# NN-sI Concatenations in Turkish Construct-State Nominals and Phrasal Compounds\*

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## 1 Introduction

Turkish N(ominal)+(N)ominal concatenations with the  $-(s)I(n)^1$  suffix at the right periphery (1a,b) (henceforth NN-sI) have generally been called 'possessive compounds' (van Schaaik, 1992; Hayashi, 1996; Yükseker, 1998) or merely 'compounds' (Hankamer, 1988; Göksel, 2009; Kornfilt, 1997) which agree on the implication that these concatenations have a semi- or non-compositional structure. The suffix -sI is called either 'Compound Marker' (van Schaaik, 2002; Kornfilt, 1997; Ralli, 2008) or 'Linking Element' (Göksel, 2008, 2009) and is generally asserted to have originated from a third person singular possessive suffix (2), but to bear no meaning of possession in these concatenations (Göksel and Kerslake, 2004, 104):

(1) a. kapı kol -u door hand -sI 'doorknob'

b. çamaşır makina -sı washing machine -sI 'washing machine'

(2) Can -ın araba -sı Can -GEN3sg car -Poss.3sg 'Can's car'

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<sup>&</sup>lt;sup>1</sup>The vowel in capital in the citation form of the morpheme -(s)I(n) indicates an archiphoneme, i.e. phoneme whose feature is determined by vowel harmony. Segments in parentheses do not surface, or the reverse, in well-defined (morpho)phonological contexts; e.g. the fricative in -(s)I(n) surfaces only when it is preceded by vowel and the nasal surfaces only when there is another suffix following the -(s)I(n).

Abbreviations used in the glosses are as follows: ABIL=Abilitative, ABL=Abilative, ACC=Accusative, AOR=Aorist, CL=Clitic, CM=Compound Marker, DER=Derivational suffix, GEN=Genitive, GER=Gerundive, HEAR=Hearsay, LOC=Locative, NEG=Negation, NOM=Nominalizer, PARTCPL=Participial, PASS=Passive, PL=Plural, Poss=Possessive, PRV=Privative, REL=Relational, RTV=Relativizer, VRBLZ=Verbalizer.

Concerning their internal structure, there has been a general consensus on the assertion that they are syntactically built (but see Göksel (2009) as well).

In this paper we argue that NN-sI concatenations show variation as those having referential properties and as those having modificational properties. From an empirical point of view, we show that these two sets exhibit some *sui generis* semantic and syntactic characteristics. At the end of our morphosyntactic tests, we reveal that the NN-sI concatenations revealing referential property are Construct-State Nominals (CSNs) (in the sense of Borer (1998, 2009)) and the NN-sI concatenations revealing modificational property are phrasal compounds (PCs) (Ralli, to appear). We propose that the different morphosyntactic nature of CSNs and PCs conforms to the idea that they follow distinct derivational routes. Hence, contrary to earlier approaches, our analysis argues against the existence of a unique syntactic (or morphological) generation of all NN-sI concatenations. This also means that the -sI suffix is generated distinctly in CSNs and PCs, and the overt similarities between the two sets concerning the behaviour of -sI should be accounted for distinctly.

In the next section we will first list the morphosyntactic and semantic differences and similarities between the two sets of NN-sI concatenations. In section 3.1, we will first give the previous analyses on the structure of N+N-sI and will argue that they do not encompass both the differences and similarities altogether. In section 3.2 we will give our own proposal and will argue that these two sets must be generated distinctly. Section 4 concludes the paper.

# 2 NN-sI: Mapping the Differences and Similarities

#### 2.1 Differences

NN-sI concatenations in Turkish show variation while responding to certain morphosyntactic tests. First of all while some concatenations constitute island to outbound anaphora (Postal, 1969), some allow such anaphoric indexation of the non-head (3a and 3b respectively):<sup>2</sup>

- (3) a. \* [di $_{s_i}$  doktor -u da]  $\emptyset_i$  ağrı-sın-dan muzdarib-miş tooth doctor -sI too [tooth] pain-sI-ABL sufferer-HEAR.3sg Intended: 'The dentist too was suffering from toothache'
  - b. [di $\S_i$  ağrı -sı] durum-un-da  $\emptyset_i$  dolgu-sun-da bir sorun ol-abil-ir tooth ache -sI case-sI-LOC [tooth] filling-sI-LOC a problem be-ABIL-AOR.3sg 'In case of toothache, there might be a problem in its filling'

Second, while in some NN-sI concatenations the non-head can be modified separately, some concatenations can be modified only as a whole (4a and 4b respectively):<sup>3</sup>

However, it should be noted that in these counterexamples, the non-head is a bare compound; i.e. a syntactic atom. See Gökdayı (2007) and Göksel (2008) for a neat discussion on bare compounds.

<sup>&</sup>lt;sup>2</sup>Turkish is a PRO-drop language (both Subject and Objects in sentential and phrasal levels (Kornfilt, 1984)). In the examples therefore, we hypothesize that *dis-in* 'tooth-GEN' is the the covert subject of the PossP.

<sup>&</sup>lt;sup>3</sup>It seems that there are some counterexamples to (4b):

<sup>(</sup>i) a. hava tahmin rapor -u weather prediction report -sI 'weather forecast'

b. açık deniz akıntı -sı open sea current -sI 'offshore current'

(4) a. [kutsal kitap] kapağ-ı sacred book cover-sI 'sacred-book cover' b. \* [büyük diş] doktor-ubig teeth doctor-sIIntended: 'doctor for big teeth'

Third, though in some concatenations the coordination of the non-head under identity is tenable, in some others this leads to ungrammaticality (5a and 5b respectively):

- (5) a. kitap<sub>i</sub> sayfa -sı ile  $\emptyset$ <sub>i</sub> kapağ -1 book page -sI and [book] cover -sI 'book page and book cover'
- b. \* diş<sub>i</sub> doktor -u ile Ø<sub>i</sub> ağrı -sı tooth doctor -sI and [tooth] pain -sI 'dentist and toothache'

Finally, in some, but not all, concatenations the non-head can become definite (specific) by -GEN attachment:

(6) a. kitab -ın sayfa -sı book -GEN page -sI 'the page of the book' b. \* diş -in doktor -u tooth -GEN doctor -sI

### 2.2 Similarities

Despite the differences indicated in 3–6 the two sets share some features in common. First of all, in neither construction types can the head be directly modified:

(7) a. eski kitap (\*eski) kapağ -ı old book \*old cover -sI 'old book cover' b. yaşlı diş (\*yaşlı) doktor -u old tooth \*old doktor -sI 'old dentist'

The so-called indefinite article *bir* which can surface between the non-head and head in a DP cannot occur between the constituents in both construct types:<sup>4</sup>

(8) a. bir kitap (\*bir) sayfa -sı one book \*one page -sI 'a book page' b. bir diş (\*bir) doktor -u one tooth \*one doctor -sI 'a dentist'

In both construction types, -sI is mutually exclusive with other Poss suffixes:

(9) a. [kitap sayfa (\*-s1)] -m book page -sI -Poss.1sg 'my book page' b. [diş doktor -(\*-u)] -umtooth doctor -sI -Poss.1sg'my dentist'

In both construct types PL surfaces always inside -sI, (10a,b) whereas case (oblique) (11a) and sentential clitics always follow -sI (11b):

 $<sup>^4</sup>$ It should be noted that we agree with Arslan-Kechriotis (2006, 2009) in that *bir* cannot be a Det occupying the D<sup>0</sup>. It can be projected either in Spec,DP, or as an AP head. Only in the former case does it render indefinite reading whereas in the latter case it is a numeral modifier on the head, similar to classifying modifiers exemplified in the previous example (7). The reader may refer to Arslan-Kechriotis (2006, 2009) and Öztürk (2005) for an elaborate discussion of the dual-status of *bir*.

- (10) a. kitap sayfa (\*-s1) -lar -1 book page \*-sI -PL -sI 'book pages'
- (11) a. kitap sayfa -sın -dan book page -sI -ABL 'from the book page'

- b. diş doktor (\*-u) -lar -1 tooth doctor \*-sI -PL -(s)I(n) 'dentists'
- b. diş doktor -u =ysa tooth doctor -sI =CL 'as for the dentist'

Certain suffixes derivational in nature, such as PRV, REL and VRBLZ are mutually exclusive with -sI suffix:

(12) a. kitap sayfa (\*-sı) -lı book page -sI -REL 'with book page(s)' b. diş doktor (\*-u) -suz tooth doctor -sI -PRV 'without dentist(s)'

Other derivational suffixes always appear before -sI:

(13) a. kitap sayfa -lığ -ı book page -DER -sI 'book-page shelf' b. diş doktor -luğ -u tooth doctor -DER -sI 'dentistry'

At the end of these tests, the results can be summarized in the table below:

	Tests	Construct-type I	Construct-type II	examples
(i)	Outbound anaphoric co-indexation	YES	NO	(3a) vs. (3b)
	of the non-head			
(ii)	Direct modification of the non-head	YES	NO	(4a) vs. (4b)
(iii)	Ellipsis of the non-head under co-	YES	NO	(5a) vs. (5b)
	ordination			
(iv)	GEN attachment to the non-head	YES	NO	(6a) vs. (6b)
(v)	Direct modification of the head	NO	NO	(7a,b)
(vi)	Indefinite bir between the non-head	NO	NO	(8a,b)
	& head			
(vii)	Co-occurrence of -sI with Poss	NO	NO	(9a-b)
(viii)	PL before -sI	YES	YES	(10a,b)
(ix)	Case after -sI	YES	YES	(11a)
(x)	CL after -sI	YES	YES	(11b)
(xi)	Co-occurrence of PRV,REL with -sI	NO	NO	(12a-b)
(xii)	Co-occurrence of DER with -sI	NO	NO	(13a-b)

Table 1: distribution of tests

A number of these observations are not novel and – especially – the similarities between the two sets were discussed in some previous analyses. What is missing in the literature though, is an exhaustive analysis that deals not only with the similarities (v–xii) but with the differences as well (i–iv). In the next section we will first summarize the analyses on the structural representation of the NN-sI concatenations and later will offer our own approach which adopts distinct generations for the two sets, which in turn explain both the similarities and the differences in between.

## 3 NN-sI: The Structure

### 3.1 Previous Approaches

The structure of NN-sI concatenations has drawn enough attention within the realm of generative grammar with the ultimate assertion that these are syntactically built structures. In Yükseker's (1998) analysis, Poss is a *functional head*, the affixation of which to the head (i.e. the right-hand constituent) enables the generation of a specifier slot in the NP, which according to her, is absent by default in Turkish NP structure. She further proposes that once the specifier slot (i.e. the non-head/left-hand constituent) is generated, the referentiality of the non-head (and thus, of the whole NP via feature percolation) is a matter of GEN attachment to this specifier. Overt realization of the GEN indicates that the NP that receives this case is referential (specific or definite). The absence of GEN, on the other hand leads to a generic reading of the non-head. In such a case where the non-head is not GEN-suffixed, the non-head is subject to syntactic head adjunction and thus the whole concatenation becomes a possessive compound.

Göksel (2009), basing her analysis on the assertion that Turkish indeed generates a DP layer (Arslan-Kechriotis, 2006), states that the structure of NN-sI concatenations can be a copy of the structure of the PossPs (see example (2)), with the main difference being the Poss head functionally reduced to a 'Linking element' (LE) which closes off the NP:

(14) 
$$[PossP [DP [NumP/ClP [N' N N] Num^0/Cl^0] D^0] LE^0]$$

The fact that NNsI concatenations show limited sensitivity to syntactic phenomena is explained in her account by the assertion that this structure possibly belongs to the morphological module.

Gürer (2011), similar to Göksel (2009) argue that -sI is not identical to Poss head even though it still is a functional element. In her account -sI suffix is generated under  $D^0$ :

(15) 
$$\left[ DP \left[ D' \left[ NP \left[ N' X N \right] \right] - sI \right] \right]$$

van Schaaik (2002) states that the analysis of NN-sI concatenations and syntactic possessives (3sgGEN-POSS Phrases) in a unitary fashion (such as done in the works of Yükseker (1998) and Göksel (2009) is misleading and only very few such concatenations would conform to such an analysis as that of Yükseker's (e.g. 1a). He aserts that -sI is mutually exclusive with Poss.3sg while the structural similarity of both is a pure coincidence as compounding does not include the semantics of possession.<sup>5</sup> He states that -sI is a compound marker which surface only when does the term+noun concatenation (N(P)/IP/CP+N) is expressed in isolation. In this case -sI is late inserted and is inflectional rather than derivational in nature.

As can be noted from the above analyses, the main evidence for claiming a structural divergence of NN-sI concatenations from PossPs is the lack of GEN attached on the non-head and the structural compositionality of—at least the NN— of NN-sI concatenations. The cases above may account for cases (v–xii), however, they are incapable of encompassing the divergences (i–iv).

# 3.2 Our Proposal

As has been indicated in Section 2, the NN-sI concatenations do not behave uniformly under certain moprhosyntactic environments. In some other respects, however, they are similar. In this

<sup>&</sup>lt;sup>5</sup>see Haig (2005) for an elaborate criticism on Schaaik's ignorance of – at least – the diachronic affinity of -sI to Poss.3sg.

subsection, we argue that asserting that all NN-sI concatenations can be represented with a unique structure can be misleading. Before we give distinct accounts for the structural representations of the NN-sI concatenations, we will show a fundamental distinction between the two sets.

#### 3.2.1 R-Constructs and M-Constructs

Construct formation is highly productive cross-linguistically and is not limited to N+N types, yet pertinent to the topic of the current paper, we will discuss only two sub-types of N+N constructs, i.e. modificational constructs (henceforth M-constructs) and referential constructs (henceforth R-constructs).

Broadly speaking M-constructs are a type of modificational genitive (Munn 1995; Borer 2009, classifying genitive in Alexiadou et al. 2007) in which the relation between the non-head and the head is modificational and whose syntactic properties are closer to compounds. The non-head in M-constructs is not referential and is interpreted as a modifying property. We argue that constructs whose properties are given as Construct type II in Table 1 and exemplified in (16) below are M-constructs:

(16) meyva tabağ-ı; yaz aşk-ı; el yapım-ı; at araba-sı fruit plate-sI summer love-sI hand made-sI horse carriot-sI 'fruit plate'; 'summer love'; 'handmade'; 'couch'

*M*-constructs in (16) can be compared with *R*-constructs (i.e. construct type I in table 1) in (17):

(17) kapı kol-u ; göz reng-i ; ayak tırnağ-ı ; fil diş-i door hand-sI eye color-sI foot nail-sI elephant tooth-sI 'doorknob' ; 'eye colour' ; 'toenail' ; 'ivory'

In *R*-constructs the non-head – contrary to *M*-constructs – is referential. These are the construct types that coincide to Individual Genitives of Munn (1995).

According to us, this assertion, which is based on the semantic dependency between the non-head and the head in Turkish, is a direct consequence of their respective derivations. In the next section, we argue that their respective derivations diverge at one point yielding to the prevenient morpho-syntactic differences exemplified in (3–6). These respective derivations also include two distinct -sI suffixes.

### 3.2.2 Discussion

We assume that in R-constructs the non-head is a full DP. We base our argument on Arslan-Kechriotis' (2006; 2009) analysis, according to whom Turkish indeed generates a DP-layer dominating the NPs, whose  $D^0$  is phonologically null but carries the features of definiteness and specificity, and thus assigns referentiality to the noun head and acts as a type shifter, shifting predicates into arguments, i.e. shifting NPs of  $\langle e,t \rangle$  into arguments of type e. The phonologically null  $D^0$  is specified for features [ $\pm$ definite] and [ $\pm$ specific]. We are aware of the fact that definiteness and specificity are interdependent and [ $\pm$ def] is per force [ $\pm$ spec]. On the other hand, [ $\pm$ def] can be [ $\pm$ spec]. Thus, all in all, the full referentiality of the NP is bound to feature of the  $D^0$  dominating the NP.

In some earlier analysis of NN-sI concatenations in the generative perspective (excluding Gürer (2011)), the non-head is taken to be  $N^0$  which is base generated (Göksel, 2009) or head-adjuncted

to Poss<sup>0</sup> (Yükseker, 1998) dominating N<sup>0</sup> and Poss<sup>0</sup>. When the cases (ii,iii) on Table 1, in which the non-head of the R-constructs is accessible for further syntactic operations, are taken into account the assertion that the non-head is an N<sup>0</sup> assertion should at once be discarded. In a similar vein, neither the base generation of the non-head as N<sup>0</sup>/X<sup>0</sup> as the complement of the head does explain why the non-head can be separately modified, coordinated or eluded (contra Dede (1978); Göksel (2009); Gürer (2011)). The problem, however, does not cease at this point, as one could easily argue that the non-head is not an *argument* of type e but is still a *predicate* of type <e,t>, however; it is not an N<sup>0</sup>, but an NP (as can be argued once the assertion of (Öztürk, 2005) is adopted). It is true that bare predicate NPs can also be coordinated as it is obvious from the cases of incorporation (of agents and themes) in Turkish.<sup>6</sup> The bare predicate NP account of the non-head in R-constructs could account for the cases (ii, iii) on Table 1. However, it does not account for the case (i) in which the non-head can be co-indexed with a covert subject since binding requires referentiality (definite or idefinite) of the binder. Further evidence against the bare NP account comes from the example below in which *bir* can take narrow scope over the non-head in R-constructs in adjectival use:

(18) [bir doru at] boy -u fark one bay horse length -sI difference 'a bay horse length difference'

In the example above, assuming that *bir* is generated higher than the Adj *doru* modifying the N(P) *at*, we argue that it is generated in the Spec,DP position. Besides, assuming that the PL is generated as a higher maximal projection (ClP in Borer (2005) or NumP in Arslan-Kechriotis (2006)) taking the NP as its complement, the existence of *R*-constructs in which the non-head bears plural marking cannot be accounted:

(19) a. Öğretmen-ler ev -i teacher-PL house -sI 'Teacher's house'

b. Şah-lar şah -1 Shah-PL shah -sI 'Shahanshah'; 'emperor'

As DPs are arguments and not predicates (and as arguments per force are referentiality candidates), we now suppose that the non-head DP in *R*-constructs always merges in the specifier position of some nominal projection associated with the head N. In such a case the fact that the

(Öztürk, 2005, 39–40)

 $<sup>^6</sup>$ Giving a full account of incorporation is well beyond the scope of the current paper and the reader may refer to (Öztürk, 2005; Kornfilt, 1995) and references therein for differing accounts. Relevant to the discussion here, it should be noted that the noun in the complex N+V predicate can directly be modified (iia) and coordinated with a conjunction (iib) – both of which are characteristics to maximal projections of Ns:

<sup>(</sup>ii) a. Ali [NP ekşi elma] yedi. Ali sour apple ate 'Ali did sour apple eating'

b. Ali [NP kitap] ve [NP dergi] okudu.
 Ali book and magazine read
 'Ali did book reading and magazine reading'

non-head is a full DP enables the non-head to be interpreted referentially, as a possesor, or, as in our case, as bearing part—whole relation with the head.<sup>7</sup>

Now that it became clear that the non-head is a full DP in R-constructs which is generated in the Spec position of any nominal projection, what is left is the structure of this nominal projection. At this point, we align with Yükseker (1998) in that this maximal projection should in fact be a PossP. Therefore, our stance is that there is an immediate connection between PossPs and R-constructs. Moreover, we argue that Poss.3sg in PossPs and -sI on R-constructs are generated as Poss<sup>0</sup> without any reduction in its functionality (contra Göksel (2009)). However, we diverge from Yükseker (1998) in that [head-noun+sI] does not constitute a syntactic atom. The counterargument to the assumption of Yükseker (1998) has been given in the lines above in the discussion of the status of the non-head. One other argument to reject Yükseker's (1998) analysis is the fact that -sI does not constitute an undetachable formative of the concatenation, as there must be a NumP generated immediately before the -sI (10a) and the -sI must be stripped off in the case of PRV, REL and VRBLZ affixation (12a). These and the facts concerning the maximal status of the non-head (as DP) are very well covered if the PossP structure of Arslan-Kechriotis (2006) is adopted with the further assumption that the empty  $D^0$  of the Spec,PossP position bears the feature [-def, -spec]. Up to this certain point, we do not accept any fundamental structural difference between the R-constructs and the 3sg PossPs (cf. (2)). The only difference emerges in the  $[\pm def, \pm spec]$  feature setting of the D<sup>0</sup> in Spec,PossP position. We argue that 3sg PossPs are set as [+def] and hence requires GEN affixation. Based on this difference of [-def, -spec] feature of the R-constructs from the 3sg PossPs and following Borer (1998, 2009) among others, we call the R-constructs 'Construct State Nominals' (CSNs).

Concerning the M-constructs, we propose that their structure must be divergent from that of CSNs due to the facts given in cases (i–iv) where the non-head behaves as  $X^0$ . It cannot be directly modified, cannot be co-indexed with an outbound anaphora and cannot be coordinated. The same constraints hold for the head noun as well. Thus it is safe to argue that the [non-head+head] behaves as a complex predicate. We further propose that the non-head is base-generated as the sister of the head  $N^0$ . This assertion is much in line with the accounts on classifying genitives cross-linguistically (see Barker (1991); Munn (1995); Alexiadou et al. (2007) among others, see also the account given by Göksel (2009)). It should be noted here that, according to us, morphology and syntax – at least in Turkish – are submodules of a supermodule (as word syntax and phrasal syntax respectively) between which the relation occurs via competition and feature matching (Ackema and Neeleman, 2004). In other words, we do not recognise an asymmetry between syntax and morphology; rather they are parallel systems. We base our argument on the existence of the so-called 'higher-order compounds' (Schaaik 2002 among others) in which the non-head can be any maximal projection (XP):

(20) a. [IP Cevat işi bıraktı] gerçeğ -i
Cevat work.ACC quit.PAST.3sg fact -sl
'the fact that Cevat quitted the job'

<sup>&</sup>lt;sup>7</sup>In such a sense, this Spec position can be thought as the Spec,IP or Spec,vP where the subject is merged in verbal predicates; see Kornfilt (1984) for an elaborate discussion of the analogy between the relationship between bare DPs and the verb, and between non-specific non-heads in nominal compounds.

b. [CP Temel bakmış ki bunlar uçakta yok] fikra -sı Temel see.PAST Comp they plane.LOC non.exist.AOR joke -sI 'the joke that goes 'Temel saw that they are not on the plane'

The examples above indicate a clear connection with the M-constructs, and we argue that they should be analysed collaboratively with them. The result that the examples above lead us to is that the non-head is not restricted to N(P), it can be some other maximal projection as well. One may argue that this fact is clearly contra lexical integrity hypothesis, as phrases cannot be generated as parts of words. However, following Ackema and Neeleman (2004) we argue that just as morphological structures can be inserted in syntactic structures, the reverse can be true as well given the parallel nature of syntax and morphology. In this sense, the insertion of XP categories as non-head in M-constructs is a feature matching between the top node of the inserted structure and the terminal node.

One should note that insertion, as stated here, does not mean that inserted XPs are visible to syntactic processes in the morphological representation. If for one thing, arguments in the inserted XPs are invisible for binding operations as example (21) shows:

Based on the fact that the non-head in these *morphological M*-constructs is phrasal, we state that *M*-constructs in Turkish are 'phrasal compounds' (Ralli, to appear) (as discussed in Botha (1981); Lieber (1992); Sproat (1985); Wiese (1996); Booij (2002); Ackema and Neeleman (2004) among others). This indicates that since there is no relation of possession between the non-head and the head, the -sI suffix in these concatenations is a functionally reduced head (i.e. CM (Ralli, 2008; Göksel, 2008)) which licences the compound to surface (see also van Schaaik (2002)). Note that this assertion does not render that the CM is a non-compositional part of the construction (contrary to CMs in Modern Greek or Modern Armenian for example) nor a derivational suffix (contra Schroeder (1999)). On the other hand, it is observable that [*the non-head+head*] constitute a bare nominal predicate. This is observable from the fact that the PL does not co-occur with -sI in PCs (case viii); it precedes the -sI (case ix) and it does not occur in case of PRV, REL and VRBLZ affixation (case xii).

It should be noted that even though the insertion of CP or IP into terminal X (non-head position) is allowed in phrasal compounds certain maximal projections cannot be inserted in the specific terminal node. We argue that DP is such a maximal projection, as it is clear from the fact that non-head cannot be modified separately (case ii) or coordinated (case iii).

Concerning the cases of PRV, REL and VRBLZ affixation, we argue that these three suffixes are word-formation  $X^{max}$  affixes that choose phrase levels. This is obvious from the example below:

(22) [DP karşı dağın ardındaki kasaba] -lı opposite mountain.GEN beyond.LOC.RTV town REL 'from the town beyond the opposite mountain'

<sup>&</sup>lt;sup>8</sup>The same kind of observation is made by Hoeksema (1988) for English in which, while NPs are allowed in non-head position DPs are ruled out.

Another fact that is pertinent to these affixes is that they are directly attached to the *head* lexical category. In other words, they require the base to be stripped of any functional head:<sup>9</sup>

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(23) a. * çocuk-lar -lı b. * köpeğ-i -siz dog-Poss3sg -PRV

Intended: 'with (the) children'

a.' çocuk -lu child -REL b.' köpeğ-i olmadan dog-Poss3sg be.NEG.GER 'with child/children'

b. * köpeğ-i -siz dog-Poss3sg -PRV

Intended: 'without his/her dog'
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Such requirements, which are inherent of the suffixes, are insensitive to the nature of the base XPs, that is, not only NN-sI concatenations but any XP has to be stripped off its functional head(s) which are adjacent to these suffixes.

Moreover, we argue that the mapping of an AFFIX in to its overt counterpart can depend on properties of the internal structure of the inserted phrase, and can even modify this internal structure according to the formal requirements of the AFFIX. In our case, we argue that though the AFFIXes PRV, REL and VRBLZ take a complement X (terminal node), into which XPs can be inserted, they select the first lexical head inside (any possible sequence of) functional heads which are phonologically realized or not. This yields to the fact that PRV, REL and VRBLZ AFFIXes not only override the (reduced) functional head realized as -sI in CSNs and PCs—which are distinct formations but eventually both XPs—but any other functional head as well, such as PL.

## 4 Conclusion

We stated that in CSNs the non-head is a full DP while the  $D^0$  is set [-def]. The difference between CSNs and PossPs is the feature specification in Spec,PossP position:  $[\pm def]$ . The [+def] feature on the  $D^0$  yields to full specificity, and hence requires the DP to be GEN marked. In the case of CSNs, however, [-def] feature on the non-head yields to non-specific reading.

Concerning the PCs, we argued that their generation differs from that of CSNs in certain respects. We started with the observation that the non-head in PCs is modificational, and is basegenerated as the sister of head  $N^0$ , at the end of which a complex nominal predicate is created. However, this complex predicate created in the word syntax level needs a licensor, a CM to surface in phrasal syntax.<sup>10</sup> It is generated as a functional head above the NumP/CIP.

The similarities between the CSNs and PCs concerning the status of -sI vis-a-vis  $X^{max}$  suffixes, we argued that the fact that they are mutually exclusive is not due to the structure of the CSNs or PCs, but rather due to the structural requirements of these suffixes: they require the base to be stripped off its functional heads that are adjacent to these suffixes.

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(iii) köpeğ -im -siz
dog Poss.1sg -PRV
'without my dog'
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<sup>&</sup>lt;sup>9</sup>The only apparent counterexample to this is the co-occurrence of PRV with Poss.1sg:

<sup>&</sup>lt;sup>10</sup>It is observed in some languages, such as Nunggubuyu, Tzutujil that Adj+N, which is a universal syntactic configuration, needs a licensor (which Baker (2004) calls a 'Linking element') to surface in syntax.

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