The typology and formal semantic of adnominal possession

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CHAPTER 1

Introduction

This dissertation is a study of the semantics of adnominal possession cross-linguistically. This chapter introduces the topic and structure of the thesis. In section 1.1, I introduce the notion of adnominal possession and formulate the research question. In section 1.2, I introduce the terminology that I use in the thesis and briefly discuss various approaches to possessive interpretations in formal semantics and in typology. In section 1.3, I justify the sample of languages and the constructions that I analyzed in this study. Finally, section 1.4 is a brief overview of the remainder of the thesis.

1.1 The research question

This thesis presents an inquiry into cross-linguistic variation. The main question is how various semantic types of possession map onto morphosyntactic constructions. The object of study is the relation between the **formal marking of a possessive construction** and its **possessive interpretation**.

As far as interpretation is concerned, in daily use, "possession" is usually understood as ownership. Superficially, possessive constructions like *John's book* describe ownership relations. However, it is easy to show that this possessive phrase can receive various interpretations. *John's book* might describe a book John wrote, a book John likes, a book John recommended to someone or a book John chose to write a review about. The most prominent interpretation of a possessive phrase like *John's nose* is clearly not ownership, but a reference to a body-part relation. Other interpretations are available as well; *John's nose* might describe a nose in John's collection, John's drawing of a nose, or a

nose that John likes, etc. Due to this interpretive flexibility of possessive constructions, linguistic understanding of possession diverges from its daily use. In linguistic models, possession is usually assumed to be an underspecified relation, not limited ownership. Adnominal possession is a grammaticalized way to express this underspecified relation between two nominal groups within a nominal phrase. According to Aikhenvald (2013: 1), adnominal possession is universal: "every language has a mechanism for expressing possession, within a noun phrase and within a clause."

The idea that despite interpretative flexibility, there is a system behind various possessive interpretations has been around for a long time. As I discuss in more detail below, possessive interpretations have been widely discussed under the label of (in)alienable possession in the typological literature (Nichols 1988; Chappel and McGregor 1996; Stassen 2009, among many others). In formal semantics, a crucial distinction has been made between possessive interpretations established in the context and possessive relations provided by the possessed noun itself (Partee 1983/1997; Barker 1995; Löbner 2011). The focus of this thesis is the expression of possession cross-linguistically. It explains the intuition that there is a similarity in how various possessive relations are expressed in genetically unrelated languages. In this thesis, I argue that distinct formal marking may correspond to distinct types of relations between the possessor and the possessed.

1.2 Methodology and assumptions

This thesis combines typological research with formal semantics. The semantic system adopted is truth-conditional formal semantics (see e.g. Heim and Kratzer 1998). The typological part of the study is done with help of a database of adnominal possession, which was created as a part of my work within the NWO-sponsored project, *Lend me your ears: the grammar of (un)transferable possession*. The database is discussed in more detail in section 1.3 and in Appendix 1. In addition to a large-scale study involving the creation of the database, I undertook detailed studies on a smaller set of languages in order provide deeper insights into how possessive interpretations are established in the grammar.

The main assumption behind this study is that cross-linguistic differences in the morphosyntactic encoding of possession may reveal something about the differences in interpretation. As far as syntax is concerned, I assume that it is essentially type-driven; for instance, I don't assume designated slots for possessive markers. In what follows, I introduce the relevant discussion of adnominal possession.

1.2.1 Possessive constructions: the components

Any possessive construction involves a possessed entity and a possessor. A possessive construction may also involve additional morphemes. Thus, in the example *John's nose* above, *John* is the possessor, *nose* is the possessed and *'s* is an additional morpheme. Languages can make use of more than one morphosyntactic construction to express adnominal possession. I use the term *marking strategies* to describe possessive constructions in a given language. A *marking strategy* is a morphosyntactic construction defined by its morphological components: the possessor, the possessed and the morphemes used to express possession. The differences in morphology (differential possessive marking) serve as the primary criterion for me to distinguish multiple marking strategies in a given language. On the general notion of possession that I adopt, the possessor is an entity that stands to the possessed in any conceptual relation. This relation might be ownership, kinship, part-whole (including parts of possessor's body), creator or any other contextually determined relation like 'like', 'take care of' or 'be attacked by'. I use the term **possessive marker** for a morpheme that helps to establish a relation between the possessor and the possessed. Thus, in the Samoan example in (1), the preposition *a* is a possessive marker, but the determiner *le* is not.

(1) le ata **a** le fafine
ART picture poss ART woman
'A picture of a woman' (Mosel and Hovdhaugen 1992)

In the typological literature on possession, it is common to use the notion of "possessive marking", as for instance in "Locus of Marking in Possessive Noun Phrases" in Nichols and Bickel (2013a); see also Nichols (1988), Krasnoukhova (2012) and many other works. This notion should be seen as a cover term for a range of phenomena. For instance, "possessive marking" can describe a morpheme that attaches to the possessor or the possessed within a possessive construction, but it can also describe the possessor expressed by a pronoun-like element. See also van Rijn (2016) for a detailed study of this notion. There are various asymmetries in terms of the constraints on the expression of the possessor and the possessed. The possessed entity is represented by a noun, like *car*, *hand*, etc. The possessed is usually not a pronominal element: **John's she*. In contrast, the possessor can either be represented by a noun e.g. *girl* in *the girl's book* or by a pronoun, like *her* in *her book*. A pronoun can be a separate word, like *her* in the English example. But it can also appear as a morpheme attached to the possessed noun, as in (2) from Baure.

(2) ni=hačkis
1SG=glasses
'my glasses' (Baure; Danielsen 2007) [1]

[1] Here and in the rest of the dissertation I adopt the phonetic orthography and the glossing rules used by the authors of the respective grammars.

Possessive constructions often allow for multiple expression of the possessor; for instance, in Baure example (4) the possessor is represented twice, as a pronoun-morpheme and as the noun 'lizard'. Similarly, in Dutch (1b), the possessor is represented as the pronoun *z'n* and as the noun *Johan*.

(3) a. teč **ro**=wer to **kotis**
DEM2M 3SGM=house ART lizard
'the house of the lizard' (Baure; Danielsen 2007)
b. **Johan z'n** auto
Johan his car
'Johan's car' (Dutch; Le Bruyn and Schoorlemmer 2016: 7)

By contrast, multiple expression of the possessed noun does not seem to be possible in adnominal possessive constructions, e.g. **the house it of the lizard*. Such asymmetries show that the possessor and the possessed have a different status in the grammar. The possessor is more grammatically marked; it can take the shape of an affix, and it can appear in the structure multiple times. I will not provide an explanation for these asymmetries in this dissertation. My focus will be on the relation between different marking strategies for expressing possession.

1.2.2 Adnominal possession: semantics and typology

1.2.2.1 Semantics of possession

The semantics of possession is concerned with interpretations of possessive constructions. A major distinction is usually made between *inherent* and *free* possessive interpretations. It is assumed that *inherent* interpretations result from the lexical semantics of the possessed nouns while *free* possessive interpretations are contextually determined. *Relational* nouns are the source of *inherent* relations. While *sortal* nouns, like *cat*, classify objects, *relational* nouns, like *husband* or *nose*, "describe objects as standing in a certain relation to others" (Löbner 1985: 292).[2] For instance, possessive phrases like *John's nose* or *Mary's husband* have salient interpretations 'husband-of' or 'nose-of'. Other interpretations, such as the nose in John's collection, John's drawing of a nose, or a nose that John likes are available as well, but they require much more contextual support.

It is a matter of debate how the possessive interpretations of *sortal* nouns like *cat* should be modeled. While some models assume these interpretations to be pragmatic and underspecified, other models aim to account systematically

[2]Löbner (1985: 293) points out that the notion of semantic relationality is very flexible; various occurrences of the same noun might be interpreted as sortal or relational. *Sortal* nouns might be coerced into denoting relations by a context. If someone points to a box, which is used as a table, saying *this is my table*, the noun *table* no longer describes a set of tables, but a 'table'-relation between the box and the speaker.

at least for a subset of *free* interpretations. The general intuition is that free interpretations are not all born equal; some are more prominent than others.

For example, Storto (2003) argues for two types of *free* possessive interpretations for sortal nouns: *control* interpretations and truly contextual interpretations. According to Storto (2003), relations of control, including relations of ownership, have a special status in the grammar. A relation of control, as formulated by Storto (2003: 44), holds between a possessor and a possessed if "the possessor has some sort of control of the possessum or of his bearing a relation to the possessum". For example, the possessive construction with the sortal noun 'dogs' in (4a) could receive a control interpretation in the context provided in (4b). In the context provided in (4c), the relation between Gianni and the dogs is 'to be attacked by', which is not in Gianni's control. On Storto's (2003) account, 'to be attacked by' is an example of a truly contextually determined interpretation.

(4) Italian (Storto 2003)
   a. i cani di Gianni
      def dogs of Gianni
      'Gianni's dogs'
   b. ...yesterday Gianni and Paolo were entrusted two groups of dogs...
   c. ...yesterday Gianni and Paolo were attacked by two groups of dogs

Vikner and Jensen (2002) argue for a different system of possessive interpretations. They assume several type-shifters that change sortal nouns into relations. One of the type-shifters derives pragmatic (the truly free) interpretations. One is responsible for general interpretations of *control*, which include relations of ownership.[3] Other type shifters derive possessive interpretations from the lexical semantics of the possessed nouns. Vikner and Jensen (2002) assume qualia theory: nouns in the lexicon are supplied with additional ontological information, so-called qualia roles. For instance, nouns like *book, painting, photo* are assumed to have (among others) an *agentive qualia role*, their creator. A type shifter *Ag* can access this qualia role to derive relational nouns, 'book by', 'painting by', etc. Part-whole interpretations of possessive constructions are derived from the *constitutive role*, and interpretations of use/function from the *telic role*.

Le Bruyn et al. (2016) extend the system of qualia roles proposed by Vikner and Jensen (2002), adding the *possessor role* and the *holistic role*. The possessor role is meant to derive ownership interpretations. The holistic role is meant to derive the interpretation from parts to whole like in *tree's leaves*. The differences

[3]Vikner and Jensen (2002) view control as the most salient interpretation that arises between a possessed and an animate possessor. This interpretation is quite vague. Possessive constructions like *the dog's ball*, but also *the horse's car* and *the owl's computer* give rise to control interpretation. In contrast, possessive constructions with an inanimate possessor, like *the car's cake* or *the cake's garden* never receive an interpretation of control.

between various approaches to possessive interpretations are summarized in table 1.1.

<table>
<tr><th>Barker (1995), Partee and Borschev (2003), Gerland and Ortmann (2014)</th><th>Storto (2003)</th><th>Vikner and Jensen (2002)</th><th>Le Bruyn et al. (2016)</th></tr>
<tr><td rowspan="4">inherent interpretations of relational nouns
John's father[5]
a car's wheel
the tree's leaves</td><td rowspan="4">inherent interpretations of relational nouns
John's father
a car's wheel
the tree's leaves</td><td>inherent interpretations of relational nouns
John's father</td><td>inherent interpretations of relational nouns
John's father</td></tr>
<tr><td rowspan="2">a car's wheel
the tree's leaves
(constitutive role)</td><td>??? (constitutive role)[4].</td></tr>
<tr><td>the tree's leaves
whole-to-parts (holistic role)</td></tr>
<tr><td rowspan="4">free interpretations
John's painting
Johns (favourite) chair
John's dogs (that attacked him)</td><td rowspan="3">CONTROL as a special possessive head
John's keys
John's painting
Johns (favourite) chair</td><td>John's keys (control operator)</td><td>John's keys possession (possessive role)</td></tr>
<tr><td>John's painting (agentive role)</td><td>John's painting (agentive role)</td></tr>
<tr><td>Johns (favourite) chair (telic role)</td><td>Johns (favourite) chair (telic role)</td></tr>
<tr><td>free interpretations
John's dogs (that attacked him)</td><td>free interpretations
John's dogs (that attacked him)</td><td>free interpretations
John's dogs (that attacked him)</td></tr>
</table>

Table 1.1: Possessive interpretations of sortal nouns, inspired by the table in Vikner and Jensen (2002)

Table 1.1 shows that the major distinction between inherent and free interpretations, mentioned at the beginning, is not absolutely clear-cut. As indicated by the shading in the table, different approaches have a different take

[4]Le Bruyn et al. (2016: 60) argue that it is not easy to find examples in which wholes possess their parts: *The door's house*; those examples are predicted by the *constitutive role*. They conclude that "constitutive role simply doesn't give rise to relations that can easily be exploited by HAVE or prenominal genitives"

[5]It wasn't possible to find identical examples for all the studies cited, therefore, the examples are classified according to my understanding of the proposed distinctions.

on what counts as inherent and what counts as free. There is a general agreement between the four models that some interpretations are free, contextually dependent. There is even an inclusion relation: the interpretations considered free by Le Bruyn et al. (2016), are a subset of free interpretations in Barker's (1995) system. All four theories agree that some nouns encode inherent interpretations in their lexical semantics, but there is no agreement on which nouns are relational and which nouns are not. For example, part-whole interpretations like *a car's wheel* are attributed in Barker's (1995) system to relational nouns while in Vikner and Jensen's (2002) model they are attributed to qualia roles. Storto's (2003) and Vikner and Jensen's (2002) models are similar because both attribute a special status in the grammar to relations of control. However, their take on control is slightly different, as Vikner and Jensen (2002) attribute a subset of these interpretations to telic roles.

One could say that Vikner and Jensen (2002), as well as Le Bruyn et al. (2016) are arguing for some kind of gradation between sortal nouns and relational nouns in possessive constructions. On the one hand, some of the nouns that Barker (1995) would consider relational are treated as sortal, but on the other hand, some of the possessive interpretations of the sortal nouns are derived from artifacts of their lexical semantics. Thus, the range of interpretations that are based on the lexical semantics of the possessed nouns is larger in Vikner and Jensen's (2002) and Le Bruyn et al.'s (2016) system than in Barker's (1995) system.

In fact, depending on the context, some sortal nouns might become indistinguishable from relational nouns. This observation is behind the approaches that minimize the differences between relational nouns and sortal nouns in possessive interpretations. For example, Vikner and Jensen (2002) emphasize that not only possessive interpretations provided by the relational nouns, but also possessive interpretations provided by the qualia roles, require no contextual support, in contrast to other possessive interpretations. For instance, *John's car*, out of the blue would be probably interpreted as a car controlled by John. The hearer won't have any difficulties finding the right interpretation, similarly to finding the right interpretation for *John's nose*. This idea was endorsed, for instance, by Löbner (2011). Löbner (2011) points out that although artifacts are typical sortal nouns, they can easily be shifted into relational readings on the basis of their function. "'Toothbrush' is a concept for a certain type of artifact with a purpose specified. Toothbrushes are mostly used by one person exclusively; this results in a mapping from toothbrushes to persons". According to Löbner (2011), after such a shift, 'toothbrush' would describe "the object with the sortal characteristics of a toothbrush which possessor uses to clean his/her teeth".

In his discussion of Barker (1995), Storto (2003) demonstrates another context that neutralizes the differences between a subset of relational nouns and a subset of sortal nouns. Barker's (1995) original observation was that a possessive phrase with a definite possessor can be used to introduce a discourse novel referent only if the possessed is a relational noun, like *daughter* in (5).

The sortal noun like *firetruck* cannot introduce a novel referent.

(5) A man walked in.
   a. His daughter was with him.
   b. #His firetruck was visible through the window.

Storto (2003) points out a problem with this generalization. If it is the inherent relation denoted by *daughter* that makes it possible to introduce a novel discourse entity, one would expect possessives like *his purchase* or *his pen pal* to be felicitous in the same context. By contrast, a sortal noun like *car* would not be used to introduce a novel discourse entity. As the examples in (6) show, we observe exactly the opposite. A sortal noun *car* can be used to introduce a novel discourse entity, but a relational noun such as *pen pal* can't.

(6) A man came into the pub.
   a. His car was idling outside.
   b. #His pen pal was with him

It is important to note that some relational nouns and some sortal nouns might show similar properties in a certain environment. Unfortunately, the only diagnostic for possessive interpretations, suggested by Vikner and Jensen (2002), is the availability of certain out-of-the-blue interpretations. Out-of-the-blue-contexts are problematic in the case of ambiguity, for instance, as discussed in Matthewson (2004). The reasons why certain interpretations are less available out of the blue than the others often have little to do with syntax or semantics. As an example, Matthewson (2004) shows that expressions containing negation or pronouns are often judged odd out of the blue just because they are never used to start a conversation. Accommodation seems to play a big role in this kind of diagnostic.

Furthermore, it is unclear how far the lexical specification of possessed nouns should go. For instance, Le Bruyn et al. (2016) add a possessive qualia role to derive an ownership interpretation. As already observed at the beginning of the section, one of the most prominent interpretations of possessive constructions is ownership. Almost any entity can be interpreted as being in an ownership relation with an animate possessor, for instance, *John's stone* or *John's forest*. It is unclear to what extent it is it plausible that nouns like *stone* or *forest* need to be specified for a possession qualia role.

A cross-linguistic study of possession could help to reveal which semantic dimensions of possession might be encoded in the language. The availability of certain possessive interpretations can be used as an argument for them being either lexically encoded or contextually supplied. Examples from cross-linguistic studies are used, for instance, by Barker (1995) and Löbner (2011) as supporting evidence for the special status of relational nouns in the grammar.

1.2.2.2 (In)alienable possession

The idea that not all possessive interpretations are "born equal" is present in the descriptive and typological literature as well. In the descriptive literature, the contrasts between various possessive interpretations are often addressed in terms of the "(in)alienability" distinction. Nichols (1988: 568) describes this distinction as follows: "the basic idea behind these terms is clear enough: inalienable possession is inborn, inherent, not conferred by purchase; alienable possession is, roughly ownership, socially and economically conferred. But the terms are used to refer to very different phenomena and literature. Two usages dominate. In one of them 'inalienable' is used to label the closed set of bound nouns which cannot be used without possessive marking... The other common usage of the term is as a label for [...] patterns, where bond nouns are called 'inalienably possessed' in their most typical function; e.g. when 'my skin' means the skin on my body or 'my leg' means my own body part. They are called 'alienably possessed' in a secondary, less common usage, e.g. when they mean 'my cowhide' or 'my (turkey) drumstick (that I am eating)'."

Nichols (1988) points to a confusion around inalienability. She mentions "two usages" of the term, and, as I will show below, these two usages can easily be subdivided into at least five. Thus, when "inalienability" is mentioned, one should be aware that different authors are talking about different things. And even individual authors are not always consistent with their use of terminology. This is a common problem with a blanket term which is used to address various phenomena with superficially similar outcomes. The term (in)alienability is traditionally used to address the interface between linguistic possession and the speaker's or the linguist's world knowledge. However, the generalizations based on the linguist's world knowledge often prove to be not linguistically relevant. As Nichols (1988) herself shows, the description of inalienable as "inborn, inherent, not conferred by purchase" has, in fact, little to do with linguistic reality. "The crucial example of Nanai which treats body parts, relational terms and domestic animals as 'inalienable', shows that the hierarchy can be further elaborated without inclusion of kinship terms" (Nichols 1988: 573). If "inborn" criteria had linguistic relevance, domestic animals wouldn't be included in the inalienable class in Nanai to the exclusion of kinship terms.

I will illustrate some usages of the term (in)alienability to make it clear what I mean by referring to it as a blanket term. By demonstrating these inconsistencies, I want to make it clear why I want to avoid using the the term (in)alienability in the rest of the dissertation. In my work, I will concentrate specifically on the distinction in the morphosyntactic means to express possession and I do not want to raise any expectations connected to the other uses of the term. One way of using the term "(in)alienability", as pointed out by Nichols (1988: 568), is to describe certain properties of a noun class. It appears that this one usage actually describes three possible ways of using the term. As an example, Nichols (1988: 568) mentions obligatorily possessed nouns. It appears that in some languages, one can distinguish a considerable group of

nouns that don't appear without a possessor. Saxon and Wilhelm (2016) point out that this use of the term (in)alienability is very common in the grammars of Athabaskan languages. For example, Hargus (2007), in the grammar of Witsuwit'en uses the term "inalienable" for obligatorily possessed nouns. Among them are: kinship terms like 'father' and 'brother', body parts like 'bone' and 'hair' but also parts of plants like 'unripe berry'.[6] Another way of describing a class of nouns as "(in)alienable" is through the morphemes they combine with. Especially for the languages which have two morphosyntactic strategies to express possession, the grammar authors often provide a list of nouns that can appear possessed with one morpheme but not the other. For example, Gruber (2013: 84) divides the nouns in Blackfoot into two groups; those that take a short prefix are inalienable and those that take a long prefix are alienable. "In many languages that morphologically mark the difference between the two overtly, membership of one class or the other is mostly a lexical property; that is to say that real world relational entities need not necessarily belong to the class of inalienable nouns, and vice versa." The examples in (7) show this lexical distinction. While nouns like 'horse', 'ring' and 'husband' receive a short prefix (inalienable in Gruber's terms), nouns like 'cow', 'bracelet' and 'brother in law' receive the long one (alienable). Although Gruber (2013: 84) claims that this distinction is completely lexical, one can see some connection with the word's meanings. The relation between a 'horse' and a horseman is probably different from the relation between a 'cow' and its owner, etc. The problem with any claims about world knowledge is that the speaker's world knowledge might be very different from the world knowledge of a linguist.

(7) Blackfoot (Gruber 2013)

a.	n'-ota'sa	n-is'apiikitsoohsa'tsisa	n'-ooma
	'my horse'	'my ring'	'my husband'
b.	nit-'a'apotskinaama	nit-ohp'o'nna	nit-'o'otoyoomi
	'my cow'	'my bracelet'	'my brother in law'

The third way of characterizing a class of nouns as "(in)alienable" is based primarily on the linguist's world knowledge and categorization. Nouns are described as "(in)alienable" on the basis of their meanings. For example, Bowern (2012: 357) describes all body parts and kinship terms as "semantically inalienable" in her discussion of Bardi, although there is no indication that Bardi treats them as a homogeneous class: "Other items which are inalienable do not take the prefixes. Only about half the body parts take them...; others, such as *langana* 'shoulder' and *gaanyji* 'bone', take regular possessive pronouns. Kinship words also take regular possessive marking."

It is important to realize that while describing a class of nouns as (in)alienable,

[6] Barker (1995, 2008) notes that in English, one can also find nouns that don't appear without a possessor, for instance *sake*, *travels* and *forte*. However, the term (in)alienability is usually not applied to describe those nouns in English.

authors address at least three different phenomena. Unsurprisingly, the class of nouns under discussion varies from one grammatical description to the other. Obligatory expression of the possessor, as described for Witsuwit'en, points to obligatory realization of an argument. In Athabaskan languages, obligatorily possessed nouns can appear in possessive constructions with various morphemes; the choice is predetermined by the noun. Nouns that are not possessed can appear with the same morphemes. This asymmetry between obligatorily possessed nouns and the marking strategies is well known for the language family; see Saxon and Wilhelm (2016). In contrast, in many languages, obligatorily possessed nouns form a class or a proper subset of a class that requires a certain marking strategy. In Blackfoot, for instance, only a subset of nouns that receive the short possessive prefix is obligatorily possessed. It is likely, that the choice between multiple marking strategies, as described for Blackfoot, is driven by other morphosyntactic principles than obligatorily realization of arguments, as described, for instance, for Witsuwit'en or Koyukon. It is also very likely that differential morphological marking and obligatory realization of arguments do not have much in common with abstract semantic classification of nouns as "semantically inalienable". This classification primarily refers to (the linguist's) world knowledge, notions like "inborn" or "inherent". It might have little to do with the way a specific language describes the world. It shouldn't come as a surprise that the three notions of (in)alienability do not lead to any comparable results.

Another major use of the term (in)alienability, pointed out by Nichols (1988: 568) is to describe relations between the possessor and the possessed. There is no agreement, however, on which semantic characteristics correspond to (in)alienable relations. I will describe two major approaches, but there are probably more. Some authors consider the (in)alienability distinction to be a matter of temporality vs permanence. Chappell and McGregor (1996: 4) describe inalienable relations as "permanent and inherent". Von Prince (2012) argues that the term "inalienability" can be "reduced to the notion of temporal relativity". The inalienable relation "is always interpreted to be a permanent property of the possessed noun". As an example, von Prince (2012b) shows two constructions with the word 'bone' *bosi* in (8). According to her, 'pig bone' is a permanent relation: "the possessor noun pig denote[s] a permanent property of the bone"; 'Joebang's bone' describes a relation between Joebang and an animal bone; this relation is temporarily restricted.

(8) Daakaka von Prince (2016)[7]

a. bosi ane barar
bone TRANS pig
'pig's bone'

b. bosi s-e Joebang
bone CL3-LINK Joebang

[7]For a detailed description of Daakaka, see chapter 4.

'Joebang's bone'

This distinction leads to a conceptual problem with the idea of temporal permanence. In the real world, some relations might be permanent by coincidence; for instance, 'Joebang's bone' might stay in his possession all his life. The question is to what extent the language would be sensitive to such notions. Other studies argue that "(in)alienable" relations should be characterized through notions of control.

In a later paper, von Prince (2016) argues that "inalienable" relations are relations lacking control of the possessor. "One other plausible approach to the problem is that alienable relations are control relations – inalienable relations would simply be all non-control relations [...] most importantly, a possessor who has control over her possession should be able to manipulate it and to abandon it or transfer ownership...". From this point of view, the Daakaka example in (8) shows a contrast between a relation of control, 'a bone in Joebang's possession' and a relation that is not controlled by the possessor: 'pig's bone'. In general, "control"-like contrasts between different kinds of possessive relations are often discussed in the literature under the notion of (in)alienability. The examples usually involve a contrast between an inanimate possessor and an animate possessor. For instance, Holton (2000) shows for another Athabaskan language, Tanacross, that a noun like 'water' can appear in two types of possessive constructions. In (9a) there is an ownership relation between 'water' and an animate possessor; in (9b) there is a constitutional relation between 'water' and an inanimate possessor, 'lake'. However, it doesn't seem possible to reduce inalienable relations to inanimate possessors, as there are too many examples to the contrary, such as 'pig' in (8a).

(9) Tanacross

a. štŭ-ˑʔ
1sg.water-poss1(**ˊɛʔ**)
'my water'

b. jêg tú-ʔ
berry water-poss2(**ˊʔ**)
'berry water (wine)'

Evaluation of all those proposals amounts to saying that although they all go under the notion of (in)alienability, they all describe different phenomena. For instance, the definition of inalienability via the nature of the relation is orthogonal to the definition of inalienability as a noun class. Nouns like 'bone' in Daakaka or 'water' in Tanacross cannot be assigned either to an alienable or an inalienable class of nouns. In my opinion, the terminological confusion around the notion of "inalienability" reflects the cross-linguistic diversity of adnominal possession. The same relatively vague label is being applied to describe some prominent contrast in the grammar of a given language, which is in one way or another connected to our understanding of possession. It appears impossible to

establish a single proper use of the term (in)alienability to satisfy all needs. It seems to me that it would only be confusing to redefine inalienability, given the heavy load of expectations that is already connected with the term. The five different ways in which the term (in)alienability can be used are schematically represented in table 1.2.

(in)alienability as characteristic of a noun class			(in)alienability as characteristic of a relation	
1	2	3	4	5
Hargus (2007)	Gruber (2013)	Bowern (2012)	von Prince (2012b)	Holton (2000), von Prince (2016)
Inalienable nouns are obligatorily possessed	Inalienable nouns receive short prefix when possessed (not the long one)	Inalienable nouns are "semantically" inalienable (which is not always reflected in their formal marking)	Inalienable relations are permanent, alienable are relative to a certain point at time	Inalienable relations as not controlled by (inanimate) possessors, alienable relations are controlled

Table 1.2: (In)alienability as a blanket term; uses of the term (in)alienability vary from author to author

The notion of inalienability has found its way into the literature on European languages as well. It received special attention in the discussion of the use of definite determiners in Romance and Germanic languages, as shown in (10). The contrast is between *la bouche* 'the mouth', which is interpreted as Marie's body part, and *le livre* 'the book', which is not interpreted as Marie's possession.

(10) Marie a ouvert la bouche/ le livre.
Marie opened the mouth/ the book
'Marie opened her mouth/ #her book.' (Rooryck 2017)

First, it was described by Bally (1926/1995: 33) as "indivisibility": "each phenomenon, action, state or quality which affects any part whatsoever of the personal domain, automatically affects the whole person". Later, inalienable possession in French was described, for instance, by Vergnaud and Zubizarreta (1992: 596) as body parts and clothing, but crucially not kinship: "An inalienable object is a dependent entity in the sense that it is inherently defined in terms of another object of which it is a part". This characteristic of inalien-

ability is consistent with the left part of table 1.2, column 3; inalienable nouns are seen as a special semantic class.[8]

In the theoretical literature on the semantics of possession, various authors have expressed the hope that the (in)alienability distinction would reveal some attested contrasts between various possessive interpretations. An obvious candidate would be the contrast between sortal and relational nouns, as formulated by Barker (1995: 67): "I expect the alienable/inalienable distinction to be a syntactic and morphological grammaticization of the semantic distinction between *lexical* versus *extrinsic* possessive interpretations." The same claim is made in Löbner (2011: 322): "Inalienability essentially coincides with relationality"; see also Gerland and Horn (2010) for the study of (in)alienability distinction as a grammatical reflection of the distinction between relational and non-relational concepts. There is, thus, a general intuition that relational nouns play an important role in the expression of possession in various languages. Unfortunately, the general confusion around the term "(in)alienability" makes it difficult to test those theoretical claims systematically.

1.2.3 Adnominal possession in this thesis

The discussion of (in)alienability touches upon various phenomena connected with the expression of possession. In order to specify the object of study, I will primarily look at the difference in morphological encoding. One of the questions I want to answer is to what extent the relation between the possessor and the possessed affects morphological marking. If the difference in morphological marking of possession is driven by possessive interpretations, the study should also reveal which interpretations are important and thus help to evaluate the theories described in section 1.2.2. In order to avoid confusion and to stay away from implicit assumptions which are connected with this terminology, I choose not to use the term "inalienability" further in this thesis.

I do not assume either that differences in formal encoding of possession necessarily reflect the distinction between relational and sortal nouns. In chapter 2, I introduce my notion of an *idiosyncratic* noun class and show that there is only a weak link between its members and nouns that are traditionally considered relational. I argue that neither relational nor sortal nouns are uniform with respect to the differential possessive marking. In the analysis developed in chapter 2, I attribute differences in interpretation to possessive markers and not to the possessed nouns. However, in chapter 4 I also show that in addition to the distinction between possessive markers proposed in chapter 2, syntactically relational nouns can play an important role in determining possessive marking. Therefore, I argue that it is important to control for various semantic factors in cross-linguistic analysis.

[8] But see the argumentation against this treatment of inalienability in Rooryck (2017).

1.2.4 Data sources and methodological problems

This study of possessive constructions aims to explore possession beyond well-studied European languages. The major challenge for this kind of study is availability of data. Typological research is dependent on comparable data from many diverse languages. It would have been beyond the scope of a PhD thesis to collect data from a large number of languages in the field. Therefore, empirical evidence for my analysis comes almost exclusively from secondary sources, such as reference grammars of different languages and various publications that discuss possessive constructions specifically. Unfortunately, the use of secondary sources comes at a cost. For the evaluation of a semantic (or syntactic) analysis, first-hand data is crucial.

Secondary data sources come with important shortcomings. Firstly, grammatical descriptions are often based on corpora and spontaneous speech. Descriptions that include elicitations are more rare. The problem with corpora and spontaneous speech is that they cannot provide negative evidence. The reported data does not contain ungrammatical or infelicitous examples. Non-reported data might be ungrammatical, infelicitous or just non-reported (but still available in the language). Negative evidence is crucially required for semantic and syntactic analysis.

Furthermore, even those grammatical descriptions that rely on elicitations provide scarce data for a semantic analysis. This shouldn't be surprising, because a grammatical description is a large-scale study that aims to provide a broad overview of various phenomena to be found in a given language. Fine-grained semantic distinctions are rarely the primary concern of the author. Semantics has to be presented next to the other areas of grammar: phonology, morphology and syntax. However, semantic fieldwork is a very complex process which requires a lot of resources. Firstly, the data acquired in elicitation sessions are by themselves not sufficient for semantic analysis. As argued, for instance, by Matthewson 2004, the speaker's answers provide clues about the data, but they cannot be considered the end-results for semantic analysis. The actual data that is being acquired within an elicitation session is the data about the speaker's behaviour. It is a task of the semantic fieldworker to develop a theory that explains how the data about the speaker's behaviour reveals the data about linguistic meaning (see, for instance, Deal 2015). There are many reasons why a speaker might reject an utterance. It might be rejected because it is not well-formed on syntactic, morphological, phonological, or prosodic grounds. It might also be rejected because of what it means. By contrast to other areas of grammar, semantic research deals not only with ungrammaticality, but also with truth and felicity conditions of the expressions in question. It is not sufficient to determine under which conditions a given sentence is true; one also needs to determine the conditions under which it is appropriately uttered. Unfortunately, reference grammars seldom discuss their assumptions about meaning correspondences. It is not common that we find a detailed description of the context provided to the consultant or systematic

probing for negative evidence. Compare the following remark in Coupe (2007: 253): "**Exploratory elicitation** also **confirms** that the possession of body parts and other entities thought to be bound to their possessors in perpetuity **must be encoded by** nominal apposition." While elicitation is explicitly mentioned, there is no discussion of the exact data provided by the speakers of Mongsen Ao. It is impossible to tell in this case if the utterances with body parts were rejected as ungrammatical or as infelicitous.

Semantic analysis that has to rely on secondary sources is confronted with multiple challenges: scarcity of data, lack of negative evidence and an implicit connection between the claims about meaning that the grammar makes with the actual evidence for a certain semantic analysis. The research in this thesis would have been more reliable if I had access to fuller semantic analyses of the languages involved in the study. As pointed out, for instance, in Baker and McCloskey (2007), large data samples based on secondary sources inevitably contain errors. These errors are either inherited from the grammatical descriptions, or introduced by the researcher's own misreadings of those descriptions. I realize that the lack of original data is a major drawback of the current study. However, I have to leave a more complete evaluation of my proposal in light of first-hand data for future work.

1.3 The sample

As a part of my work in the project *Lend me your ears: the grammar of (un)transferable possession*, I created a database of adnominal possession. The current version of the database provides insights about how possession is expressed in 70 genetically diverse languages. The database is primarily based on secondary sources: grammatical descriptions and papers dedicated to the expression of possession in specific languages. In some cases, I also consulted linguists working on a given language. I am particularly grateful to Swintha Danielsen for the information on Baure, Heather Bliss for the information on Blackfoot, Vera Hohaus for the information on Samoan and Stavros Scopeteas and Elisabeth Verhoeven for a very helpful discussion of Yucatec data. The data from Shughni were collected during my own fieldwork in Tajikistan. The database is a large-scale investigation of the ways in which the different types of possession are encoded in typologically unrelated languages. It shows 1) different morphosyntactic constructions to express possession that are attested in the languages of the world 2) structural and semantic oppositions between different types of morphosyntactic constructions. For a detailed description of the database, see Appendix 1.

The languages that have been entered into the database present a varied set. While making this selection, I followed both practical and methodological criteria; the resulting choice is to some extent arbitrary. The choice of particular languages for the database was determined by geographical spread as the database was expected to provide insights into cross-linguistic variation. An-

other criterion was complexity. Languages that use several marking strategies to encode possession were often preferred to the languages that only make use of a single strategy. For the relatively complex systems of possessive marking, I was additionally interested in microvariation. In line with this interest, there is sometimes more than one language from the same language family included in the database (Mayan, Athabaskan, etc.). Finally, the choice of the languages was also determined by practical factors such as the availability of grammatical descriptions and the level of detail in the description of possessive constructions.

The sample of languages that serves as the basis of the thesis is selected from the languages that appear in the database. Since accounting for the whole diversity of possessive marking is beyond the scope of one dissertation, I had to choose a selection of languages to discuss in the thesis. The primary object of this study is the relation between the interpretation of a possessive construction and the availability of differential possessive marking, Therefore, from the database I first chose the languages that employ multiple morphosyntactic means to mark adnominal possession. As the next step of data sampling, I chose 1) languages for which it is explicitly claimed that the possessed noun determines the shape of the possessive marking (see also Nichols and Bickel 2013b) and 2) languages in which alternation of the possessive marking gives rise to a meaning effect which can be described as a change in the relation.

As I mention in section 1.2, in this thesis I analyze the difference in possessive interpretations as the differences in the semantics of the possessive markers. I describe 39 languages in terms of this analysis. These languages are: Adyghe, Bardi, Blackfoot, Bororo, Chontal Mayan, Daaakaka, Ewe, Guajiro, Hidatsa, Koyukon, Lele, Maltese, Maricopa, Mongsen Ao, Movima, Mussau, Nêlêmwa, Ngiyambaa, Paamese, Panare, Yine (Piro), Q'eqchi, Rapa Nui, Saliba, Samoan, Slave, Tanacross, Tariana, Tawala, Tera, Tlingit, Toba, Tolai, Toqabaqita, Tzutujil, Udmurt, Wandala, Yaitepec Chatino and Yucatec Mayan. The languages that are analyzed in more detail are: Toqabaqita, Hidatsa, Adyghe, Rapa Nui, Panare, Bororo, Paamese, Mussau, Saliba, Tolai, Chontal, Yucatec, Nêlêmwa, Daakaka, Movima, Slave and Koyukon. I briefly discuss several languages with "fixed strategies"; these languages are: Nubian (Dongolese), Limbu, Tehit, Tauya, Moskona, Amele, Wauja, Baure, Aguaruna. In chapter 2 I explain why my analysis does not apply to some of these languages. I argue that instead of the meaning distinction, fixed strategies often signal lexically conditioned allomorphy. In chapter 5 I discuss some problematic cases for my analysis on the basis of Kayardild, Mandarin, Hungarian and Hebrew. All together, the thesis deals with the data from 54 languages from 28 different language families.

It is important to know that not all marking strategies are considered in my analysis. Some phenomena concerning the expression of possession do not receive special attention in the thesis.

For example, consider two kinds of alternation of possessive marking in Udmurt (Uralic). In Udmurt, the case marking of the possessor appears to be conditioned by the syntactic function of the whole possessive DP. As shown in

(16), if the possessive DP is a direct object, the possessor is marked ablative; otherwise genitive case marking is used (for more details, see Winkler 2001; Assmann et al. 2014).

(11) Udmurt (Winkler 2001: 22)

a. so kolkhoz-**len** busi-ja-z min-i
she kolkhoz-gen field-ill-3sg go-pret.3sg
'she went to the kolkhoz field'

b. so kolkhoz-**leš** busi-z-e vožmat-i-z
she kolkhoz-abl field-3sg-acc show-pret-3sg
'she showed the kolkhoz field'

Another alternation of possessive marking noted for Udmurt concerns the vowel of the possessor clitic. This alternation is claimed to be determined by the possessed noun (Edygarova 2010). While for the most nouns the possessor clitic involves the vowel *-e...*, for some nouns the same clitic involves the vowel *-i...*. Consider the example in (6).

(12) Udmurt (Edygarova 2010)

a. ki-**i**, nel-**iz**, vin-**iz**
hand-1sg arrow-3sg younger.brother-3sg
'my hand, his arrow, his younger brother'

b. li-**e**, tuš-**ez**, anaj-**ez**
bone-1sg beard-3sg mother-3sg
'my bone, his beard, his mother'

While in the database all four marking strategies are described for Udmurt, the present study only deals with the alternation between *-e...* and *-i...*. Although this alternation between genitive and ablative as shown in (16) may be very interesting on its own, I chose to exclude it from the discussion in the thesis. The factor that determines the alternation is the syntactic structure of the clause; the relation between the possessor and the possessed does not play any role in the choice of the case marking. Therefore, in chapter 2, Udmurt is discussed among languages that have a binary opposition between morphosyntactic strategies to express possession.

Similarly, not all marking strategies found in Lele are considered in the thesis. In (13), two possessive constructions are shown. (13a) involves juxtaposition of the possessed noun and the possessor clitic; in (13b), the possessor clitic attaches to a morpheme, *kè* 'gen'. According to Frajzyngier (2001), the choice between the two marking strategies in (13) is determined by the possessed noun; the contrast is thus between 'friend' and 'word'.

(13) Lele (Frajzyngier 2001: 71, 74)

a. bùgà-**y**
friend-3m
'his friend'

b. kolo **kè-y**
word gen-3m
'his word'

However, there is an additional marking strategy in Lele which involves multiple exponents of the possessor. The choice of this marking strategy is determined by the wider syntactic structure, in particular the binding domain. Frajzyngier (2001) argues that possessive constructions such as (13a) are interpreted as reflexive. In order to achieve a non-coreffferent (3rd party) interpretation for *idiosyncratic* nouns, the speaker has to express the possessor twice, as shown in (14).The possessed noun *bùgà-y* 'friend' is marked with a possessor clitic *-y* '3m' and additionally with a combination of the morpheme *kè* 'gen' and the clitic *-y*.

(14) Lele (Frajzyngier 2001: 74)
a. è dí túgú **bùgà-y**
go 3m house friend-3m
'he$_1$ went to his$_1$ friend'
b. è dí túgú **bùgà-y kè-y**
go 3m house friend-3m gen-3m
'he$_1$ went to his$_2$ friend'

While the difference between the two marking strategies in (13) is discussed in the study, the difference between single expression of the possessor and possessor doubling does not receive special attention. Similarly, I don't discuss differences in definiteness, emphasis, etc.

To summarize, the alternations I exclude from the discussion do not depend on the relations between the possessor and the possessed. They are determined by other factors, such as syntactic function of the possessive phrase, binding conditions, definiteness or information structure.

1.4 Preview

The thesis is organized around the analysis which I develop in chapter 2. In that chapter, I introduce the main notions such as the opposition between idiosyncratic and non-idiosyncratic strategies, and stereotypical possessive relations. I argue that there is a semantic opposition between two types of possessive strategies. I propose that the main principle that regulates the outcome of the competition between the two possessive strategies is *Maximize Presupposition* (Heim 1991). Empirical evidence for the analysis considered in chapter 2 comes from languages which make use of two marking strategies (but see the discussion of the ignored strategies in section 1.3). In chapter 3 and chapter 4, I show how the proposed analysis can be extended to languages that have more than two marking strategies. In chapter 3, I discuss languages with possessive modifiers, better known from the typological literature as "possessive classifiers".

In chapter 4, I discuss other ways in which multiple marking strategies might come about. In that chapter, I show that meaning-based distinctions between possessive strategies need to be distinguished from form-based distinctions. The first part of the chapter deals with form-based distinctions, lexically determined allomorphy. I show that superficially, some languages seem have more than two marking strategies, but under a more detailed look such systems can be reduced to the binary opposition discussed in chapter 2. In the second part of the chapter, I show that the semantic opposition between idiosyncratic and non-idiosyncratic strategies is not the only factor behind differential possessive marking. The cross-linguistic variation within possessive constructions may be deeper than first meets the eye. That part of the chapter deals with interactions between (non)-idiosyncratic strategies and relational nouns (see the discussion in section 1.2.2). The interaction is presented on the basis of four case studies: Daakaka, Movima, Slave and Koyuon. Although the languages under discussion show some similarities, there are also important differences between them with respect to the role relational nouns play in possessive marking and with respect to the semantic opposition between idiosyncratic and non-idiosyncratic strategies. I argue that in order to analyze possessive marking in various languages, one needs to control for various semantic factors systematically. In chapter 5, I discuss problems and prospects of the proposed analysis.

The main idea developed in this thesis is that morphosyntactic strategies to express possession differ with respect to the relations they can convey. I introduce a meaning-based distinction between idiosyncratic and non-idiosyncratic strategies to mark possession. The idiosyncratic possessive strategy (involving the semantics of *MaxSpec*) is only compatible with the stereotypical relation given the semantics of the possessed noun. My definition of stereotypical relation is that it is derived from the most salient feature of the possessed noun in the given language. By contrast, a non-idiosyncratic strategy (involving the semantics of *MinSpec*) is not restricted with respect to the relations it can express. It allows for a variety of interpretations and, crucially, it allows the relation to be derived from the context. In chapter 3, I develop a unified analysis of the possessive strategies based on the insights from possessive modifiers. I propose a uniform lexical entry for a possessive marker *PossSpec* that either takes as its argument an overt relation provided by a possessive modifier or combines with a covert relational pro-form which gives rise either to an idiosyncratic or to a non-idiosyncratic interpretation.