. Introduction: Recent studies in morphology (Lieber, 1983; Selkirk, 1982) have concentrated on developing models to account for compound structure. Most of these studies are concerned with the relation between the constituents of primary and synthetic compounds. Although the proposed models differ in the representations they use, they make similar assumptions and predictions about possible structures of nominal, verbal and adjectival compounds.

Turkish provides examples of a type of a nominal compound which differs both from primary and synthetic compounds by having a possessive case marker present internal to the compound. This particular type of nominal compound, which I will refer to as the possessive compound, has not been considered within existing models of compounding. These possessive compounds are interesting because they contrast with another form of compounding in Turkish which is very similar to nominal compounding in a language like English. Possessive compounding differs structurally from regular nominal compounding in that the head of the compound must be marked with the possessive case. There are also semantic differences between the two types of compounds as the
following examples show.

(1)

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>kadın doktor</td>
<td>kadın doktor-u</td>
</tr>
<tr>
<td>woman doctor</td>
<td>woman doctor 3sposs</td>
</tr>
<tr>
<td>'a female doctor'</td>
<td>'a gynecologist'</td>
</tr>
<tr>
<td>kalem silgi</td>
<td>kalem silgi-si</td>
</tr>
<tr>
<td>pencil eraser</td>
<td>pencil eraser 3sposs</td>
</tr>
<tr>
<td>'a pencil shaped eraser'</td>
<td>'an eraser attached to a pencil'</td>
</tr>
<tr>
<td>çocuk katil</td>
<td>çocuk katil-i</td>
</tr>
<tr>
<td>child murderer</td>
<td>child murderer 3sposs</td>
</tr>
<tr>
<td>'a murderer who is a child'</td>
<td>'a killer who murders children'</td>
</tr>
</tbody>
</table>

The forms in Column I of (1) are examples of regular nominal compounds, while those in Column II are possessive compounds. I will address three major questions in this paper. First, why must the head of the possessive compound be case-marked? Secondly, why is this case marking third person singular? And lastly, can we predict which NN juxtapositions will be marked with the possessive marker?

This paper is divided into three sections. First, the phonological and structural criteria which have traditionally been used to distinguish compounds from simple words, affixed words and phrases are examined. Then, through a discussion of nominal compounds in Turkish, it is shown that the marking of the possessive compounds cannot be predicted from the lexical entries which constitute the compounds. In section 3, the structural and semantic similarities between syntactic possessives and possessive compounds are examined and an analysis which takes these
similarities into account is proposed.

1. **Indentification of Compounds.** Traditionally, phonological criteria have been used to distinguish compounds from simple and affixed words in Turkish. One of the criteria is stress. Turkish stress falls on the final syllable of a word¹, as shown in (2a). In compounds, as in (2b), the last syllable of the first constituent takes main stress and, unlike stem+affix structures, the stress does not change when the compound is affixed²:

   \[
   \begin{array}{ll}
   \text{(2a) Stem+Affix:} & \text{(2b) Compound+Affix} \\
   \text{baba} & \text{b"uy"ukbaba} \\
   \text{father} & \text{grandfather} \\
   \text{baba-l"ar} & \text{b"uy"ukbaba-lar} \\
   \text{father-pl} & \text{grandfather-pl} \\
   \text{baba-l"ar-in} & \text{b"uy"ukbaba-lar-in} \\
   \text{father-pl-of} & \text{grandfather-pl-of} \\
   \end{array}
   \]

   Vowel harmony is the second criterion which distinguishes simple words and affixed words from compounds. As shown in (3a), vowel harmony does not apply between the constituents of a compound, but applies to affixes, (3b):³

   \[
   \begin{array}{ll}
   \text{(3a) [b"uy"uk][baba]} & \text{baba \quad \text{\textquotesingle\textacutefather\textquotesingle}} \\
   \text{\textquotesingle\textacutegreat father\textquotesingle} & \text{baba-l"ar \quad \text{\textquotesingle\textacutefathers\textquotesingle}} \\
   \text{\textquotesingle\textacutegrandfather\textquotesingle} & \text{bebek \quad \text{\textquotesingle\textacutebaby\textquotesingle}} \\
   \text{*[b"uy"uk][bebe]} & \text{bebek-l"er \quad \text{\textquotesingle\textacutebabies\textquotesingle}} \\
   \text{\textquotesingle\textacutegreat *baba} & \text{\textquotesingle\textacutegreat *grandfather} \\
   \text{\textquotesingle\textacutestar} & \text{\textquotesingle\textacutestar} \\
   \end{array}
   \]
Syllabification and devoicing also can be used to distinguish compounding from affixation. In Turkish, onsets are maximized in the assignment of syllable structure. A devoicing rule applies to devoice stops and affricates which are placed in the coda as in (4a). If the constituents of a compound were syllabified, as a single word, with the stop or the affricate in the onset of the following vowel initial syllable, we would expect the devoicing to apply. But as shown in (4b), resyllabification does not apply leaving the obstruent in the coda, so devoicing applies:

\[ \text{(4a) } \text{UR Ablative Dative} \]

\[
\begin{array}{ccc}
\text{/kitab/} & \text{kitab}^+\text{tan} & \text{kitab}^+\text{a} \text{ syllabification} \\
\text{\textbackslash V \ textbackslash V \ textbackslash V} & \text{\textbackslash V \ textbackslash V \ textbackslash V} & \text{\textbackslash V \ textbackslash V \ textbackslash V} \\
\sigma \sigma \sigma & \sigma \sigma \sigma & \sigma \sigma \sigma
\end{array}
\]

\[
\begin{array}{c}
\text{kitap}^+\text{tan} \\
\text{\textbackslash V \ textbackslash V \ textbackslash V} \\
\sigma \sigma \sigma
\end{array}
\]

\[ \text{N/A devoicing} \]

\[ \text{(4b) Compound} \]

\[
\begin{array}{ccc}
\text{/kitap a\check{c}a\check{a}ya\check{a}/} & \text{syllabification} \\
\text{\textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V} & \text{\textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V} & \text{\textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V} \\
\sigma \sigma \sigma \sigma \sigma \sigma & \sigma \sigma \sigma \sigma \sigma \sigma & \sigma \sigma \sigma \sigma \sigma \sigma
\end{array}
\]

\[
\begin{array}{c}
\text{kitap a\check{c}a\check{a}ya\check{a}} \\
\text{\textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V} \\
\sigma \sigma \sigma \sigma \sigma \sigma
\end{array}
\]

\[ \text{devoicing} \]

\[
\begin{array}{c}
\text{kitap a\check{c}a\check{a}ya\check{a}} \\
\text{\textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V \ textbackslash V} \\
\sigma \sigma \sigma \sigma \sigma \sigma
\end{array}
\]
All of the examples cited in this paper are compounds based on these phonological criteria.

Constituent structure has been the traditional syntactic criterion used to distinguish compounds from phrases. Thus (5a) is traditionally classified as a compound and (5b) as a noun phrase. Within a noun phrase, the modifiers can occur in free order, but nothing can separate the constituents of a compound. Therefore, any modifier which is used with the compound has to precede the compound and modifies it as a whole, as seen in (5c). In (5c) yeni 'new' cannot separate the constituents of the compound. In (5d), which has the same surface linear string as (5c), the noun okul 'school' is the head with two adjectives modifying it, and this is the only grammatical reading of this string. Based on this criterion, the examples cited in this paper are compounds, rather than noun phrases:

(5a) [ɪˈiʃ][okul]]
   first school
   'elementary school'

(b) ɪʃ okul
   '(the) first school'

(c) yeni [ɪʃ okul]
   new
   *(ɪʃ [yeni] okul]
   *new elementary school

(d) ɪʃ yeni okul
   '(the) first new school'

2- Types of nominal compounds: In (6) and (7) examples of compounds are provided. Turkish compounds are right headed, consisting of an adjective or noun as the non-head and a noun as the head. In this paper most of the examples are drawn from NN compounds. One type, exemplified by (6), juxtaposes a noun (the head) with another noun (the non-head). (6a) shows compounds composed of non-derived items. As (6b) shows, the head can also be deverbal, in this case, the non-head satisfies the argument structure of the verb that the noun is derived from:
also be deverbal, in this case, the non-head satisfies the argument structure of the verb that the noun is derived from:

(6a) Stem-Stem:

\[
\begin{array}{l}
\text{kadin} \quad \text{doktor} \\
\text{woman} \quad \text{doctor}
\end{array}
\]  
'female doctor'

(b) \(\text{can} \ [\text{kut} \text{ar}]_{\text{an}}_{\text{h}}\)  
'life guard'

\[
\begin{array}{l}
\text{life} \quad \text{save} \quad \text{-er}
\end{array}
\]

Examples in (7) show the second type of compound, possessive compounds. In these compounds a third person singular possessive marker is attached to the head noun. In (7b) the head noun is deverbal, and the non-head satisfies the argument structure of the verb the noun is derived from.

(7a) Stem-Stem+poss (3rd sg)

\[
\begin{array}{l}
\text{kadin} \quad \text{doktor-u} \\
\text{woman} \quad \text{doctor-poss}
\end{array}
\]  
'a gynecologist'

(b) \(\text{oyun} \ [\text{yaz}, \text{var}]_{\text{h}}\)  
'a playwright'

\[
\begin{array}{l}
\text{play} \quad \text{write-er-poss}
\end{array}
\]

With the exception of the possessive marker, there are no apparent structural differences between the two types of nominal compounds. Yet a comparison of forms in Columns I and II of (8) shows that there are semantic differences between the two types of compounds. In the compounds given in Column I of (8) the non-head modifies the head as an adjective or as a noun does. But in possessive compounds shown in Column II of (8) the non-head is
either the type or source or product of the head:

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8a) kadın doktor</td>
<td>(d) kadın doktor-u</td>
</tr>
<tr>
<td>'a female doctor'</td>
<td>'a gynecologist'</td>
</tr>
<tr>
<td>(b) kalem silgi</td>
<td>(e) kalem silgi-si</td>
</tr>
<tr>
<td>'a pencil shaped eraser'</td>
<td>'an eraser attached to a pencil'</td>
</tr>
<tr>
<td>(c) cocuk katil</td>
<td>(f) cocuk katil-i</td>
</tr>
<tr>
<td>'a murderer who is a child'</td>
<td>'a killer who murders children'</td>
</tr>
</tbody>
</table>

One might expect that the semantic difference would follow from a structural difference. This structural difference is the presence of the possessive case marker on the head of the possessive compounds. Yet as these examples show, we cannot tell from the constituents of a compound alone whether there will be a possessive marker on the second constituent or not. Then the question arises, if possessive compounds differ from lexical compounds structurally, are there any structures in the language which possessive compounds resemble?

Traditional grammarians in their analyses of Turkish compounds have proposed not only semantic but also structural differences between the compound types drawing parallels between possessive compounds and syntactic possessives. (Ediskun, 1963; Lewis, 1967; Underhill, 1976).

Underhill (1976) compares the structures of possessive compounds and syntactic possessives, and points out that they differ primarily in that in the possessive compounds the second noun must have a possessive suffix whereas the first noun is not affixed; but in syntactic possessives the first
noun has a genitive marker and the second one has a possessive marker. A comparison of Column I of (8) and (9a-c) shows this similarity and difference.

(9a) kadın-in doktor-u 'this/the woman's doctor'
    woman-gen doctor-poss

(b) kalemin silgi-si 'this/the pencil's eraser'
    pencil-gen eraser-poss

(c) çocuğ-un katil-i 'this/the child's murderer'
    child-gen murderer-poss

This structural similarity is reflected in the interpretation of the compounds shown in Column II of (8), (8d-f). Semantically the compounds are more similar to syntactic possessives shown in (9) than they are to the nominal compounds shown in Column I of (8), (8a-c).

Lewis (1967) and Ediskun (1963) also recognize the semantic and structural similarities between possessive compounds and syntactic possessives. Lewis refers to both structures, possessive compounds and syntactic possessives, as izafet (annexation) groups; and classifies the former as indefinite izafet and the latter as definite izafet. Lewis states that in definite izafet "the first element is a definite person or thing to which the second element belongs." According to him, the indefinite izafet is used "when the relationship between the two elements is merely qualifactory and not so intimate or possessive as indicated by the definite izafet." (pp. 42-44).

Ediskun, like Lewis, sees the structural similarity, and refers to this
particular structure as a 'noun group chain' and distinguishing between the syntactic possessives and the possessive compounds by calling the former "the definite noun group chain" and the latter "the indefinite noun group chain". According to Ediskun, the relation between the constituents of the definite noun group is "concrete and pertains to reality at the moment of speaking", and the relation between the constituents of the indefinite noun chain is "abstract and does not have any reference to reality at the moment of speaking."

Both Lewis and Ediskun account for the semantic similarities between the syntactic possessives and possessive compounds by the presence of the possessive marker, and the semantic differences by the absence of the genitive marker. As the English translations of (8d-f) and (9a-c) indicate, the first constituent is interpreted as indefinite or unspecified in the possessive compound. That is to say, in contrast to (9a), (8d) means 'the doctor of any woman, not a specific or a particular woman's doctor', whereas (9a) refers to a particular or a specific woman's doctor. Because of the semantic similarities between the syntactic possessives and the possessive compounds, I follow Lewis and Ediskun's generalizations and propose that the syntactic possessives and the possessive compounds have similar structures, which is shown in (10):

(10) NP-Gen NP-Poss.

Whereas the syntactic possessives have both the genitive and the possessive overtly case marked, the possessive compounds lack the overt genitive marker⁴.
3-Other Null Case Markers: The implication of my analysis is that the first NP of a possessive compound is case marked by a null case marker. Turkish provides evidence for null case marking in two instances: the nominative (whose interpretation as definite or indefinite is determined by discourse) and the indefinite (or unspecified) accusative. (11) shows a zero nominative and a definite accusative with an overt case marker, the high front vowel:

(11) kédi-Ø köpeğ-i kovaladı
    cat-nom dog-acc chased
kópeğ-i kédi-Ø kovaladı
    dog-acc cat-nom chased
"A/The cat chased the dog"

(12a &12b) show a null nominative and a null accusative:

(12a) kédi-Ø köpek-Ø kovaladı
    cat-nom dog-acc chased
"A/The cat chased a dog."
"*A/The dog chased a cat."

(b) köpek-Ø kédi-Ø kovaladı
    dog-nom cat-acc chased
"A/The dog chased a cat."
"*A/The cat chased a dog."

In (12) the accusative has a null case marker and is interpreted as indefinite/unspecified. Turkish has relatively free word order, but having two arguments without overt case marking makes word order crucial for
interpretation. Therefore (12) in the given linear order cannot be interpreted to mean, "A/The dog chased a cat." Therefore, we can say that overt case marking, at least in the accusative, is a signal of definiteness.

Returning to the possessive compounds shown in (7) and (8d–f) now, recall that these have a case marker on the second noun. Assuming the principles of the Case Theory, we can say that being case marked is a property of noun phrases since the Case Filter rejects any lexical NP which is not assigned case. In the examples given in (7) and (8d–f), the second constituent of the possessive compound has an overt case marker, therefore, the second constituent of the possessive compound, having a case marker, must be a noun phrase rather than a noun. Thus the second constituent of the possessive compound has the structure NP–Poss. NP–Poss is also the structure of the second constituent of the syntactic possessives. I will now turn to the structure of the first constituent of both the possessive compounds and the syntactic possessives, I claim that in both cases it is NP–Gen. In syntactic possessives this NP has an overt case marker and thus it is interpreted as definite or specified. In possessive compounds, on the other hand it is null and thus it is interpreted as indefinite or unspecified. Therefore the possessive compounds given in (8d–f) have the following representations following the structure proposed in (10):
(13)  NP-Gen  NP-Poss

kadin-Ø  doktor-u
woman-gen doctor-pos

kalem-Ø  silgi-si
pencil-gen eraser-pos

çocuk-Ø  katil-l
child-gen murderer-pos

The Ø case form is indefinite or unspecified as elsewhere in non-nominative cases.

The question arises as to why the possessive marker is third person singular. This fact follows from the principles of concord in Turkish grammar. The principles of concord as shown in (14) require that in the presence of an overt genitive marker possessive should agree with it:

(14a)  ben-im  doktor-un  my doctor
     1sgen  doctor-1sgpos

(b)  sen-in  doktor-un  your doctor
     you-2sgen  doctor-2spos

(c)  *ben-im  doktor-un
     1sgen  doctor-2spos

But in the absence of an overt genitive marker, the possessive, by default, is third person singular.

The proposed structural similarity between possessive compounds and syntactic possessives accounts for the semantic similarities between
the two. It explains the presence of the case markers, and it also accounts for the fact that possessive compounds semantically are closer to syntactic possessives than lexical compounds. This proposal does not add an extra cost to the grammar because it already has a mechanism to differentiate between definite or specified and indefinite/unspecified accusatives. However the conclusion that possessive compounds have NP-Gen NP-Poss structure, that is to say a phrasal structure, seems to be in conflict with the traditional criterion used to distinguish compounds from phrases. As we have seen in (5a-c) and as we see in (15) no constituent can separate the constituents of a compound:

(15) genç kadın doktoru "a young gynecologist"
young gynecologist

*k kadın [genç] doktoru "*a young gynecologist"

If this generalization is a valid test to distinguish compounds from phrases, it will hold for compounds but not for phrases, and thus we would expect the members of a phrase to allow other constituents to intervene between them. This is possible as (16a-c) shows. Dün 'yesterday' can be the first constituent of the sentence, (16a); can intervene between the subject and the object, (16b); or can be the last element of the sentence, (16c); but as (16d) shows, it cannot intervene between the indefinite or unspecified accusative and the verb:

(16a) dün kedi köpek koşaldı
yesterday cat dog chased
‘A/ The cat chased a dog yesterday.’
(b) kedi dün köpek kovaladı
(c) kedi köpek kovaladı dün
(d) *kedi köpek dün kovaladı

But when dün 'yesterday' is used to modify the sentence with definite or specified accusative, i.e. sentence (11), repeated here as (17), all four possibilities are grammatical, as shown in (17a-d):

(17a) dün kedi köpeği kovaladı
    yesterday cat dog-acc chased
    'A/The cat chased the dog yesterday.'

(b) kedi dün köpeği kovaladı
(c) kedi köpeği kovaladı dün
(d) kedi köpeği dün kovaladı

Clearly, "chase a dog/a cat' is not a compound, but is a verb phrase.
The ungrammaticality of (16d) can only be accounted for by the case filter.
It is known that the arguments of a verb in Turkish can occur in free order. I am proposing that one of these arguments can optionally be not overtly case marked for accusative. This unmarked argument can receive structural case if and only if it is adjacent to the verb. Then it can satisfy the case filter. Hence the sentences (16a-c) are grammatical since the accusative is adjacent to the verb. This argument later is interpreted as indefinite or unspecified. But if it is not adjacent to the verb it cannot receive case, and the case filter rejects the sentence, hence (16d).
Therefore, adjacency is necessary for non-overt accusative case marking.

Turkish nominalization facts7, and syntactic possessives indicate that in every NP NP sequence which is not a sequence of arguments of a verb, genitive is assigned to the NP which is the antecedent of the
possessive. For nominalization and syntactic possessives, the genitive marking is overt. Structural genitive can only be assigned if the NP is adjacent to the possessive. Therefore, no constituent can intervene between the genitive NP and the possessive NP. The lexically unmarked genitive, like the unmarked accusative, is interpreted as indefinite or unspecified. Thus, the generalization that no constituent can separate the constituents of a compound is valid for NN compounds, but cannot be used as a test to distinguish compounds from phrases. Therefore, we can propose that the possessive compounds have the NP-Gen NP-Poss structure.

I thus propose that the possessive compounds are phrasal in nature. Why have the traditional grammarians called them compounds? There are several reasons. Their stress pattern is similar to other compounds as shown in (8). In addition the possessive compounds can serve as N0’s in compounds:

(18) [[ilk okul] öğretmen-i]  
first school teacher-poss  
'elementary school teacher'  

[[ilk okul öğretmen-i] eğitim-i]  
first school teacher-poss training-poss  
'elementary school teacher training'

These lexical word properties can be accounted for if the possessive compounds are reanalyzed as N0’s, along the lines of reanalysis proposed by di Scuillo and Williams (ms). That is to say, they are "syntactic words".
In their discussion of the relation of morphology to syntax di Sculillo and Williams claim that the two systems are distinct from each other. Yet, they also claim that the two systems overlap. The issue of "syntactic words" falls into the area where the distinction between the two systems is not so clear. Syntactic words are words which have the internal structure of syntactic phrases but behave like words in the lexicon.

Syntactic words, according to di Sculillo and Williams, are syntactic atoms. That is to say, no "syntactic rule can insert or move a category into the structure." Another characteristic of syntactic words is that they receive generic interpretation.

di Sculillo and Williams claim that syntactic words are words without morphological form. These types of words are formed by a general rule:

\[(19) \ Y \rightarrow \ XP\]

The categories of 'Y' and 'XP' are determined by language specific facts. For French nominal syntactic words like essui-glace, fend-la-bise the rule is:

\[(20) \ N \rightarrow \ XP\]

where 'XP' can either be 'VP', or 'AP', or 'PP' or 'NP'.

The general rule (which has to be parametricized for each language that makes use of it) distinguishes syntactic words from compounds which are formed by morphological rules.
Now let us return to the Turkish nominal compounds, i.e. the possessive compounds. We have seen that these compounds have the two characteristics observed in syntactic words: being opaque to syntactic rules and receiving generic interpretation. Thus, Turkish possessive compounds can be analyzed as syntactic words. The rule for Turkish is:

(21) \( N \rightarrow NP \)

The rule as stated above allows an NP expansion for the NP. This is a possibility (which has not been considered in this paper earlier). Such an expansion can be possible if we assume that the NP is assigned possessive case marking and this case phonologically appears to be attached to the head \( N \). Yet such an analysis fails to capture the semantic similarities that exist between the syntactic possessives and the possessive compounds. Moreover, why is possessive case and not the genitive case assigned to these structures? We can only provide an ad hoc explanation for the possessive case marking. Therefore, the semantic similarities between the syntactic possessives and possessive compounds indicate an NP NP structure. Both syntactic possessives and nominalization facts (see note (7)) clearly show that the language already has this structure and refers to it. Moreover, the zero marking of the indefinite or unspecified genitive is in agreement with the similar treatment of the indefinite or unspecified accusative. Based on these arguments (21) has to be modified as follows:

(22) \( N \rightarrow NP \ NP \)
The case marking of the NP's follow from the principles of the grammar. The NP NP sequences which have a null genitive marker, then, are reanalyzed in the lexicon as N's.

4- Summary: In Turkish the NP NP sequences which have null genitive and third person singular possessive case markings are reanalyzed in the lexicon as nouns.

The analysis proposed in this paper has consequences both for syntax and morphology. In syntax, Turkish must allow two distinct case assignment systems: lexical and structural, with adjacency being crucial to the latter.

Since constituent structure cannot anymore be used as a valid test to distinguish compounds from phrases, a large number of traditional nominal and verbal compounds can be more insightfully analyzed as syntactic words along the lines proposed by di Scuillo and Williams.
FOOTNOTES

1 This is a general rule which has exceptions in place names and adverbs. Moreover, some suffixes do not receive stress at all.

2 The examples are given in Turkish orthography unless data covers phonological material. For sound and letter correspondences see below: č-ç; j-c; y-ğ; i-i.

3 (3a) shows a compound where the second constituent has back vowels. If vowel harmony applied between the constituents of a compound, we would have the ungrammatical form shown below the compound. (3b) shows how the vowel of the plural morpheme agrees in backness or frontness with the stem vowel.

4 See Kornfilt (1984) for a similar proposal to account for the assignment of genitive case to a subject by AGR under government.

5  
   NP  
   / \
  N   N is a possible structure. This possibility will be discussed later in the paper. The following discussion argues for an NP NP structure for the reasons given.

6 I am assuming that lexical case, which is overt, is assigned to NP slots and constitute a phonological word with the head.

7 Turkish does not allow embedded sentences. The Turkish equivalent of "I know that Ayşe has arrived" has the following representation:

   [Ayşe -nin gel- diğ-i] ni bil-iyor-um
   [ name3sgen come-nom-3spos] acc know-pres-1

As seen the accusative of the verb bil 'know' is a nominalized sentence. Ayşe, the subject of the sentence, is genitive marked and the predicate is possessive marked.

8 Although this rule is highly marked, it is very productive in Turkish.
REFERENCES


di Scuillo, A.M. and E. Williams. ms. Three Types of Words: The Relation of Morphology to Syntax.


