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Editorial

Possession: Puzzles in meaning and form

1. Introduction

Possession has intrigued linguists for mainly two reasons (see for example also Coene and D'Hulst, 2003; Myler, 2014). The first among these is its polymorphous morphosyntactic realization. In most languages, a single possessive relation can be expressed by using various different grammatical structures. We illustrate this with an example from Dutch. All five expressions in (1) encode the same possessive relation between Johan, the possessor, and a car, the possessee.

(1) a. *Johan-s auto*
Johan-POSS car
'Johan's car'

b. *de auto van Johan*
the car of Johan
'Johan's car'

c. *Johan z'n auto*
Johan his car
'Johan's car'

d. *Johan heeft een auto*
Johan has a car
'Johan has a car'

e. *Die auto is van Johan*
That car is of Johan
'That car belongs to Johan'

[Dutch]

In addition, the set of grammatical structures that is used to express possession varies from language to language. There is even variation among closely related languages. German, which is closely related to Dutch, has equivalents for each of the five strategies in (1), but, unlike Dutch, can also use the postnominal genitive to express possession, as in (2).

(2) *das auto des professor-s* [German]
the car the.GEN professor-GEN
'the professor's car'

The second property of possessive structures that has fascinated researchers for years is the versatility with respect to the meanings these structures express. For instance, the Dutch postnominal possessor introduced by *van* 'of', (1b), can be used to express a wide range of different relations, among those given in (3).

(3) a. *de auto van Johan* [legal ownership, responsibility, designer, etc. . .] [Dutch]
the car of Johan
'Johan's car'

b. *de zoon van Johan* [kinship]
the son of Johan
'Johan's son'

c. *de neus van Johan* [body part]
the nose of Johan
'Johan's nose'

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d. *de deur van de auto* [part-whole]
the door of the car
'the door of the car'

e. *de boosheid van Johan* [source]
the anger of Johan
'Johan's anger'

f. *de verwijdering van Johan* [theme]
the removal of Johan
'Johan's removal'

g. *het geren van Johan* [Agent]
the running of Johan
'Johan's running'

In the case of (3a), one obvious reading is that Johan legally owns the car, but other readings are also available. For instance, (3a) is also possible in a context in which Johan has the responsibility of securing a particular car, or when Johan is the designer of the car, or when Johan is a police officer that has been assigned the duty of following a particular car, etc. The data in (3) thus show that possessive constructions can be used to express a whole range of meanings.

The polymorphous realization of possession and the versatility with respect to the meaning expressed by possessive structures have been extensively studied by linguists. We will henceforth refer to these two issues as *the polymorphous realization puzzle* and *the meaning versatility puzzle* respectively.[1]

2. The meaning versatility puzzle

The meaning versatility puzzle has led some linguists to believe that the meaning of the possession relation is not constrained at all and can be anything. One of the most explicit formulations of this belief is that of Williams (1982:283) who states that ''The [possession] relation [. . .] can be any relation at all.'' This is far from the whole story though and in what follows we will step by step introduce the insights that have emerged from the – mainly semantics – literature.

2.1. The sortal-relational distinction

Partee (1983/1997) and Barker (1995) were among the first to show that there are restrictions on the interpretation of possession relations, in particular in out-of-the-blue contexts. For instance, while multiple possessive interpretations are freely available in (4a), kinship is the only interpretation that presents itself in (4b).

(4) a. *Johan-s boek* [authorship, readership, etc.] [Dutch]
Johan-POSS book
'Johan's book'

b. *Johan-s zoon* [kinship]
Johan-POSS zoon
'Johan's son'

The difference between (4a) and (4b) lies in the noun types: nouns like *zoon* 'son' in (4b) inherently express a relation, while nouns like *boek* 'book' in (4a) do not. This distinction is therefore also referred to as that between *relational* and *sortal* nouns (Löbner, 1985; Partee, 1983/1997; Barker, 1995, 2011).

The sortal-relational distinction is standardly analyzed in terms of presence or absence of argument structure (Barker, 1995, 2011; Partee, 1983/1997). Relational nouns have argument structure that specifies the particular relation between the possessor and the possessee. This is illustrated for *son* in (5):

(5) $[\![\text{son}]\!] = \lambda y \lambda x(\text{son\_of}(y)(x))$

[1] Although most of the literature on possession is concerned with these issues, the two issues are rarely given names. Myler (2014)'s study on predicative agreement is an exception to this. He refers to the polymorphous morphosyntactic realization of possession as the *too many (surface) structures*-puzzle. He dubs the issue of the versatility with respect to the meaning of possessive constructions the *too many meanings*-puzzle. We will not adopt these names, since we do not agree with the negative connotation of *too many* in these names.

We will refer to *y* as the internal argument and to *x* as the external argument of *son*. The relation expressed in (4b) is fully determined by the meaning of the possessee noun.

Sortal nouns entertain a more flexible relation with their possessors. This relation is classically analyzed as the result of a type-shifting operation that adds an argument to a sortal noun. We will refer to this operation as *relationalization* (Barker's, 2011 π type-shifter):

(6) *Relationalization* (REL)
$\lambda x(P(x)) \rightarrow \lambda y \lambda x(P(x) \& \mathbf{R}(y)(x))$
where **R** is a pragmatically defined relation

The relationalization operator takes a non-relational predicate *P* as input and returns a relational one whose external argument is required to satisfy *P* and stand in the new – pragmatically defined – relation ***R*** to a new internal argument *y*. This enrichment operation can apply to *book* and return something like 'book *y* wrote', making it relational. This is worked out in (7):

(7) $\lambda x(book(x)) \rightarrow \lambda y \lambda x(book(x) \& \mathbf{written\_by}(y)(x))$
where **written_by** has been chosen as a pragmatically relevant way to specify **R**

The sortal noun *book* in (7) is enriched with an internal argument *y* that is related to the external argument *x* through the *written_by* relation.

2.2. Qualia structure

The sortal-relational distinction is an important step toward understanding the meaning versatility puzzle but there is still more to it. Vikner and Jensen noticed that some pragmatically defined relations are more readily available than others (Vikner and Jensen, 2002; Jensen and Vikner, 2004). For instance, they observed that the relation in (4a) can easily receive an authorship or readership interpretation but not an interpretation according to which (4a) refers to the book Johan likes. More contextual support is needed to get the latter interpretation, despite the fact that the operation of relationalization in principle allows any relation to be established between the internal and the external argument:

(8) [context: The whole morning we have been discussing everyone's favorite book.]
Ik vond Johan-s boek leuk maar Jan-s boek niet.
I found Johan-POSS book fun but Jan-POSS book not
'I liked Johan's book but not Jan's.'

The contrast between (4a) and (8) is doubled by the contrast between (4b) and (9):

(9) [context: The whole morning we have been discussing everyone's favorite mother figure.]
Ik vond Johan-s moeder geweldig.
I found Johan-POSS mother great
'I really liked Johan's mother.'

Johans moeder in (9) no longer necessarily refers to Johan's actual mother but can refer to his favorite mother figure.

The comparison between (4a), (4b), (8) and (9) suggests that there is a category of relations (as in (4a)) that lies in between being pragmatically defined (as those in (8) and (9)) and being hardwired into the semantics (as the one in (4b)). Jensen and Vikner relate this in-between category to relations encoded not in the argument structure of nouns but in their qualia structure, the noun's repository of lexical information regarding – among others – their creator (the agentive quale) and their user (the telic quale) (Pustejovsky, 1995).[2] They assume the relationalization type-shift can exploit either the noun's qualia structure or pragmatic context.

We note that the full analysis of (9) not only involves relationalization but also another standard type-shift, *viz.* the *detransitivization* type-shift defined in (10) (Barker's, 2011 *Ex* type-shifter):

(10) *Detransitivization*
$\lambda y \lambda x(\mathbf{R}(y)(x)) \rightarrow \lambda x \exists y(\mathbf{R}(y)(x))$

[2] See Le Bruyn, de Swart and Zwarts (*this issue*) for a discussion of two more debated qualia: the constitutive quale and the possessor quale.

Detransitivization takes a relation ***R*** and returns a non-relational predicate by existentially closing off the internal argument *y* of ***R***. The result of applying detransitivization to *mother*, thus preparing it for relationalization, is given in (11):

(11) $\lambda y \lambda x(\textbf{mother\_of}(y)(x)) \rightarrow \lambda x \exists y(\textbf{mother\_of}(y)(x))$

The input of (11) is the set of pairs of individuals that stand in the mother-child relation to each other whereas its output is the set of individuals that are mothers. This set can then be relationalized again so as to lead to the set of pairs of individuals involving a mother and an individual that likes her.

Both relationalization and detransitivization have standardly been assumed to be available for free, i.e. they do not have to be triggered by type mismatches. On the classical analysis of relational nouns as two-place predicates this assumption is necessary to account for the fact that relational nouns like *mother* can undergo detransitivization and subsequent relationalization in the absence of a type mismatch. (9) is a case at hand as *Johans* 'Johan's' requires a relational expression and *moeder* 'mother' immediately qualifies. The reinterpretation of *moeder* 'mother' as *favorite mother figure of someone* can thus only be explained by assuming that detransitivization and relationalization apply freely.[3]

2.3. The meaning versatility puzzle: conclusion

The work of semanticists like Barker, Partee, Jensen and Vikner has convincingly shown that possessive relations are not without restrictions. Freely available relations make crucial use of lexical information encoded in the argument or in the qualia structure of nouns whereas strong contextual support is needed to introduce non-lexical relations.

3. Interlude: types of relational nouns

In section 2 we presented the standard analysis of relational nouns and the way they interact with possessive markers. There are however some interesting alternatives, one of which we would like to discuss in a bit more detail. Dekker (1993) proposes that relational nouns are implicitly relational in the sense that their internal argument is not represented in their semantic type (they are one-place predicates) but can be activated on demand, through a process that Le Bruyn, de Swart and Zwarts (*this issue*) call *explicitation*. The crucial difference between the classical and the Dekker analysis lies in the fact that the former assumes two arguments for a relational noun whereas the latter dynamically existentially closes off the noun's internal argument. The Dekker analysis of a relational noun like *son* is given in (12):

(12) $[\![\text{son}]\!] = \lambda x \mathcal{E} y(\text{son\_of}(y)(x))$

The curly capital E in (12) is the dynamic version of the existential quantifier and guarantees that, despite the fact that *y* is not an argument in (12), it remains semantically retrievable, unlike its alternative version in (13) that is closed off by a static existential quantifier:

(13) $[\![\text{son}]\!] = \lambda x \exists y(\text{son\_of}(y)(x))$

The semantics of *son* in (13) is – semantically speaking – non-relational because no expression (13) combines with can access the statically existentially closed off argument *y*.

If one combines the classical analysis of relational nouns with the Dekker analysis, one obtains an interesting new perspective on the inventory of different types of relational nouns. The classical analysis would be the preferred option for nouns like *sake* that obligatorily take an internal argument (14a) whereas the Dekker analysis would be the preferred option for nouns like *son* that optionally take an (overt) internal argument (14b):

(14) a. **The sake* vs. *The sake of John*
b. *The son* vs. *The son of John*
c. *The stranger* vs. **The stranger of John*

[3] Given that these shifts are not meaning preserving this is not an innocent move as non-meaning-preserving type-shifts are typically assumed to be triggered by type mismatches. Section 3 provides an alternative analysis for relational nouns like *mother* and *son* that takes them to be one-place predicates. This entails that there is a type mismatch between *Johans* and *moeder* in (9) and that the relationalization type-shift is licensed. See Le Bruyn et al. (2013a,b) for discussion.

To complete the picture one could then use a representation as the one in (13) for conceptually relational nouns that cannot take an internal argument (14c).[4]

The paradigm in (14) is not new and semanticists working with the classical representation of relational nouns like two-place predicates have typically compared it with the optionality/non-optionality of arguments in the verbal domain to justify a unified analysis of all relational nouns as two-place predicates (see e.g. Barker, 2011, *this issue*). The underlying assumption is then that syntax interacts differently with different types of relational nouns. This assumption is however only viable if the lexicon flags different types of relational nouns differently and providing them with a different semantics is a straightforward way of doing so.

The noun classes in (14) are not only relevant to analyze English data (see among others Barker, *this issue*) but are relevant for all languages in which relational nouns come in different guises (see among others Chappell and McGregor, 1996 and von Prince, *this issue*).

4. The polymorphous realization puzzle

4.1. Syntactic approaches

The polymorphous realization puzzle has received quite a lot of attention in the generative syntactic literature. Most of the literature follows a traditional approach to this issue and tries to show that the different possessive constructions are surface variations that are different manifestations of the same underlying structure (see for instance among many others Szabolcsi, 1983, 1994; Fiva, 1985; Freeze, 1992; Kayne, 1993; Grohmann and Haegeman, 2003; Julien, 2005; Alexiadou, 2005; Solstad, 2010; Georgi and Salzmann, 2011).

Szabolcsi's (1983, 1994) work on Hungarian possession is the most classical example of such an approach. She observes that Hungarian has two different types of adnominal possessors: nominative possessors, occurring in between the definite article and the possessee noun as in (15a), and dative posssessors normally occurring in front of the definite article as in (15b).

(15) a. *a* ***Mari-Ø*** *vendég-e-Ø* [Hungarian]
the Mary-NOM guest-POSS-3SG
'Mary's guest' (Szabolcsi, 1983:89, ex 3)

b. ***Mari-nak*** *a* *vendég-e-Ø*
Mary-DAT the guest-POSS-3SG
'Mary's guest' (Szabolcsi, 1983:89, ex 10)

Dative possessors do not only occur in the position immediately preceding the definite article, but can also occur further away from the noun, like for instance in the clause initial focus position, as in (16).

(16) ***Mari-nak*** *alszik* *a* *vendég-e-Ø* [Hungarian]
Mari-DAT sleeps the guest-POSS-3SG
'It is Mari whose guest sleeps' (based on Szabolcsi, 1983, ex 20)

According to Szabolcsi (1983, 1994), nominative possessors occupy the base position in between the definite article and the possessee noun. Instead of in this base position, dative possessors occur in derived positions as the result of movement. So the dative possessor in (15b) is the result of moving the possessor from its base position between the definite article and the noun to a position immediately preceding the definite article, as in (17).

(17) *Mari-nak a* t_{Mari} *vendég-e-∅*

Szabolcsi derives dative possessors that occur even further away from the noun by an additional movement step after the possessor has undergone movement from its base position to the position immediately preceding the definite article. This has been schematized in (18) for the sentence in (16).

[4] This of course leaves us with the question what to do with *to*-PPs combining with *stranger* as in 'He's a stranger to himself'. One way to go would be to assume that *of* is not the only preposition that is able to probe internal arguments and that relational nouns whose internal argument cannot be retrieved by any preposition simply do not exist.

(18) *Mari-nak alszik* t-$_{Marinak}$ *a* t_{Mari} *vendég-e-∅*

In this way, Szabolcsi reduces multiple surface patterns in the expression of possession in Hungarian to a single underlying structure.

This approach of reducing surface variation to a single underlying structure has also been applied by many researchers to another topic, namely sentences with HAVE and BE. These two verbs are cross-linguistically very frequently used to express possession. Some languages only use HAVE, like English and Dutch. Other languages only use BE, like for instance Russian (Freeze, 1992). There are also languages that have possessive sentences with both BE and HAVE. As illustrated in (19), French is a case at hand.

(19) a. *Jean a une voiture* HAVE [French]
Jean has a car
'Jean has a car'
b. *Cette voiture est à Jean* BE
This car is to Jean
'This car is Jean's'

Freeze (1992) observes that cross-linguistically the possessive structures with BE are almost always accompanied by a PP containing the possessor, as is also the case in (19b). He also observes similar patterns for existential constructions. This leads him to propose that HAVE is actually a derived form that results from combining (via incorporation) BE with a preposition. This idea has been very influential. It has been proposed in many slightly different forms and has been extended to also include a whole range of other uses of HAVE and BE beyond the possessive and existential use, like the auxiliary, modal, experiencer and causative uses of these verbs (see Kayne, 1993; Belvin and Den Dikken, 1997; Guéron, 1998; Hoekstra, 2004; among others).

4.2. Semantic approaches

The polymorphous realization puzzle has received less attention in the semantics literature. This is probably due to the fact that semanticists have focused their efforts on discovering small but crucial meaning differences between closely related expressions, thus (a)voiding the puzzle.

One of the best examples of such small meaning differences is the opposition between *of*-possessives and prenominal genitives as in (20):

(20) a. *John's brother*
b. *the brother of John*

Despite the fact that (20a) and (20b) can mean the same thing, *of*-possessives are semantically different from prenominal genitives (see in particular Barker, 1995; Barker and Dowty, 1993). This becomes particularly obvious in the range of readings (20a) and (20b) allow for: whereas the interpretation of (20b) necessarily involves the *brother* relation, (20a) allows for all relations as long as they are contextually supported. According to Barker's analysis, *of* binds internal arguments of relational nouns whereas *John's* merely requires a relation. This explains why (20a) not only gives rise to an interpretation based on the *brother* relation but also allows for a wider range of readings implicating detransitivization and subsequent relationalization. It furthermore explains why *John's* has a wider distribution and can occur with almost any noun, relational or sortal.

Another illustration involves the so-called opposition between modifier and predicate possessives. English predicate possessives are known to be out for classical relational nouns but are perfectly acceptable for non-relational nouns. Modifier genitives, on the other hand, are acceptable with either noun type, be it only with a possessive interpretation.

(21) a. ??*That brother is John's.*
b. *That's John's brother.*

(22) a. *That car is John's.*
b. *That's John's car.*

Facts from Russian and Polish, languages in which predicate uses can be distinguished from noun ellipsis confirm that relational nouns are out with predicate possessives whereas non-relational nouns are fine but only with a possessive interpretation (see Öztürk Basaran and Erguvanli Taylan, *this issue*, for discussion of Turkish).

A final illustration is provided by Le Bruyn, de Swart and Zwarts (*this issue*) who argue that *HAVE* can take NPs or DPs and that this syntactic difference is linked to a semantic one. In particular they argue that *HAVE* takes NPs only if it accesses the relations included in the argument or qualia structure of its object noun.

4.3. The polymorphous realization puzzle: conclusion

Semanticists and syntacticians have reacted quite differently to the polymorphous realization puzzle. In general, syntacticians have tried to reduce the different possessive constructions to a single underlying structure. Semanticists, on the other hand, have searched for small meaning differences between possessive structures. We think that these two research strategies should be combined more often. In case meaning differences exist between possessive constructions, it is very unlikely that these constructions have the same underlying structure. However, there are also cases in which no meaning differences between possessive constructions are found (e.g., to our knowledge, there are no meaning differences between the Dutch prenominal possessor construction in (1c) and its postnominal counterpart in (1b)). In that case, investigating whether a common underlying structure can be found can be a fruitful approach.

5. The papers

The papers in this special issue all contribute to a better understanding of one or more of the issues raised above. Of most papers, a more basic version was presented at the GLOW workshop ''Understanding Possession'' that took place at the HUB in Brussels on April 5th, 2014.[5] We will briefly introduce each of the papers below.

Barker (*this issue*) takes a closer look at the distinction between sortal and relational nouns. As observed above, Barker and others have argued in earlier work that this distinction is relevant for the possible interpretations of the possessive relation and also plays a role in the distribution of some possessive constructions. Barker (*this issue*) shows that this distinction is also relevant for a phenomenon outside the domain of possession: concealed questions. Concealed questions are nominal constituents that receive a question-like interpretation. For instance, the sentence in (23a) has the same interpretation as the sentence in (23b). This shows that the nominal constituent *Chris*' *age* is interpreted as the (concealed) question *what Chris*' *age is*.

(23) a. *Anikó found out Chris*' *age.*
b. *Anikó found out what Chris*' *age is.*

Now, relational nouns like *age* in (23a) make good concealed questions. However, simple nominal constituents headed by sortal nouns do not. If they occur in an environment that normally triggers a concealed question, sortal nouns give rise to an incomprehensible utterance, as in (24).

(24) ?? *Anikó found out the pen.*

Barker's main claim is that this contrast is due to the nature of concealed questions (and questions in general), which according to him consist of two parts: a foreground, identifying a set of alternatives, and a background that identifies the relevant ones among those alternatives.

Sortal nouns correspond only to a set of individuals and therefore do not have enough material to map onto the foreground-background structure. They can therefore not be interpreted as questions. Relational nouns, on the other hand, make available the possessee noun and, obligatorily, a relation between the possessee and the possessor. According to Barker, this is enough to be mapped onto the foreground-background structure. The set represented by the possessee noun provides the alternatives for the foreground. The relation to the possessor provides the necessary background to distinguish among these alternatives. In this way, relational nouns can be interpreted as concealed questions. By extending it beyond possession, Barker's proposal shows that the sortal-relational distinction is a solid and important component of the grammar.

[5] The only paper that was not presented at this workshop is the one by Le Bruyn, de Swart and Zwarts.

Above we discussed the research tradition in which different uses of HAVE and BE are derived from a common core. In line with this tradition, **Bjorkman and Cowper** (*this issue*) try to unify two different uses of HAVE in English: its possessive use as in (25a) and its use as a marker of modal necessity as in (25b).

(25) a. *John has a very fast car.* [possessive]
b. *John has to go now.* [modal necessity]

As we have seen above, most researchers try to reduce the different uses of HAVE to a single underlying syntactic structure (see Kayne, 1993; Belvin and Den Dikken, 1997; Guéron, 1998; Hoekstra, 2004; among others). However, Bjorkman and Cowper take a different approach. Cowper and Bjorkman claim that the unifying link between the possessive and modal uses of HAVE is to be found in the semantics. They propose that both these uses have a common semantic core: the concept of inclusion. Possessive HAVE expresses the inclusion of two arguments of type <e>. The inclusion relation with modal HAVE is between sets of worlds.

Contrary to the research tradition, Cowper and Bjorkman claim that the possessive and modal uses of HAVE have a different syntax, one that cannot be reduced to a common underlying structure. According to their proposal, *v* takes a nominal argument as its complement, when it hosts possessive HAVE. If it is occupied by modal HAVE, *v*, however, takes a proposition as its complement.

Finally, Cowper and Bjorkman show that their proposal for HAVE-possession languages like English carries over to BE-possession languages like Hindi-Urdu.

Le Bruyn, de Swart and Zwarts (*this issue*) also zoom in on the semantics of HAVE and argue that it holds answers for the literature on nominal incorporation in languages like Greek, Romanian, Norwegian, Spanish and Catalan. We illustrate the phenomenon for the first three languages:

(26) a. *Forouse frako.* (Greek, Alexandropoulou, 2013)
s/he-wears frock.coat
'He was wearing a frock coat.'
b. *Ion are copil.* (Romanian, Dobrovie-Sorin et al., 2006)
Ion has child
'Ion has a child.'
c. *Han hadde rød ytterfrakk.* (Norwegian, Borthen, 2003)
he had red coat
'He had a red coat.'

What the examples in (26) show is that singular count objects can appear bare in Greek, Romanian and Norwegian despite the fact that these languages are known as article languages, i.e. they normally impose the use of articles and come with a ban on bare nouns. The exceptional status of bare singular count objects in these languages has generated quite some research and the general consensus seems to be that examples like (26) always involve verbs like HAVE.

The question Le Bruyn, de Swart and Zwarts tackle is why HAVE verbs come with the special property of allowing for incorporation. The answer they provide exploits an older intuition about HAVE according to which it selects relations and the use of an article for its objects would be semantically vacuous (see Landman and Partee, 1987; Szabolcsi, 1994; Partee, 1999; Landman, 2004 for variations on this intuition). In order to extend this analysis to HAVE verbs in general (as in 26a) and to nouns that are typically not considered to be relational (as in 26c), Le Bruyn, de Swart and Zwarts argue that non-relational nouns very often come with a relational dimension through their qualia structure and that HAVE verbs probe their object noun's qualia structure in the same way as HAVE probes its object noun's argument structure.

Along the way, Le Bruyn, de Swart and Zwarts also make a few important points about possession in general. They argue in favor of Dekker's analysis of relational nouns, which allows them to analyze qualia and argument structure as containing implicit arguments and to provide a unified analysis of HAVE in (26b) and (26c). They furthermore argue that there are at least two types of HAVE and HAVE verbs, not only in languages like Greek but also in English: one type selecting (implicit) relations and imposing narrow scope of their objects as well as an indefinite reading and the other selecting arguments and allowing their objects to take variable scope and to be interpreted as an indefinite or a definite.

Semantic and syntactic theories about possession are mainly based on a handful of European languages. Because of this bias, these theories are at risk to be unable to account for the full range of variation among the world's languages. **Von Prince** (*this issue*) tries to tackle this problem by her study of possession in the Oceanic language Daakaka. In Daakaka, nouns that denote internal organs can occur in two different possessive constructions, the ones in (27).

(27) a. *bura=**ne** vyanten en=te* [body part reading] (Dakaaka)
blood=TRANS person DEM=MED
'this person's blood'

b. *bura **Ø-e** vyanten en=te* [ownership reading]
blood CL2-LINK person DEM=MED
'this person's (animal) blood' (Von Prince this issue: ex 1)

In (27a), the noun *bura* blood occurs with the *(a)ne*-morpheme. This triggers the meaning according to which the blood is part of the person's body. This body part interpretation is normally associated with relational nouns. The same noun can also occur with the linker morpheme *–e* as in (27b). In that case, the blood has a different source than the possessor, for instance the blood came from an animal, but the possessor somehow owns the blood. Such a meaning is typically associated with sortal nouns. The construction therefore determines the interpretation, not the possessee noun.

Relational nouns in languages like English do, however, also have a sortal use. For instance, *dr. John's heart* can in the right context be the heart of a patient that cardiologist John is examining. This is normally dealt with through means of a type shift operation that detransitivizes the relational noun. However, von Prince shows that nouns like *bura* have all the morphosyntactic properties of sortal nouns, not those of relational nouns. In (27a), a sortal noun is thus type-shifted to a relational interpretation.

The interpretation of sortal nouns is often equated in the literature to that of alienable possession and that of relational nouns to inalienable possession. Von Prince (*this issue*) argues that the data from Daakaka shows that the actual interpretation of a possessive construction can be independent of the type of possessee noun. Put differently, sortal nouns can receive an inalienable interpretation, like in (27a), and relational nouns can receive an alienable interpretation (like *heart* in the example above). She therefore shows that the inventory of possible type-shifting operations relevant to possession needs to be enriched by a transitivizing operation leading to inalienable readings.

Özturk and Taylan (*this issue*) show that the traditional approach of generative syntax to analyze different possessive construction as variations of a single underlying structure does not always work. They are concerned with the three Turkish possessive constructions in (28).

(28) a. *Çocuğ-**un** kitab-**ı*** Genitive-Possessive
Child-GEN book-POSS
'the child's book'

b. Çocuğ-**un** kitap Possessor Free Genitive
Child-GEN book
'the child's book'

c. Çocuk kitab-**ı** Possessive Compound
Child book-POSS
'(a) children's book' (Özturk and Taylan, this issue: ex 1–3)

The constructions in (28a) and (28b) differ with respect to the presence of the possessive marker on the possessee noun. Traditionally, the only difference between the more colloquial construction in (28b) and the standard construction in (28a) has been considered the pronunciation of the possessive marker (Göksel and Kerslake, 2005). Kundaracı (2013) therefore assigns the same syntactic structure to both of these constructions. Özturk and Taylan (*this issue*) argue that this cannot be the case, since it does not account for a difference in what types of nouns can occur as the possessee in these two constructions. Although both sortal and relational nouns can occur as the possessee noun in the construction in (28a), relational nouns cannot in (28b).

In order to account for this difference, Özturk and Taylan propose that the possessive marker on the possessee noun signals an argument relation between the possessor and the possessee (either because the noun is relational or as the result of type-shifting a sortal noun to a relational interpretation). The absence of the possessive marker signals the absence of an argument relation. As a consequence, the relation between the possessor and the possessee can only be one of modification (cf. Partee and Borschev, 2003). Özturk and Taylan argue that this semantic difference between the two constructions gives rise to a different syntax. The possessor in (28a) starts out as an argument introduced in the specifier of the projection headed by the possessive-suffix on the possessee noun (nP). It subsequently moves to spec DP, where its genitive case is licensed. The possessor in (28b), on the other hand, has a modifier syntax: it is inserted as an adjunct to DP.

With respect to the possessive construction in (28c), the same range of nouns that can occur in (28a) can occur in this construction as well. Özturk and Taylan therefore claim that, just like in the case of (28a), the possessor enters the

derivation as an argument in spec nP. However, the absence of genitive case, which correlates with a non-referential reading of the possessor, prevents the possessor to raise to Spec DP. The possessor is therefore in spec nP at all levels of the derivation.

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