



Possessive constructions in Turkish

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Abstract

This study investigates the syntax and semantics of possessive constructions at the phrasal level in Turkish, namely, genitive-possessive constructions (GP), possessive free genitives (PFG) and possessive compounds (PC). Semantically, the constructions fall into two types based on the argument–modifier relation of the possessor to the possessee (Partee and Borschev, 2003). Genitives in GPs are argumental, while the ones in PFGs are modifiers. PCs also pattern with GPs in that the non-head is a non-referential argument. The relation established between the two nouns in GPs and PCs relies on the lexical properties of the head noun. The relation modifier genitives form with the head in PFGs, on the other hand, is pragmatically defined. At the level of morpho-syntax, the argument modifier split is signaled by the presence or absence of the morpheme POSS, which surfaces only in GPs and PCs. We argue that POSS is a valency marker indicating the introduction of an argument to an NP.

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1. Introduction

Work on the semantics and syntax of possessive constructions in different languages has shown that the nature of the so-called ‘possessive’ relation between two nouns/entities is quite varied and that languages exhibit diverse means of coding these relations. One of the well-known debates regarding genitives cross-linguistically has been the type of relation genitives establish with the nouns they co-occur, that is, whether they hold an argument or a modifier relation (Partee, 1983/1997; Barker, 1995; Vikner and Jensen, 2002; Partee and Borschev, 2003, among others). This study aims to explore the type of relation expressed in possessive constructions in Turkish, which comprise three morphologically differentiated structures at the NP level, namely the genitive-possessive (GP), the possessive free genitives (PFG) and the possessive compounds (PC). GPs illustrated in (1) make use of two separate suffixes, namely the GEN (genitive suffix), which occurs on the possessor and the POSS (possessive suffix) on the possessee, which is the head noun.¹ In PFGs, shown in (2), on the other hand, the possessee lacks POSS, while the possessor has GEN. In PCs given in (3), only POSS is observed on the possessee:

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¹ The following abbreviations are used in the glosses. For ease of recognition, we have capitalized genitive and possessive markers:

abl – ablative, acc – accusative, dat – dative, fut – future, GEN – genitive, impf – imperfective, loc – locative, mod – modality, nec – necessitive, neg – negative, nomin – nominalizer, pass – passive, pl – plural, ppl – person plural, POSS – possessive, ps – person singular, Q – question particle.

- | | | |
|-----|---|------------------------------------|
| (1) | Çocuğ-un kitab-ı
child-GEN book-POSS
the child's book | (GP): Possessor-GEN Possessee-POSS |
| (2) | Çocuğ-un kitap
child-GEN book
the book of the child | (PFG): Possessor-GEN Possessee-Ø |
| (3) | Çocuk kitab-ı
child book-POSS
children's book | (PC): Possessor-Ø Possessee-POSS |

The most extensively studied constructions in the literature are GPs and PCs. (For GPs, see Lewis, 1967; Kornfilt, 1984, 1997; Özsoy, 1994; Yüксеker, 1998; Arslan-Kechriotis, 2006, 2009; Göksel, 2009; Bošković and Şener, 2014, and for PCs, see Swift, 1963; Lewis, 1967; Hayasi, 1996; van Schaaik, 1992; Yüксеker, 1998; Göksel and Kerslake, 2005; Kharytonava, 2011; Kunduracı, 2013, among others.) PFGs, on the other hand, have not received much attention and have been seen as a colloquial variant of GPs, where POSS is not realized (Göksel and Kerslake, 2005; Kunduracı, 2013). However, we will show that PFGs play a key role in understanding the type of relation between the possessor and the possessee.

This study aims to first disentangle the semantic differences between the three types of possessive constructions given above, and then to propose an account of their syntax and morphology. Semantically, we will show that PFGs are incompatible with inherently relational nouns, unlike GPs, which are compatible with both inherently relational and non-relational nouns. Based on this asymmetry, we will argue that the genitive marked possessor in PFGs in (2), which lack POSS, holds a modifier relation, whereas the genitive possessor in GPs as in (1) acts as an argument. This means that while non-relational nouns can be mapped onto PFGs directly, for them to occur in GPs they need to undergo a type-shifting operation to become a transitive relational noun as proposed in Vikner and Jensen (2002). Thus, in line with Partee and Borschev (2003), who argue that cross-linguistically all genitives may not be of the argument type, the genitive marked possessors in Turkish also come across as being of the argument or the modifier type depending on the construction.

We argue that this semantic argument–modifier distinction is directly reflected onto syntax. That is, semantic modifiers in PFGs surface as adjuncts, while semantic arguments in GPs hold a syntactic argument-status in the NP-structure. We claim that POSS is the morphological reflex of this syntactic argument-adjunct distinction, as it surfaces in GPs as opposed to PFGs. Thus, the presence of POSS is an indicator of an argument relation in an NP.

As shown in (3), POSS is also observed in PCs; it has been treated either as an agreement suffix or a compound marker in the literature. We argue that POSS in PCs is also a reflex of a certain type of argument relation available in the absence of GEN, which we will discuss at length below. We propose that POSS is a valency marker indicating the presence of an argument in the NP domain, and thus, present a novel account of POSS.

The paper is organized as follows: In Section 2, we present the two perspectives proposed for the argument–modifier distinction in genitives by Vikner and Jensen (2002) and Partee and Borschev (2003) and discuss how the genitives in GPs and PFGs in Turkish behave with respect to this split. In Section 3, we investigate the role of POSS in PCs and GPs and identify its function as a valency marker. In Section 4, we propose our syntactic account of the three different constructions at the NP level. In Section 5, we present our conclusions and discuss the implications of our analysis.

2. The genitive in possessive constructions

This section presents first the different semantic aspects of the genitive marked possessors in PFG and GP constructions, specifically focusing on the argument vs. modifier asymmetry. Then we discuss how the referential properties of these two constructions interact with the argument–modifier split. Finally, we address the issue of what genitive case morphology contributes to the distinction between argument and modifier possessors.

2.1. Argument vs. modifier genitives

The debate about the semantic relation a genitive noun holds with a possessee revolves around the argument vs. modifier status of the genitive. While Vikner and Jensen (2002) argue that the genitive NP can only combine with a transitive relational noun, and thus it can only be argumental, Partee and Borschev (2003) promote the view that genitives can be either of the modifier or the argument type.

In order to understand how the genitive NP in GPs and PFGs behave in Turkish with respect to their argument vs. modifier status, we will first look closely into the types of semantic relation a genitive noun establishes with the possessee.

Vikner and Jensen (2002) distinguish four types of lexical relations available in genitive constructions: (i) inherent (e.g. *capital, sister*), (ii) part–whole (e.g. *nose, roof, top*), (iii) agentive (e.g. *poem, cake*) and (iv) control (e.g. *car, stone*) (Vikner and Jensen, 2002: 196–197). These relations are not necessarily mutually exclusive, as in the case of ‘the girl’s picture’, which can denote either an inherent relation, or an agentive one, or a control relation. Among the four types of lexical relations, only inherent relations have a transitive argument structure. These would include kinship terms, all verb related nouns (e.g. *aim, arrival, death, purchase, end, destruction*), and relational nouns such as *birthday, queen, boss, age, position, title, capital*. The nouns denoting the other three lexical interpretations in (ii–iv) are lexically intransitive, therefore, need to be transitivized through a set of type-shifting operators, based on the qualia structure defined by Pustejovsky (1995) in order to combine with the genitive. Pustejovsky (1995) argues for four levels of lexical representation of a lexical item; namely, event structure, argument structure, lexical inheritance structure and qualia roles. Qualia roles constitute the essential attributes that define an object and fall into the following four categories:

Constitutive: the relation between an object and its constituent parts or between an object and what the object is logically a part of.

Formal: that which distinguishes it within a larger domain.

Telic: its purpose and function.

Agentive: factors involved in its origin, bringing it about (Vikner and Jensen, 2002: 198).

Vikner and Jensen (2002) argue that the part–whole relation in (ii) relies on the constitutive qualia role of the noun, which contains a part of relation. The operator *Co* is introduced as a function to transitivize the argument structure of nouns with a constitutive qualia role, by combining the *part-of* predicate of the constitutive role with that of the argument structure. They distinguish between two types of component-part nouns: dependent part–whole (e.g. *top, bottom, side, surface*) and autonomous part–wholes (e.g. *engine, wheel, handle*). Dependent part–whole nouns are taken to be lexically transitive on a par with inherently relational nouns in (i); thus, they do not need the operator *Co*, unlike autonomous part–wholes. The agentive relation in (iii), on the other hand, relies on the agentive qualia role associated with all nouns which can be seen as artifacts, e.g. *poem, cake*. In such nouns, the *Ag* operator is used to derive a transitive noun. Similarly, in a control relation in (iv), where the genitive has to be animate, the type-shifting operator *Ctr* is used.

In addition to these four types of lexical relations, pragmatic relations are also expressible in genitive constructions; such cases require the operator *Prag* according to Vikner and Jensen. Pragmatic genitives are rarer in written texts than they are in spoken discourse as the readers will not have the adequate contextual background in written forms.

Partee (1983/1997) and Barker (1995) differ from Vikner and Jensen (2002) and argue for a two-way split in the genitive relation. While this split is expressed in terms of inherent R type vs. free R type relations by Partee (1983/1997), Barker (1995) chooses to label them as lexical possession vs. extrinsic possession. Barker’s lexical possession and Partee’s inherent R correspond to Vikner and Jensen’s inherent relations and part whole relations. However, agentive and control relations are treated as free R for Partee and as extrinsic possession for Barker, but since the agentive and control relations are accessible without a supporting pragmatic context, Vikner and Jensen opt to include them under the lexical relations as summarized in Table 1.

Another approach to the relation that genitive NPs hold with the head noun is presented in Partee and Borschev (2003), who examine genitives from a cross-linguistic point of view. Taking a close look at genitive constructions in Russian, they provide evidence for modifier genitives in addition to argumental ones. They illustrate that the use of genitives in the predicative position, which was excluded in Vikner and Jensen (2002), play a crucial role in establishing such a divide. Predicative genitives (e.g. This book is *John’s*.) are typically associated with a free R reading which is preferentially interpreted as some kind of “possession” or “control”. When argument genitives in the predicative position occur without the relational head noun, e.g. *His [pointing] father is also John’s*. (Ex. 20d in Partee and Borschev, 2003: 187), they are taken as elliptical NPs (i.e. *His father is also John’s father*.) where the relational noun is still semantically implied. Thus, the readings stemming from the semantics of the relational noun are potentially available.

Table 1
 Different genitive interpretations (Vikner and Jensen, 2002: 213).

Partee & Borschev/Barker	Genitive relation	Vikner and Jensen
Inherent R/lexical possession	Inherent relation	Lexical interpretation
	Part whole	
	Agentive	
Free R/extrinsic possession	Control	
	Others	Pragmatic interpretation

Russian, which has both prenominal and postnominal possessives (see (4)) provides evidence for a split account. While Partee and Borschev take the prenominal adjectival possessives as modifiers having “free” R_{POSS} as the core of their relational meaning as in (4b), they consider postnominal genitives as argumental as in (4a). The possession interpretation in prenominal possessives needs to be taken in a broad sense. As seen in (4b), the potential readings include not only possession proper, but also ‘authorship’, or the relation of ‘being portrayed’, overlapping with the readings of the postnominal genitive in (4a) to a certain extent. The example in (5) illustrates that the argument-head relation between a victim and a murderer can only be expressed via a postnominal genitive in Russian as in (5a), but not with a prenominal adjectival possessive as in (5b):

- (4) a. portret Mamy
 portrait-m.sg Mama-gen.sg
 Mama’s portrait. (Partee and Borschev, 2003: 188)
- b. Mamin portret
 Mama-poss-m.sg portrait-m.sg
 Mama’s portrait.
- (5) a. ubijca Peti
 murderer-m.sg Petja-gen.sg
 Petja’s murderer’ (murderer of Petja) (Partee and Borschev, 2003: 189)
- b. Petin ubijca
 Petja-poss-m.sg murderer-m.sg
 # ‘Petja’s murderer’ [ok only as e.g. ‘a murderer Petja has hired’]

Another language which formally differentiates between arguments and modifiers in possessive constructions is Daakaka (von Prince, 2012). Intransitive nouns in Daakaka can be transitivized via the morpheme *(a)ne*, and thus can take an argument possessor as seen in (6a). The other strategy to introduce a possessor to an intransitive noun is via linker genitives, which introduce the possessor as a modifier as in (6b), and just as in Russian it is these modifier genitives which can function as predicates. von Prince (2012) argues that the transitivized possessor phrases resemble individual level predicates, while the linker genitive constructions are stage level, anchoring the relation between two individuals to a certain time in discourse.

- (6) a. Bosi **ane** vyanten ente b. Bosi Ø-**e** vyanten ente
 bone trans man that bone cl2-link.s man that
 that man’s bone that man’s bone
 (which is part of his body) (which he has taken from a dead animal or similar)
 (von Prince, 2012:165)

As introduced above in (1) and (2), Turkish has two separate constructions with GEN, namely PFG and GP; we now investigate whether these structures reflect an argument–modifier split as exhibited by languages like Russian and Daakaka or not.

2.2. Argument–modifier distinction in Turkish genitives

Examining the genitive noun in PFGs and GPs in terms of the semantic relations summarized in Table 1, we observe that GPs, which make use of both GEN and POSS, can express all the four types of lexical relations defined by Vikner and Jensen. These include inherent (7a–c), part–whole (8a–c), agentive (9) and control relations (10), the last two of which are taken as free R and extrinsic possession by Partee (1983/1997) and Barker (1995), respectively:

- (7) a. Öğretmen-in hala-sı inherent: kinship
 teacher-GEN aunt-POSS
 The teacher’s paternal aunt
- b. makale-nin başlıĝ-ı inherent: relational
 article-GEN title-POSS
 The title of the article
- c. Bina-nın yık-ım-ı inherent: verb related
 building-GEN demolish-nomin-POSS
 The demolition of the building

- (8) a. Çocuğ-un burn-u part-whole:body part
child-GEN nose-POSS
The child's nose
b. Araba-nın lastiğ-i part-whole:autonomous
car-GEN tire-POSS component part
The car's tire
c. Masa-nın kenar-ı part-whole: dependent
table-GEN edge-POSS component part
The edge of the table
- (9) Çocuğ-un şiir-i agentive
child-GEN poem-POSS
The child's poem
- (10) Kadın-in araba-sı control
woman-GEN car-POSS
The woman's car

GPs can denote any pragmatically defined relation, as long as the semantics of the head noun allows. For example, the relation in (10) can be interpreted as a car not necessarily the woman owns but can also be understood as referring to the car she likes, depending on the pragmatic context.

Not all four types of semantic relations illustrated above are expressible in PFGs. They are not compatible with inherently relational head nouns as in (11a–c), and neither with dependent part-wholes as in (12c), but they can express body part (12a), autonomous part (12b), agentive (13) and control (14) relations:

- (11) a. *Öğretmen-in hala inherent: kinship
teacher-GEN aunt
The teacher's paternal aunt
b. *makale-nin başlık inherent: relational
article-GEN title
The title of the article
c. *Bina-nın yık-ım inherent: verb related
building-GEN demolish-nomin
The demolition of the building
- (12) a. Çocuğ-un burun part-whole: body part
child-GEN nose
The child's nose
b. Araba-nın lastik part-whole: autonomous
car-GEN tire component part
The car's tire.
c. *Masa-nın kenar part-whole: dependent
table-GEN edge component part
The edge of the table
- (13) Çocuğ-un şiir agentive
child-GEN poem
The child's poem
- (14) Kadın-in araba control
woman-GEN car
The woman's car

The constraints observed in (11)–(14) indicate that nouns compatible with PFGs are typically the ones which require type-shifting operators when they are to take a genitive noun as an argument in Vikner and Jensen's system. Hence, PFGs do not accommodate semantically transitive nouns, where the genitive noun obligatorily holds a semantic argument relation.

Such genitives can only occur in GPs. This asymmetry then suggests that the genitive cannot hold a true semantic argument status in PFGs, but it can in GPs. We, thus, argue that the genitive in GPs is argumental, while in PFGs it is a modifier. This situation in Turkish parallels the case of prenominal and postnominal possessives in Russian illustrated in (5) above. As seen in (15a), the transitive victim–murderer relation in Turkish is available only in a GP construction, illustrating that the genitive is argumental on a par with the Russian postnominal genitive given in (5a). However, only a free possession relation is available for PFGs as in (15b), which is parallel to (5b). Thus, the genitive in the PFG construction in (15b) cannot be interpreted as an argument, similar to the case of prenominal possessives in Russian, which are modifiers.

- (15) a. Kadın-in katil-i GP
woman-GEN murderer-POSS
The murderer of the woman
b. Kadın-in katil PFG
woman-GEN murderer
The woman's murderer (the murderer she hired, but not as the person who killed her)

As the grammatical example in (15b) shows, it is not the case that an inherently relational noun never surfaces in a PFG construction. When such a noun appears in a PFG as in (15b), what is not available is the inherently transitive reading of the noun, but as long as the noun allows for a free R reading defined by the context, a PFG is possible.

When we turn to predicate genitives in Turkish, we see that they denote only a free possession relation as illustrated in (16) and (17a), similar to the reading in PFGs. This is in line with the observation by Partee and Borschev (2003) regarding predicative genitives expressing a free R reading functioning as a modifier. In (16), the genitive predicate denotes a free possession relation to be defined contextually. Similarly, the predicate genitive in (17a) induces a free R relation and the murderer is interpreted as the one hired by the woman, not as the one who killed her, which has the same reading as (15b). The only way to express the argument reading in (15a) in the predicate position would be to use a full GP as in (17b). When a PFG is used in the predicate position as in (17c), the victim–murderer relation is not tenable:

- (16) Bu kalem ben-im.
this pencil I-GEN
This pencil is mine.
(17) a. Bu katil kadın-in.
this murderer woman-GEN
This murderer is the woman's.
i. the murderer the woman hired
ii. * the murderer who killed the woman
b. Bu katil kadın-in katil-i.
this murderer woman-GEN murderer-POSS
This murderer is the woman's murderer.
i. the murderer the woman hired
ii. the murderer who killed the woman
c. Bu katil kadın-in katil.
this murderer woman-GEN murderer
This murderer is the woman's murderer.
i. the murderer the woman hired
ii. * the murderer who killed the woman

The contrast in meaning between (17a) and (17b) illustrates that in the case of argumental genitives the head noun cannot be elided in the predicate position. Note that Turkish behaves differently from English, where argumental genitives allow for NP ellipsis in the predicate position as shown in (18a). The Turkish counterpart of the sentence in (18a) requires a full GP in the predicate position as in (18c). If the relational head noun is elided as in (18b), we get ungrammaticality. Thus, Turkish does not allow for NP ellipsis in the predicate position²:

² For a discussion of NP ellipsis in argument position in Turkish, see Bošković and Şener (2014).

- (18) a. His[pointing] father is also John's. (Partee and Borschev, 2003: 187)
 b. * On-un baba-sı Ali-nin de.
 he-GEN father-POSS Ali-GEN too
 His father is also Ali's.
 c. On-un baba-sı Ali'nin de baba-sı.
 he-GEN father-POSS Ali-GEN too father-POSS
 His father is also Ali's father.

In sum, we have argued that in Turkish the genitive NP in GPs is argumental, whereas the one in PFGs is a modifier, introducing a free relation, which needs to be contextually defined. PFGs are typically incompatible with semantically transitive nouns but it is possible for a semantically transitive noun to occur in a PFG when it can denote a free R relation defined by the context. GPs have no such restriction; that is, they are compatible both with semantically transitive and intransitive nouns. We argue that as the genitive in GPs is an argument, in the case of intransitive nouns, a type-shifting operation based on the qualia roles as defined in Vikner and Jensen (2002) has to take place to introduce the noun as the genitive argument of the GP.

A supporting evidence for the argument vs. non-argument split between GPs and PFGs is observed in the restricted distribution of certain lexical items. For example, the relational kinship term *oğul* 'son' can only be used in GPs as in (19a), and when used in a PFG to express a similar reading, it needs to be replaced with the non-relational near synonym *oğlan* 'boy' as in (19b). The use of *oğul* 'son' in a PFG leads to ungrammaticality as illustrated in (19c):

- (19) a. Ali-nin oğl-u GP
 Ali-GEN son-POSS
 Ali's son (only kinship reading)
 b. Ali-nin oğlan PFG
 Ali-GEN boy
 Ali's son/Ali's boy (the boy whom Ali likes/hates/who chases Ali, etc.)
 c. * Ali-nin oğul PFG
 Ali-GEN son
 Ali's son

In addition to being an indicator for argument vs. modifier status of possessors, the PFG–GP split in Turkish also has implications for the different classifications of the semantic relations as given in Table 1. From the point of view of Partee and Borschev's and Barker's classifications, it is expected to find agentive and control relations to be expressible with a PFG construction, as they consider them to be non-relational unlike Vikner and Jensen, and this is the case in Turkish. The part–whole relations, which all the three approaches consider as relational, exhibit an interesting split in Turkish such that only intransitive part–whole relations, i.e. body parts, and autonomous component parts, are available in PFGs, but not dependent component parts, which are semantically transitive.³

2.3. Further aspects of PFG–GP split

Given that both PFGs and GPs are compatible with intransitive nouns, then the question is whether the two forms can be used interchangeably, and the answer is no. PFGs are observed in presuppositional contexts where the relation between the two nouns is salient for the discourse participants, as discussed extensively in Öztürk et al. (in press). However, there is no such requirement for GPs. Thus, in situations where the speaker and the hearer do not share the same background information, PFGs are infelicitous as illustrated in (20b), unlike GPs in (20a)⁴:

³ This observation is further substantiated by the fact that the genitives in both types of part-whole relations can appear predicatively:

- (i) a. Bu lastik o araba-nın. b. Bu burun ben-im.
 this tire that car-GEN this nose I-GEN
 This tire is that car's. This nose is mine.

⁴ Unlike GPs, PFGs are restricted to contexts where the possessor is a definite noun with a clearly defined, presuppositional referent. Therefore, the genitive noun in PFG's cannot be indefinite (ib), unlike GPs (ia), which can host indefinite specific possessors (see Section 2.4).

- (i) a. Bir kız-ın ev-i b. *Bir kız-ın ev
 a girl-GEN house-POSS a girl-GEN house
 A girl's house

- (20) Context: You do not know your roommate has ordered a pizza. The doorbell rings and you open the door and see the delivery. Then you call at your roommate:
- a. Sen-in pizza-n gel-di galiba.
You-GEN pizza-2ps.POSS come-past I.think
I think your pizza came.
- b. # Sen-in pizza gel-di galiba.
You-GEN pizza come-past I.think
I think your pizza came.

Following from their presuppositional nature, PFGs always take wide scope. Therefore, in a context which enforces a narrow scope reading, PFGs are infelicitous as illustrated in (21a), while GPs, which can take both wide and narrow scope (21b) are acceptable⁵:

- (21) Context: The teacher prepared ten questions for the exam and each student answered two different questions:
- a. # Her kız öğretmen-in iki soru-yu cevapla-dı. (two > every, * every > two) PFG
every girl teacher-GEN two question-acc answer-past
Every girl answered the two (specific) questions of the teacher.
- b. Her kız öğretmen-in iki soru-sun-u cevapla-dı. (two > every, every > two) GP
every girl teacher-GEN two question-POSS-acc answer-past
Every girl answered (any) two questions of mine.

As noted by two of the reviewers, although semantically transitive nouns are not compatible with PFGs retaining their transitive reading as shown in (22a), when the genitive is pronominal as in (22b), inherently relational nouns, especially pertaining to humans, become acceptable in a PFG construction, constituting an exception to this generalization.

- (22) a. * Öğretmen-in hala/yaş b. Sen-in hala/yaş
Teacher-GEN aunt/age you-GEN aunt/age
The aunt/age of the teacher Your aunt/age

We argue that what makes such human related transitive nouns in (22b) acceptable in a PFG construction, which is most natural within a presuppositional context, is that their possessors are first and second person pronouns, which are discourse participants with referents fully salient for the hearer and the speaker. When the discourse saliency requirement of PFGs is fulfilled, as in the case of pronominal possessors, an inherently transitive relation appears to be accommodated by the PFG.⁶ Thus, we have seen two cases where transitive nouns appear in PFG constructions, namely, (i) when they can shift to an intransitive free R relation based on the context (as in Ex. 15b), or (ii) when their possessors are discourse salient. However, how this discourse saliency condition leads to the loosening of the semantic transitivity restriction in PFGs requires further investigation.⁷

2.4. The function of GEN in GPs and PFGs

Although the possessors in PFGs and GPs semantically fulfill different functions, namely, modifier and argument, respectively, they bear the identical genitive case morphology (GEN). This implies that the argument–modifier distinction does not stem from the presence or absence of the genitive case, which, then, raises the question of what the contribution of the genitive case is in both constructions.

⁵ One of the reviewers did not agree with the narrow scope reading of (21b), however, the 15 native speakers we have consulted confirmed the ambiguity in (21b). This type of scope ambiguity, which arises in the interaction of an accusative marked indefinite object with the subject quantified with *her* 'every', is a very well-observed issue in the literature (Enç, 1991; Keleşir, 2001; Aygen, 2007).

⁶ When proper nouns are third person participants present in the discourse they are also more acceptable in comparison to common nouns. If they refer to non-present third persons, they are not acceptable in a PFG construction:

- (i) Ali-nin hala/yaş
Ali-GEN aunt/age
Ali's aunt/age

⁷ Using such relational nouns in PFGs also has the pragmatic effect of alienating, distancing and objectifying the possessee, almost suppressing the inherent relation.

GEN in Turkish has been analyzed as a marker of specificity of the possessor (Barker et al., 1990; Erkman-Akerson and Ozil, 1992; Öztürk, 2004, 2005, among others). The referential properties of the genitive possessors in PFGs and GPs so far seem to be in line with this view. In PFGs the genitive noun is always definite, hence, specific. In GPs, the possessor can be indefinite as in (23), but is interpreted as specific, as well observed in the literature. In a sense, this semantic function of GEN is analogous to the accusative case denoting the specificity of direct objects in Turkish.⁸ Examples (23) and (24) illustrate the similarity of GEN on the possessor to accusative on direct objects as a marker of specificity on indefinite nouns:

(23) Context: In a dormitory where each child has a separate room.

Bir çocuğ-un oda-sı ışık al-ıyor.
a child-GEN room-POSS light get-impf
One of the children's room is getting (sun)light.

(24) Context: Ali is a postman. He is looking for different addresses to deliver mail.

a.	Ali bir ev-i bul-du.	b.	#Ali bir ev bul-du.
	Ali a house-acc find-past		Ali a house find-past
	Ali found one of the houses.		Ali found a house.

However, in generic contexts, we observe that the genitive noun in GPs is interpreted as indefinite and non-specific as in (25):

(25) Context: An architect expresses his opinion on how children's rooms should be.

Bir çocuğ-un oda-sı ışık al-malı.
a child-GEN room-POSS light get-nec
A child's room should get (sun)light.

The interpretation of (25) can be paraphrased as "Given that there is/will be a room belonging to a child/at a child's disposal in a particular context, it should get sunlight." The function of the case GEN here is to link the relation between the two nouns to a possible world. Thus, in addition to its function as a marker of specificity, the case GEN also signals a specific instantiation of the relation between the two nouns linked to a specific context/world.⁹ In modal contexts, the specificity feature of the case GEN is canceled by the generic modal, and we observe only its instantiation function.¹⁰

As seen in the discussion above, the case GEN serves two functions, namely, specificity and linking, but it does not contribute to the argument–modifier distinction. We argue that this distinction is expressed through POSS morphology, which is available in the case of argument genitives in GPs, but not in PFGs with modifier genitives. The following section investigates the role of POSS in this distinction, by focusing on the two constructions, where POSS surfaces, i.e. GPs and PCs.

3. POSS in possessive constructions

POSS, which surfaces on the head noun in GPs, is the only marker in PCs, which lack GEN. POSS, both in PCs and GPs, has been traditionally analyzed as a third person possessive agreement marker (Lewis, 1967; Dede, 1978; Yüksek, 1998), which implies that PCs and GPs are derivationally linked. Another analysis of POSS treats POSS in the two structures as distinct; the one in PCs is a marker deriving compounds, which necessarily makes the derivation of PCs independent from that of GPs (Swift, 1963; van Schaik, 1992; Göksel, 2009; Kharytonava, 2011; Kunduracı, 2013).

The analysis we will propose for POSS below captures the intuitions behind the two earlier approaches. Patterning with the first approach, we argue that POSS both in GPs and PCs is the same marker. However, we do not treat it as a third person marker, but as a valency marker which signals the introduction of an argument. In line with the second approach, we take POSS to have a derivational function as well.

⁸ Note that we are simply highlighting the semantic parallelism between GEN and accusative in Turkish. The aim is not to get into the definition or a discussion of specificity; we refer the reader to the literature on the various accounts of specificity in relation to case markers in Turkish (Enç, 1991; Keleşir, 2001; Aygen, 2007).

⁹ This instantiation function of GEN in Turkish is reminiscent of the genitive linker in Daakaka, which anchors the relation between the two nouns to a moment in time in the discourse (cf. von Prince, 2012).

¹⁰ In fact, a similar pattern is observed with indefinite objects marked with accusative. They also have an indefinite non-specific reading under the scope of a modal operator:

(i) İnsan bir çocuğ-u döv-me-meli.
Human a child-acc beat-neg-nec
One should not beat a child.

3.1. Semantics of PCs

Recall that semantically transitive nouns are incompatible with PFGs, while GPs are compatible both with transitive and intransitive nouns. When we turn to PCs we observe that they pattern with GPs in being compatible with both transitives and intransitives. Hence, all types of lexical relations defined in [Vikner and Jensen \(2002\)](#) are felicitous with PCs as shown below:

- | | | | |
|------|----|--|---------------------------------------|
| (26) | a. | öğretmen hala-sı
teacher aunt-POSS
aunt of a teacher | inherent: kinship |
| | b. | makale başlığ-ı
article title-POSS
article title | inherent: relational |
| | c. | Bina yık-ım-ı
building demolish-nomin-POSS
building demolition | inherent: verb related |
| (27) | a. | Çocuk burn-u
child nose-POSS
children's nose | part-whole: body part |
| | | Araba lastiğ-i
car tire-POSS
Car tire | part-whole: autonomous component part |
| | c. | Masa kenar-ı
table edge-POSS
table edge | part-whole: dependent component part |
| (28) | | Çocuk şiir-i
child poem-POSS
a child's poem | agentive |
| (29) | | Kadın araba-sı
woman car-POSS
women's car | control |

What these examples of PCs illustrate is the formation of a new lexical item through two nouns which hold a certain relation.¹¹ We claim that it is the presence of POSS which signals this relation, also observed in GPs. [Kunduracı \(2013\)](#) claims that the relation in PCs is an associative relation as in (30b), rather than ascription, which is only possible without POSS as in (30a):

- | | | | |
|------|----|---|---------------|
| (30) | a. | Kadın doktor
woman doctor
Woman/female doctor | (ascriptive) |
| | b. | Kadın doktor-u
woman doctor-POSS
gynecologist | (associative) |

How the type of association relation is interpreted in a given PC depends on the head noun. If the head noun is a semantically transitive one, such as kinship terms, dependent component parts, or verb related nouns, then the reading is limited to this

¹¹ Note that in PCs, just like in GPs, the first noun is a phrasal category, as it can be modified and coordinated. For a discussion of coordination patterns available in PCs, see [Kharytonava \(2011\)](#):

- | | | |
|-----|----|--|
| (i) | a. | Sarışın kadın fotoğraf-ı
blonde woman photo-POSS
Picture of a blonde woman/blonde women |
| | b. | kadın ve çocuk fotoğraf-lar-ı
woman and child photo-pl-POSS
Pictures of women and children |

lexical relation, as seen in (26a–c) and (27c). However, if the head noun is not transitive, then, a type-shifting operation based on qualia roles will apply and thus a PC can denote different relations. For example, *çocuk şiiri* in (28) above can not only express an agentive reading derived via the type-shifter *Ag*, where the child has written the poem, but it can also be interpreted as a poem written for children. We take this second reading, i.e. poem for children, to result from the Telic qualia of the head noun, which is not immediately available in the GP counterpart, namely, *çocuğ-un şiir-i* 'the poem of the child' given in (9). Thus, the type-shifter *Tel* proposed by Vikner and Jensen (2002) based on the Telic qualia accounts for the use of the relational adjective *favorite* in genitive constructions in English (e.g. *John's favorite song*), is functional in PCs in Turkish.

We see that PCs predominantly express a subcategory of the head noun, forming a new lexical item naming this subcategory. For example, *çocuk şiiri* is a type of poem, whether it is written by a child or for a child. Similarly, *makale başlığı* 'article title' in (26b) is a certain type of title as opposed another type of title, such as *kitap başlığı* 'book title'.¹²

The fact that the same types of lexical relations can be available both in GPs and PCs does not necessarily imply that each PC would have a GP counterpart and vice versa, as already observed in the literature (Hayasi, 1996). Just as there are certain relations which are only expressible in a GP construction as shown in (31a), there are also relations which only find form in PCs as seen in (32b):

- | | | | | | | |
|------|----|----------------------|----|----|--------------------------------|----|
| (31) | a. | Nisan-in beş-i | GP | b. | *Nisan beş-i | PC |
| | | April-GEN five-POSS | | | April five-POSS | |
| | | The fifth of April | | | | |
| (32) | a. | *Spor-un ayakkabı-sı | GP | b. | Spor ayakkabı-sı ¹³ | PC |
| | | Sports-GEN shoe-POSS | | | sports shoe-POSS | |
| | | Sports shoe | | | | |

We claim that the unacceptability of (31b) and (32a) can be accounted for through the semantic function of GEN, which signals both specificity and a certain instantiation of the relation between the two nouns linked to a specific context/world. The unavailability of a PC for (31b) is because *the fifth of April* is a very specific date, which does not lend itself to a meaningful subcategory in this world.¹⁴ In (32), we see the opposite pattern where the relation is expressible only as a PC, which introduces a subtype of shoe. This pattern typically emerges when the head noun is an intransitive abstract noun, where there is no pre-defined lexical relation. When GEN occurs on the first NP, since the head noun is not relational, an instantiation of the undefined relation becomes very difficult to interpret.¹⁵

¹² In Turkish, PCs are productively used as a naming strategy, creating new lexical items, where the relation expressed is not always easily accountable by the three qualia available in the type-shifting operation, namely, constitutive, agentive/control and telic qualia, as in (i):

- | | | | | | | |
|-----|----|---------------|----|---------------------|----|-----------------|
| (i) | a. | A harf-i | b. | Üçgen şekli-i | c. | Kuzey rüzgar-ı |
| | | A letter-POSS | | triangle shape-POSS | | north wind-POSS |
| | | The letter A | | the shape triangle | | The north wind |

As discussed above, Pustejovsky defines a fourth qualia, i.e. the formal qualia as "that which distinguishes the object within a larger domain: orientation, magnitude, shape, dimensionality, color, position" (Pustejovsky, 1995: 85–86). Given these examples make reference to formal properties, such as shape, orientation, then the question can be raised as to whether type-shifting based on the formal qualia, which is not available in a language like English, is operative in Turkish or not.

¹³ Hayasi (1996) shows that PCs are compatible with proper names. We assume that this is possible, when the PC refers to a subtype:

- | | | |
|-----|----|---|
| (i) | a. | Aristo mantığ-ı |
| | | Aristotle reasoning-POSS |
| | | Aristotle's reasoning (vs. Plato's reasoning) |
| | b. | Ali kız-ı Ayşe |
| | | Ali girl-POSS Ayşe |
| | | Ayşe, the daughter of Ali (vs. the daughter of Hasan) |

¹⁴ Similarly, (ia) and (ib) are not meaningful PCs, since particular measure expressions, e.g. kilogram, meter, etc., as a head noun are not seen as having sub-types which serve a function in the world we live in:

- | | | | | |
|-----|----|-----------------|----|-------------------|
| (i) | a. | *elma kilo-su | b. | *kumaş metre-si |
| | | apple kilo-POSS | | fabric meter-POSS |
| | | *Apple kilo | | *fabric meter |

¹⁵ The GP in (32a) can be acceptable, when the relation is very specifically modified and contextualized as in (i):

- | | |
|-----|---|
| (i) | Çok koş-ma-yı gerektiren bu spor-un ayakkabı-sı çok dayanıklı ol-malı. |
| | much run-nomin-acc requiring this sports-GEN shoe-POSS very sturdy be-nec |
| | The shoe of this sport, which requires a lot of running, needs to be very sturdy. |

Except for the cases like (31b) and (32a), which are accountable by the semantics of GEN, we have seen that all the PCs in (26)–(29), formed with lexically relational transitive/intransitive nouns have a GP counterpart. If the genitive possessor in GPs, as we claim, is an argument, then the question is whether the first NP of a PC can act as an argument as well?

Recall that we have drawn a parallelism between GEN on the possessor and the accusative case on the direct object in terms of the expression of specificity. As seen in (33a), overt accusative morphology on the object renders it definite/specific, while the lack of it leads to a non-referential, number-neutral reading for the object, yielding a pseudo-incorporation construction, as seen in (33b):

- (33) a. Ali şise-yi aç-tı.
Ali bottle-acc open-past
Ali opened the bottle.
- b. Ali bütün gün şise aç-tı.
Ali all day bottle open-past
Ali opened bottles/did bottle-opening all day.

The pseudo-incorporated objects specify a subtype of the event denoted by the verb, by restricting the extension of the internal argument (cf. Chung and Ladusaw, 2004). We claim that the presence or absence of GEN has a similar effect at the NP level. When it is present as in GPs, we have a specific possessor as shown in (34a), but when it is absent as in PCs we have a subcategory of the head noun, restricted by the number neutral, non-referential first NP of the PC as in (34b).

- (34) a. şise-nin açacağ-ı
bottle opener for
the opener of the bottle
- b. şise açacağ-ı
bottle opener-POSS
bottle opener/opener for bottles

We argue that non-referential NPs in PCs, which do not bear any overt case morphology, are analogous to the non-referential complements of verbs.¹⁶ Given this analogy and the fact that PCs are compatible with semantically transitive nouns, we claim that the non-genitive marked first NP is an argument of the head noun, and being non-referential, it acts as a restrictor.

3.2. POSS is not an agreement marker

Recall that the genitive noun in PFGs, which lack POSS, acts as a modifier. However, as argued above, whenever there is POSS on the head noun, the first NP has argument status, regardless of its bearing GEN or not. Therefore, we propose that POSS both in GPs and PCs is an indicator for the presence of an argument. If so, then POSS cannot be an agreement marker as proposed in the literature.

The form of POSS in PCs is always $-(s)/l(n)$, but GPs exhibit a nominal person agreement paradigm as in (35).¹⁷ Note that when the possessor is third person as in (35c), again $-(s)/l(n)$ is observed on the head noun¹⁸:

- (35) a. Ben-im ev-im
I-GEN house-1ps.POSS
My house
- b. Sen-in- ev-in
you-GEN house-2ps.POSS
Your (sg.) house
- c. o-nun ev-i
s/he/it-GEN house-POSS
His/her/its house

Kunduraci (2013) has already argued against the third person agreement marker analysis of $-(s)/l(n)$, by showing that it does not exhibit the same distribution as 1st and 2nd person markers. As seen in (36a–b), while the suffix $-l$, which

¹⁶ Knecht (1986) has also observed this parallelism between PCs and verbs with non-referential objects, which constitute compound structures just like PCs in her account.

¹⁷ The initial [s] of $-(s)/l(n)$ does not surface when attached to a noun with a final consonant and the final [n] does not surface when there is no following case suffix.

¹⁸ Note that as Turkish is a pro-drop language, the pronominal genitives in GPs, which bear agreement, can also be dropped if they are previously introduced in the discourse and do not serve any contrastive function. See Kornfilt (1984). Such an option is not available in PFGs since they lack agreement.

derives attributive adjectives from nouns, can come after 1st and 2nd person markers, POSS is incompatible with *-ll* as seen in (36c):

- (36) a. anne-m-li
 mother-1ps.POSS-with
 with my mother
- b. anne-n-li
 mother-2ps.POSS-with
 with your mother
- c. *anne-si-li
 mother-POSS-with
 with his/her mother
(Kunduraci, 2013: 157)

Another piece of evidence for the non-agreement status of POSS is that it surfaces in partitive constructions in Turkish, which select the ablative case on the specified set as in (37a) (cf. [Taylan and Öztürk, 2014](#)). Ablative marked arguments never undergo agreement in Turkish. In partitive constructions POSS indicates a relation, as in GPs given in (37b). While the presence of GEN indicates a specific subset, ablative does not impose specificity:

- (37) a. elma-lar-dan iki-si b. elma-lar-ın iki-si
apple-pl-abl two-POSS apple-pl-GEN two-POSS
(any) two of the apples (these) two of the apples

Furthermore, it is possible to have PCs where the first NP is a pronominal but not a third person. As seen in (38a), when there is a second person pronoun as the first NP, the acceptable structure necessitates POSS but not the second person possessive agreement as in (38b), which yields ungrammaticality:

- (38) a. Bu tipik bir sen şikayet-i.
this typical a you complaint-POSS
This is a typical complaint of yours.
b. *Bu tipik bir sen şikayet-in.
this typical a you complaint-2ps.POSS
This is a typical complaint of yours.

If POSS is not an agreement marker as the above data suggests, then what is the form of the third person in the nominal agreement paradigm? We argue that it is zero in form analogous to the zero marking for third person in the verbal agreement paradigm, given in (39). This way nominal and verbal agreement paradigms pattern identically by overtly marking only first and second persons, constituting a meta paradigm.

- (39) a. Ben uyu-du-m.
 I sleep-past-1ps
 I slept.
- b. Sen uyu-du-n.
 you sleep-past-2ps
 You slept.
- c. Ali uyu-du.
 Ali sleep-past
 Ali slept.

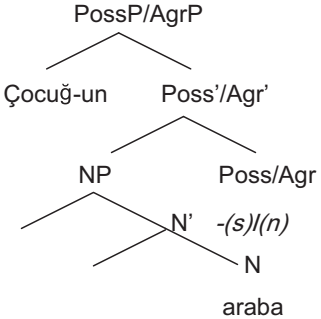
Siewierska (2008), in her cross-linguistic study on person marking, shows that it is typologically highly uncommon to have agreement on the possessed nouns, without having predicate agreement. Given that Turkish does not overtly mark third person on the predicate, it would be typologically unexpected to argue that there is third person agreement on the possessed nouns in GPs. Thus, even though we agree with the traditional approach to POSS that the same POSS surfaces in GPs and PCs, we deviate from this analysis as we claim that *–(s)I(n)* is not an agreement marker on a par with first and second persons, but a morphological indicator for the presence of an argument in GPs and PCs.

As for the second approach which treats POSS in PCs as a derivational compound marker, distinct from the POSS in GPs, we agree with it in that POSS has a derivational function. However, we deviate from this account by claiming that there is only one POSS with the same derivation function both in GPs and PCs. This we will focus on in the following section.

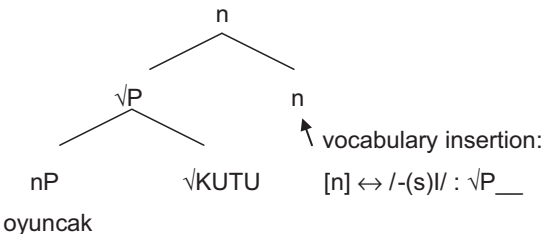
4. Syntax of possessive constructions

In the predominant analyses of GPs, the genitive case is assumed to be assigned by a PossP or a nominal AgrP, which hosts the possessor in its Spec, as seen in (40) (Lewis, 1967; Dede, 1978; Kornfilt, 1984, 1997; Özsoy, 1994; Yüксеker, 1998; Arslan-Kechriotis, 2006, 2009; Göksel, 2009). PFGs, which have not received much attention in the literature, are mainly treated as a variant of GPs, where POSS is deleted (Kunduraci, 2013). Those studies which consider POSS in PCs as identical to the one in GPs, also assumed a common structure as the one in (40a).¹⁹

¹⁹ For example, *Yükseker (1998)* argues that GPs and PCs have the same structure, but PCs are reanalyzed as N⁰ forming syntactic words. *-(s)I(n)* both in PCs and GPs is again a third person possessive suffix, but only in PCs it has a generic reference.

- (40) a.  b. Çocuğ-un araba-sı
child-GEN car-POSS
The child's car.

There are also syntactic accounts which map PCs and GPs onto different structures. Kharytonava (2011) treats POSS in PCs as a category assigning n^0 within the framework of Distributed Morphology (DM), where n^0 is semantically null and has the sole function of assigning a nominal category to complex roots in the formation of compounds. In PCs, this category assigning n^0 is spelled out as $-(s)/(n)$, and it is different from the $-(s)/(n)$, which surfaces in GPs. For Kharytonava (2011) the one in GPs is an agreement marker.

- (41) a. oyuncak kutu-su
toy box-POSS
toy box
b. 

(Kharytonava, 2011: 145)

Our analysis resembles the traditional account in treating the POSS both in GPs and PCs as the same, but we also divert from it, as we do not consider POSS to be an agreement/possessive marker. Similar to Kharytonava's approach, we take POSS to be a derivational suffix, however, our analysis differs from hers, too, since we take POSS to be a valency marker signaling the introduction of an argument.

4.1. The syntactic architecture of GPs and PCs

As observed in the literature, while the complements of verbs are obligatory in syntax, nouns do not have to project a complement obligatorily. Recent literature on the syntax of nouns has argued that nouns cannot directly take complements unlike verbs in syntax (Grimshaw, 1990; Marantz, 2000; Hale and Keyser, 2002; Mateu, 2002; Kayne, 2008; Gallego, 2009; Coon, 2013). This implies that even though a noun is semantically transitive, it cannot directly select its argument in syntax and the introduction of the argument has to be mediated via certain functional projections. This constitutes a syntax-semantics mismatch. That is, even if a noun is semantically transitive, it always starts out as an intransitive noun in syntax, as it cannot select its argument directly.

In Turkish, while verbs can take NPs or PPs as complements, this option is not available for nouns. As shown in (42), while a transitive verb can readily take an argument, a noun derived from the same verb cannot, as in (43a). As (43b) and (43c) illustrate, only when POSS is present it is possible for a noun to take a syntactic argument²⁰:

- (42) a. Bina yık-
building demolish
to demolish buildings
b. bina-yı yık-
building-acc demolish
to demolish the building

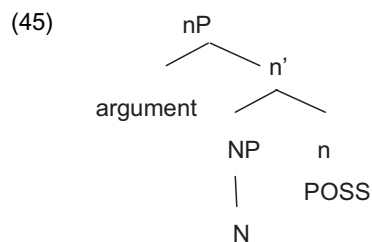
²⁰ Note that von Prince (2012:166) observes a similar kind of syntax-semantics mismatch in Daakaka. Semantically transitive kinship terms in possessive constructions in Daakaka appear as intransitives syntactically, thus, they are compatible with linker genitives, which hold a modifier relation to the head noun.

- (43) a. * bina yık-ım
building demolish-nomin
building demolition
b. bina yık-ım-ı
building demolish-nomin-POSS
building demolition/demolition of buildings
c. bina-nın yık-ım-ı
building-GEN demolish-nomin-POSS
the demolition of the building

Note that sentential complements of nouns also require POSS in Turkish, as in (44a), which indicates the role of POSS in signaling the presence of an argument. The absence of POSS leads to ungrammaticality as in (44b):

- (44) a. Ali gel-ecek haber-i b. * Ali gel-ecek haber
Ali come-fut news-POSS Ali come-fut news
The news that Ali will come.

Thus, we argue that the only way a noun can take a complement is via the presence of POSS. We take POSS to be a valency marker surfacing in the head position of the functional element, namely little nP, which introduces an argument externally to a noun in its specifier position. This configuration is illustrated in (45):



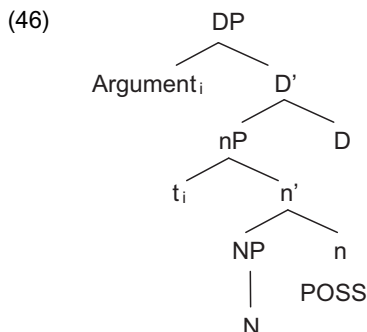
This configuration is reminiscent of little vP introducing an external argument to a VP. Just like the external argument in Spec, vP, which checks its case with the T head, the argument introduced in Spec, nP also has to check its case. Therefore, we need another layer of functional projection above nP. We argue that this is the DP layer, and it checks the case of the argument in Spec, nP.²¹

The argument introduced in Spec, nP has to check its case. This is done through the D head via Agree. When the argument has a referentiality/specificity feature to check as in GPs, it overtly moves into Spec, DP and triggers agreement via phi-feature checking as shown in (46). Such arguments are overtly marked for genitive case at the level of morphology. If the noun is non-referential, then it remains in Spec, nP and appears as zero-case marked. This leads to the PC interpretation.²²

²¹ To maintain the parallelism between clause structure and nominal structure, we call this projection DP, as it is the domain where referentiality and deixis are encoded, similar to the function of TP at the clausal domain. We are aware of the debate whether this layer is a DP or another functional layer (cf. Arslan-Kechriotis, 2006, 2009; Bošković and Şener, 2014), however, this is immaterial to the discussion here.

²² Note that, as seen in the common representation we propose both for GPs and PCs, we are considering the head noun denoting the possessee to be a phrasal category. Both nouns can be modified via adjectives (i) or coordinated (ii). Such type of adjectival modification and coordination is typically less favored and more restricted in PCs, which indicates another similarity to non-referential complements of verbs:

- (i) a. Ülke-nin eski cumhurbaşkan-ı b. Cumhuriyet eski başkan-ı
country-gen old president-POSS republic old president-POSS
The former president of the country former president of the/a republic
(ii) a. Subay-lar-ın bröve ve kokart-lar-ı
officer-pl-GEN brevet and cockade-pl-POSS
The brevets and cockades of the officers
b. Subay bröve ve kokart-lar-ı
officer brevet and cockade-pl-POSS
Officer brevets and cockades



The structure in (46) parallels the clausal structure; DP is the deictic domain like TP, in the sense that the noun and the event are anchored to the discourse and time, respectively.

The *n* head is a functional element which derives a noun with a new valency specification and POSS is the morphological reflex of this derivation. Note that we can introduce more than one argument to the same noun by embedding one *nP* under the other, as illustrated in (49a) and (49b). Both *üniversite* 'university' and *öğrenci* 'student' can be independently introduced as an argument to the noun *yurt* 'dorm' via *nP* forming GPs as in (47a) and (48a) or forming PCs as in (47b) and (48b). Although both nouns can be marked for genitive by moving into Spec, DP, as illustrated in (47a) and (48a), respectively, when they co-occur, either only the highest one, i.e. *üniversite*, can be marked as genitive as shown in (49a) or both remain zero-marked for case as in (49b). Marking both NPs as genitive would lead to ungrammaticality as in (49c), as this would require the derivational layer *nP* introducing the noun *üniversite* to embed the DP which bears the genitive marked *öğrenci* in (49c). This is unacceptable, as introducing the derivational layer *nP* to a purely inflectional layer DP is not possible:

- (47) a. [DP *Üniversite-nin_i* [nP *t_i* [NP *yurd-u*]]] b. [nP *Üniversite* [NP *yurd-u*]]
 university-GEN dorm-POSS university dorm-POSS
 The dorm of the university university dorm
- (48) a. [DP *Öğrenci-nin_i* [nP *t_i* [NP *yurd-u*]]] b. [nP *Öğrenci* [NP *yurd-u*]]
 student-GEN dorm-POSS student dorm-POSS
 The dorm of the student student dorm
- (49) a. [DP *Üniversite-nin_i* [nP *t_i* [nP *öğrenci* [NP *yurd-u*]]] b. [nP *Üniversite* [nP *öğrenci* [NP *yurd-u*]]]
 university-GEN student dorm-POSS university student dorm-POSS
 University's student dorm University student dorm
- * [DP *Üniversite-nin_i* [nP *t_i* [DP *öğrenci-nin_j* [nP *t_j* [NP *yurd-u*]]]]
 university-GEN student-GEN dorm-POSS
 The student's dorm of the university

POSS, as a derivational suffix, exhibits an interesting interaction with other derivational elements. As observed in the literature, particularly in the case of PCs, when another noun deriving suffix should be added to the PC, POSS appears as the terminal element, even if the other derivational suffix is introduced structurally higher than POSS (Göksel and Haznedar, 2007; Kabak, 2007; Kharytonava, 2011; Kunduraci, 2013):

- (50) a. Adana kebab-ı b. *Adana kebab-ı-cı c. Adana kebab-cı-sı
 Adana kebab-POSS Adana kebab-POSS-CI Adana kebab-CI-POSS
 Adana kebab seller of Adana kebab

To create the lexical expression referring to a seller/restaurant of Adana kebab, first the PC *Adana kebab-ı*, naming a food category in (50a) should be formed as a lexical unit via POSS and then the agentive suffix *-CI* can be added to this PC.

This predicts the ungrammatical ordering in (50b), where POSS precedes *-CI*. The acceptable form is (50c), where POSS appears as the terminal element. Note that we observe this shift only when the derivational suffix derives a noun. As both POSS and *-CI* are also noun deriving morphemes, the two can co-occur as long as POSS is the terminal element.

If, however, there is an adjective deriving suffix to be introduced to the PC formed with POSS, such as the attributive *-II* or deprivative *-s/z*, POSS cannot surface at all, whether it precedes or follows the adjective deriving suffix, as seen in (51b) and (51c):

- (51) a. Adana kebab-ı
Adana kebab-with
with Adana kebab
- b. * Adana kebab-ı-ı
Adana kebab-POSS-with
- c. * Adana kebab-ı-sı
Adana kebab-with-POSS

This constraint is further illustrated with the other use of *-CI*, where *-CI* derives an attributive adjective meaning the liker of something, in which case POSS does not surface, as seen in (52a). If POSS is present as in (52b), then we get the expected agentive reading identical to the one in (50c)²³:

- (52) a. Adana kebab-cı bir adam
Adana kebab-CI a man
A man who likes Adana kebab
- b. Adana kebab-cı-sı bir adam
Adana kebab-CI-POSS a man
A man who sells Adana kebab

As is well-known, POSS also exhibits an interesting interaction with agreement morphology, such that when there is an overt agreement marker, POSS cannot surface:

- (53) a. oyuncak kutu-su
toy box-POSS
Toy box
- b. * Biz-im oyuncak kutu-muz-u
we-GEN toy box-1ppl-POSS
- c. * Biz-im oyuncak kutu-su-muz
we-GEN toy box-POSS-1ppl
- d. Biz-im oyuncak kutu-muz²⁴
we-GEN toy box-1ppl
Our toy box.

Agreement is the morphological reflection of the phi-features of the genitive argument on the D head. As seen in (53b), POSS, which surfaces in the head of nP, cannot follow agreement, which belongs to the DP domain. This implies that POSS belongs to an inner domain and, as a terminal element, is observed only after the markers which belong to this domain lower than the DP, such as other noun deriving suffixes and the plural marker. If it surfaces before agreement, it leads to ungrammaticality, as seen in (53c), since it is not in a terminal position. Therefore, when there is overt morphological agreement, POSS cannot surface, as in (53d). Furthermore, agreement appears only when there is a genitive argument introduced via little nP, syntactically. Thus, its presence presupposes that there is a little n head in the architecture of the DP, which can potentially be spelled out as POSS, when it can appear as the terminal element. One such case is the PFG construction, as seen in (54), when the first person agreement is not available, POSS can be spelled out:

²³ Within the DM model Kharytonava (2011) proposes that derivational suffixes, such as *-CI* and *-IIK* in Turkish are acategorical roots with semantic content, therefore, they cannot assign syntactic category. For them to appear on compounds, the category of the complex root has to be specified by the category assigning n⁰, which is semantically null and spelled-out as *-(s)I(n)*. This then yields the ungrammatical order where *-(s)I(n)* precedes the derivational suffix. For such cases Kharytonava (2011) proposes a Local Dislocation rule which moves *-(s)I(n)* to the word-final position at PF. However, the treatment of such derivational suffixes as acategorical is problematic, as *-IIK* only selects nominals and *-CI* verbs (cf. Uygun, 2009). Secondly, such PF level local dislocation is not a very common pattern in Turkish morphology. In the proposed analysis, there is no need to treat derivational suffixes as acategorical and thus no such dislocation is required.

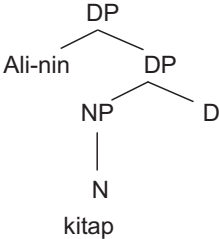
²⁴ Note that this example is two way ambiguous in the absence of POSS. The word *oyuncak* 'toy' can be interpreted either as a noun, hence forming a PC with *kutu* 'box', which means a box to put toys in, or as an adjective modifying the head noun, a box, which is a toy.

- (54) Biz-im oyuncak kutu-su
 we-GEN toy box-POSS
 Our toy box.

To summarize, we have proposed that POSS both in GPs and PCs is the spell out of the functional head *n*, which introduces a syntactic argument to an NP. What remains to be discussed at this point is how the structure of PFGs differs from these two constructions with POSS.

4.2. The structure of PFGs

Recall that PFGs, which lack POSS, are incompatible with lexically transitive nouns. They introduce a free *R* relation, which needs to be contextually defined, where the genitive has a modifier status, similar to the Russian prenominal genitives and Daakaka linker genitives. Furthermore, as shown above, the genitive noun in a PFG patterns similar to the genitives found in predicate position in Turkish, which we take to be evidence for their modifier status in PFGs. Thus, given that they are semantically modifiers we argue that they do not have an *nP* layer in their architecture which introduces an argument NP. Mapping its semantics to syntax, we consider the genitive noun in PFGs as an adjunct, having the following representation:

- (55) a.  b. Ali-nin kitap
 Ali-GEN book
 Ali's book

As seen in (55), along the same lines as Öztürk (2001), we introduce the genitives in PFGs as a DP level adjunct, on a par with demonstrative adjuncts in Turkish, which are also deictic and context dependent.²⁵ As DP level adjuncts we would expect them to be more flexible in their ordering with respect to demonstratives. This prediction is borne out. Variation in the ordering of the demonstrative and the genitive is possible in PFGs, as shown in (56), unlike the restricted ordering observed in GPs, as in (57)²⁶:

- (56) a. Bu [pointing] ben-im bisiklet sat-ıl-a-ma-dı hala. PFG
 This I-GEN bicycle sell-pass-mod-past yet
 This bicycle of mine has not been sold yet.
 b. Ben-im bu bisiklet sat-ıl-a-ma-dı hala.
 I-GEN this bicycle sell-pass-mod-past yet
 This bicycle of mine has not been sold yet.
- (57) a. */?? Bu [pointing] ben-im bisiklet-im sat-ıl-a-ma-dı hala. GP
 this I-GEN bicycle-1ps.POSS sell-pass-mod-past yet
 This bicycle of mine has not been sold yet.
 b. Ben-im bu bisiklet-im sat-ıl-a-ma-dı hala.
 I-GEN this bicycle-1ps.POSS sell-pass-mod-past yet
 This bicycle of mine has not been sold yet.

As a DP-layer adjunct it is expected to appear before NP-layer attributive adjectives, and as seen in (58) this prediction is borne out. The genitive adjunct can only precede the attributive adjective as in (58a) and not follow it as in (58b):

²⁵ It is a common view in Turkish grammar that demonstratives have an adjunct status (cf. Göksel and Kerslake, 2005).

²⁶ Bošković and Şener (2014) argue that the genitive NP in GPs is also an NP adjunct. However, given the distributional and semantic differences between the genitives in GPs and in PFGs, we argue that the genitive in GPs cannot be an NP adjunct. Their analysis is only valid for the genitive in PFGs, which they do not address in their paper.

- (58) a. Ben-im kırmızı bisiklet
I-GEN red bicycle
My red bicycle
b. *Kırmızı ben-im bisiklet
red I-GEN bicycle

As the discussion above shows, we propose that since PFGs lack POSS, there is no argument introduced to the NP. As only arguments can trigger agreement in Turkish, it is predicted that nominal agreement surfacing in GPs will not be available in PFGs, where the genitive is an adjunct.

5. Concluding remarks

Our semantic analysis of the different phrasal possessive constructions in Turkish has revealed that the relation between two nouns is structurally reflected. The first noun in GPs and PCs is always an argument, hence, requires type-shifting in the case of semantically intransitive head nouns. The one in PFGs, on the other hand, is a modifier of the head, hence a non-argument. Syntactically, we have proposed that arguments in GPs and PCs are introduced in the Spec position of an nP projection, while the non-argument genitives in PFGs are simply introduced as a DP adjunct. This syntactic argument-adjunct split is reflected onto morphology through the presence or absence of POSS, which we take to be the spell out of the n head.

The syntactic structure we have proposed for GPs and PCs, as discussed above, is analogous to the clausal architecture in the sense that nP is a valency related layer like vP, and DP is the deictic referential layer similar to TP (Enç, 1987). This parallelism is revealed in certain types of epithets as in (59) in Turkish based on a PC structure:

- (59) Ali salağ-ı
Ali idiot-POSS
Ali the idiot (Intend: Ali associated with idiotness)

These constructions almost resemble a small clause where the first NP acts as a subject and the second NP a property denoting predicate, paraphrasable as “Ali is an idiot” (cf. Belvin and den Dikken, 1997). That epithets have such a PC structure in Turkish is not surprising given that compounds have a naming function in addition to the subcategorization function as defined by Li (1971), and Downing (1977:815). Compounds with naming function denote categories perceived as significant for the speaker based on his/her experience as argued by Zimmer (1971) cited in Downing (1977:823). Epithets, such as (59), are typically used as naming strategies based on the speaker’s subjective experience/choice in a given context, rather than denoting a permanent property.

POSS is also observed in impersonal infinitival clauses involving an arbitrary null subject and a verb nominalized with *-mA* as noted by Özsoy (1988) and illustrated in (60a-b). For analyses which consider POSS to be a referential third person agreement marker, this pattern is unexpected. However, within the current proposal we take this to be another instance of POSS as an argument introducing valency marker, signaling the presence of an arbitrary subject:

- (60) a. [e bu sıcak-ta ders çalış-ma-sı] çok zor.
This heat-loc lesson study-nomin-POSS very difficult
It is very difficult to study in this heat.
b. Ben [e fal-a bak-ma-sın]-ı bil-mi-yor-um.
I fortune-dat look-nomin-POSS-acc know-neg-impf-1sg
I do not know how to tell a fortune.

(Özsoy, 1988, Examples 2a–b, p. 301)

In fact, POSS is also observed in all types of nominalized embedded structures constituting the main strategy for complementation in Turkish. Such nominalized complements take a nominalized verb bearing POSS, agreeing with either a genitive subject as in (61a) or a zero-marked subject as in (61b), mainly depending on the specificity of the subject:

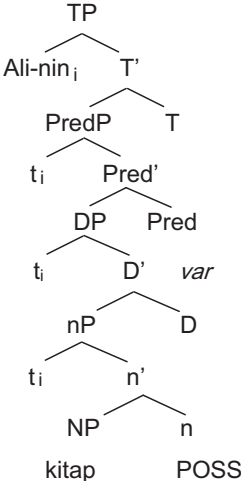
- (61) a. Ali hırsız-in o ev-e gir-diğ-in-i duy-du.
Ali thief-GEN that house-dat enter-nomin-POSS-acc hear-past.
Ali heard that the thief broke into that house. (Lit.: Ali heard about the thief’s breaking into that house)
b. Ali o ev-e hırsız gir-diğ-in-i duy-du.
Ali that house-dat thief-GEN enter-nomin-POSS-acc hear-past.
Ali heard that a thief/thieves broke into that house. (Lit.: Ali heard about thieves’ breaking into that house)

Here again we claim that POSS signals the presence of an argument, namely the subject. However, the intricacies of the syntactic derivation for such constructions within this new approach to POSS require further investigation, which we leave for future research.

Finally, as Turkish lacks a separate verb *have*, the expression of possession at the clausal level makes use of a GP construction involving POSS and the existential predicates *var/yok*, as shown in (62). As it is the case in GPs, both lexically transitive and intransitive nouns can take part in such constructions:

- (62) Ben-im şapka/hala-m var/yok.
I-GEN hat/aunt-1ps.POSS exist/exist.neg
I have/don't have a hat/an aunt.

The relation denoted between two nouns in an existential possessive is exactly the same as the one observed in a GP at the phrasal level. Thus, the nP analysis argued for phrasal possessives can be extended to these constructions as well as in (63a), where a GP construction is selected by the existential predicate *var*. While *kitap* 'book' remains within the existential closure in the c-command domain of the existential predicate, the possessor is topicalized into Spec, TP being extracted from the DP domain.²⁷

- (63) a.  b. Ali-nin kitab-ı var.
Ali-GEN book-POSS exist
Ali has a book.

As argued above, we believe the current proposal not only accounts for the three types of phrase level possessive constructions in Turkish, but also has major implications for the clause level syntax of the language, which we hope will be pursued in future research.

References

- Arslan-Kechriotis, C., 2006. *Case as an Interpretable Feature* (Ph.D. dissertation). Boğaziçi University, Istanbul.
- Arslan-Kechriotis, C., 2009. *Determiner Phrase and Case in Turkish: A Minimalist Account*. VDM Publishing House, Saarbrücken.
- Aygen, G., 2007. *Specificity and subject–object positions/scope interactions in Turkish*. *J. Linguist. Lit. (Mersin Üniversitesi Dil ve Edebiyat Dergisi)* 1–37.
- Barker, C., 1995. *Possessive Descriptions*. CSLI Publications, Stanford, CA.
- Barker, C., Hankamer, J., Moore, J., 1990. *Wa and Ga in Turkish*. In: Dziwirek, K., Farrell, P., Mejias-Bikandi, E. (Eds.), *Grammatical Relations: A Cross-theoretical Perspective*. CSLI, Stanford, pp. 21–43.
- Belvin, R., den Dikken, M., 1997. *There, happens, to, be, have*. *Lingua* 101, 151–183.
- Bošković, Ž., Şener, S., 2014. *The Turkish NP*. In: Hofherr, P.C., Zribi-Hertz, A. (Eds.), *Cross-linguistic Studies on Nominal Reference: With and Without Articles*. Brill, Leiden.
- Chung, S., Ladusaw, W., 2004. *Restriction and Saturation*. MIT Press, Cambridge.
- Coon, J., 2013. *Aspects of Split Ergativity*. Oxford University Press, Oxford.
- Dede, M., 1978. *A Syntactic and Semantic Analysis of Turkish Nominal Compounds* (Ph.D. dissertation). University of Michigan.
- Downing, P., 1977. *On the creation and use of English compound nouns*. *Language* 53, 810–842.

²⁷ This is along the same lines as Szabolcsi (1994)'s proposal for existential constructions in Hungarian. The view that the genitive marked possessor is a topic has also been stated as early as Ultan (1978). Note that Spec, TP in Turkish has also been argued to be a discourse-related position, which hosts sentence initial topics (Özsoy, in press).

- Enç, M., 1987. Anchoring conditions for tense. *Linguist. Inq.* 18, 633–657.
- Enç, M., 1991. The semantics of specificity. *Linguist. Inq.* 22, 1–25.
- Erkman-Akerson, F., Ozil, Ş., 1992. /EN/and /DiĞI/ crossings: genitival NPs and sentential clauses as relative clause subjects. In: *Proceedings of the Sixth International Conference on Turkish Linguistics*, pp. 1–11.
- Gallego, A., 2009. Two types of light categories, one type of roots. In: *Paper Presented at the Roots Workshop*. University of Stuttgart.
- Göksel, A., 2009. Compounds in Turkish. *Ling. Linguaggio* 2, 213–236.
- Göksel, A., Haznedar, B., 2007. Remarks on Compounding in Turkish. Boğaziçi University Ms.
- Göksel, A., Kerslake, C., 2005. *Turkish Grammar*. Routledge, London.
- Grimshaw, J., 1990. *Argument Structure*. MIT Press.
- Hale, K., Keyser, S.J., 2002. *Prolegomenon to a Theory of Argument Structure*. MIT Press, Cambridge (Mass.).
- Hayasi, T., 1996. The dual status of possessive compounds in modern Turkish. In: Berta, A., Brendemoen, B., Schöning, C. (Eds.), *SymbolaeTurcologica*, vol. 6. pp. 119–129.
- Kabak, B., 2007. Turkish suspended affixation. *Linguistics* 45 (2), 311–347.
- Kayne, R., 2008. *Antisymmetry and the Lexicon*. NYU, Ms..
- Kelepir, M., 2001. *Topics in Turkish Syntax: Clausal Structure and Scope* (Ph.D. dissertation). MIT, Cambridge.
- Kharytonava, O., 2011. *Noms Composés en Turc et Morphème -(s)I* (Ph.D. dissertation). The University of Western Ontario.
- Knecht, L.E., 1986. *Subject and Object in Turkish* (Ph.D. dissertation). MIT.
- Kornfilt, J., 1984. *Case Marking, Agreement and Empty Categories in Turkish* (Ph.D. dissertation). Harvard University, Cambridge.
- Kornfilt, J., 1997. On syntax and morphology of relative clauses in Turkish. *Dilbilim Araştırmaları*. Kebikeç Yay, Ankara.
- Kunduracı, A., 2013. *Turkish Noun–Noun Compounds: A Process-Based Paradigmatic Account* (Ph.D. dissertation). University of Calgary.
- Lewis, G., 1967. *Turkish Grammar*. Oxford University Press, Oxford, New York.
- Li, C., 1971. *Semantics and the Structure of Compounds in Chinese* (Ph.D. Dissertation). University of California, Berkeley.
- Marantz, A., 2000. *Words*. MIT, Ms..
- Mateu, J., 2002. *Argument Structure: Relational Construal at the Syntax–Semantics Interface* (Ph.D. dissertation). UAB.
- Özsoy, A.S., 1988. On complementation in Turkish: possessed impersonal infinitives. In: SabriKoç (Eds.), *Studies on Turkish Linguistics*. ODTÜ Yayınları, Ankara, pp. 299–313.
- Özsoy, A.S., 1994. *Türkçe'deOrtaçYapısı*. In: *Dilbilim Araştırmaları-1994*. Hitit Yayınevi, Ankara.
- Özsoy, A.S., (in press). Linearization in Turkish and minimality in binding. In: *Proceedings of ICTL 2012*. Harrassowitz, Wiesbaden.
- Öztürk, B., 2001. Genitive phrases in Turkish. In: *Proceedings of HUMIT*, (Harvard University-MIT Joint Conference on Linguistics), 2000, MITWPL 40.
- Öztürk, B., 2004. *Case, Referentiality and Phrase Structure* (Ph.D. dissertation). Harvard University.
- Öztürk, B., 2005. *Case, Referentiality and Phrase Structure*. *Linguistik Aktuell*. John Benjamins, Amsterdam.
- Öztürk, B., Taylan, E., Zimmer, K., (in press). Possessive free genitives in Turkish. In: Zeyrek, D., Sağ in Şimşek, Ç., Atas, U., Rehbein, J. (Eds.), *Ankara Papers in Turkish and Turkic Linguistics (Proceedings of the 16th International Conference on Turkish Linguistics)*. Series *Turcologica*. Harrassowitz, Wiesbaden.
- Partee, B., 1983/1997. Uniformity vs. versatility: The genitive, a case study. Appendix to Theo Janssen (1997), compositionality. In: van Benthem, J., ter Meulen, A. (Eds.), *The Handbook of Logic and Language*. Elsevier, New York, pp. 464–470.
- Partee, B., Borschev, V., 2003. Genitives, relational nouns, and argument–modifier ambiguity. In: Lang, E., Maienborn, C., Fabricius-Hansen, C. (Eds.), *Modifying Adjuncts*. Mouton de Gruyter, pp. 67–112.
- Pustejovsky, J., 1995. *The Generative Lexicon*. MIT Press, Cambridge, MA.
- Siewierska, A., 2008. Person forms. In: Song, J.J. (Ed.), *The Oxford Handbook of Linguistic Typology*. Oxford University Press, Oxford.
- Swift, L., 1963. *A Reference Grammar of Modern Turkish*. Indiana University Publications, Bloomington.
- Szabolcsi, A., 1994. The noun phrase. In: Kiefer, F., Kiss, E.K. (Eds.), *The Syntactic Structure of Hungarian*, vol. 27. Academic Press, New York, pp. 179–274.
- Taylan, E., Öztürk, B., 2014. The notorious –s/n in Turkish: neither an agreement nor a compound marker? *Dilbilim Araştırmaları Dergisi* 2014/II, 181–199.
- Ullan, R., 1978. Toward a typology of substantial possession. In: Greenberg, J.H. (Ed.), *Universals in Human Language*. Stanford University Press, Stanford, pp. 11–50.
- Uygun, D., 2009. *A Split Model for Category Specification: Lexical Categories in Turkish* (Ph.D. dissertation). Boğaziçi University.
- van Schaik, G., 1992. The treatment of Turkish nominal compounds in FG. In: Fortescue, M., Harder, P., Kristoffersen, L. (Eds.), *Layered Structure and Reference in a Functional Perspective*. John Benjamins, Amsterdam, pp. 231–252.
- Vikner, C., Jensen, P.A., 2002. A semantic analysis of the English genitive. *Interaction of lexical and formal semantics*. *Stud. Linguist.* 56, 191–226.
- von Prince, K., 2012. Nominal possession in Daakaka: transitivizing vs. linking. In: *Proceedings of AFLA*, vol. 18.
- Yükseker, H., 1998. Possessive constructions in Turkish. In: Johanson, L., et al. (Eds.), *The Mainz Meeting, Proceedings of the 11th International Meeting on Turkish Linguistics*. Harrassowitz, Wiesbaden, pp. 458–477.
- Zimmer, K., 1971. Some general observations about nominal compounds. In: *Working Papers on Language Universals*, No. 5. Stanford University, pp. C1–C21.