

NOMINAL POSSESSION IN DAAKAKA: TRANSITIVIZING VS. LINKING*

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The Oceanic language Daakaka has transitive nouns, requiring a second noun phrase as a possessor argument, as well as intransitive nouns. Intransitive nouns can be possessed in two different ways: One involves transitivity, the other involves a linker. This paper discusses the semantic and syntactic properties of both constructions and explores the implications of their meanings. In particular, I will argue that the notion of (in)alienability can be reduced to the notion of temporal relativity.

1. The Daakaka noun system

Daakaka is an Oceanic language of Vanuatu, spoken by about a thousand speakers on the island of Ambrym. All the data come from my own fieldwork on Ambrym from 2009 through 2011.

By and large, nouns are a well-defined lexical class in the system of Daakaka word classes. They all have some properties in common which are prototypical of nouns and separate them from other classes such as verbs or adjectives: They mostly refer to objects and living entities, abstract notions or similar. In contrast to verbs and some adjectives, they can not serve as predicates without the interference of the copula, whereas verbs and adjectives are banned from argument positions. In contrast to all adjectives, nouns can not serve as optional attributes to other nouns. The class of nouns can be further divided into three subclasses. The largest noun class is basically defined *ex negativo* by the absence of any conspicuous features. In contrast to the other two classes, they can stand alone as arguments without any reference to a possessor.

The second class consists of nouns which identify their possessor by their inflection. Most of these nouns refer to body parts such as *bet-uk* ‘my head’, *bat-om* ‘your head’, *bat-en* ‘her/his head’, *bat-er* (head.of-1P.IN.POSS) ‘all our heads’. It is impossible to omit the ending, there is no word **bet* or **bat* simply meaning ‘head’. The following example shows one of these nouns in action:

- (1) me tas yan **med-uk**
come sit on back.of-1S.POSS
‘come, sit down on my back!’

The third noun class consists of lexemes which cannot be inflected, but instead require a second noun phrase in order to form a complete constituent. Many of these nouns refer to plant parts,

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Table 1: Examples of nouns from different classes referring to roughly the same concept

Meaning	Inflected	Trans. uninfl.	Intransitive
‘child’	<i>nat-</i>	<i>neti</i>	<i>temeli</i>
‘hole’	<i>b-</i>	<i>bwili, booli, bwilin</i>	<i>buluwu</i>
‘egg’	<i>dal-</i>	<i>deli</i>	
‘sound’	<i>diy-</i>	<i>dulu</i>	
‘feces’	<i>sy-</i>		<i>taten</i>
‘tooth’	<i>lu-</i>		<i>ép</i>
‘leaf’		<i>ye</i>	<i>yesukuo</i>

such as in *ung* *(*baa*) (flower.of hibiscus) ‘hibiscus flower’ or *ye* *(*vis*) (leaf.of banana) ‘banana leaf’.

The argument of a transitive noun can itself be a complex noun phrase:

- (2) a. *sini* *(*ye* *(*wep*))
 thorn.of leaf.of pandanus
 ‘tips of pandanus leave’
- b. *gili* *(*s-ar* *pun-an*)
 end.of CLF3-1P.IN.POSS tell-NMLZ
 ‘the end of our tale’

The difference between uninflected transitive nouns and intransitive nouns is two-fold: On the one hand, transitive nouns can never occur without an argument. On the other hand, it is impossible for an intransitive noun to be followed directly by a second noun phrase. Even in cases where it would make sense conceptually to assume that a noun might be transitive, if it does not belong to that lexical class, it cannot simply be followed by another noun:

- (3) *mwe poo usili vityop* (**em*)
 3S.REAL climb follow roof house
 intended: ‘He climbed onto the roof of the house’

Inflected noun phrases with a third person singular ending, by contrast, can be followed by a full noun phrase coreferential with their possessor ending:

- (4) *eya ma liye lee swa kuon te waase bung-un tomo*
 white-eye REAL take tree one after DISC whip mouth-3S.POSS rat
 ‘the white-eye [a bird] took a stick and beat the rat on the mouth.’ (lit. ‘...beat the rat’s mouth’)

Many concepts can be expressed by two or three roughly synonymous nouns belonging to different classes – this is illustrated in 1.

What we have seen so far is that some Daakaka nouns are, by their lexical definition, syntactically transitive, in the sense that they require a noun phrase as a syntactic argument. It

seems natural to assume that semantically too, they are two-place predicates. This intuition is strongly supported by the fact that the relation between a transitive noun and its argument is strictly fixed and cannot be modified much by the pragmatic context. For example, for nouns referring to plant parts like *ye* ‘leaf.of’ or *ung* ‘flower.of’, the argument always designates the organism that the leaf or flower grows out of. Thus, a phrase like *?*ye vyanten* (leaf.of man) is hardly acceptable and would have to mean something like ‘man leaf’, in analogy to ‘banana leaf, coconut leaf’ etc. It would necessarily refer to a leaf which is growing out of a person and could never refer to a leaf that a man merely possesses or has any other kind of relation with.

Another case in point to show that the relation between a transitive noun and its argument is determined lexically comes from two transitive nouns, *bwili* and *booli*, which both mean ‘hole’. But while the possessor argument of *bwili* refers to its content (or inhabitant), the possessor argument of *booli* instead refers to its location. In other words, *bwili* could be translated as ‘hole caused/ left by *x*’, whereas *booli* means ‘hole inside/ surrounded by *x*’. An example is given below:

- | | | | | | | |
|-----|----|---------------------------------------|-------|----|------------------------------------------|-------|
| (5) | a. | booli | vyor | b. | bwili | vyor |
| | | hole.in | stone | | hole.caused.by | stone |
| | | ‘a hole in a stone, cavity in a rock’ | | | ‘a hole (in the ground) left by a stone’ | |

To sum up these last two paragraphs, we have seen that for most transitive nouns the relation to their argument can easily be predicted from their meaning, as for example in the case of *uti* ‘seed of’, but in some cases, such as the two transitive nouns for ‘hole’, the relation is non-trivial and idiosyncratic. Furthermore, it holds for all transitive nouns that the relation to the possessor argument does not depend on the meaning of this argument, nor on the pragmatic context, but is determined entirely by the transitive noun itself. This means that the relation to the possessor argument is part of the lexical meaning of a transitive noun, in other words, a syntactically transitive noun is also semantically transitive.

Having shown that transitivity can be a lexical feature of Daakaka nouns, I will now go on to show how intransitive nouns and noun phrases can be productively transitivized.

2. Transitivization of noun phrases

Both verbs and nouns in Daakaka can be transitivized by a morpheme spelled out either as *ane*, mostly if the preceding noun ends in a consonant or */i/*, or as *ne*. In verbs, *(a)ne* does not assign a fixed role to the argument it binds. Instead, the role of the argument depends very much on the meaning of the transitivized verb.

Likewise with nouns, the range of relations holding between a transitivized noun and its argument depends strongly on the meaning of the noun phrases involved. I will refer to the phrase constituted by a transitivized noun phrase and its argument as a *transitive nominal construction*.

In many cases, especially when concrete objects are involved, the relation between the two noun phrases can be described as a part-whole relation in a broad sense:

- (6) a. yes ***(ane)** apyang ente c. temyar ***(ane)** s-ok bivian
 smoke TRANS fire that demon TRANS CLF3-1S.POSS friend
 ‘the smoke of that fire’ ‘the ghost of my (deceased) friend’
- b. bweang ***(ane)** leevyó
 treefern.hair TRANS treefern
 ‘the fibrous outer part of a treefern’

Another very frequent effect is that the possessor noun specifies the *kind* the head noun belongs to. These cases can often be translated into English as nominal compounds. So if for example the noun *ur* ‘louse’ is transitivized and followed by a noun referring to an animal (including humans), the latter noun specifies the typical host of the louse as in *ur ane barar* ‘pig louse’:

- (7) ur **ane** barar
 louse TRANS pig
 ‘pig louse’

The transitivizer is also applied to nouns referring to persons. If the possessor argument is a place name, it designates the place of origin of that person. The only other type of noun phrase to serve as a possessor argument of a transitivized person noun are deverbal nouns, which refer to activities or properties which are characteristic of that person. The following examples show that the relation between the two noun phrases depends on the argument noun at least as much as on the transitivized noun.

- (8) a. vyanten **ane** vilye Sesivi c. vyanten **ane** ól apyang an
 man TRANS place Sesivi man TRANS cook fire NMLZ
 ‘a man from Sesivi’ ‘a cook’
- b. vyanten **ane** peten-an
 man TRANS be.truthful-NMLZ
 ‘a truthful/honest man’

When a word like *bag* or *bowl* is used as a measure word as in *a bowl of water*, the measure noun is also transitivized and the mass which is being measured is taken as an argument:

- (9) atuwo **ne** deli es swa
 bag TRANS egg black.ant one
 ‘one bag of rice’

Especially when abstract noun phrases are involved in a transitive nominal construction, it is hard to give a general definition of the kind of relation that holds between the two noun phrases of each construction. The example in (10-c) also shows that the argument of a transitivized noun phrase can be a pronoun as well as a noun:

- (10) a. ebyate **ne** Oktoba
 moon TRANS October
 ‘the month October’
- b. daa **ne** yos-an
 speech TRANS love-NMLZ
 ‘words of love’
- c. emyarmyar **ane** nye
 memento TRANS 1S
 ‘a token of my memory, something
 to remember me by’

The type of relationship expressed in this section summons associations to what has been dubbed *inalienable possession*. However, whenever this term is explained in the literature, authors revert to listing specific kinds of relations such as ‘part-whole’, ‘bodyparts’ or ‘kinship’. However, the examples shown so far clearly show that no such label or list of labels can hope to fully capture the range of interpretations a transitivized noun phrase can receive. At the same time, the term *inalienability* has so far not been defined in a way which would allow a precise and unanimous distinction between relations which are inalienable and those which are not.

For the time being, I want to point out one characteristic all these cases of transitivized noun phrases do seem to have in common: the argument noun always expresses a defining, non-arbitrary feature of the transitivized noun: If the possessor argument was replaced by a different, if similar, noun phrase, the transitivized head noun would in general not be able refer to the same entity.

In the following sections, I will show that the same does not hold for linker genitives. By comparing the two possessive constructions, I will argue that the main feature responsible for the semantic differences is the presence or absence of a temporal argument.

3. Linker genitives

In addition to the transitivized possessive phrases, there are also two linkers which can be used to form a nominal possessive construction. I will refer to these constructions as linker genitives.

The first of the two linkers is restricted to singular possessor noun phrases and is realized as *-e*; the other occurs with plural and generic possessor noun phrases and is realized as *-an*, just like the third person singular possessive pronoun. Both linkers are prefixed by one of three possessive classifiers or agreement markers, *m-* for class one, \emptyset - for class two and *s-* for class three. The choice of classifier depends on lexical properties of the possessed noun: each noun lexically belongs to one of three possessive classes. Each possessive class can roughly be assigned certain semantic domains: class one comprises human and animal dwellings as well as liquids, class two contains nouns referring to edibles, including all animals, as well as some tools; class three comprises everything else.

However, the choice of classifier is generally not predictable from the reference of the noun and usually it is impossible to choose different classifiers for the same noun to express a semantic difference. The following example shows that the choice of the possessive classifier does not depend on whether the noun *dom* means ‘yam’ or ‘years’, even though the latter noun

	Class 1	Class 2	Class 3
Singular	<i>m-e</i>	\emptyset - <i>e</i>	<i>s-e</i>
Plural	<i>m-an</i>	\emptyset - <i>an</i>	<i>s-an</i>

Table 2: Linkers and classifiers

does clearly not refer to anything edible.

- (11) \emptyset -ok dom mw-i twenti
 CL2-1S.POSS year/yam REAL-COP twenty
 a. ‘I am twenty years old.’¹
 b. ‘I have twenty yams.’

Furthermore, in contrast to other Oceanic languages, the classifier does not inform the relation between the possessor and the possessed: Thus, the phrase *my dog* will always be expressed as \emptyset -ok kuli, using the edible classifier, whether I have any intention to eat my dog or not (cf. Franjeh and von Prince, 2011).

The two linkers differ regarding the number and definiteness or specificity of the possessor; generally speaking, the linker *-e* only applies to specific singular possessors, while *-an* is used for indefinite or unspecific and plural possessors. The following minimal pair shows the contrast between the two linkers:

- (12) a. atuwo **s-e/** *s-an Baeluk
 basket CLF3-LINK.S CLF3-LINK.P Baeluk
 ‘Baeluk’s basket’
 b. atuwo *s-e/ **s-an** vyanten nyoo ente
 basket CLF3-LINK.S CLF3-LINK.P man 3P that
 ‘the basket(s) of these men’

The different possible combinations of classifiers and linkers are summed up in table 3.

In many cases, especially if the head noun refers to a concrete object and the possessor noun refers to a person, the relation between the two is one of possession in a narrow, legal sense:

- (13) a. vyan ane ka ye-p yas yen [too **s-e** vyanten swa]
 go TRANS MOD 3D-POT steal in garden CLF3-LINK.S man one
 ‘they went to steal in someone’s garden.’
 b. em **m-e** Buwu
 house CLF1-LINK.S Buwu
 ‘Buwu’s house’

¹Here, the classifier combines with a possessive pronoun, not a linker. The selection of classifiers is the same for possessive pronouns and linkers.

- c. barar Ø-e yap myato ente
 pig CL2-LINK.S venerable.man old this
 ‘the pig of this venerable old man’

In more abstract contexts though, the relation expressed is usually not a relation of possession in this narrow sense:

- (14) a. byakvi s-e nat-eyaa
 rite.of.circumcision CLF3-LINK.S child-3D.POSS
 ‘the rite of circumcision of their sons’
 b. myaek s-e temeli entak
 secret CLF3-LINK.S child this
 ‘this boy’s secret’
 c. mw-i interpreter s-e gavman ne vilye Noumea
 REAL-COP interpreter CLF3-LINK.S government TRANS place NAME
 ‘He was an interpreter of the government in Noumea.’

Strikingly, the possessor noun phrases of a modifier genitive always refers to animate, human-like entities. The only cases in which a singular possessor refers to an animal or plant, these animals or plants are speaking, walking and acting – they are anthropomorphized actors. The clause in (14-c) is the only example I have in which a singular possessor, *government*, does not refer to a human or human-like individual; but even a government can certainly have a very high rank in the animacy hierarchy.

The question here is whether the possessor noun of a linker genitive is always assigned an agentive role or whether the linker selects highly animate noun phrases as its argument.

One factor which might support the idea that the possessor noun has to be agentive is the fact that the agent of an action denoted by a deverbal noun is also introduced by a linker:

- (15) a. kuone-an s-an nyoo na ya-m gyes pyan clinic
 to.help-NMLZ CLF3-LINK.P 3P COMP 3P-REAL work under clinic
 ‘the help of those who work at the clinic.’
 b. seli ane sukuo-an s-an bweti lewewedrame myane lóó
 road TRANS be.together-NMLZ CLF3-3S.POSS stem kava.plant with coconut
 ‘the companionship of the kava plant and the coconut palm’ (lit. ‘the way of being together of...’)

These cases can however not decide the matter as the possessor nouns are then at the same time taken to be highly animate. But while animacy is a property common to all the attested possessor nouns of linker genitives, agentivity is not necessarily so. In examples like *biyep san barar* ‘a pigs’ fence’ shown in (16), the possessor referent cannot be said to have the possessed referent at its disposal, the pig cannot be said to perform an agentive role with respect to the fence.

- (16) a. biyep **s-an** barar
 fence CLF3-LINK.P pig
 ‘fence/ pen of pigs’
- b. vilye **s-an** vi
 place CLF3-LINK.P white.man
 ‘the western world, the place of
 white people’

Summarizing these observations, the genitive linker is restricted to highly animate possessor noun phrases; the semantic role of the possessor and the relation between possessor and possessed do not appear to be specified by the linker.

4. Transitivity vs. Linking

The previous sections have given a first descriptive account of the distribution and meaning of transitivized noun phrases and linker genitives. By comparing the two directly, we will be able to draw more specific conclusions about their syntactic and semantic properties. Of the two linkers *-e* and *-an*, I will focus here on the linker *-e* which is used for specific singular possessor nouns.

The major syntactic differences between the two possessive constructions in Daakaka concern the presence of the possessed noun, which is always obligatory for transitivized possessor phrases, but not for linker genitives. One environment in which this contrast can be seen are predicative genitives: only the linker genitive can serve as a predicate. Even if the relation between two noun phrases is usually expressed by a transitivized possessive construction instead of a linker genitive, if the possessor is to be a predicate to the possessed, this can only be expressed by the linker, not by the transitivizer:

- (17) a. Sóróusian **ne/** *s-e Reprepmalao mo nok ate
 story TRANS CLF3-LINK.S Reprepmalao REAL end here
 ‘the story of Reprepmalao ends here’
- b. Sóróusian entak mw-i **s-e/** *(a)ne Reprepmalao
 story that REAL-COP CLF3-LINK.S TRANS Reprepmalao
 ‘this story is of/ about Reprepmalao.’

If the possessor is inanimate, the structure in (17-b) is avoided and the possessor is topicalized – and left-dislocated – instead. For example, to say ‘this smoke belongs to that fire’, one would rather revert to the following structure:

- (18) yes entak, s-an apyang sa ngete
 smoke this CLF3-3S.POSS fire TOP that
 ‘that is the smoke of this fire’ (lit. ‘this smoke, that is its fire’)

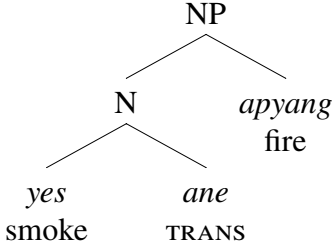
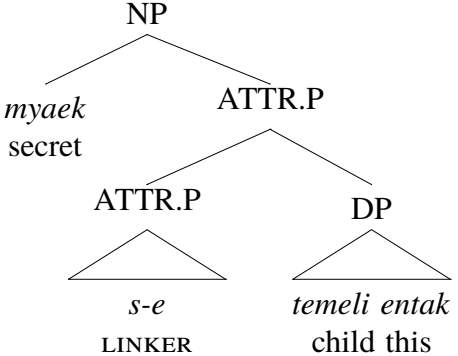
Furthermore, if the possessed noun of a linker genitive has been mentioned in the context, it can be dropped as shown in (19).

- (19) te ye-m vyan te du unun or ye-m unte (or) s-e krap
 DISC 3D-REAL go DISC stay clear.garden bush 3D-REAL clear bush CL3-LINK.S crab
 mo nok, te ye-m vyan te unte (or) s-e tomo mon
 REAL finish DISC 3D-REAL go DISC clear bush LINK.S rat also
 ‘Then the two went to clear the bush. When they had cleared (the field) of the crab, they
 then also cleared (the field) of the rat.’

Again, the same does not hold for transitivized possessive constructions:

- (20) ya-m liye bosi ne barar te ya-m liye *(bosi) ne tyu mon
 3P-REAL take bone TRANS pig DISC 3P-REAL take bone TRANS chicken also
 ‘they took pig bones and also chicken bones’

These findings suggest that the transitivizer and the linker differ morpho-syntactically just as much as semantically. Apparently, the transitivizer forms one constituent with the transitivized noun. By contrast, the linker seems to be more closely connected to the possessor noun and to form a constituent with it. The two different structures are illustrated in (21):

- (21) a.  b. 

This assumption about the syntactic structure is also supported by the observation that a different type of attribute has a very similar distribution to linker genitives: relative clauses can also serve as predicates without a head noun and the head noun can be dropped if it is mentioned earlier in the context. Both cases are illustrated below:

- (22) ya-m gene mwe me mw-i [na ma ge myane na na-m ka
 3P-REAL make REAL COME REAL-COP COMP REAL be.like with COMP 1S-REAL say
 mw-i mo]
 REAL-COP first
 ‘They make it like I said before.’ (lit. ‘They caused it to become what is like what I said
 before’)
- (23) s-aya **pisya** nyoo mu du te mwe liye [na te mir-mir]
 CLF3-3D.POSS paint 3P REAL stay DISC REAL take COMP DIST REDUP-black
 ‘they still had some colors and he took the black one’

Turning to the semantic differences, we have already seen that linker genitives are restricted to animate possessor nouns, while no such restriction holds for transitivized noun phrases.

At the same time, while possessors argumentes of transitivized nouns denote an essential, defining property of the transitivized noun, the same does not hold for possessors of linker genitives. The most striking examples to illustrate this difference come from nouns denoting internal organs: As mentioned above, they belong to the class of intransitive nouns despite their apparently inalienable relation to the body. But it is only when they are transitivized that this inalienable relation is established between them and their possessor argument. In modifier genitives, the noun will refer to an organ which is a rather arbitrary possession of its living, unscathed owner:

- (24) a. bosi **ane** vyanten ente
 bone TRANS man that
 ‘that man’s bone’ (which is part of
 his body)
- b. bosi \emptyset -e vyanten ente
 bone CL2-LINK.S man that
 ‘that man’s bone’ (which he has
 taken from a dead animal or sim-
 ilar)

An apparent exception to this rule are intransitive kinship terms: If the corresponding relative is to be expressed within the same noun phrase, that noun phrase always has to be a modifier genitive:²

- (25) a. naana s-e/ *ne temeli ente
 mother CLF3-LINK.S TRANS child this
 ‘the mother of this child’
- b. vyale s-e/ *ne temeli vyaven
 family CLF3-LINK.S TRANS child female
 ‘the family/relative of the girl’

So here we have two groups of nouns, both belonging to semantic domains which could reasonably be conceptualized as being relational: internal organs and kinship terms. However, only the nouns referring to internal organs can be transitivized while kinship terms can not. In the following paragraphs, I will suggest a way to account for this difference and discuss the implications for the meaning of the transitivizing morpheme (*a*)*ne*.

Consider that the application of the transitivizer (*a*)*ne* results in a noun phrase which is both syntactically and semantically transitive – it establishes a relation between the transitivized noun and its argument. This means that the meaning of a transitivized noun phrase should be of the following form:

²For most kinship terms, inflected and uninflected transitive versions also exist. Thus, Kailong’s mother could also be referred to as *yas-en* (*Kailong*) or *yas* *(*Kailong*). For some kinship terms, however, only intransitive nouns exist.

- (26) $\llbracket \text{NOUN TRANS} \rrbracket = \lambda x \lambda y. P(y) \wedge R(x)(y)$: A transitivized noun takes a two individuals as arguments and a relation is established between the two.

Now, if we assume that, 1) the transitivizer only takes a one-place predicate as its first argument and 2) that syntactically intransitive kinship terms are still semantically transitive, in contrast to terms for inner organs, the fact that kinship terms cannot be transitivized derives as a consequence. These assumptions are summarized below:

- (27) $\llbracket \text{TRANS} \rrbracket = \lambda P \lambda x \lambda y. P(y) \wedge R(x)(y)$, where P is of type $\langle e, t \rangle$ and R is some relation to be discussed below; (first approach)
- (28) Syntactically intransitive (non-case-assigning) nouns denoting kinship relations, such as *naana* ‘mother’, are semantically transitive (two-place predicates):
 $\llbracket \text{naana} \rrbracket = \lambda x \lambda y. \text{mother}(x)(y)$; They are of type $\langle e, \langle e, t \rangle \rangle$
- (29) Syntactically intransitive nouns denoting internal organs, including skin, bones and blood, are semantically intransitive (one-place predicates):
 $\llbracket \text{bone} \rrbracket = \lambda x. \text{bone}(x)$; They are of type $\langle e, t \rangle$.

It follows that kinship terms cannot be transitivized because they are of the wrong type, that is, because they are already transitive semantically. If these assumptions are correct, we already know part of the meaning of the transitivizer: It takes a one-place predicate and two individuals as arguments and yields a relation between the two individuals.

By contrast, the linker is less specific about the semantic type of the possessed noun phrase. A straightforward way to account for this flexibility is to say that the linker takes a two-place predicate as its second argument; if confronted with a one-place predicate instead, it can shift the one-place predicate to a two-place predicate. This would give us the following definition:

- (30) $\llbracket \text{LINKER} \rrbracket = \lambda x \lambda R_{\langle e, t \rangle} \lambda y : x \in \text{ANIMATE}. R(x)(y)$. If the second argument of the linker is of type $\langle e, t \rangle$, it will be forced to shift to type $\langle e, \langle e, t \rangle \rangle$ (first approach)

The same definition has already been considered for the meaning of the English genitive ‘s by Partee and Borschev (2003: 75), among others. The mechanism Partee and Borschev propose for the type-shift from type $\langle e, t \rangle$ to type $\langle e, \langle e, t \rangle \rangle$ provides a free relation variable R_i which is to be determined by the context and the meaning of both nouns involved.

Vikner and Jensen (2002), on the other hand, suggest that if type-shifting is part of the function of genitive ‘s in English, the resulting relation should be informed exclusively by the lexical meaning and qualia structure of the shifted possessed noun. According to their approach, this process would exclude the possibility of a control relation between possessor and possessed: Thus, a phrase like *Ann’s car*, where Ann is simply the owner of the car, would not involve a

type-shift of *car*.

In Daakaka, however, this kind of control relation is in fact a very common interpretation of linker genitives. Apart from that, the relation expressed by a linker genitive is very unspecific and depends much on both noun phrases involved, as well as the context. These observations match well with the approach by Partee and Borschev which I will therefore adopt here. Then, the definition of the linker can be spelled out as in (31):

- (31) $[[\text{LINKER}]] = \lambda x \lambda R_{\langle e, t \rangle} \lambda y : x \in \text{ANIMATE}. R(x)(y)$. If the second argument of the linker is of type $\langle e, t \rangle$, it will be forced to shift to type $\langle e \langle e, t \rangle \rangle$ by the following process:
 $\lambda x. \phi(x) \rightarrow \lambda x \lambda y. \phi(x) \wedge R_i(x)(y)$, where R_i is a relation variable to be determined by the context. (second approach)

5. Inalienability as Temporal Permanence

So far I have derived the structural features of both the transitivizer and the linker from their different distributions. The question now is how the differences in interpretation come about in contexts where both the transitivizer and the linker could be used. This difference is illustrated by the minimal pair given in (24), where *this man's bone* refers to a body part of him if the transitivizer is used, but denotes an arbitrary bone in his possession if the linker is used. The meanings of both morphemes specify some kind of relation between the two referents involved; in the case of the linker, this relation is supplied by the lexical meaning of the noun phrases involved and by the context. How then is the relation between a transitivized noun and its argument determined, and how is it different from a linker genitive?

I have concluded from the examples in section 2 that the only possible generalization over the different cases of transitivized noun phrases is that the relation between the two referents is non-accidental, permanent and defining for the possessed noun. In direct comparison with linker genitives, it appears that the difference between the two constructions is very similar to the difference between individual-level predicates and stage-level predicates: Individual-level predicates are properties which, once acquired, do typically not change much over time, as for example *know French* or *be blond*. By contrast, stage-level predicates may be true for one individual for only a restricted period of time and are not characteristic of an individual as in *Ned is eating spaghetti*.

According to Kratzer (1995), stage-level predicates have “an extra argument position for *events* or *spatiotemporal locations*” (Kratzer, 1995:126, original emphasis). Now, space does not appear to play such a great role in linker genitives: in a phrase like *Baeluk's basket*, the possessive relation between Baeluk and his basket is not dependent on the location of the basket (or, for that matter, the location of Baeluk). But it does appear to depend on time, because the owner of a basket might change; what is more, the Daakaka phrase *atuwo se Baeluk*, like its English counterpart *Baeluk's basket*, might refer to a basket which Baeluk just happens to be

using at the moment, but of which he does not claim ownership.

I therefore suggest that the linker morpheme introduces a relationship which holds between two individuals x, y and a moment in time t . By contrast, the transitivizer also introduces a relation variable which is determined by the context, but it does not include a temporal reference. As a result, the relation introduced by the transitivizer is always interpreted to be a permanent property of the possessed noun, whereas the relation introduced by the linker may be temporal and accidental.

This also means that the linker always type-shifts its argument: If it is an intransitive noun, it is extended to a relation between two nouns and a moment in time; if it is a (semantically) transitive noun, the relation to its argument is extended to include a temporal argument. The two final definitions are summarized below:

$$(32) \quad \llbracket \text{TRANS} \rrbracket = \lambda P \lambda x \lambda y. P(y) \wedge R_i(x)(y)$$

$$(33) \quad \llbracket \text{LINKER} \rrbracket = \lambda x \lambda R_{\langle e, t \rangle e_i} \lambda y \lambda t : x \in \text{ANIMATE}. R(x)(y)(t), \text{ where } t \text{ is a point in time.}$$

If the second argument of the linker is of type $\langle e, t \rangle$, or of type $\langle e, \langle e, t \rangle \rangle$ it will be forced to shift to type $\langle \langle e, t \rangle e_i \rangle$ by the following processes:

- a. $\lambda x. \phi(x) \rightarrow \lambda x \lambda y \lambda t. \phi(x) \wedge R_i(x)(y)(t)$, where R_i is a relation variable to be determined by the context.
- b. $\lambda x \lambda y. \rho(x)(y) \rightarrow \lambda x \lambda y \lambda t. \rho(x)(y) \wedge R_i(x)(y)(t)$, where R_i is a relation variable to be determined by the context.

Note that this definition of the linker allows for the possibility to interpret a phrase like (34-a) as expressing a temporal, accidental relationship between Kailong and his mother, in contrast to the expression in (34-b):

- | | | | |
|------|--------------------------------------------------------------------------|--|-------------------------------------------------------------------|
| (34) | a. naana s-e Kailong
mother CLF3-LINK.S Kailong
‘Kailong’s mother’ | | b. yas-en Kailong
mother-3S.POSS Kailong
‘Kailong’s mother’ |
|------|--------------------------------------------------------------------------|--|-------------------------------------------------------------------|

The fact that this interpretation is in reality still not available can be contributed to world knowledge: The fact that the phrase in (34-a) allows for the relation between Kailong and his mother to be temporal does not exclude the possibility that this relation is permanent. And the mother relation is usually not conceptualized to be subject to change over time. With terms not referring to kinship relations, however, it usually makes sense to assume that the relation between the two noun phrases is not necessarily permanent. This is certainly true of a phrase like *bosi se Joebang* ‘Joebang’s bone’, which refers to an animal bone in Joebang’s possession.

Crucially, the transitivized counterpart *bosi ane barar* ‘pig bone’ requires that the possessor noun *pig* denote a permanent property of the bone, which obviously corresponds to the actual interpretation: A pig bone cannot simply become a chicken bone or similar. Likewise, the phrase *bosi ane nye* (bone TRANS 1S) ‘my bone’ expresses a relation which is not subject to

change over time. Even if my body was disintegrated in such a way that there was no longer a direct physical link between the bone and any other of my body parts, it would still consist of my cells, contain my DNA and bear the traces of the life that has shaped it.

So both morphemes introduce a relation between two noun phrases by means of a free relation variable R_i . They differ in that the transitivizer requires the relation between its two nominal arguments to be permanent because it does not provide for a temporal argument. The linker, on the other hand, does provide for a temporal argument and therefore allows for the possibility that the relation it expresses is only momentary. Going back to previous considerations about the term *inalienability* which has often been used in connection with non-arbitrary possessive relations, I hereby suggest that the concept can be reduced to the notion of temporal relativity: inalienable possession means that there can be no temporal argument in the possessive relation.

From a cross-linguistic perspective, lexically transitive and transitivized noun phrases in Daakaka not only differ from linker genitives, they also differ fundamentally from genitive constructions in languages like English: For English genitive constructions, a temporal, alienable reading is essentially always available; even a phrase like *Gerd's nose* can in principle refer not just to a body part of Gerd's, but also for example to a work of art he has bought.

By contrast, transitive noun phrases in Daakaka can express a wide range of relations, but they cannot be in anyway arbitrary, accidental, or subject to temporary restrictions. In languages without transitive noun phrases, similar conditions might hold instead for other constructions, such as nominal compounds.

Concluding this section, I have discussed the semantic differences between linker genitives and transitive nominal constructions in Daakaka. I have argued that the only way to account for the consistent differences in their interpretation, while at the same time allowing the full range of their possible meanings, is to stipulate a difference in temporal relativity: Linker genitives establish a relation between two noun phrases and a moment in time and can therefore always be interpreted as arbitrary and accidental. Transitive nominal constructions, on the other hand, do not involve a temporal argument and can therefore only express relations which are not subject to change over time.

6. Summary

In this paper, I have given an overview over nominal possessive constructions in Daakaka and I have discussed the differences between transitivized noun phrases and linker genitives. I have argued that the two differ syntactically in that the transitivizer forms one constituent with the possessed noun phrase, while the linker forms one constituent with the possessor noun phrase.

Furthermore, I have shown that the only semantic domain in which the distributions of the two morphemes differ are syntactically intransitive kinship terms: Only the linker can

introduce possessor noun phrases to these terms, whereas the transitivizer cannot. From these observations I have concluded that the transitivizer only takes one-place predicates as its possessor argument; and that the linker takes transitive predicates and has the power to type-shift its possessor argument.

Regarding the meaning of both morphemes, I have argued that the relations they can express are so varied and so much dependent on the nouns involved that they must be provided by the context; this means that both morphemes rely on a free variable to establish the relation between their two nominal arguments. To account for the differences in interpretation, I have suggested that only the relation provided by the linker includes a temporal reference. This means that the relation established by the linker may be only momentary. By contrast, the transitivizer does not include such a temporal argument, which means that the relation it establishes is not subject to change over time.

Appendix

1 – first person	DISC – discourse particle	S – singular
2 – second person	IN – inclusive	REAL – realis
3 – third person	MOD – modal relator	REDUP – reduplication
LINK – linker	NAME – name	TOP – topic marker
CLF – classifier	NMLZ – nominalizer	TRANS – transitivizer
COMP – complementizer	P – plural	
COP – copula	POSS – possessive	
D – dual	POT – potential	

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