Inalienable possession as grammatical category and discourse pattern

Paul Kockelman
Department of Anthropology, Columbia University

This essay analyzes the grammatical category of inalienable possession by examining the interaction of morphosyntatic forms, semantic features, pragmatic functions, and discourse frequencies. Using data from Q'eqchi'-Maya, it is argued that inalienable possession may be motivated relative to two dimensions: (1) whatever any person is strongly presumed to possess (identifiability); (2) whatever such personal possessions are referred to frequently (relevance). In regards to frequency, inalienable possessions are compared with possessed NPs, and possessed NPs are compared with all NPs, in regards to grammatical relation, information status, animacy rank, and semantic role. In regards to identifiability, it is argued that inalienable possessions are like deictics and prepositions in that they guide the addressee's identification of a referent by encoding that referent's relation to a ground; and inalienable possessions are different from deictics and prepositions in that the ground is a person and the referents are its parts or relations.

0. Introduction

Inalienable possessions may be initially understood as those nouns which are morphosyntactically marked when non-possessed (Bally 1926; Chappell & McGregor 1996, and references therein). In Q'eqchi'-Maya, this cross-linguistic grammatical category is instantiated as follows: members of a small subset of nouns take the suffix *-(b')ej* when non-possessed. The following examples demonstrate the morphological patterns evinced by alienable nouns and inalienable nouns under possession:

	Alienable Nouns	Inalienable Nouns
Unpossessed	*tz'i'*	*na'b'ej*
	'dog'	'mother'
Possessed	*in-tz'i'*	*in-na'*
	'my dog'	'my mother'
Unpossessed	*maal*	*jolomej*
	'axe'	'head'

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Possessed	*aa-maal*	*aa-jolom*
	'your axe'	'your head'

In addition to many body parts and most kinship terms, this category includes words like name, shadow, and clothing. Its semantic extension includes not only parts of personable wholes, but also personable nodes in a social network. See Figure 1. In this essay, the grammatical category of inalienable possession, and the notional domain so delimited, is motivated in terms of pragmatic functions and discourse patterns. In particular, it is argued that there are two key criteria underlying inalienable possession: first, whatever any person may be strongly presupposed to possess (identifiability); second, whatever such personal possessions are referred to frequently (relevance). See Figure 2.

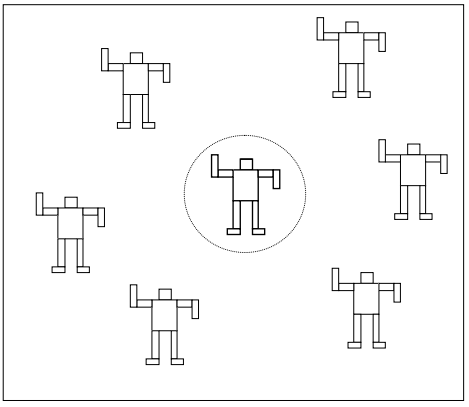


Figure 1. Parts of Personable Whole and Personable Nodes in Social Network

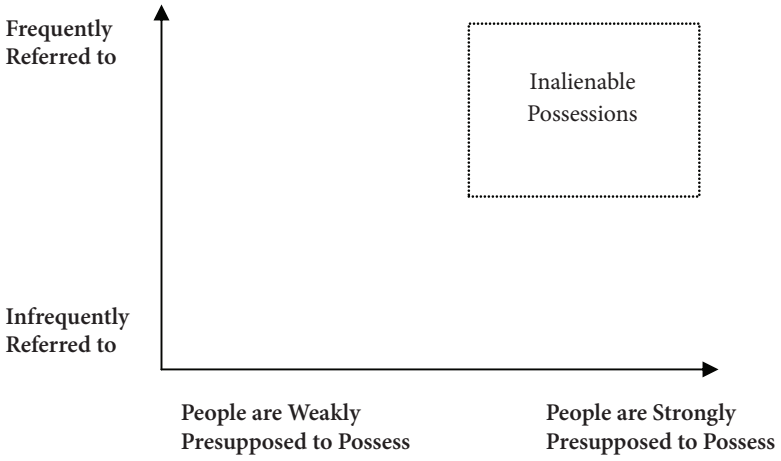


Figure 2. IPs relative to other (Possessed) NPs

Inalienable possessions, then, are quite marked entities. On the one hand, we take their existence for granted (as mutually known by speaker and addressee). On the other hand, we worry about their condition (only speaker knows it, and yet it is informative to addressee). In other words, while inalienable possessions are symmetrically accessible to speaker and addressee as to their existence, they are asymmetrically accessible as to their condition. In some sense, they are both figure (à la focus) and ground (à la topic). Such criteria turn on relatively localized cultural practices (what it means to be a person, what is frequently referred to), as much as more general cognitive processes (what parts or relations constitute a person as an inferential frame, such that a whole can prime its parts, or a node can prime its network). And hence membership in this class should be subject to uniformly principled variability.

However, to fix a grammatical category by reference to a form-class, and then analyze its discourse pattern by reference to a 'frequency class', would overly constrain the analysis from the onset. Instead, inalienable possessions are initially understood relatively broadly, relative to four dimensions: (1) as a form class, relative to morphosyntactic categories; (2) as a feature class, relative to semantic concepts; (3) as a function class, relative to pragmatic ends; (4) as a frequency class, relative to discursive patterns. While any one of these criteria might be used to delimit a class of inalienable possessions, it is methodologically instructive to look at each one separately and to look at all of them simultaneously — and thus to examine the kinds of NPs that stand at their intersection, as well as the kinds of NPs which make up their union. Thus, it will be shown how possessed NPs are distributed (grammatically, semantically, pragmatically, and discursively) relative to other NPs; how inalienable possessions are distributed relative to other possessed NPs; how particular kinds of IPs (body parts and kinship terms) are distributed relative to all IPs; and how body parts are distributed relative to relational nouns and prepositions. In short, by broadening the frame through which inalienability is observed, the multiple factors it correlates with are shown.

Such an approach may be compared to a proposal put forth by Hawkins (2004; and see DuBois 1987). First, we "find a language whose grammar generates a plurality of structural alternatives of a common type" (5). And second, we "check for the distribution of these same structural patterns in the grammatical conventions across languages (ibid). In some sense, the second step has already been done; and so the bulk of the analysis comes down to a fine-grained analysis of the grammatical categories and discourse patterns of one language.[1]

Section 1 reviews the cross-linguistic literature on inalienability, summarizing the patterns that performance data will be compared to. The next two sections treat general aspects of Q'eqchi' grammar. Section 2 describes various grammatical relations involving NPs (as arguments of predicates, and dependents of heads more

generally). Section 3 describes various form classes involving NPs (as elucidated by reference to their morphosyntactic behavior under possession). And Section 4 describes in detail the mophosyntactic and semantic properties of inalienable possessions. The final three sections treat discourse patterns involving inalienable possessions and NPs more generally. Section 5 describes coding conventions used to analyze the text in question: how frequency counts were collected for various properties of NPs such as information status, thematic role, animacy rank, and so forth. Section 6 analyzes NPs which are core-arguments of clauses. And Section 7 analyzes NPs which are arguments of adpositions. The conclusion describes the pragmatic function of inalienable possession, focusing on the relation between inalienable possession, prepositions, and deictics.

1. Inalienable Possession as a Cross-Linguistic Category

In languages that are genetically close to Q'eqchi', inalienable possessions have a similar grammatical form and semantic extension. For example, in the Mayan language Jacaltec (Craig 1973), there is a grammatical category of inalienable possession that includes the terms for kinship relations, body parts, excretions, clothing, and photos. The suffix of this category is *-e*, which appears on such nouns when they are not possessed. For example: *mam-e* 'father', *mi-e* 'mother', *ixal-e* 'wife', *ti-e* 'mouth', *wi-e* 'head', *k'ab'-e* 'hand/arm', *oj-e* 'foot' *camix-e* 'shirt', and *echel-e* 'photo'. In the Mayan language Yucatec (cf. Lehmann 1998), there is a grammatical category of inalienable possession that only includes the terms for kinship relations. The suffix for this category is *-tsil*, which appears on such nouns when they are not possessed. (Body parts, in contrast, are always possessed.) And in the Mayan language Tzeltal (Brown 1994, Levinson 1994, Stross 1976), there is a grammatical category of inalienable possession that includes body parts, body products, soul/spirit, kin terms, and clothing.[2] The suffix for this category is the suffix *-Vl*, which appears on such nouns when they are not possessed.

In languages that are genetically unrelated to Q'eqchi', there is also a grammatical category of inalienable possession (Bally [1926] 1996, Chappell & McGregor 1996, Heine 1997, Nichols 1988 & 1992, Nichols and Balthazar 2005, and Seiler 1983, *inter alia*). In his discussion of Melanesian languages Lévy-Bruhl (1914) was one of the first to introduce the distinction between alienable and inalienable possessions into the literature. There he found two classes of nouns. One set of nouns, which had an extra morphological mark when non-possessed, consisted of body parts, kin relations, spatial relations, and various important utensils, such as weapons and nets. And the other set, which had no such mark, consisted of all other nouns. Examples like this may be multiplied. See, for example, the volume edited

by Chappell and McGregor (1996), in which inalienable possessions are analyzed in African languages such as Bavin, Ewe, and Haya; Australian languages such as Nyulnyul, Yawuru, and Ndjébbana; Asian languages such as Mandarin Chinese, Japanese, Thai and Hmong; and native North American languages such as Mohawk and Koyukon.

Needless to say, although the category of inalienable possession is found in each of these languages, its particular semantic extension and grammatical marking vary. For this reason, attempts to fix the semantic scope of this category have been inconclusive (see Haiman 1985, Nichols 1992, Seiler 1983). And most authors agree with Bally's assertion ([1926] 1996) that the scope of this category is determinable by current or previous cultural interest, rather than some cross-cultural ontological fact. The most that may be said, then, is that it often includes body parts and kin relations, part-whole or spatial relations, and culturally important possessed items (names, domestic animals, shadows, soul, etc.). Other frequent items include exuviae, speech, footprints, domestic animals, mental and physiological states, and pets.[3]

Grammatically, such a class is usually closed in comparison to alienable possessions: that is, the number of items in this class is relatively fixed and finite (Nichols 1988). And the most frequent grammatical marking of this distinction is morphological: when possessed, alienable possessions receive a formal mark in comparison to inalienable possessions; or, when unpossessed, inalienable possessions receive a formal mark in comparison to alienable possessions (Heine 1997). Two other frequent grammatical markings of this distinction, possessor deletion and possessor promotion, are marked in the clause rather than on the noun phrase (in cases of attributive possession). In cases of *possessor deletion*, inalienable possessions appear with no markers of grammatical possession whenever they are the object of a transitive verb whose subject is the possessor (in such a language, 'I cut my finger' would be rendered as 'I cut the finger'). And in cases of *possessor promotion*, inalienable possessions retain their status as direct objects, but their possessors are marked through dative or accusative case rather than genitive (in such a language, 'I cut my finger' would be rendered as 'I cut (to) myself the finger'). Examples of these constructions taken from various languages may be found in Chappell & McGregor (1996). More recent examples of the wide range of grammatical encoding may be found in Dahl (2004: 151–154), Haspelmath (2006), and Nichols and Balthazar (2005).

Since Bally's seminal article on the subject ([1926], 1996),[4] it is well known that in many Indo-European languages, such as Spanish and German, it is ungrammatical to possess body-part terms in certain verbal constructions. For example, where in English we use the expression *he washes his hands*, in German one says *er wäscht sich die Hände* (literally, 'he washes to himself the hands'), and in Spanish

one says *él se lava las manos* (literally, 'he washes himself the hands').[5] Such languages exhibit object-promotion: when the direct object is an inalienable possession, its possessor is encoded as a dative or accusative reflexive construction. In such languages, the semantic extension is usually confined to body parts, but may also include clothing and kinship terms. For example, in German one may say *ich zerriß meine Hose* (literally, 'I tore my pants'), or *ich zerriß mir die Hose* (literally, 'I tore to myself the pants), but the latter is only appropriate when the speaker was wearing the pants at the time of their tearing (Heine 1997). And, in the case of the verb *wegnehmen* (to take away), such possessor-promotion may even occur with kinship terms. In other words, there is a relatively covert category of nouns in these languages, whose grammatical marking (object promotion) and semantic extension (body parts, kinship relations, and clothing) are formally and functionally comparable — but not identical — to inalienable possession in Q'eqchi'.

Several scholars have mentioned frequency of possession as a key factor motivating inalienability (Nichols 1988:579, Haspelmath 2006, Kockelman 2007:351). And many linguists take discourse frequency to be the key factor motivating grammatical categories more generally (Du Bois 1987, Hawkins 2004, *inter alia*), so that the claim that it motivates inalienable possession (as one particular kind of grammatical category) should not be surprising. Nichols (1992), for example, has made the important claim that inalienable possession is not primarily a semantic distinction, but rather a grammaticalization of the fact that inalienable possessions usually appear possessed in discourse.

Haspelmath (2006) has argued against Haiman's claim (1983) that inalienable posession should be motivated in terms of iconicity. Instead, he argues that "frequency of occurrence in possessed constructions" (1) determines it. And his overarching proposal is that conceptualization leads to frequency, and frequency leads to form (11). To make this argument, he marshals morphosyntactic data from a wide-range of languages showing the variety of ways languages encode inalienability. However, his frequency data comes entirely from English: so he is using frequency data from English to make arguments about grammatical categories in other languages. In this way, there is still a discrepancy between the claims made and the evidence put forth to support them.

Using text-based data from Q'eqchi'-Maya, Kockelman examines non-derived NPs that appear possessed on initial mention (and have human possessors). He shows that this discursive category has substantial overlap with the grammatical category of inalienable possessions (marked by the suffix *-b'ej*). And he hypothesizes that "the grammatical category is ultimately the result of the discourse category; and the discursive category is ultimately the result of both relatively widespread cognitive processes [e.g. "what parts constitute a person as a cognitive frame"] and relatively localized cultural practices" (2007:351). In that article, Kockleman was

primarily focused on cultural practices surrounding the referents of inalienable possessions, and only sketched out the grammatical category and discourse pattern. In this essay, these categories and patterns are analyzed in full detail.

More generally, as will be argued in what follows, the issue is not just discourse frequency in some raw sense. For example, while making no claims about the nature of inalienability per se, DuBois (1980) found evidence in English narratives for a particular discourse pattern involving any part-whole relation — be it a woman and her arm, a tree and its branch, or a bike and its wheel. In particular, looking at the use of definite and indefinite articles (that is, the difference between *the boy* and *a boy* in English), he noticed that once a person has been introduced in a narrative, that person's body parts and clothing may be immediately referred to without first having to introduce them using an indefinite article. That is, body parts, hair, and clothing form part of a frame, whose discursive reactance is the fact that its members are able to be formally marked as definite on initial mention. Thus, "there was a woman who had a leg/mother" sounds odd, but "there was a woman whose leg/mother was broken/dead" sounds fine.[6]

We might say, then, that the speaker assumes that the addressee assumes that entities belonging to the category of 'person' usually come with bodies, hair, and clothing. And we may argue that this discursive pattern includes not only body parts, hair and clothing, but also kinship relations, homes, and names. Indeed, it should — as a relatively *graduated* phenomenon — include whatever a particular speech community discursively assumes to necessarily belong to any referent that falls into the local category of person. More generally, as long as one understands the formal expression of this category to turn on discourse patterning (rather than grammatical encoding), and as long as one takes into account the various formal means by which the identifiability of referents may be marked (extending well beyond the range of definite and indefinite articles), such a frame is almost certainly a widespread phenomenon (Kockelman 2007). Relative ease of identifiability and frequency of possession, then, should be two key criteria organizing the discursive patterning of inalienability and hence, ultimately, the grammatical category.

2. Grammatical Relations and Nominal Arguments

Q'eqchi' is a Mayan language of the Kichean family, spoken by some 500,000 people in Guatemala and Belize. Typologically, Q'eqchi' is morphologically ergative and head-marking: obligatory affixes on transitive verbs cross-reference the verb's A-role and O-role arguments; obligatory affixes on intransitive verbs cross-reference the verb's S-role arguments; and the same set of affixes that marks O-role

3a. **[a' ixqa'al a'an]$_i$ ki-Ø$_i$-ch'oolanink r$_j$-e [ix yuwa']$_j$**
Dm girl Dm Inf-A(3s)-care E(3s)-RN E(3s) father
it was this unmarried girl who cared for her father…

b. **toj jo'q'e ki-Ø$_i$-x-raq [ix k'anjel]$_i$**
Part when Inf-A(3s)-E(3s)-finish E(3s) work
…until she finished her work

c. **na-Ø$_i$-x-k'am [ix kem-leb']$_i$ mu-kab'**
Pres-A(3s)-E(3s)-carry E(3s) weave-Nom shadow-house
she carries her weaving-equipment (into the) house's shadow (corridor)

d. **na-Ø$_i$-x-b'ak' [ix t'uy-al]$_i$ chi r$_j$-ix [r-oqechal]$_j$**
Pres-A(3s)-E(3s)-fasten E(3s) cord-Abs Prep E(3s)-RN E(3s)-post
she fastens her cord (for weaving) behind the post (of the house)

e. **na-Ø-chunla chi kemok**
Pres-A(3s)-sit Prep weave
(and) she sits down to weave

4a. **aran ki-Ø-il-e' x$_i$-b'aan [qaawa' b'alamq'e]$_i$ sa' ix num-ik wi'**
there Inf-A(3s)-see-Psv E(3s)-RN SD PN Prep E(3s) pass-Nom Part
there she was seen by Lord Balamq'e in his passing by (there)…

b. **naq na-Ø-xik aj yo r$_i$-ub'el [k'i-che']$_i$**
Comp Pres-A(3s)-go SD hunter E(3s)-RN many-tree
…when, (as a) hunter, he goes beneath the forest

c. **ix ch'in-a-kaq-i-tz'i' k'am-ol b'e chi r-u**
E(3s) small-SF-red-SF-dog carry-Nom road Prep E(3s)-RN
his small red dog is a leader in front of him

d. **a'an$_i$ us-Ø-Ø$_i$ chan-Ø-Ø sa' ix ch'ool**
Dm good-Pres-A(3s) say-Pres-A(3s) Prep E(3s) heart
"she's nice," he says inside his heart

e. **a'an$_i$ ch-Ø$_i$-in-k'am-aq ta jo'-aq w-ixaqil**
Dm Opt-A(3s)-E(1s)-carry-NS IR Prep-NS E(1s)-wife
"would that I could take her as my wife"

5a. **[a tuq'-ixq]$_i$ ink'a' ki-Ø$_j$-x$_i$-taqsi [r-u]$_j$**
Dm young-woman Neg Inf-A(3s)-E(3s)-raise E(3s)-face
that young woman did not raise her face/gaze

b. **maa-min ni-Ø$_i$-x-k'e [r-eetal]$_i$ joq'e ta-Ø-num-e'q**
Neg-Part Pres-A(3s)-E(3s)-give E(3s)-sign when Fut-A(3s)-pass-Psv
never (in no manner) does she realize when he passes by…

c. **[jun chi yuk]$_i$ iiq'o-Ø-Ø$_i$ x-b'aan sa' ix champa**
one Prep goat carry-Pres-A(3s) E(3s)-RN Prep E(3s) bag
…(that) a goat is carried by him inside his bag

Text 1. Examples of Constructions at Issue

arguments on transitive verbs also marks S-role arguments on intransitive verbs (see Comrie 1981 and Dixon 1994, for a discussion of this nomenclature).

Besides this affixal marking of person, number and case, the only other obligatory affixal marking on verbal predicates is a paradigm of inflectional prefixes, marking features belonging to the grammatical categories of mood, aspect, tense and evidentiality. I will refer to members of this paradigm as MATEs. In this way, transitive verbal predicates have the following affixal order: MATE-Absolutive-Ergative-Verb. For example, line 3b of Text 1 shows such a transitive predicate: *ki-Ø-x-raq* (Inf-A(3s)-E(3p)-finish) 'she finished it'. And intransitive verbal predicates have the following affixal order: MATE-Absolutive-Verb. For example, line 3e of Text 1 shows such an intransitive predicate: *na-Ø-chunla* (Pres-A(3s)-sit) 'she sits down'.

In addition to transitive and intransitive verbal predicates, there is also a large class of stative predicates. These are similar to intransitive verbal predicates in that they only have one set of obligatory affixes, cross-referencing the verb's single S-role argument. But they are different in that the affixes are suffixed rather than prefixed; and in that they have a highly reduced paradigm for MATEs, which is also suffixed rather than prefixed. In this way, stative predicates have the following affixal order: Verb-MATE-Absolutive. Members of this class include positionals (*chunchuu* 'to be seated'), the existential and locative predicate (*wank* 'to be located, to exist, to have'), the progressive auxiliary verb (*yoo* 'to be doing'), and adjectives (when used as predicates). For example, line 4d of Text 1 shows such a stative predicate: *chan-Ø-Ø* (say-Pres-A(3s)) 'he says'.

I will refer to the obligatory arguments of such predicates (intransitive, transitive, stative), as cross-referenced by these affixes, as core arguments. Text 1 shows examples of all these verbal constructions: transitive constructions (3b–d, 4e, 5a–b); intransitive constructions (3a, 3e, 4a–b, 4d); and stative constructions (4d, 5c). Full NPs and independent pronouns may optionally occur in the clause, thereby instantiating such arguments as cross-referenced by such affixes. The relation between cross-referencing affixes and instantiated arguments is shown by subscripts.

In addition to arguments licensed by verbs, there are also arguments licensed by nouns. In particular, the set of affixes marking ergative case (A-role arguments) is also used, in slightly modified form, to mark the possessors of possessed noun phrases (PNPs).[7] As with verbs, an explicit NP encoding the possessor, as cross-referenced by such an affix, may optionally occur; and it too may be a possessed NP, and so on. Such possessed NPs have the following affixal order: Ergative-Noun. Text 1 shows examples of such possessed-noun constructions (3a–d, 4a–e, 5a–c). Again, the relation between cross-referencing affixes and instantiated arguments is shown by subscripts.

In contrast to core arguments, which are part of the semantic representation of a predicate, most additional arguments in a clause may be understood as non-core, or peripheral, arguments. Aside from adverbial NPs, most of these are licensed by adpositions, and come in three types. First, there are those headed by prepositions. For example: *sa' k'iche'* (Prep forest) 'in the woods'; and *chi yuk* (Prep goat) 'as a goat.' Second, there are those headed by relational nouns. For example: *x-b'aan li winq* (E(3s)-RN Dm man) 'because of the man'; and *r-e li ixq* (E(3s)-RN Dm woman) 'to the woman'. And third, there are those headed by relational nouns which are themselves headed by prepositions. For example: *sa' x-yanq li tzuul* (Prep E(3s)-RN Dm mountain) 'between the mountains'; and *chi r-e li palaw* (Prep E(3s)-RN Dm sea) 'by the edge of the sea'. Text 1 shows examples of these constructions (along with NPs they license, as marked by subscripts): bare prepositions (3e, 4a, 4d–e, 5c); bare relational nouns (3a, 4a–b, 5c); and prepositions plus relational nouns (3d, 4c).

Relational nouns are non-referential NPs, which are obligatorily possessed (as marked by an ergative cross-referencing prefix), and whose possessors are the arguments in question (as optionally instantiated by a pronoun or full NP). As will be discussed in detail in Section 7, there are around ten such relational nouns, and they often play a dual role as an unmarked, or referential NP (often an inalienable possession, as will be discussed below). Prepositions are distinct from relational nouns in that they do not consist of an obligatorily possessed head (as marked by a cross-referencing affix). In this way, while they functionally license an NP, they do not formally cross-reference the NP by an affix. For this reason, the NP in question must usually be instantiated.[8] There are really only two frequently used prepositions, and one of them (*sa'* 'at/in'), also plays a role as a relational noun (*x-sa'* (E(3s)-RN) 'inside of') and an unmarked NP, itself an inalienable possession (*sa'b'ej* 'stomach'). In short, two well-know grammaticalization pathways are at work: one, whereby referential nouns (such as body part terms) grammaticalize into relational nouns; and another, whereby relational nouns grammaticalize into prepositions.

Within the class of relational nouns there is a sub-class of obliques: those whose arguments are (presumably) part of the semantic representation of a predicate, but which are not affixed on the predicates as such. Rather, they show up as the arguments of relational nouns which accompany such predicates. These include the demoted actors of passive constructions (marked with the relational noun *-b'aan*), the demoted undergoers of antipassive constructions (marked with the relational noun *-e*), and the recipient in various three-place predicates, such as 'to say *to him*' or 'to give *to her*' (marked by the relational noun *-e*). There is a general tendency: constructions encoding oblique arguments are composed of a relational noun without a preposition (the second class, above); whereas constructions encoding

Table 1. Grammatical Relations in which NPs are Implicated

Grammatical Relation	How Relation is Encoded
Agent-role	Cross-referenced by ergative affix of transitive verbal predicate
Subject-role (Verbal)	Cross-referenced by absolutive affix of intransitive verbal predicate
Subject-role (Stative)	Cross-referenced by absolutive affix of stative predicate
Object-role	Cross-referenced by absolutive affix of transitive verbal predicate
Possessor-role	Cross-referenced by ergative affix of noun
Adposition-role (Prep)	Argument of preposition
Adposition-role (RN)	Cross-referenced by ergative affix of relational noun (includes obliques)
Adposition-role (Prep+RN)	Cross-referenced by ergative affix of relational noun, itself argument of preposition
Extra-role	Adverbial NPs, Non-referential NPs, and so forth

non-core arguments are composed of a relational noun with a preposition (the third class, above), or a bare preposition (the first class, above).

Finally, there are also 'extra NPs' — or those NPs occurring in a clause which are neither cross-referenced by an affix (be it on a verb, or a noun), nor formally licensed by a preposition. Some of these are just non-referential NPs: vocatives, predicate NPs, incorporated NPs, and so forth. And some of these are just adverbial NPs, often locative deictics, which encode the goal of an action or the locale of a state. Text 1 shows examples of such extra NPs: non-referential (3c, 4b–c); and adverbial (3c, 4a).

In sum, there are a variety of grammatical relations which involve nominal arguments. Overt NPs may thereby be formally licensed (as cross-referenced by an absolutive or ergative affix) as the arguments of intransitive, transitive, and stative predicates; as well as the possessors of NPs and relational nouns. NPs may be formally licensed by prepositions. And unlicensed NPs may occur in adverbial and/or non-referential contexts. Table 1 summarizes these relations. After discussing the different form classes of NPs that exist, we will examine how tokens of such form classes are distributed across these grammatical relations.

3. Form Classes and Possessed NPs

In Q'eqchi', seven classes of (non-derived) nouns may be distinguished as a function of the morphological changes their members undergo when grammatically possessed (compare Stewart 1980; and see Lehman 1998, Nichols and Balthasar

Table 2. Simple Noun Classes in Q'eqchi' as a Function of Grammatical Possession

FORMAL FEATURES OF EACH CLASS	EXAMPLES	SEMANTIC EXTENSION	Relatively Marked if Possessed
1) 'Never' possessed	*saq'e (sun)* **x-saq'e (its sun)*	*Uniques and Naturals:* Sun, Moon, Earth, Valley,	↕
2) Take suffix *-Vl* when possessed	*kik'* (blood) *in-kik'el* (my blood)	*Extended Bodily Substance*: Blood, Bones, Nerves, Skin	
3) No change when possessed by humans Take suffix *-Vl* when possessed by non-humans	*xe'* (root) *in-xe'* (my root) *x-xe'el* (its root)	*Metonymic Possession*: Road, Tortilla, Animal, Basket, Etc.	
4) No change when possessed	*chiin* (orange) *in-chiin* (my orange)	*Unmarked Category:* Most Nouns	
5) Suppletive possession	*kab'l (house)* *w-ochoch (my home)*	*House and Home*	
6) Take suffix *-(b')ej* when non-possessed	*na'b'ej* (mother) *in-na'* (my mother)	*Inalienable Possession*: Kin-Terms, Some Body Parts, Clothing, Place, Name	
7) 'Always' possessed	*r-a' (its leg)* **a' (leg)*	*Most Body Parts*	Relatively Marked if Unpossessed

2005, Balthasar and Nichols 2005, for typologies of possession). These morphological changes, while highly frequent tendencies, do have some exceptions which I will point out. Moreover, given the relative infrequency of tokens for some of these classes, it is not always easy to determine whether the exceptions are idiosyncratic, perhaps due to performance issues or even dialectal and idiolectal variations. These classes have been ordered as a function of the degree to which they are morphologically marked when non-possessed.

As may be seen in Table 2, members of the first class are (almost) never possessed. This class includes relatively abstract words like *na'bejil* 'motherhood', and words with unique referents such as *saq'e* 'sun' and *po* 'moon' — though the latter can be possessed by a woman to talk about her menstrual cycle.[9]

Members of the second class of nouns take the suffix *-Vl* when possessed (where V is a vowel).[10] For example, *tz'uum* 'skin' and *in-tz'uumal* 'my skin'; or *baq* 'bone' and *in-baqel* 'my bone(s)'. I have only found four terms in this class: *tz'uum-al* 'skin', *baq-el* 'bone', *ich'm-ul* 'vein/artery', and *kik'-el* 'blood'. Another term *metz'ew* sits on the edge of this class: unpossessed, it may mean either 'strength' or 'muscle'. And this polysemy is differentiated when possessed, as it may occur either with a suffix *(in-metz'ew-il* 'my muscles') or without (*in-metz'ew* 'my strength'). Notice that this class has, in some sense, an opposite morphological pattern than

inalienable possessesions: the noun is morphologically marked when possessed. And, members of this class are frequently referred to in non-possessed form. Crucially, the suffix in question (*-Vl*) tends to mark more abstract referents, and often less bounded referents. Broadly speaking, this class may be semantically characterized as extended bodily substances.

Members of the third class undergo no changes when possessed by humans, but they take the suffix *-Vl* when possessed by nonhumans. For example, *chakach* 'basket' and *x-chakach li winq* (E(3s)-basket Dm man) 'the man's basket', and *x-chakach-il li wa* (E(3s)-basket-Abs Dm tortilla) 'the tortilla's basket'. Semantically, members of this class are difficult to characterize, but they include words such as *chakach* 'basket', *wa* 'tortilla', *xul* 'animal', and *be* 'road'. Notice that when the possessor is nonhuman, the semantic relationship is not one of physical or legal possession per se, but rather part-to-whole, shared-locale, or means-to-end. That is to say, the basket does not belong to the tortillas; the basket is where the tortillas are kept. Similarly, we can speak of the 'town's road' or the 'tree's animal'. For this reason, members of this class may be semantically characterized as metonymic possessions. (Many possessions are, of course, metonymic rather than physical or legal; what is special about this class is that it is morphologically sensitive to the distinction.)

The fourth class of nouns is the largest and least marked. Aside from being prefixed by a possessive pronoun, its members undergo no changes when possessed. For example, *tz'i'* 'dog' and *in-tz'i'* 'my dog'; or *maal* 'axe' and *in-maal* 'my axe'. Given the ontological range over which members of this class may vary, there seems to be no underlying semantic domain to which it corresponds. This, then, is the unmarked class of nouns — the largest in size, and the least specified in meaning.

The fifth class has only one member, which is highly frequent, and involves suppletion: *ochoch* (almost always possessed) may be glossed as 'home'; and *kab'l* (almost always non-possessed) may be glossed as 'house.'[11] In addition to humans, many animals may be said to have houses. This is especially true of domestic animals, or companion species, such as cats, dogs, pigs, chickens, turkeys, ducks and cows.

Members of the sixth class of nouns lose the suffix *-(b')ej* when possessed. For example, *ko'bej* 'daughter (of woman)' and *in-ko'* 'my daughter'; or *ch'oolej* 'heart' and *in-ch'ool* 'my heart'. These words are pragmatically odd when not possessed, insofar as they have generic reference. That is, if you use these words in their non-possessed form, they rarely refer to specific hands or daughters — but rather to hands or daughters in general. Think, for example, of sentences like 'arms are for hugging'. Because these nouns usually appear in possessed form, and because they are morphologically marked and pragmatically odd when non-possessed, they have been referred to as *inalienable possessions*. As will be discussed in the next

section, this class includes most kin terms, many frequently used body-part terms, and the words for name, place, family, and clothing.

Members of the seventh class are (almost) always possessed. This class includes the majority of body part terms such as *x-ch'ub* '(his/her) navel' and *x-maqab* '(his/her) chest' — unless they are involved in butchery.[12] Like class 1, this class is difficult to specify, in that it turns on the word 'always' which would be difficult to confirm. Nonetheless, it is useful to consider it as a limit class. Some linguists, such as Lehmann (1998), would consider this class inalienable possessions as well: those words which are always possessed. And the technical term for distinguishing this class from the preceding class is inabsolutive inalienable (class 6) versus absolutive inalienable (class 7).

There are a number of derived NPs, usually nominalizations of other form-classes, that interact with possession. Gerunds, as a form-class in Q'eqchi', consist of nominalizations of transitive predicates: *ilok* 'to see' becomes *r-il-b'al* (E(3s)-see-Nom) 'its seeing, or seeing it'; and *kamsink* 'to kill' becomes *x-kamsink-il* (E(3s)-kill-Nom) 'its killing or killing it'. In such constructions, the possessor of the gerund would be the usual object (or undergoer) of the predicate; and there is no MATE. Such constructions often occur with the stative predicate *yook* to mark progressive aspect. And they often occur in interclausal relations.[13] They are almost always possessed, and hence should belong to class 7.

Non-finite predicates, which have neither cross-referencing affixes nor MATEs, are quasi-NPs. They have a complementary distribution with gerunds (in progressive aspect constructions, and interclausal relations more generally), encoding erstwhile intransitive rather than transitive constructions. These are almost never possessed, and hence should belong in class 1. See Text 1, line 3e: *kemok* 'to weave'.

Many relatively concrete nouns and adjectives may be derived into relatively abstract nouns, using the suffix *-Vl* (where *V* is a vowel), sometimes iteratively: *kaq* 'red' becomes *x-kaq-il* (E(3s)-red-Abs) 'its redness'; and *winq* 'man' becomes *x-winq-il-al* (E(3s)-man-Abs-Abs) 'his manliness'. Such derived nouns are usually possessed. As such, this derivational process marks relatively abstract entities (redness, manhood), such that properties of a substance are construed as possessions of a possessor. This abstraction makes sense in the case of the second and third form-classes discussed above: in the case of extended bodily substances, such possessions are construed as unbounded (my blood, my bones, my nerves); and in the case of metonymic possessions, it is only the non-physical and/or non-legal sense which requires the suffixing. It is worthwhile noting that the one-dimensional continuum along which these form-classes have been ordered, might really be organized relative to two dimensions: one turning on whether an NP is more or less marked when possessed; and the other turning on whether an NP is more or less bounded/concrete or unbounded/abstract.

Finally, many intransitive predicates may be derived, via the suffix *-ik*, into a (usually) possessed noun referring to the time at which an event took place: *kamk* 'to die' becomes *x-kam-ik* 'its time of death, its event of dying, its death'. Many transitive verbs may be derived into an (usually) possessed noun, via the suffix *-om*, referring to the object of the action: *ajok* 'to desire, to love' becomes *r-aj-om* 'his loved one, her object of desire'. Many verbs may be derived into a (usually) possessed noun, via the suffix *-leb'*, referring to the instrument with which an action is undertaken: *kemok* 'to weave' becomes *x-kem-leb'* 'its weaving instrument, or its loom'. And many verbs may be derived into a (usually) possessed noun, via the suffix *-b'aal* (which sometimes co-occurs with *-leb'*), referring to the place an action occurs (or the location of an instrument used to undertake the action): *chunlaak* 'to sit' becomes *chun-le(b')-b'aal* 'bench'.

While the focus in what follows will be inalienable possessions of the strict sort (those which take the suffix *-b'ej* when non-possessed), several of the classes just discussed are *quasi inalienable possessions* in that they overlap semantically or pragmatically with the main class. For example, extended bodily substances (class 2), suppletive possession (class 5), always possessed NPs (class 7), and many possessed NPs which have been derived may be understood as difficult to alienate parts of human possessors. As will be seen, however, they often differ in their overall frequency (there are many many more inalienable possessions, be it of any individual IP or of the class of IPs); they are more likely to be found in non-possessed form; and their possessors may or may not always be human.

4. The Semantic Extension of Inalienable Possession

Table 3 lists all the inalienable possessions in Q'eqchi'.[14] As may be seen, there are five different subclasses. First, listed under (1) as *Body Parts (Adpositions)* are those inalienable possessions that have a grammatical role as not only a noun denoting a body part but also a relational noun or preposition denoting a spatial, temporal, or grammatical relation. There are around five such terms. *Ix-(b)ej* 'back' is also used in the adposition *chi rix* 'in back of, after'. It is also used to refer to the shells and fur of animals, as well as the bark of trees. *U-hej* 'face' is also used in the adposition *chi ru* 'in front of, before'. *E-hej* 'mouth' is also used in the adposition *chi re* 'at the edge of, during', as well as marking dative case. *Sa'-ej* 'stomach' is also used in the adposition *chi x-sa'* 'inside of' and, even more frequently, as the preposition *sa'* 'at/in'. And *yii-b'ej* 'waist' is also used in the adposition *sa' xyii* 'in the center of'. In short, words for certain body parts provide a handy domain for the grammatical encoding of spatial and temporal relations. As will be discussed in Section 7, just about

Table 3. Grammatical Category of Inalienable Possessions

Q'EQCHI' WORD		ENGLISH GLOSS
1) Body Parts (Spatial Relations)	yii-b'ej	waist (in the center of)
	u-hej (uub'ej)	face (in front of)
	e-hej	mouth (at the edge of)
	sa'-ej	stomach (inside of)
	ix-ej	back (in back of)
2) Body Parts (Appendages)	uq'-ej	hand
	oq-ej	foot
	jolom-ej	head (hair)
	tz'ejwal-ej	body (penis)
	ch'ool-ej	heart
	xolol-ej	throat
3) Non-Body Parts	aq'-ej	clothing
	na'aj-ej	place (of body, home, field)
	k'ab'a'-ej	name
	komun-ej	family (community, class)
4) Marginal Members	[ketomj] (ketomq)	domestic animals
	[awimj]	seedlings
	[anum-ej]	spirit [Spanish *anima*]
	[tibel-ej]	body
	[muh(el)-ej]	shadow, spirit
	[musiq'-ej]	spirit-breath
	[awab'ej]	leader, president, governor
	[ojb'ej]	cough
	[eech-ej]	possessor
5) Kinship Terms	yuwa'-b'ej	father
	na'-b'ej	mother
	alal-b'ej	son (of male)
	rabin-ej	daughter (of male)
	yum-b'ej	son (of female)
	ko'-b'ej	daughter (of female)
	yuwa'chin-b'ej	grandfather (either side), godfather
	na'chin-b'ej	grandmother (either side), godmother
	ii-b'ej	grandchild, great-grandchild
	as-b'ej	elder brother
	anab-ej	elder sister (of male)
	chaq'na'-b'ej	elder sister (of female)
	iitz'in-b'ej	younger sibling
	ikan-b'ej	uncle (FBr, MBr, FSiHu, MSiHu)
	ikanna'-b'ej	aunt (FSi, MSi, FBrWi, MBrWi)
	beelom-ej	husband
	ixaqil-bej	wife
	hi'-b'ej	son-in-law (DHu)
	alib-ej	daughter-in-law (SWi)
	balk-ej	brother-in-law (SiHu of male)
	echalal-b'ej	brother-in-law (SiHu of female), sister-in-law (BrWi)

any IP can be used like a relational noun in the right context, and so this distinction between class 1 and class 2 should be understood as relative, not absolute.

Second, listed under (2) as *Body Parts (Appendages)* are those inalienable possessions that refer to relatively discrete body parts. There are six such terms: *uq'-ej* 'hand', *oq-ej* 'foot', *jolom-ej* 'head, hair', *tz'ejwal-ej* 'body' (or more vulgarly, 'penis'), *xolol-ej* 'throat/neck', and *ch'ool-ej* 'heart'. Notice that these terms pick out the whole person (body), the five pieces farthest from the center (limbs, head and neck), and the innermost part of the person (heart). As discussed in Kockelman (2007), the heart enters into a large number of frequently used grammatical constructions that denote intentional states such as memory, jealousy, estrangement, desire, worry, and belief. Thus, constructions involving this inalienable possession provide a handy domain for the metaphorical elaboration of mind.

Third, listed under (3) as *Non-Body Parts* are those four inalienable possessions that denote neither body parts nor kinship relations. The term *aq'-ej* 'clothing' may refer both to any particular article of clothing and to the general class of clothing, including both the locally made *traje* worn by women and the second-hand American clothing worn by men. The term *na'aj-ej* 'place' has three standard referents: the space of an individual's body or a group's bodies; the homestead (including house, garden, latrine, chicken coop, pigpen, and surrounding grounds); and the cornfield (usually limited to one's current *milpa*, but at times extended to include the extent of one's agricultural property). The term *k'ab'a'-ej* 'name' refers not only to first and family names, but also to basic-level terms such as 'dog', 'tree', and 'house' — that is, the names of things. Last, the term *komun-ej* 'family' is a loanword, coming from Spanish *comunidad* 'community', which is now grammatically assimilated to Q'eqchi'. It usually refers to consanguineal kin (as a class), but it may be extended to include affinal and ritual kin, as well as all village members.

Listed under (4) as *Marginal Members* are peripheral inalienable possessions. Included are the words *ketomj* 'domestic animals', *awimj* 'seedlings', *anumej* 'evil spirit' (cf. Spanish *anima* 'soul'), *tib'elej* 'body', *muh(el)ej* 'shadow, soul', and *musiq'ej* 'breath, soul'. The first two of these words are phonetically odd (the combination /mj/ is rare), so that it looks like these used to be inalienable possessions but are not any longer, yet still bear a morphophonemic trace; and the last three are inalienable possessions for only some speakers (or perhaps in some dialects). There are also a few terms that end with */(b')ej/*, but which do not seem to be inalienable possessions: *sa'bej* 'stomach ache' (cf. *sa'ej*); *ojb'ej* 'phlegm, cough, chill'; *jolomb'ej* 'head ache' (cf. *jolomej*); *tuulej* 'witchery', and *we'ej* 'hunger'. The noun *awab'ej* 'leader' also has the correct morphology, and certainly shares a family resemblance with other inalienable possessions; however, it often occurs in non-possessed form and does not lose the suffix when it occurs in possessed form. In the text to be considered, two of these marginal members — *mu(hej)* 'shadow' and *musiq'ej* 'breath'

— were not included in token counts of inalienable possessions, but are included in the discussion of their distribution. In short, just as certain inalienable possessions are coming into Q'eqchi', others are falling out of Q'eqchi'. This is in no way, then, a fixed or stable category.

Lastly, listed under (5) as *Kinship Terms* are those inalienable possessions that make reference to particular social relations. Such terms are unique insofar as their referents are simultaneously inalienable possessions and inalienable possessors. They are ordered, from top to bottom, according to the following semantic feature hierarchy: consanguineal before affinal, lineal before collateral, ascending before descending, first-generation before second-generation, elder before younger, and male before female (cf. Greenberg 1980).[15]

5. Texts Considered and Coding Conventions

The preceding discussion has focused on the grammatical category of inalienable possession in Q'eqchi' as it was spoken during my fieldwork (1996–2002). In this way, it focused on present-day grammatical categories. Such analysis should be related to discourse patterns which involve inalienable possessions. Moreover, with the understanding that today's grammatical categories are often yesterday's discourse patterns, it is worth studying examples of narrative from previous eras. As Hawkins puts it: "Grammars are 'frozen' or 'fixed' performance preferences" (2004). Insofar as Q'eqchi' was an unwritten language, this is of course impossible. However, one particularly good text, transcribed from an oral recounting around 1900, provides an opportunity. In particular, the text itself is very carefully transcribed: for example, long and short vowel distinctions are consistently marked, as are glottalized and non-glottalized consonants. And it provides tokens of over 1000 nominal arguments, as distributed across a wide-range of grammatical, semantic, and pragmatic contexts: and so relative frequencies may be compared.

A key set of features for which this text was coded may be seen across the top row of Table 4. In particular, each NP was coded for its grammatical relation, or case-role (broadly construed), as laid out in Section 2. A-role (qua relatively agentive argument of transitive predicate, as cross-referenced by an ergative affix); S-role (qua single argument of intransitive predicate, whether stative or non-stative, as cross-referenced by an absolutive affix); O-role (qua relatively non-agentive argument of a transitive predicate, as cross-referenced by an absolutive suffix); possessor of relational noun (whether or not the relational noun is itself the argument of a preposition); argument of preposition (when there is no relational noun); extra-role of clause (qua non-licensed argument of clause, often temporal

Table 4. Overall Token Count of Nominal Arguments

		All NP	A-role	S-role (All)	O-role	Adpos (RN)	Adpos (Prep)	E-Role (Cl)	E-Role (NP)
	Tokens	1016	124	235	120	119	141	46	15
Info-Status	Theme	500	107	125	45	45	22	16	1
	Resume	170	17	42	16	32	15	5	4
	First	273	0	61	43	39	87	6	7
	Non-Ref	32	0	4	0	1	14	9	3
	Other	28	0	2	16	0	2	1	0
	Null	13	0	1	0	2	1	9	0
Theta-Role	Actor	222	106	113	0	0	0	0	0
	Experiencer	20	18	2	0	0	0	0	0
	Theme	37	0	8	28	0	0	0	1
	Undergoer	206	0	110	92	0	0	0	2
	Possessor	332	0	0	0	119	0	0	2
	Adpositional	129	0	0	0	0	128	0	1
	Adverbial	26	0	0	0	0	1	24	1
	Predicative NP	7	0	0	0	0	0	6	1
	Predicative Adp	11	0	0	0	0	11	0	0
	Other	15	0	1	0	0	0	7	7
	Null	11	0	1	0	0	1	9	0
Animacy	Deity	410	103	111	20	44	4	9	5
	Human	31	7	7	0	5	0	0	0
	Animal	90	12	32	15	5	2	2	2
	Living	32	2	17	2	4	1	0	0
	Organic	87	0	20	21	9	16	2	1
	Other	353	0	47	62	50	117	24	7
	Null	13	0	1	0	2	1	9	0
Formal Class	Zero (Null)	482	108	129	42	51	1(?)	9	0
	Deictic	49	4	8	2	1	16	17	0
	Proper Noun	55	7	20	2	10	0	1	4
	IP	57	1	13	9	5	16	5	1
	Common Noun	301	4	59	53	42	69	13	9
	Gerund	37	0	0	2	10	23	9	1
	Non-Finite	18	0	2	1	0	15	9	0
	Wh-Word	8	0	3	4	0	0	1	0
	Other	9	0	1	5	0	1	9	0

Table 5. Overall Token Count of Possessive Constructions

		All (Possessors)	All (Possessions)	IP (Possessors)	IP (Possessions)	CN (Possessors)	CN (Possessions)
	Tokens	211	211	57	57	100	100
Info-Status	Theme	136	8	39	4	68	3
	Resume	39	36	13	13	19	23
	First	29	145	5	36	12	74
	Non-Ref	1	5	0	4	0	0
	Other	6	17	0	0	1	0
	Null	0	0	0	0	0	0
Theta-Role	Actor	0	6	0	2	0	4
	Experiencer	0	0	0	0	0	0
	Theme	0	7	0	3	0	4
	Undergoer	0	70	0	18		38
	Possessor	211	55	57	12	100	26
	Adpositional	0	54	0	11	0	20
	Adverbial	0	5	0	1	0	4
	Predicative NP	0	3	0	2	0	1
	Predicative Adp	0	6		5	0	1
	Other	0	5	0	3	0	2
	Null	0	0		0	0	0
Animacy	Deity	113	23	34	19	59	4
	Human	12	0	5	0	7	0
	Animal	18	4	10	0	3	4
	Living	5	2	1	1	4	1
	Organic	18	46	1	29	10	17
	Other	45	136	6	8	17	74
	Null	0	0		0	0	0
Formal Class	Zero (Null)	138	1(?)	41	0	65	1
	Deictic	1	0	0	0	1	0
	Proper Noun	11	0	3	0	8	0
	IP	7	57	1	57	5	0
	Common Noun	51	112	12	0	21	99
	Gerund	1	36	0	0	0	0
	Non-Finite	0	0	0	0	0	0
	Wh-Word	0	0	0	0	0	0
	Other	2	5	0	0	0	0

and locative adverbials); or extra-role of NP (qua non-licensed argument of NP, often non-referential NPs).

Another key set of features may be seen across the top row of Table 5. In particular, each NP was coded for whether or not it was involved in a possession construction (be it as possession or possessor), and for how it was involved: (1) all possessed NPs (and their possessors); (2) all simple possessed NPs (and their possessors), which will be referred to as SPNPs; (3) all inalienable possessions (and their possessors), which will be referred to as IPs. The second category consisted of all possessed NPs minus inalienable possessions, minus gerunds, and minus instances of the reflexive construction.

It should be emphasized that some nominal arguments may be analyzed by both sets of features (either those of Tables 4 or those of Table 5). For example, a single NP may be both an S-role and a simple possessed NP; and a single NP may be both an inalienable possession and a possessor of another NP. So the two largest token counts are not meant to be mutually exclusive.

As may be seen down the left-hand column of Table 4 and Table 5, the text was also coded for another set of dimensions. Like the dimensions across the top row, these dimensions were chosen because they are locally salient (yet cross-linguistically applicable), and organized relative to clines or scales (which will prove useful for typological comparison). First, each nominal argument was coded for its *information status*: first-mention (never previously referred to in the text); resumptive mention (previously referred to in the text, but not in the current or immediately preceding clause); and thematic mention (last referred to in the text in the current or immediately preceding clause).[16] Some NPs could not fit into anyone of these three categories, being non-referential (such as vocatives, incorporated objects, negative pronouns, predicate nominals, parts of proper names, and so forth). Other NPs were coded as null: usually meaning that, while a potential nominal argument was formally licensed by a cross-referencing affix on some predicate, there was no actual argument (semantically speaking). This is the case, for example, when the argument in question was instantiated by a complement clause.

Second, each nominal argument was coded for its *semantic role* (or thematic relation), loosely speaking. This was the most difficult coding to do. A key concern, for nominal arguments which were licensed by verbal predicates, was the semantic role of the argument: actor (any doer of an activity or effector of a change in state); experiencer (for agents in two-place stative predicates: *see*, *call*, *want*, *believe*, etc.); theme (for patients in two-place stative predicates: *see*, *call*, *want*, *believe*, etc.); and undergoer for any argument that has a state or change of state predicated of it. Not all nominal arguments could be classified this way, and so it was also indicated what other kind of role an argument might have: possessor, adverbial (temporal and locative NPs not licensed by a preposition), predicate NP (he is *my brother*),

predicative adposition (he is *in the kitchen*), others (unclassifiable relative to any of these distinctions), and null (again, meaning that while an NP was formally licensed by a predicate, via some cross-referencing affix, there was no formal or semantic instance of it — often because of complementation of some kind). In certain cases, values along this horizontal dimension correlated with values along the vertical dimension; but usually they were orthogonal enough as to be informative, especially in the case of core arguments. In certain contexts, I will make a distinction between actors (agent, experiencer) and undergoers (theme, patient), broadly construed.

Third, each nominal argument was coded for its relative rank in *animacy*. This property is really an inherent property of the referent, and was made relative to the analyst's standard. There were seven categories: deity (most of the key actors in the narrative, almost all of whom take human forms for much of the action); human (of which there were only two bona fide characters in the text); animal (ranging from dragon flies and turtles to snakes and bees); living (meaning an inanimate entity that is alive: trees, forests, plants, and so forth); organic (meaning a part of a whole which is living, animal, human, or deity: arms and legs, leafs and stems, fur and so forth); other (meaning inanimate in a narrow sense, as whatever concrete referents do not fit into the above categories: rocks, tools, houses, and so forth); and null (which again encompasses nominal arguments that have no referents at all, or cannot otherwise be classified). In certain contexts, I will make a distinction between animate (deity, human, animal) and inanimate (living, organic, other), in the strict sense: that which has (or does not have) sensation and movement.

Fourth, the *formal* class of nominal arguments was coded relative to a number of broad categories. It was marked as zero-realization if its only manifestation was a cross-referencing affix, and there was no full NP or pronoun present. It was marked as an inalienable possession if it belonged to class (6). Other salient categories included: deictics (and pronouns), gerunds, non-finite predicates, and Wh-words. It was marked as a common noun if it was an NP that did not belong to any of the foregoing categories. And finally, it was marked as N.A. if it could not otherwise be categorized.

6. Discourse Patterns Involving Inalienable Possessions as Core Arguments

How are inalienable possessions (IPs) distributed relative to other possessed noun phrases (PNPs), and how are possessed noun phrases distributed with respect to all noun phrases (NPs)? This question, then, is about discursive patterning: the distribution of NPs with respect to grammatical relations (A-role, S-role, O-role, etc.), information status (theme, resume, first), semantic role (actor, experiencer,

theme, undergoer, etc.), animacy rank (deity, human, animal, living, organic, and inanimate), and form class (inalienable possession, deictic, gerund, etc.).

Before analyzing the distribution of PNPs, it is worthwhile characterizing the distribution of nominal arguments more generally. As may be seen across the top row of Table 4, out of 1016 nominal arguments in the text, 124 occurred in A-role, 235 occurred in S-role, 120 occurred in O-role, 119 occurred as the possessor of a relation noun, 141 occurred as the argument of a preposition, 46 occurred as extra (or formally unlicensed) NPs of clauses, and 15 occurred as extra NPs of NPs. (Of the remaining 215 nominal arguments, 211 are possessors of NPs, and 4 are semantically empty — having clauses as their arguments.) Notice, then, that aside from extra-roles (which are relatively infrequent) and S-roles (which are relatively frequent, so far as they include the arguments of stative predicates, many of which function as auxiliaries), the other roles have very similar frequencies (around 120 tokens or so).

Now we may turn to the distribution of the horizontal categories relative to the vertical categories (qua information status, thematic role, animacy rank, and form-class). To characterize a few key trends, as summarized in the first four rows of Table 6, a number of well-known patterns should strike the reader's attention (cf. Dixon 1979, DuBois 1987, Greenberg 1966). First, as one moves from A-role arguments, through S-role and O-role arguments, to Adpos-role arguments (which include both the possessors of relational nouns and the arguments of prepositions), the referents of these NPs go from old to new (or thematic mentions to first

Table 6. Summary of Broad Distributional Patterns

		Tokens	Old vs. New	Resumptive	Actor vs. Undergoer	Animate vs. Inanimate	Zero vs. NP
NPs and PNPs	**A-role**	124	100% vs. 0%	0%	100% vs. 0%	98% vs. 2%	87% vs. 13%
	S-role	235	71% vs. 26%	3%	49% vs. 50%	64% vs. 36%	55% vs. 45%
	O-role	120	51% vs. 36 %	23%	0% vs. 100%	29% vs. 71%	35% vs. 65%
	Adp-role	260	26% vs. 48%	26%	N.A.	23% vs. 77%	20% vs. 80%
	IP	57	7% vs. 63%	30%	4% vs. 37%	33% vs. 67%	N.A.
	PNP	211	4% vs. 69%	27%	3% vs. 36%	13% vs. 87%	N.A.
	SPNP	100	3% vs. 74%	23%	4% vs. 42%	8% vs. 92%	N.A.
Possessions	**KS**	19	11% vs. 37%	52%	5% vs. 26%	100% vs. 0%	N.A.
	IP	57	7% vs. 63%	30%	4% vs. 37%	33% vs. 67%	N.A.
	BP	34	6% vs. 74%	20%	3% vs. 44%	0% vs. 100%	N.A.
	SPNP	100	3% vs. 74%	23%	4% vs. 42%	8% vs. 92%	N.A.
Possessors	**P of KS**	19	89% vs. 5%	6%	N.A.	100% vs. 0%	100% vs. 0%
	P of IP	57	68% vs. 9%	23%	N.A.	87% vs. 11%	65% vs. 35%
	P of SPNP	100	68% vs. 12%	20%	N.A.	85% vs. 15%	72% vs. 28%
	P of BP	34	53% vs. 12%	35%	N.A.	82% vs. 18%	56% vs. 44%

mentions), the semantic roles of NPs in these argument positions go from actor to undergoer, and the animacy of referents in these roles goes from animate to inanimate.[17] Moreover, the percentage of nominal arguments expressed as full NPs increases accordingly. As has been argued by Du Bois (1987), A and S contrast with O, as actor to undergoer; and S and O contrast with A as new (focus) to old (topic). Here we can see how this trend carries over to adpositions (and possessions). Moreover, given the fact that possession is marked with ergative case (like A-role arguments), we may predict that possessor-role arguments will be +topic, and they will be co-referenced by NPs that are +topic +actor. In short, these patterns provide a useful baseline, relative to which the behavior of IPs and PNPs may be compared.

We may begin by noting a few of the more simple patterns involving inalienable possessions. As may be seen from the first column of Table 4, IPs are *relatively frequent*. 6% (57/1016) of all nominal arguments are IPs. If we set aside zero-forms (482 tokens), deictics (49 tokens), proper nouns (55 tokens), and relatively grammatical elements (such as gerunds, non-finite verbs, Wh-words, and such), then we find that out of the 358 remaining noun phrases in the text, 16% (57/358) are IPs. If we focus on possessed NPs, these number become even starker. As may be seen across the top row of Table 5, there were 211 possessed NPs in the text. Of these, 57 were inalienable possessions (IPs), and 100 were simple possessed noun phrases (SPNPs). The remaining PNPs were gerunds (36 tokens) or reflexives (18 tokens). In other words, 27% (57/211) of all possessed NPs are IPs. And, if we remove gerunds and reflexives from possessed NPs, than 36% (57/157) of such NPs are IPs. In short, members of a finite closed-class category (IPs) are doing much of the work of a potentially infinite open-class category (possessed NPs, and NPs more generally).

As befits their name, IPs in this text were *always possessed*. 100% (57/57) were possessed compared to 21% (211/1016) of all nominal arguments being possessed. Indeed, some 60% of NPs are not even possessable, being zero forms (indexed by a cross-referencing affix on predicate), proper nouns, deictics, and so forth. However, if we focus on possessable NPs (consisting of IPs, gerunds, and common nouns), then 53% (211/395) of possessable NPs are possessed. In other words, IPs are indeed relatively inalienable: IPs are unmarkedly possessed and other NPs are unmarkedly non-possessed. Moreover, insofar as IPs are always possessed, they always license other NPs (as their cross-referenced possessor). So, another way to read the above fact is that, in comparison to other NPs, IPs frequently license other nominal arguments.

This fact should be coupled to a related fact that may be seen from the distribution of IPs across grammatical relations: inalienable possessions are *often non-licensed*. In particular, as may be seen from the bottom of Table 4, 2% (1/57) of IPs are in A-role, 23% (13/57) of IPs are in S-role, 16% (9/57) of IPs are in

O-role, 9% (5/57) of IPs are the arguments of adpositions (qua possessors of relational nouns), 28% (16/57) of IPs are the arguments of prepositions, 9% (5/57) of IPs are extra NPs of clauses, and 2% (1/57) of IPs are extra NPs of NPs.[18] In other words, 39% (22/57) of IPs are not formally licensed in the strict sense: there is no predicate with a cross-referencing affix that licenses them. (Indeed, given that there are 235 NPs in S-role position, and only 141 NPs in preposition position, the relative number of IPs that occur in these positions is even more striking.) And 11% (22/202) of non-licensed NPs (arguments of prepositions, or extra NPs of clauses and NPs) are IPs. As will be seen, when adpositions are discussed, IPs are also the most frequent relational nouns and prepositions — and so this trend is essentially grammaticalized. In short, *IPs tend to license other NPs and not be licensed as NPs*. Loosely speaking, they are more like predicates than arguments, more like heads than dependents.

The top third of Table 6 shows how inalienable possessions (IPs), simple possessed noun phrases (SPNPs), and possessed noun phrases (PNPs) are distributed with respect to information status, thematic role, and animacy rank. It also shows how their distribution compares with that of other nominal arguments that are involved in various grammatical relations. First, as we move from A-role arguments to SPNPs, we move from thematic reference (old) to first reference (new). That is, possessed NPs usually have new referents on initial mention: they are treated as identifiable on initial mention (in the context of their possessors, which are usually already established topics). And while IPs are therefore at the bottom compared to nominal arguments in general, they are above other PNPs and SPNPs. Second, possessed NPs tend to be either undergoers (usually in O-role) or non-core arguments (usually in Adpos-role); though IPs are less frequently core-arguments than SPNPs. Third, IPs are more likely to be animate (33%) than any other kind of possession, and are even more animate than arguments in O-role and Adpos-role. Finally, possessed NPs are, of course, always NPs — and hence the not applicable (N.A.) entered in the last column. In some sense, though, they might be understood as 100% full NPs (versus zero NPs). Thus, possessions continue the trend whereby the further one gets away from A-role, the less likely a zero-form occurs — and, more generally, the less topical and more focal an argument is. In sum, compared to all nominal arguments, possessed NPs are at 'the bottom' of the four key clines (information status, theta role, animacy rank, and implicitness). And, compared to possessed NPs, IPs are at 'the top' of 'the bottom.'

Within the category of inalienable possessions, the two largest semantic subgroups — kinship relations and body parts — are also split with respect to discourse patterns. First, as may be seen by the middle third of Table 6, body parts are more likely to be first mentions and kinship relations are more likely to be thematic mentions. Indeed, kinship relations have the highest resumptive mentions (52%)

of all the tabulated categories. This is because this is a small set of referents (3–4 key characters) who are referred to again and again, so that kinship relations are used to relate the last topic (qua possessor) to the ensuing topic (qua possession). That is, kinships terms are used to establish topic-topic relations. Body parts are very different: it is rare to refer to the same body part twice; so the pool of referents is much larger; and so it is less likely for there to be resumptive mention.

Second, with respect to thematic role, kinship relations are more likely to be actors than body parts. But the real difference is that body parts are more likely to be core-arguments than kinship relations (which are more likely to be arguments of adpositions).

Finally, with respect to animacy, kinship relations are of course 100% animate — and so maximally contrasted with other possessions — whereas body parts are inanimate — in particular, organic (parts of personifiable wholes). Indeed, we may further break up the animacy ranking: 33% of IPs are animate (deity/human/animal) and 4% of simple possessed NPs are animate; 2% of IPs are living and 1% of simple possessed NPs are living; 51% of IPs are organic and 17% of simple possessed NPs are organic; 14% of IPs are inanimate and 74% of simple possessed NPs are inanimate. In short, IPs are predominately animate (in particular, human-like deities), or parts of animate things. Whereas simple possessed IPs are predominately inanimate.

In short, while IPs are relatively similar to simple possessed NPs in regards to information status and semantic role, they are different in regards to animacy rank. Their inherent properties are different (qua semantic features of their referents); whereas their relational properties are similar (qua information status of their referents, or semantic relation to their predicates). This is not necessarily to be expected: in English we have many constructions like 'my hand hurts' (IP as experiencer) and 'my mother is picking me up' (IP as agent) and 'his elbow broke it' (IP as effector), and Q'eqchi' is no different: thus, one might have expected IPs (so far as they are kinship terms or body parts) to have relative agentive thematic roles (compared to other possessed NPs, which are more likely to be patients). However, as discussed in Kockelman (2003, 2007), the ascription of mental states is done via a possessed-heart construction. For example, there are many constructions like, 'it fell into my heart' (I remembered it) and 'my heart did it' (I intended to do it). In such constructions, the possessed-heart is the controller of a coordinated predicate, and often has thematic roles like agent and experiencer.

Finally, we may turn to the possessors of possessed NPs. As may be seen by the bottom third of Table 6, possessors tend to have a complementary distribution to possessions: they are at the high end of all the clines. Indeed, given that possession is marked with an ergative prefix, like A-role arguments, it is morphologically not surprising that their referents are +thematic and +animate. Relatively speaking,

such possessions are more like O-role or Adpos-role arguments (first mention, inanimate, full NP, and undergoer), and their possessors are more like A-role or S-role arguments (old, animate, and zero). Possessors of IPs are very similar to possessors of SPNPs. As may be seen in Table 6, their differences come out in animacy: IPs are more likely to have animals as possessors; and SPNPs are more likely to have inanimates and organics as possessors; but they have similar frequencies for human and deities. The biggest difference is that inalienable possessions very frequently have animals as their possessors (shells of turtles, hides of goats, features of birds, and so forth); and the possessors of SPNPs are more likely to be organic (parts of living entities). Notice, then, that it is *not* the case that the possessors of IPs are more likely to be persons (human or deity) than the possessors of SPNPs; indeed, they are more likely to be animals — all of which were personified in this text, as speaking and thinking creatures.

In the realm of possessors, body parts and kinship relations may also be distinguished. In particular, possessors of kinship relations are more likely to be thematic than possessors of body parts (89% versus 53%), and much less likely to be resumptive (6% versus 35%). Possessors of kinship relations were always zero NPs, whereas possessors of body parts were only zero about half the time. Finally, it is really in the realm of animacy rank that major distinctions may be seen. While possessors of kinship relations were all either human-like deities (17 tokens) or humans (2 tokens), possessors of body parts were much more likely to be animals or inanimate things altogether: deity (15 tokens), human (3), animal (10), living (1), organic (1), other (4). So the splitting between body parts and kinship relations is as pronounced in the domain of possessors as it is in the domain of possessions. Possessors, then, tend to be themes, actors, and animates — and so do the relational grounds of inalienable possessions: the person.

There is also a weak tendency for inalienable possessions to be possessors. Out of 211 possessed NPs, only 73 had overt possessors (in addition to the cross-referencing prefix). Of these overt possessors, 10% (7/73) were IPs (11/73 were proper nouns, and 51/73 were common nouns). Focusing on only simple possessed NPs (of which there were 100), only 35 had overt possessors. Of these overt possessors, 14% (5/35) were IPs (8/35 were proper nouns, and 21/35 were common nouns). Focusing on only IPs (of which there were 57), only 16 had overt possessors. Of these overt possessors, 6% (1/16) were IPs (3/16 were proper nouns, and 12/16 were common nouns). Given that more than half of IPs (as types) are kinship terms, this should make sense: the referents of kinships terms are both inalienable possessions and inalienable possessors, both parts of wholes and wholes with parts. Moreover, as revealed in a perusal of a Q'eqchi' dictionary (and see footnote 12), the most common constructions involving successively embedded possession constructions (e.g. possessing a possession which itself possesses a possession)

Table 7 (part one): Overall Frequency of Simple Possessed NPs and Inalienable Possessions in Text

CLASS TYPE	GLOSS	PNP	TOKENS
Extended Bodily Substance (2)	blood	*kik'il*	2
Extended Bodily Substance (2)	strength	*metz'ew*	1
Metanymic (3)	smoke	*sib'el*	2
Metanymic (3)	sign	*eetal(il)*	2
Metanymic (3)	gourd	*seel*	1
Metanymic or Unmarked (3 or 4)	road	*b'e*	2
Metanymic or Unmarked (3 or 4)	foilage	*mul*	2
Metonymic or Unmarked (3 or 4)	thread	*noq'(al)*	2
Unmarked (1), Compound	blow-gun	*puub'che'*	4
Unmarked (4)	bag	*champa*	3
Unmarked (4)	axe	*maal*	3
Unmarked (4)	cargo	*iiq*	2
Unmarked (4)	tip	*u'uj*	2
Unmarked (4)	mirror	*lem*	2
Unmarked (4)	cry/voice	*yaab'*	2
Unmarked (4)	bed	*ch'aat*	2
Unmarked (4)	goat	*yuk*	2
Unmarked (4)	feeling	*eek'*	2
Unmarked (4)	thirteen	*oxlaju*	2
Unmarked (4)	fear	*xiw*	2
Unmarked (4)	foam	*woqs*	1
Unmarked (4)	work/task	*k'anjel*	1
Unmarked (4)	corner	*xuk*	1
Unmarked (4)	self/alone	*junes*	1
Unmarked (4)	sleep	*wara*	1
Unmarked (4)	corn	*b'uch*	1
Unmarked (4)	jar	*kuk*	1
Unmarked (5)	leaf	*xaq*	1
Unmarked (4)	post	*oqechal*	1
Unmarked (4)	k'aj	*piece*	1
Unmarked (4)	juice	*ya'al*	1
Unmarked (4)	word	*aatin*	1
Unmarked (4)	dog	*tz'i'*	1
Unmarked (4)	deer	*kej*	1
Unmarked (4)	huipil	*po'ot*	1

turn on kinship terms (my uncle=my father's brother or 'his brother my father') and body parts (my finger=my hand's tip or 'its tip my hand'; my thumb=my

Table 7 (part two): Overall Frequency of Simple Possessed NPs and Inalienable Possessions in Text

CLASS TYPE	GLOSS	PNP	TOKENS
Suppletive (5)	house	*kab'l*	1
Suppletive (5)	home	*ochoch*	4
Inalienable Possession (6)	**back, feathers, skin, hide**	***-ix***	**9**
Inalienable Possession (6)	**face, seed**	***-u***	**8**
Inalienable Possession (6)	**father**	***-yuwa'***	**6**
Inalienable Possession (6)	**daughter**	***-rab'in***	**5**
Inalienable Possession (6)	**heart**	***-ch'ool***	**5**
Inalienable Possession (6)	**hand**	***-uq'***	**4**
Inalienable Possession (6)	**wife**	***-ixaqil***	**3**
Inalienable Possession (6)	**body**	***-tz'ejwal***	**3**
Inalienable Possession (6)	**place**	***-na'aj***	**3**
Inalienable Possession (6)	**grandfather**	***-mama'***	**2**
Inalienable Possession (6)	**uncle**	***-ikan***	**2**
Inalienable Possession (6)	**foot**	***-oq***	**2**
Inalienable Possession (6)	**husband**	***-b'elom***	**1**
Inalienable Possession (6)	**stomach**	***-sa'***	**1**
Inalienable Possession (6)	**throat**	***-xolol***	**1**
Inalienable Possession (6)	**clothing/feathers**	***-aq'***	**1**
Inalienable Possession (6)	**name**	***-k'a'b'a***	**1**
Inalienable Possession, Marginal (6)	shadow	*mu*	3
Inalienable Possession, Marginal (6)	windpipe	*b'eeleb'al musiq'*	1
Unmarked or Always Possessed (4 or 7)	remains	*ela'*	1
Unmarked or Always Possessed (4 or 7)	first/above	*b'een*	1
Always Possessed (7)	leg	*a'*	2
Always Possessed (7)	chest	*maqab'*	1
Always Possessed (7)	arm	*telb'*	1
Always Possessed (7), Relational Noun	companion	*uchb'een*	1

hand's mother or 'its mother my hand'). This trend would be in keeping with the two trends already mentioned: IPs are both figures and grounds, both heads and dependents. It is their very reflexivity that defines them.

Finally, it is worthwhile comparing the semantic distribution of IPs and simple possessed NPs. As may be seen in Table 7, many SPNPs are similar to IPs — and are often found as IPs in other languages. For example, among the most frequent SPNPs are instruments (blowgun, bag, axe, cargo, mirror, bed, and so forth). In addition, there are companion species (dog, goat, deer), psychological states (fear, feeling, sleepiness), parts of (non-human) wholes (tip, foam, leaf, past, piece, juice,

Table 8. Distribution of (Derived) Possessed NPs

CLASS TYPE	GLOSS	PNP	TOKENS
Derived (-om), from Verb to Object	loved_one	*rahom*	3
Derived (-leb'), from Verb to Instrument	character	*na'leb'*	2
Derived (-leb'), from Verb to Instrument	loom	*kemleb'*	1
Derived (-ik), from Verb to Event	going	*xikik*	2
Derived (-ik), from Verb to Event	leaving	*elajik*	2
Derived (-ik), from Verb to Event	awakening	*waklijik*	1
Derived (-ik), from Verb to Event	lowering	*kub'ik*	1
Derived (-ik), from Verb to Event	passing	*numik*	1
Derived (-Vl), from Adjective	goodness	*chaab'ilal*	1
Derived (-Vl), from Adjective	goodness	*usilal*	1
Derived (-Vl), from Adjective	slipperiness	*yolyokil*	1
Derived (-Vl), from Adjective	hole	*hopolal*	1
Derived (-Vl), from Adjective or Noun	thickness	*pimal*	1
Derived (-Vl), from Noun	gift	*maatanil*	1
Derived (-Vl), from Noun	smell	*sununkil*	1
Derived (-Vl), from Noun	manhood	*winqilal*	1
Derived (-Vl), from Verb	cord	*t'uyal*	1
Derived (-Vl), from Verb	ugliness	*yib'ob'b'aal*	1
?	together	*kab'ichal*	1

remains, corner), body parts (leg, chest, arm). There are four tokens belonging to marginal members of inalienable possessions (shadow, breath) and suppletive possessions (house, home). Most of the SPNPs had humans as their possessors, but not all. For example, there were words like 'corner (of a mirror)', 'voice/sound (of animals)', 'smell (of flowers)', 'smoke (of something burned)', 'feathers (of a bird)', 'threads (of a tree)', 'juice/pollen (of a flower)', 'leaf (of a plant)', and 'shadow (of house)'. As mentioned, certain words like *ixej* (back) had a relatively shifter-like tendency: depending on the animal in question, the referent was different: feathers (birds), fur (mammals), bark (trees), back (humans). Aside from the unmarked possessions (class 4), inalienable possessions are by far the most common class in terms of lexical types. And, indeed, inalienable possessions are the highest class in overall token number. Thus, while inalienable possessions are relatively similar to other possessed NPs (in comparison to all NPs) in terms of thematic role and grammatical relation, they are relatively different from other possessed NPs in terms of their frequency. (For comparison, following the discussion at the end of Section 3, Table 8 shows the distribution of derived NPs.)

Table 9. Relational Nouns in Q'eqchi'-Maya (along with their Prepositions)

PREP	RN	GLOSS	TOKENS	NP	IP
–	**-e**	in order to, to, dative	32	mouth	+
–	**-b'aan**	because of	16		
–	**-maak**	because of (culpability)	2	sin	
–	**-ik'in**	with	9		
–	**-uchb'een**	with (companionship)	2	companion	
–, chi	**-ub'el**	beneath	3		
chi	**-u**	in front of	22	face	+
chi	**-sa'**	inside of	16	stomach	+
chi	**-e**	at the side of	6	mouth	+
chi	**-ix**	in back of	4	back, fur, bark	+
chi	**-eeqaj**	in place of	0	substitute	
chi, sa'	**-k'atq**	at side of, near	0		
sa'	**-b'een**	on top of	4	first	
sa'	**-yanq**	in-between	2		
sa'	**-yi'**	in the middle of	1	waist, tail	+
sa'	**-k'ab'a'**	in the name of	0	name	+

7. Discourse Patterns Involving Inalienable Possessions as Adpositions

As mentioned in Section 2, the NPs licensed by adpositions come in three varieties: possessors of relational nouns (e.g. *x-b'aan li winq'* 'because of the man'); possessors of relational nouns which are themselves arguments of prepositions (e.g. *sa' x-yanq li tzuul* 'between the mountains'); and bare arguments of prepositions (e.g. *sa' li k'iche'* 'in the forest'). Table 9 shows all instances of relational nouns in the text, whether or not they occur as the argument of preposition. Table 10 shows all instances of bare prepositions (with no accompanying relational noun). As may be seen, there are around 60 tokens of each kind of construction in the text.

As shown in Table 9, relational nouns may be the arguments of the prepositions *chi* or *sa'*, or they may occur alone. And when they occur alone, they tend to mark highly frequent grammatical relations (dative, commitive, causative, etc.). Two even mark semantic arguments, or obliques, which are no longer licensed by affixes on predicates: *-e* (demoted patients of antipassive constructions); *-b'aan* (demoted agents of passive constructions). Both of these RNs may also occur with the complementizer *naq* and a full-clause, indicating 'in order to' and 'because of', respectively. The relational noun *-maak* shares a semantic space with *-b'aan*, but foregrounds moral culpability. The relational noun *-uchb'een* shares a semantic space with *-ik'in*, but foregrounds human companionship. The relational noun *-ub'el* is on the border — usually it occurs without a preposition; but in other texts

Table 10. Prepositions in Q'eqchi'-Maya

PREPOSITION	ARGUMENT TYPE	TOKENS
sa'	All NPs	58
	Possessed NPs	32
	NP is IP	13
	NP is CNP	18
	NP is Gerund	1
	Non-Possessed NPs	26
	Spatial Relation	19
	Temporal Relation	7
chi	All NPs	38
	Possessed NPs	6
	NP is Gerund	5
	NP is Other	1
	Non-Possessed NPs	36
	Space, Time, Manner	12
	NP is Non-Finite	12
	NP is Deictic	3
	NP is Other	5
jo'	All NPs	15
	NP is Deictic (like this)	10
	NP is IP (as his wife)	3
	NP is CNP (its sign)	2
chi jo'	As Such (NP is Deictic)	4
naq	Like (mirror, animal)	3
chan(chan)	Like (Simile)	1
chalen	Since (Temporal)	1

it sometimes occurs with the preposition *chi*. The relational noun *-e*, from the inalienable possession *ehej* (mouth), may occur with and without a preposition, and is overall the most frequent relational noun (with 38 tokens).[19] When relational nouns are themselves arguments of the prepositions *chi* and *sa'*, they tend to mark locative constructions — usually spatial relations, but also temporal ones. The preposition *chi* tends to occur with relational nouns that begin with a vowel (and typically have *r-* as their ergative prefix); the preposition *sa'* tends to occur with relational nouns that begin with a consonant (and typically have *x-* as their ergative prefix).

As may be seen, IPs and RNs are massively interdependent. In particular, of the 16 types of relational nouns, ten serve a dual function as a non-relational noun (mouth, sin, companion, face, stomach, back/fur/bark, substitute, first, waist/tail, name). Seven of these non-relational nouns are inalienable possessions. And all of

these are body parts except for the IP *k'ab'a'ej* (name). Indeed, the distribution of tokens among these types is even more skewed towards inalienable possessions: 68% (81/119) of tokens are RNs which have a dual role as an inalienable possession. Finally, there are really only two frequent prepositions which RNs can be arguments of; and the most frequent of these is the inalienable possession *sa'* (which is now so grammaticalized that it can no longer be possessed). These are well-attested cross-linguistic patterns: inalienable possessions (and body parts more generally) often grammaticalize into relational nouns and/or prepositions (cf. Heine & Kuteva 2002). This further underscores the fact that IPs function as predicates more than as arguments, and/or encode relations rather than denote referents.

Table 10 shows all prepositions which have non-relational nouns as their arguments. As may be seen, there are really only three frequently used prepositions: *sa'* (58 tokens), *chi* (38 tokens), and *jo'* (15 tokens). As noted, the preposition *sa'* probably derives from the relational noun construction *chi x-sa'* 'inside of it', which itself derives from the IP *sa'ej* 'stomach'. As a preposition, its meaning is relatively abstract, perhaps best glossed as 'in' or 'at'. Crucially, just as inalienable possessions are likely to be found among relational nouns, and relational nouns are themselves likely to be the arguments of prepositions, inalienable possessions and quasi-IPs are likely to be the arguments of prepositions — and hence perhaps on their way to grammaticalizing into relational nouns.

The key place to see this is with the most frequently occurring preposition *sa'*. Of its 58 tokens, 32 are possessed NPs. And of these possessed NPs, 13 are IPs, most of which are body parts: heart (3), hand (2), place (3), shell/back/feature (4), throat (1). Moreover, of the remaining possessed NPs, aside from one gerund (*x-teb'al* 'its opening'), the rest are semantically comparable to IPs: 'home' (*ochoch*, 3), 'road' (*b'e*, 1), 'bag' (*champa*, 3), 'tip' (*u'uj*, 1), 'thread' (*noq'al*, 1), 'mirror' (*lem*, 1), 'smoke' (*sib'el*, 1), 'corner' (*xuk*, 1), 'windpipe' (*b'eeleb'al musiq'*, 1), 'leaving' (*elik*, 1), 'shadow' (*mu*, 1), 'awakening' (*waklajik*, 1), 'passing' (*numik*, 1), 'slipperiness' (*yolyolkil*, 1). Most of these are construable as parts of wholes (corner, thread), or as effects of causes (smoke, shadow) — but the wholes are not necessarily people, and the parts are not necessarily organic. And some of these were even discussed in Section 2 and Section 3 as quasi-inalienable possessions (or as inherent possessions, or as suppletive possessions): home, shadow, windpipe, etc.[20] Hence, this is the perfect construction for examining what NPs might become IPs, and what IPs might become RNs.[21] It is the secret signature of inalienable possessions — perhaps the best predictor that an NP has an IP-like status.

Finally, it is worth saying something about how we might distinguish prepositions from relational nouns, and relational nouns from referential nouns. Recall Table 9. The first distinction is easiest: prepositions do not have a cross-referencing affix; they cannot be possessed. The second distinction is more difficult, as there

are really three kinds of relational nouns. First, there are those possessed nouns which only function as relational nouns (and never function as referential nouns): *-yanq* 'in between', *-k'atq* 'next to', *-ik'in* 'with', *-b'aan* 'because of', *-ub'el* 'beneath'. Second, there are those possessed nouns which function as both a relational noun and a referential noun: *-e* 'in order to' (cf. 'mouth'), *-maak* 'because of' (cf. 'sin'), *-uchb'een* 'with' (cf. 'companion'). And then there are those possessed nouns that function as referential noun, and which can occur with a preposition (so they may also be relational nouns): *-e* 'mouth' (cf. 'at the side of'), *-ix* 'back' (cf. 'in back of'), *-yii* 'waist/middle' (cf. 'in the middle of'), *-k'ab'a'* 'name' (cf. 'in the name of'), *-uq'* 'hand' (cf. 'at the hand of'), *-uq* 'foot' (cf. 'at the foot of'), *-ch'ool* 'heart' (cf. 'at the center of'), etc. This, then, is where most IP-derived relational nouns occur. The crucial point is this: if a possessed noun may occur both as the argument of a preposition and as licensed by a predicate, then there is no obvious way to determine if it is a relational noun or a referential noun (in its usage with a preposition). For example, rather than gloss *chi-r-ix* (Prep-E(3s)-back) 'behind it', it should be glossed as 'at its back.' And rather than gloss *sa' x-champa* (Prep E(3s)-bag) as 'in its bag', it should be glossed as 'bagged.' That is, except perhaps by reference to frequency, it is difficult to decide where the class of relational nouns begins and where the class of possessed referential nouns following a preposition ends. Thus, most possessed NPs occuring as the argument of *sa'* — and hence the most IP-like NPs — are construable as relational nouns (though would not be listed as such in a grammar). This should make sense, given our discussion of the relation between inalienable possessions and prepositions in Section 5.

At best there is a cline of RN-like attributes that any such possessed NP could be judged by. First, there is relative frequency: as a relatively grammatical construction, types of relational nouns should be more frequent than types of non-relational nouns. Second, does the NP have a non-referential, or relational, meaning: does it encode a spatial or temporal relation. That is, it is difficult to construe the NP in question as having a referent, or the referential value is metaphoric: the back of the house, the mouth of the cave, etc. Third, if the noun in question is an inalienable possession, then it is more likely to have a non-human possessor if it is a relational noun. Indeed, we may hypothesize that those relational nouns which used to be inalienable possessions are more likely to have human possessors — and thus, perhaps paradoxically, the ground of many prepositions is likely to be animate, discrete, figural, and so forth. Finally, whereas with possessive constructions the possession is the figure, the possessor is the ground (he hurt *his back*) and the relation is possession, with adpositional constructions 'the possession' is the relation between the figure and the ground, the 'possessor' is still the ground, and the figure is usually some other NP (the wheelbarrow is *in back of* the house). In this way, semantic features of the ground of the source (qua body part) become

semantic features of the relation to the target. It would be interesting if the relative size of the class of inalienable possessions correlated with the relative size of the class of prepositions.

8. Conclusion: The Pragmatic Function of Inalienable Possessions

Let us briefly return to the end of Section 4. Just as the semantic features underlying kinship terms relate to each other via implicational universals, we may predict that so does the inalienability of various classes of kin. For example, if affinal kin terms are inalienable (*my brother-in-law*), so are consanguineal kin terms (*my brother*); if descending kin terms are inalienable (*my daughter*), so are ascending kin terms (*my mother*); if collateral kin terms are inalienable (*my uncle*), so are lineal kin terms (*my father*). (Such contrasts assume that we are holding other dimensions constant.) The logic of this hypothesis is partially grounded in what we already know about feature hierarchies via Greenberg: what kinds of kinship terms are more or less likely to be out there in the first place. And it is partially grounded in what we should expect regarding the deducibility of kinship relations: the degree to which we may predict the existence of a possession from knowing the nature of its possessor.[22] That is, if you know someone is a person, how certain can you be that he or she has a parent (versus has a child), has a father (versus has an uncle), or has a mother (versus has a mother-in-law).[23] Indeed, we might generalize this idea from kinship relations to all potential inalienable possessions (such as body parts, hair, clothing, names, tools, shadows, and so forth) under the rubric of *emblemeticity* (Kockelman 2007). To wit: the more a possession is prototypically a necessary and sufficient criterion for personhood (all people possess it, and only people possess it), the more likely it is to be inalienable.[24] Though, to be sure, we may always invert the frame: the more inalienable possessions something has, the more like a person something is.

However, it is unlikely that the linguistic phenomenon of inalienability turns on logical inference in any explicit sense (qua necessary and sufficient conditions). Rather, it is best to recast the issue in terms of deictic inclusiveness, mutual knowledge, or identifiability: the degree to which a speaker can presume that an addressee can identity a figure (qua possession) given a ground (qua possessor). To clarify this point, it is worthwhile considering the indexical function of kinship terms, as one important kind of inalienable possession.

In Q'eqchi', a word like *ko'b'ej* (daughter of woman) encodes a range of features: it indicates that the possession, or referent, is female; that the referent is in a first-generation, consanguineal, descending relation to the possessor; and that the possessor is female. That is, it encodes information about the figure (referent,

possession), about the ground (possessor), and about the relation between the figure and the ground. As is well known from the work of Hanks (1991), deictics also encode information about the figure, ground, and relation. However, whereas deictics establish the relation between a narrated event and a speech event (or E^n/E^s in Jakobson's system), kinship terms establish the relation between a possession and a possessor, where the possessor is (prototypically) a person. In other words, kinship terms are functionally equivalent to deictics, but rather than have the speech event (and its participants) as their indexical ground (or *Sprachfeld*, in Bühler's terms), they have a human possessor.

To be sure, the human possessor may always be encoded by a pronoun, which is itself a type of shifter, and so the relation established may be P^n/($P^{n'}$/P^s). Compare *the man's brother* and *my brother*. In other words, the relation at issue is twofold: first, how the possession relates to the possessor (P^n/$P^{n'}$); and second, how the possessor relates to the speaker ($P^{n'}$/P^s). In short, we might say that kinship terms establish a relation between a narrated part (qua figure or possession) and a narrated whole (qua ground or possessor); and the narrated whole may itself be a participant in the narrated event which is established relative to a participant in the speech event. Indeed, just as verbs of speaking may shift the indexical grounds of deictics, such that the shifters in the reported speech are established relative to the reported event of speaking, so too may embedded kinship terms shift the referential grounds of inalienable possessions. Compare, for example, *I will do it* and *John said, 'I will do it'* with *my wife* versus *my brother's wife*.

These points may be generalized, thereby allowing us to compare inalienable possessions with prepositions and deictics. See Figure 3. In particular, all these linguistic resources have a similar function, in that they involve a relation (R) between a relatively foregrounded entity (f) and a relatively backgrounded entity (g). Deictics relate a narrated entity to a speech event (E^n/E^s). Prepositions relate a narrated entity to another narrated entity (E^n/$E^{n'}$). And inalienable possessions like kinship terms relate a narrated entity to a narrated person (E^n/P^n).[25]

In the case of *deictics*, the backgrounded entity is the speech event, and hence is indexed (but not referred to). The foregrounded entity is minimally specified, usually turning on place (*here*), time (*now*), or identification (*this*) — though, it can be augmented: *this boy, here in America*, etc. Deictics, then, point very broadly: whatever is proximal. And the relation is often subject to a small variety of distinctions, often turning on a proximal/distal distinction: *here/there*, *this/that*, *now/then*. In short, for a deictic like *now*, R=proximal, f=time, and g=(time of) speech event.

In the case of *prepositions*, both the foregrounded entity and the backgrounded entity may be referred to, usually by an NP, and thus may be as finely specified as one wishes*: the man is behind the red barn*, etc. These slots may also be filled with deictic elements, and thus be specified relative to the speech event: *he was*

1. NOTATIONAL SYSTEMS

Jakobson's Notation for Shifters:

E^n/E^s, or narrated event in relation to speech event

Hanks's Notation for Deictics:

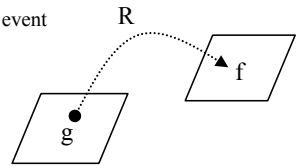
R(f,g), or figure in relation to ground

Translation between Two Notations:

f=figure (E^n)

R=relation (/)

g=ground (E^s)



2) EXTENSION OF SYSTEMS

From Deictics:

R=proximal/distal

f=space (*here/there*), time (*this/then*), identity (*this/that*)

g=speech event, or mutual knowledge (context, cotext, culture)

Degrees of Freedom: R (small), f (small, but wide), g (singular and indexed)

Transposition of g: via verbs of speaking (*John said, 'here it is'*)

To Prepositions:

R=*in back of*, *to the left of*, *in front of*, *inside of*, etc.

f=any NP (*the cat*, *the man*, etc.)

g=any NP (*the house*, *the tree*, etc.)

Degrees of Freedom: R (large, but closed), f (infinite), g (infinite and denoted)

Transposition of g: via other prepositions (*behind the house in front of the store*)

Interaction with Shifters: *this is in front of that*, or R(R(f,g),R(f,g))

To Inalienable Possessions

R=alienable possession, inalienable possession

f=small set of body parts, small set of social relations

g=person

Degrees of Freedom: R (small), f (finite), g (any personifiable NP and denoted)

Transposition of g: via other inalienable possessions (*my brother's hand*)

Interaction with Shifters: *my hand*, or R(f,R(f,g))

3) LARGER POINTS

- Grammatical categories with a strong relational function have three key loci of encodable features, which may be relatively open or closed: R, f, g.
- If sense is means by which referent is identified, words like *dog* have relatively inherent and open sense, and deictics like *this* have relatively relational and closed sense.
- Inalienable possessions have both inherent sense (type of body part) and relational sense (whose body belongs to).
- Inalienable possessions are like deictics and prepositions in that guide addressee's identification of a referent by encoding that referent's relation to a ground.
- Inalienable possessions are different from deictics and prepositions in that the ground is a person and the referents are its parts.

Figure 3. The Relational Function of Grammatical Categories

to the left of that. R(F,G)=R(r(f,g),r(f,g)) or $E^n/E^n=E^n/E^s//E^n/E^s$. And the relation is encoded by a potentially large, but not open, set of prepositions (along with a copula construction): *behind*, *in front of*, *on top of*, etc. In short, for a construction like *the man behind the tree*, R=*behind*, f=*the man*, and g=*the tree*.

And, in the case of inalienable possessions, both the foregrounded entity and the backgrounded entity may be referred to (as with prepositions, and in contrast to deictics). However, unlike prepositions, the relation is much more constrained: essentially, there is a distinction between alienable possession and inalienable possession; and, within the category of inalienable possession, there is

the difference between physical possession (governing body parts, often part-to-whole) and social possession (governing social relations, often node-to-network). The referent is subject to a much larger set of distinctions than deictics (qua various types of body parts and types of kinship relations), but a much smaller set of distinctions than prepositions (which can have essentially any NP). And finally, in contrast to both prepositions and deictics, the ground is prototypically a person.

Inalienable possession, then, is doing the work of identifiability (just as deictics and determiners do), but the figure and ground in question are not a narrated event and a speech event, but rather a narrated possession and a narrated possessor (which itself can be established relative to the speech event). That is, they are like prepositions and deictics in that they guide the addressee's identification of a referent by encoding that referent's relation to a particular ground; but they are different in that the ground is a narrated person. Broadly speaking, if we think about *sense* as the means by which we identify a *referent*, then open class concepts have a large degree of inherent sense (e.g. *dog*) and a small degree of relational sense, and deictics have a large degree of relational sense (e.g. proximal to speech event) but little inherent sense. Inalienable possessions have both inherent sense (e.g. which type of body part) and relational sense (e.g. whose body does this part belongs to). They locate a type of part relative to a type of whole with a large degree of precision, as opposed to a definite/indefinite contrast (*a ball* versus *the ball*) or a proximal/distal contrast (*this ball* versus *that ball*). While linguists, at least as far back as Bloomfield (1931) have treated possessed NPs as definite NPs, the ways in which they encode fine-grained distinctions of identifiability have not been considered. As was seen in Figure 1, there are parts of a personable whole and personable nodes in a social network. Thus, if circle-qua-self is ground (g), any of the parts or people are frequently relevant and easily identifiable figures (f).

What inalienable possessions grammaticalize, then, is not so much necessary and sufficient criteria of persons, but rather those parts (body parts, kinship relations, etc.) of a frequently invoked ground (person) which the speaker may presume the addressee may identify given the existence of the ground. Moreover, anything that can be construed as similar to such a ground (anything 'person-like'), may be used as a ground: *at the back of the car*, *in the face of opposition*, *at the foot of a mountain*, etc. That is, when we shift the ground from a person to something else, we construe that something else in personal terms. (See Brown (1994) and Levinson (1994) for a discussion of this fact in Tzeltal.)

Returning, then, to Figure 2, the category is really this: (1) *whatever any person may be strongly presumed to possess*; (2*) whatever such personal possessions are referred to frequently*. They are marked entities in this way: on the one hand, we must take their existence completely for granted; on the other hand, we must frequently make reference to them. While their *existence* is symmetrically accessible to

speaker and addressee (such that it may be assumed once a person has been invoked), their *state* is known only to the speaker and judged to be relevant to the addressee (such that it may asserted).

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Notes

1. In particular, the primary data for this essay are drawn from almost two years of ethnographic and linguistic fieldwork among speakers of Q'eqchi', most of which was spent in Ch'inahab, a village of some 80 families (around 650 people) in the municipality of San Juan Chamelco, in the department of Alta Verapaz, Guatemala. The majority of villagers in Ch'inahab are monolingual speakers of Q'eqchi', but some men who have served time in the army or worked as itinerant traders speak some Spanish. For diachronic data, a large-scale discourse count was taken from a Q'eqchi' narrative recounted at the end of the 19th century. By necessity, then, the features of one language will be treated in detail. Nonetheless, analytic categories were chosen to be both locally salient (yet cross-linguistically applicable), and organized relative to scales (for ease of typological comparison).

2. Levinson (1994) notes: "This list is almost certainly not as *ad hoc* as it seems; but that would require some Whorfian exegesis. Stross (1976:244–245) lists also *bilil* 'name', *betil* 'debt', *tz'unibil* 'planting seed', *akte'al* 'staff of office', *we'elil* 'food/meal', *ch'ulelal* 'soul', *labil* 'animal spirit companion'.

3. Chappel & McGregor, working with Lévy-Bruhl's accounts, break this up into four basic classes: biological closeness (such as kinship relations); integral relation (such as body parts); inherent relation (such as spatial relations); and whatever is essential for livelihood or survival.

4. Charles Bally's account ([1926] 1996) of the cultural fluidity of inalienable possession is worth quoting at length: "The concept of the personal domain is an entirely subjective one. Nothing prevents the collective imagination from attributing to the self objects that normally have their own independent existence or, conversely, of detaching those things which in reality cannot be. The extent of the domain is determined by the cultural outlook of each linguistic group. Its limits may vary from language to language and vary within the same language during the course of its evolution. It generally includes the body, its parts and sometimes its dimensions, the soul of the individual, and in some cases, the voice and the name. It may also include to a varying degree everything which holds an habitual relationship to it: clothing, familiar objects, utensils; people in one's social circle, family, servants and friends. … Finally, and most importantly, these beings and objects may be viewed either as being a part of the self or as being detached from the person" (33–34).

5. Contrast the grammaticality of *he kicked my leg/car* versus *he kicked me in the leg/*car*.

6. As a reviewer pointed out, a sentence like "there was a woman who had a daughter" sounds fine. This shows the graduated nature of inalienability as a phenomenon, as well as the

implicational universals one should expect (see Section 8). In particular, we may make the following predictions: if the word for "daughter" is an inalienable possession in some language, so is the word for "mother"; but the converse may not necessarily hold.

7. In addition to marking possession via possessive affixes on a noun, possession is also marked via constructions involving the stative verb *wank* (to be located, to exist) and the relational noun *r-e* (which also marks dative case). In such constructions, the NP that is possessed is the single S-role argument of the existential verb, and the argument cross-referenced by the affix of the relational noun is the possessor. Thus, a construction like *wan-Ø-Ø li maal w-e* (exist-Pres-A(3s) Dm axe E(1s)-RN) 'there is an axe for me' or 'I have an axe.'

8. In constructions involving a preposition, relational noun, and an NP (qua possessor of relational noun), the relational noun is the argument of the preposition; and the NP is the argument of the relational noun.

9. Usually this would be done with a construction like *w-e po* (E(1s)-DAT moon) 'month of mine.' Also, some speakers prefer constructions like *in-pohil* 'my monthliness'. This word, then, might plausibly be put in class 2 (when its meaning is extended to refer to menstruation, rather than to the moon per se).

10. *V* stands for 'vowel.' For vowel-final words, the suffix is *-hVl*. When the ultimate (and thus stressed) vowel of the non-possessed noun is /u/, /o/, or /i/, the vowel in the suffix is /e/. For example, *tib'* 'meat' and *x-tib-el* 'its meat', *xul* 'animal' and *x-xul-el* 'its animal'. And when the ultimate (and thus stressed) vowel of the non-possessed noun is /a/ or /e/, the vowel in the suffix is /i/. For example, *wa* 'tortilla' and *x-wa-hil* 'its tortilla', *be* 'road' and *x-b'e-hil* 'its road'.

11. In Tzeltal, there is also a suppletive possession: the word for tortilla (Penny Brown, personal communication).

12. I would include here all body parts, composed of a non-derived root, which undergo no morphological changes when possessed. Note that this is not a grammatically-derived set; rather, it is a notionally-derived set using my own common-sense idea of what a body includes. It includes the following words: *xik* 'ear', *u'uj* 'nose', *peekem* 'forehead', *ulu* 'brains', *ismal* 'hair', *mach* 'mustache, beard', *kux* 'neck', *tel* 'shoulder, arm', *maqab* 'chest', *ch'uukum* 'elbow', *tu'/su* 'breast', *pospo'oy* 'lung', *kenq'* 'kidney, bean', *ch'ub* 'navel', *it* 'butt, anus', *yupus* 'anus', *mi'/bo'/boy/ch'ima* 'vagina', *birk'/pirk'* 'clitoris', *naq'* 'testicle, pit', *kun/pirich/tz'ik* 'penis', *a'* 'thigh, leg', *tzelek* 'skin', *map* 'joint', *ixi'ij* 'nails, claws'. It must be emphasized that, in comparison to other body-part terms, especially inalienable possessions, these words are infrequently used.

Other parts of the body not listed here may be referred to using combinations of body parts, usually involving at least one body part which is an inalienable possession (often as a possessor of another body part). Frequently used constructions include *x-tz'uumal -e* 'lips' (literally 'mouth's skin'), *r-u'uj uq'* 'finger' (literally 'hand's nose'), *x-naq' -u* 'eye' (literally 'face's pit'), *x-kux -uq'* 'wrist' (literally 'hand's throat'), and *x-baqel -jolom* 'skull' (literally 'head's bone'). Other constructions include *x-kaalam e* 'cheek', *x-tz'uumal e* 'lips', *r-ixmal u* 'eyebrow', *r-uuch e* 'tooth', *x-kux uq'* 'wrist', *x-na' uq'* 'thumb', *r-u'uj aq'* 'tongue', *r-u'uj oq* 'toe', *r-u'uj uq'* 'finger', *r- u'uj tu'* 'nipple', *x-naq' u* 'eye', *x-naq' kun* 'testicles', *x-map uq'* 'wristbone', *x-map oq* 'ankle bone', *x-baqel xolol* 'trachea', *x-baqel kux* 'neckbone', *x-baqel jolom* 'skull', *sa' uq'* 'palm', *sa' tel* 'arm-pit'. Like kinship constructions (my brother's wife's nephew), body part terms often show up in constructions involving embedded possession.

13. As an example of a gerund in an interclausal relation, we have the verb *eetz'unk* 'to ridicule':

jun ch'in-a-tz'ik sa' r-u'uj k'i-che' yoo-Ø-Ø r-e(e)tz'unk-il
one small-SF-bird Prep E(3s)-top many-tree be-Pres-A(3s) E(3s)-ridicule-Nom
a small bird in the top (fingers) of the forest is making fun of him

As an example of a genrun in an interclaual relaiton we have the verb *muquk* 'to hide':

sa' a(a)nil x-Ø-hulak sa' r-ochoch x-muq-b'al r-ib'
Prep run Inf-A(3s)-arrive Prep E(3s)-home E(3s)-hide-Nom E(3s)-Rflx
running, he arrived at his house (in order to) hide himself

14. This means all the inalienable possessions I ever came across in my fieldwork — requiring that a noun be found in both its non-possessed form (with a suffix *-b'ej*) and its possessed form (without the suffix). It may be that other NPs will turn out to be inalienable possessions, but because I only saw them in their possessed form, or did not encounter them in my research, I cannot know for sure. However, given the fact that one characteristic of IPs is their relative frequency, I have some confidence that there are not too many more.

15. All these terms are underived, or simple roots, with the following exceptions. The terms for grandparents are derived from those for parents: compare *yuwa'b'ej* 'father' and *yuwa'chinb'ej* 'grandfather'. The term for 'wife' (*ixaqilb'ej*) is derived from the term for 'woman' (*ixq*). The term for 'elder sister' (*chaq'na'b'ej*) is derived from the terms for 'mother' (*na'b'ej*) and 'equal/companion' (*chaq'*). It may be loosely translated as 'mother equivalent'. The term for aunt (*ikanna'b'ej*) is derived from the terms for uncle (*ikanb'ej*) and mother (*na'b'ej*). And a term for 'in-laws' (*echalalb'ej*) is derived from the term for 'son' (*alalb'ej*) and the bound form *ech-*, which marks relations. As may be seen, the majority of these terms take the suffix *-b'ej* when non-possessed. Terms for cousins (same generation collaterals), and nieces and nephews (first-order descending collaterals), are built, through recursion, from these basic terms. For example: 'my cousin' is *ralal wikan* or 'son of my uncle.' And 'my niece' is *xko' wanab'* or 'daughter of my (elder) sister.' Terms for step-kin are derived from terms for non-step-kin using the term 'second' (*x-kab'*). For example, *x-kab' in-na'* refers to 'my second mother.' Ritual kinship relations (godparents) are referred to using either the terms for grandparents, or the Spanish loan words *kompaal* 'compadre' and *komaal* 'comadre', which are not themselves inalienable possessions for many speakers.

16. In co-reference: for example, when the subject of the main verb agrees with the object (qua reflexive constructions), the second reference would be treated as thematic.

17. The A-S-O diagonalization does not extend to adpositions because these encode a variety of semantic roles. As mentioned in Section 3, *-e* often licenses what would otherwise be an O-role argument in antipassive constructions; *-b'aan* often licenses what would otherwise be an A-role argument in passive constructions; *-uchb'een* often licenses a necessarily human-animate 'companion'; and locative constructions often have inanimate and/or old entities as their grounds, or reference points, and animate and/or new entities as their figures.

18. To phrase this another way, 1/124 A-role arguments was an IP. 13/235 S-role arguments were IPs. 9/120 O-role arguments were IPs, 21/260 Adp-role arguments were IPs (5/119 as possessors of relational nouns, and 16/141 as arguments of prepositions). And 6/61 extra-role arguments were IPs.

19. The reflexive morpheme *-ib'* is often listed as a relational noun. And, to be sure, it is always possessed, and may in fact derive from the word for body (tib'elej), itself an inalienable possession. However, it is essentially the O-role argument of transitive verbs (and its possessor co-references the A-role argument). And so it is not a relational noun in the strict sense.

20. Several of these are derived nouns (from intransitive verbs), meaning 'the time of action': leaving, awakening, passing. Thus, we see how temporal relations are marked in a similar locale to spatial relations — but with a different source: change of state verbs, or achievements, rather than body part terms.

21. There are 26 constructions involving *sa'* and a non-possessed NP. 19 of them encode spatial relations: *sa' b'e* 'on the road', *sa' cha* 'in the ashes', *sa' seel* 'in the gourd', *sa' kab'l* 'in the house', *sa' wi'b'al* 'at that place', *sa' choql* 'in the clouds', *sa' iq'* 'in the wind', *sa' yamyo* 'in this plane', *sa' palaw* 'on the lake', *sa' muqal* 'in the depths', *sa' kuk* 'in the jar', *sa' chijunil* 'in everything'. And the rest encode temporal relations: *sa' kutan* 'during the day', *sa' junpaat* 'quickly', *sa' aanil* 'running, quickly'. Note then that, like *sa'* constructions with possessed NPs, these constructions involve spatial and temporal relations — but that the ground, qua argument of the preposition, is usually not even a quasi-inalienable possession. Some, in fact, belong to the category of never possessed, and are often natural uniques: wind, lake, cloud, house, and so forth.

All of this should be contrasted with adpositional constructions involving the preposition *chi*. Of the 42 tokens of this, only 6 involved possessed NPs, and 5 of these were gerunds. These, then, are marking relations between an undergoer (qua possessor of gerund), and an action (qua verb derived into gerund). 12 tokens involved non-finite predicates — which, recall, are in complementary distribution with gerunds, as intransitive rather than transitive. Many were manner adverbials: *chi elq'anb'il* 'by theft', *chi chaab'il* 'well', *chi ra* 'painfully', *chi sa* 'pleasurefully'. Many were locative adverbials: *chi ru chi ch'och'* 'on earth', *chi ik* 'in chili'. 5 were manner deictics: *chi kan* 'like this'. 3 were temporal adverbials: *chi kutan* 'by day', *chi junpaat* 'quickly'. And some were difficult to classify: *chi tz'unun* 'into a bird', *chi tz'eq* 'as trash', *chi wa* 'at a time'. Two were group constructions: *chi kab'ichalo* 'two of us'. In short, the preposition *chi* is really serving a different function than the preposition *sa'*. It is rarely spatial. And the NPs it licenses rarely refer to concrete referents; indeed, they are not NPs in any stereotypic sense, but rather infinitives, gerunds, quasi-adjectives, and so forth.

The rest of the adpositional constructions are relatively infrequent. The majority of which encode textual deictics: like this, as such, and so forth. Other encode non-referential, simile-like construction: it appeared *like an animal*. Included in these non-referential constructions were three usages of an IP: *jo' rixaqil* 'as his wife' — usually said of the protagonist in respect to what he thought about another (that he would like to take her as his wife). There is one other possessed NP usage, which is a quasi-IP: *jo' reetalil* 'as a sign of'.

22. Emblemeticity is not necessarily a function of proximity or closeness of the kin in question. For example, one may be more likely to have a cousin than a sibling (because if all couples have an equal number of kids, more or less, there could potentially be a greater number of them).

23. Indeed, we may also predict that the younger a referent, the more likely they will have an inalienable possession predicated of them (rather than presupposed): *does he have a name yet* (asked of an infant), versus *what's his name* (asked of an adult).

24. Crucially, then, any whole with a discrete number of parts could have a special kind of possessivity assigned to it. What is so crucial about inalienable possessions, is that their ground is

the person — perhaps the most frequent kind of referent in the narrated event; and really the only kind of participant in the speech event.

25. Dahl and Koptjevskaja-Tamm (2002; and see Dahl 2004: 152) have claimed that the pragmatic anchoring of kinship relations is different from the pragmatic anchoring of body part terms: the former tend to be "pragmatically anchored" (that is, in speech act participants: I and you); and the latter tend to be "syntactically anchored" (that is, determined by the subject of the sentence in which they occur). However, assuming the possessors are marked by pronouns, both are deictically grounded: the former exorphorically (in the current context) and the latter endophorically (in the current text). In the terms used here, the ground of body part constructions is P^n, and the ground of kinship constructions is P^s. Their claim may be true, but the data I present here do not attest to it: all possessors are grounded in previous discourse; and in the case of reported speech, the participants in the speech act may be possessors of kinship relations or body part terms.

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Author's address

Paul Kockelman
Department of Anthropology
Barnard College, Columbia University
3009 Broadway
New York, NY 10027

pk2113@columbia.edu