Cushillococha Ticuna Morphosyntax: 
Noun Incorporation

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1 Introduction

This sketch describes noun incorporation in Cushillococha Ticuna (CT). While CT is a mixed head- and dependent-marking language, it displays productive incorporation of both nouns and noun classifiers. All inalienably possessed nouns can be incorporated into verbs, with no apparent semantic restrictions from animacy or definiteness. Noun classifiers, which are morphologically similar in many ways to inalienably possessed nouns, can also be incorporated into verbs.

The description is organized as follows. §2 defines the word classes involved in incorporation -- verbs, nouns, classifiers, and numerals -- using language-internal morphological criteria. Noun incorporation in CT applies to absolutive arguments: the subjects of intransitives and the patients of transitives. Since transitivity governs which arguments of the verb may incorporate, I describe noun incorporation into transitive and intransitive stems separately. §3, then, describes the morphological, syntactic, and semantic properties of noun incorporation into intransitive stems, and §4 provides a parallel description for transitive stems. §5 discusses interactions between incorporation and other voice- and valence-altering morphology, and §6 describes exceptional cases of incorporation involving numerals and the morphologically unusual verbs ā³ 'have', ŋe⁴ 'lack, and wa̰¹e³ 'want.' I do not discuss classifier incorporation or predicates which involve incorporation of both a noun and a noun classifier. Data, as always, is from my 2015 and 2016 fieldwork on CT and the texts in Anderson (1962).

2 Word Classes

CT displays only three open word classes: nominals, verbs, and adverbs. There are also two closed word classes, particles (monosyllabic grammatical words) and interjections. I define nominals as stems which can bear case markers, verbs as stems which can bear subject agreement markers, and adverbs as elements which can modify verbs without additional morphology. The majority of roots belong to exactly one word class and require class-changing morphology to be used as members of a different word class. A significant number of stems can be used as both nouns and verbs; I consider these roots to be verb stems subject to zero nominalization.

Nominals and verbs are the word classes involved in incorporation. I divide verb stems into two syntactic subclasses, transitives and intransitives. Transitive verb roots are defined as those which are unacceptable without an expressed object, intransitives as stems which are acceptable in the absence of an object. Ambitransitive verbs exist in CT, but tend to have significantly different semantics in the transitive and intransitive uses. Transitivity is important to many properties of the clause, which I describe as they become relevant in §§3-4.
I delimit five morphologically defined subclasses of nominals. The five classes are: (a) alienably possessed nouns, (b) inalienably possessed nouns, (c) noun classifiers, (d) quantifiers, and (e) deictics (pronominal and otherwise). As understanding the differences between inalienably possessed nouns and noun classifiers is essential to understanding incorporation, I will now discuss the subclasses of nominals at length.

2.1 Alienably possessed nouns

Deictics are set apart from all other nominals by their partially indexical semantics. The other four subclasses of nominals can be defined by their behavior in possessive constructions. Here I describe the contrast between alienably possessed nouns, inalienably possessed nouns, and noun classifiers, leaving aside the differences between quantifiers and other nominals.

Alienably possessed nouns have two defining characteristics: (a) they are acceptable in isolation (1a), and (b) when they are possessed by another NP, the possessor NP must bear overt possessive morphology. All referential nouns, all non-pronominal deictics, and the 3R pronoun are marked as possessors by the alienable possession suffix -a¹rɨ³ (1b-d). Pronouns other than the 3R pronoun, and perhaps some deictics, have possessive forms composed of the pronominal stem and an element -rɨ³, such as ku³¹-rɨ³ 'your(sg.)' in (1c). (Presumably the -rɨ³ formative is diachronically derived from the alienable possession suffix, but there is no evidence that the underlying forms of the possessive pronouns contain an a preceding this formative.)

(1) The alienably possessed noun ʂɨ¹ʔi⁵ 'grandfather, old man'
   a. Acceptable in isolation: ʂɨ¹ʔi⁵ 'grandfather'
   b. Referential noun possessor bears suffix -a¹rɨ³, is separate word: Ka³¹ru³a¹rɨ³ ʂɨ¹ʔi⁵ 'Carlos' grandfather'
   c. Deictic possessor bears suffix -a¹rɨ³, is separate word: ŋe²ma⁴a¹rɨ³ ʂɨ¹ʔi⁵ 'that guy's grandfather'
   d. Non-3R pronominal possessor appears in suppletive possessive form, is separate word: ku³¹rɨ³ ʂɨ¹ʔi⁵ 'your (sg.) grandfather'
   e. Pronominal possessive suffix is unacceptable: *ku³ ʂɨ¹ʔi⁵ (intended: 'your-sg. grandfather')

The possessor of an alienable noun is always a separate phonological word, a fact which can be shown by the absence of hiatus resolution and vowel assimilation between possessors and alienable possesa. All morphologically derived nouns are alienably possessed. Loans make up a significant proportion of the CT nominal lexicon. All loans of which I am aware are alienably possessed, except for the Tupi-Guaraní loan *ʧi⁵ru¹ 'clothes, cloth,' which is inalienable.

2.2 Inalienably possessed nouns and noun classifiers

Inalienably possessed nouns and noun classifiers differ from inalienably possessed nouns in that they are not acceptable in isolation (2a, 3a). They must have at least one element to the left within the same phonological word. I will refer to this element as the 'licensor' of the inalienably possessed noun or noun classifier. (I use the awkward term 'licensor' because, while inalienably possessed nouns and noun classifiers have different semantic relationships with the element that appears to their left, they have extremely similar morphosyntactic relationships with this element.)
When a free noun or a deictic acts as licensor of an inalienably possessed noun or noun classifier, it does not bear any possessive morphology. The inalienably possessed noun or noun classifier is simply suffixed to the licensor (2b-c, 3b-c). If the licensor is a pronoun, it appears as a pronominal possessive prefix (2d, 3d). The suppletive free possessive pronouns cannot act as licensors of inalienably possessed nouns or of noun classifiers (2e, 3e). Conversely, pronominal possessive prefixes cannot occur on alienably possessed nouns (1e). Hiatus resolution and vowel assimilation show that inalienably possessed nouns and noun classifiers form a single word with the licensor. I write inalienably possessed nouns and classifiers with a leading *, since -- while these forms cannot be the the first element in a word -- they are not suffixes, as a leading dash would imply.

(2) The inalienably possessed noun *ta⁴ʔa² 'grandchild, G1 + relative' (GE.LCS.20160701, GE.DGG.20160701)
   a. Unacceptable in isolation: *ta⁴a² (intended: 'a grandchild')
   b. Is suffixed to referential noun possessor: ja³⁷t⁰⁴a¹⁴a² '(the) man’s grandchild'
   c. Is suffixed to deictic possessor: gu⁶⁴ma⁶⁴a³⁸a² 'that guy’s grandchild'
   d. Pronominal possessor appears as prefix: na⁴⁶a³⁸a² 'his/her/their grandchild'
   e. Cannot be possessed by possessive pronoun: *ku⁶¹t⁰³a² (intended: 'your grandchild')

(3) The classifier *tʃi⁴ɨ³ 'clf:liquid' (GE.LCS.20160701, GE.DGG.20160701)
   a. Unacceptable in isolation: *tʃi⁴i³ (intended: 'a liquid')
   b. Is suffixed to referential noun possessor: tʃa²wɨ⁵tʃi⁴ɨ³ 'corn beer, warm corn beverage'
   c. Is suffixed to deictic possessor: ʃe⁴⁶ma²⁶tʃi⁴ɨ³ 'liquid/beverage made from that' (not 'that one's liquid' or 'that liquid')
   d. Pronominal possessor appears as prefix: tfau¹tʃi⁴ɨ³ 'my liquid,' i.e. 'beverage made for/by me'; metonymically: 'my party'
   e. Cannot be possessed by possessive pronoun: *no³¹tʃi⁴ɨ³ (intended: 'his/her/its liq-
       uid')

Table 1 gives the paradigm of inalienable possession prefixes and their corresponding free pronouns. Note that one inalienable possession prefix, na⁴³-, does not correspond to a free pronoun. Like the other inalienable possession prefixes, this prefix appears on an inalienably possessed noun or noun classifier and derives a noun which is morphologically inalienable (i.e. can appear in isolation and occur as the possessum in the alienable possession construction). Unlike the other inalienable possession prefixes, though, na⁴³- is an expletive morph with no semantic content: it does not contribute information about the possessor of an inalienably possessed noun or the object characterized by a noun classifier. I gloss this morph as 'default possessor,' DPOSS.

There are at least 200 inalienably possessed nouns in the CT lexicon, and I continue to find more. The class of inalienably possessed nouns includes the great majority of body part terms, plant part terms, and spatial and relational nouns. It also includes most relational terms referring to humans (e.g. kin terms, words such as ‘fellow person’ and ‘companion’), many terms for manufactured objects, and some terms for features of the natural environment, especially those created by people (e.g. ‘mature garden’).
Table 1: Inalienable possession prefixes and corresponding pronouns

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Pronoun Stem</th>
<th>Possessive Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>tʃo³¹ ~ tʃau¹</td>
<td>tʃau¹-</td>
</tr>
<tr>
<td>2SG</td>
<td>ku³¹</td>
<td>ku¹-</td>
</tr>
<tr>
<td>3NR</td>
<td>nɨ³¹ ~ na⁴³</td>
<td>na³¹-</td>
</tr>
<tr>
<td>3R</td>
<td>tɨ³¹ ~ tɨ³¹ma³</td>
<td>tɨ³¹ma³-</td>
</tr>
<tr>
<td>3F</td>
<td>nj⁴³</td>
<td>nj⁴³-</td>
</tr>
<tr>
<td>1EXCL</td>
<td>to³ ~ 3¹, 3⁵</td>
<td>to³-</td>
</tr>
<tr>
<td>1INCL</td>
<td>tɨ³¹ ~ ta³¹</td>
<td>ta³¹-</td>
</tr>
<tr>
<td>2PL</td>
<td>pe³¹</td>
<td>pe³¹-</td>
</tr>
<tr>
<td>DPOSS</td>
<td>--</td>
<td>na⁴³-</td>
</tr>
</tbody>
</table>

The number of classifiers is smaller, perhaps 100. Some CT classifiers, for instance *pɨ'ʔi³ 'CLF:spherical' and *a²tɨ³ 'CLF:2D.flexible,' characterize objects according to physical properties such as shape and consistency. Other classifiers, like *tʃi⁴ɨ³ 'CLF:beverage' and *tʃi⁴ɨ̃³ 'CLF:container,' characterize objects by their prototypical use rather than their shape. A significant number of classifiers can be read, with a semantically appropriate possessor, as body or plant part terms.

2.3 Inalienably possessed noun vs. noun classifier

As shown above, inalienably possessed nouns and noun classifiers largely pattern together in possessive constructions where the possessor is a referential noun, pronoun, or deictic -- though the readings available to possessive constructions can sometimes provide hints that a form is a classifier rather than a referential noun (e.g. 3c).

Inalienably possessed nouns and classifiers display clear differences, however, in their relationships with numerals (although not with other quantifiers). When a numeral acts as the licensor of an inalienably possessed noun, it can be read only as possessing the noun, not as quantifying it (4a,b). If and only if the inalienably possessed noun is a body part, the construction may additionally be read as meaning ‘(Numeral) side(s) of the (Noun),’ as in (4c).

I note that speakers have ambiguous judgments about whether numerals may license inalienably possessed nouns at all. Some speakers reject constructions like (4a) completely, while others will reject the first few they are offered in an elicitation session before accepting others with the possessor reading given in (4a).

(4) Numerals with inalienably possessed nouns (GE.LCS.20160701, GE.DGG.20160701)

a. Numeral licensor of inalienably possessed noun is acceptable as possessor:
   wi⁴³tʃi⁴-tʃi³ru¹ (one-clothes) 'someone's/one person's clothing'
   ta³re⁵-tʃi⁵ru¹ (two-clothes) 'clothing of two (people)' (one article of clothing has two possessors)

b. Unacceptable as quantifier:
   #wi⁴³tʃi⁴-tʃi³ru¹ (one-clothes), intended: 'one article of clothing'
   #ta³re⁵-tʃi⁵ru¹ (two-clothes), intended: 'two articles of clothing'

c. Unique 'side' reading for body parts: wi⁴³tʃa⁵me³'ti¹ (one-face) 'one side of the face'

When a numeral acts as licensor of a noun classifier, on the other hand, it can be read either
as possessing the noun or as quantifying it (5a,b). Here there is no gradience in judgments; all
speakers that I have worked with find constructions like (5a,b) felicitous. With classifiers that
refer exclusively to shape, such as -me⁴na⁴ʔã² 'CLF:1D.narrow' and -pi⁷ʔi³ 'CLF:spherical,' numeral
licensors are almost invariably read as quantifiers. The possessor reading becomes strongly dis-
prefixed, though I hesitate to say it is impossible (5c).

(5) Numerals with classifiers (GE.LCS.20160701, GE.DGG.20160701)
   a. Numeral licensor of noun classifier is acceptable as possessor:
      wi⁴³ʔi⁴-tʃi⁴ɨ̃³ (one-clf:container) 'one person's container, container for one thing'
      ta³re⁵-tʃi⁴ɨ̃³ (two-clf:container) 'two people's container, container for two things'
   b. Also acceptable as quantifier: ta³re⁵tʃi⁴ɨ̃³ 'two containers'
   c. Numeral licensor of classifier referring only to shape is acceptable as quantifier, dis-
prefixed as possessor: ta³re⁵-me⁴na²ʔã² (two-clf:1D.narrow) 'two long narrow objects
      (e.g. sticks, needles), ?/# `stick/needle belonging to two people'

Inalienably possessed nouns and noun classifiers also differ in their behavior with the verb ã³
'have inalienable possessum, have shape.' When an inalienably possessed noun is incorporated
into this verb, the resulting form is read as a possessive predicate (6a). When a noun classifier is
incorporated into ã³, on the other hand, the expression can be read either as a possessive predicate
or as an attributive one which characterizes the shape or consistency of the subject (6b,c).

(6) The verb ã³ 'have' with inalienably possessed nouns and with classifiers
   a. Inalienably possessed noun read only as possessum: na⁴-ã³-pa¹ (3NR.SBJ-have-hammock)
      'he has a hammock' (not: 'it is shaped like a hammock')
   b. Noun classifier read as possessum: na⁴-ã³-a⁵tɨ³ (3NR.SBJ-have-CLF:2D.flexible) 'it has
      leaves, pages'
   c. Noun classifier read as characterizing consistency: na⁴-ã³-mɨ̃¹ (3NR.SBJ-have-CLF:soft.mass):
      'it turns into a soft undifferentiated mass (e.g. mud)'

(GE.MFC.20160707)

CT classifiers have a much more restricted distribution than classifiers in other Northwestern
Amazonian languages. In many languages of this region, including Boran-Huitotoan languages,
Yagua, and all Tukanoan languages, classifiers are regularly affixed to referential nouns (deriving
nouns), verbs (deriving verbs or nouns), and numerals and deictics, these last with an important
reference-tracking function in discourse. In CT as in these languages, classifiers play an important
role in the nominal and verbal derivational morphology. However, CT classifiers cannot be affixed
to deictics except when the deictic is the possessor of the classified object, as in (3c), and it is
unusual to find a deictic or numeral affixed with a classifier in discourse (thus the elicited examples
above). The contribution of classifiers to reference tracking in discourse comes primarily from
incorporation of classifiers into verbs, rather than from affixation of classifiers to other nominals.

Both inalienably possessed nouns and classifiers may incorporate into verbs. The other classes
of nominals cannot incorporate, although there are constructions involving alienably possessed
nouns that bear a strong resemblance to incorporation (described in §3.1.2 and §3.2). Classifier
incorporation differs from noun incorporation in several ways. The most relevant here are that
(a) for many predicates with classifier incorporation, it is not possible to construct an equivalent
predicate with no incorporation (for this reason, the process may not fall within strict defini-
tions of 'incorporation'), and (b) classifier incorporation does not apply exclusively to absolutive
arguments. For these reasons, I do not attempt to describe classifier incorporation in this sketch.
3 Noun Incorporation: Intransitive Stems

3.1 Which nouns can incorporate?

3.1.1 Inalienably possessed nouns

When an inalienably possessed noun acts as the subject of an intransitive predicate, it may incorporate into the verb. (7) demonstrates subject incorporation. In the analytic version of this sentence, (7a), the subject is the inalienable noun *ne⁴ 'son,' which is possessed and licensed by the 1SG.POSS prefix tʃau¹-. The verb, ni⁴da¹we¹, is marked for 3NR agreement and forms a separate phonological and morphological word from the subject. In the incorporated alternant, (7b), *ne⁴ has been incorporated into the verb, and appears as a suffix immediately following the verb root. Hiatus resolution and vowel assimilation phenomena indicate that the incorporated noun and the root form a single phonological word; in addition, any additional affixes and clitics on the verb must follow the incorporate rather than intervening between the verb root and incorporate. The syntactic results of incorporation are that (a) the 1SG possessor of *ne⁴ becomes the subject of the clause, and as such can optionally be expressed as a free pronoun, and (b) the verb bears the 1.SG subject marker tʃi³-.

(7) Incorporation of intransitive subject (GE.LCS.20160613)

a. Analytic version: tʃau³ne⁴ ni⁴da¹we¹.
   tʃau³- *ne⁴ ni⁴- da¹we¹
   1SG.POSS- son 3NR.SBJ- be.sick
   'My son is sick.'

b. Incorporated version: (tʃo³¹ma³ rɨ¹)tʃi⁴da¹we¹ne⁴.
   tʃo³¹- ma³ rɨ¹- tʃi⁴- da¹we¹ *ne⁴
   1SG.PRO -TOP -TOP 1SG.SBJ- be.sick -NI:son
   'My son is sick.'

When the subject NP consists of an inalienably possessed noun that is possessed by another inalienably possessed noun, both nouns may incorporate. The original subject appears immediately following the verb root, and the original (immediate) possessor follows the original subject (8).

(8) Two subject incorporates (GE.LCS.20160721)

a. Analytic version: tʃau¹pa⁴ta³e⁵tɨ³rɨ¹na⁴ŋau¹.
   tʃau¹- *pa⁴ta³ e⁵tɨ³ rɨ¹- na⁴- ŋau¹
   1SG.POSS- house space.above TOP 3NR.SBJ- be.used.up
   'The roof of my house is old (used up).'

b. Incorporated version: tʃo³¹ma³ rɨ¹ na⁴ŋau¹e⁵tɨ³pa⁴ta³.
   tʃo³¹- ma³ rɨ¹ na⁴- ŋau¹ *e⁵tɨ³ pa⁴ta³
   1SG.PRO -TOP TOP 3NR.SBJ- be.used.up NI:space.above NI:house
   'The roof of my house is old (used up).'

Consultants give identical translations for intransitive clauses with incorporated and non-incorporated subjects, as reflected in the glosses of (7), and do not identify a difference in meaning. My strong impression from texts and speech is that both subject incorporation and patient incorporation tend to take place when the possessor of the inalienable noun is significantly more
The incorporation of the inalienably possessed kin term ne⁴ in (7) illustrates an unusual property of noun incorporation in CT: it is not grammatically restricted by the semantics of the noun. Inalienably possessed nouns of all semantic domains -- kin terms, terms for non-human animates (e.g. *ɨ³na³ ‘domestic animal’), body and plant part terms, terms for manufactured objects, spatial and relational nouns, and so on -- may incorporate into intransitive and transitive predicates. This is surprising, since the grammatical animacy of nouns is important in many other areas of CT grammar, such as agreement between nouns and deictics within the NP and verb root suppletion.

3.1.2 Promoted possessor construction with alienable nouns

In addition to subject incorporation proper, CT also displays a 'promoted possessor' construction with alienably possessed nouns which strongly resembles subject incorporation. The promoted possessor construction applies to intransitive clauses in which the subject NP consists of an alienably possessed noun that is possessed by another noun or pronoun, such as (9a). In this construction, the verb bears, following all other morphology, the affix or clitic -a¹ri³. (This suffix normally appears on the possessor of an alienable noun; it does not otherwise appear on verbs.) -a¹ri³ is immediately followed by the alienably possessed noun which is the notional subject and the grammatical subject in the counterpart analytic construction. This noun bears the suffix -ã̰¹, which is also used to license the participation of alienably possessed nouns in inalienable possession predicates (§??). The possessor of the erstwhile subject is promoted to subject and appears preceding the verb (9b).

(9) Promoted possessor construction with intransitive subject (GE.LCS.20160712)
   a. Analytic version: ji²ma⁴ ja³ti¹ a¹ri³ no³⁷e⁵ ti⁴ da¹we¹.
      ji²ma⁴ ja³ti¹ -a¹ri³ no³⁷e⁵ ti⁴- da¹we¹
      DEM man -POSS grandmother 3R.SBJ- be.sick
      'That man's grandmother is sick.'
   b. Promoted possessor version: ji²ma⁴ ja³ti¹ ri³ ni⁴ da¹we¹ a¹ri³ no³⁷e⁵-ã̰¹.
      ji²ma⁴ ja³ti¹ ri³ ni⁴- da¹we¹- a¹ri³ no³⁷e⁵ -ã̰¹
      DEM man TOP 3NR.SBJ- be.sick -PR.POSS grandmother -AL>INAL
      'That man's grandmother is sick.'

While I have written the noun no³⁷e⁵ in (9b) above as a phonologically free word, the phonological environment created by this construction is such that it is impossible to test whether the noun bookended by -a¹ri³ and -ã̰¹ is still phonologically free, or has been affixed to the verb. For this reason, I hesitate to refer to the promoted possessor construction as incorporation. It is clear, however, that the element followed by -ã̰¹ forms a single morphological word with the verb, since -ã̰¹ can be followed by a nominalizer to derive a relative clause, as in (10). Nominalizers, such as -ki³ in (10), otherwise appear only on verb roots and stems.

(10) Promoted possessor construction forms a single morphological word
    ji²ma⁴ ja³ti¹ ja⁴ i⁴ da¹we¹ a¹ri³ ma³ma⁵ -ã̰¹ -ki³ ri³ nu⁵a¹ na⁴ŋu¹.
    ji²ma⁴ ja³ti¹ ja⁴ i⁴ da¹we¹ -a¹ri³ ma³ma⁵ -ã̰¹ -ki³ ri³ nu⁵a¹
    DEM man NCL NGL be.sick -PR.POSS mother -AL>INAL -NMLZ:M.ANIM TOP DEM
    na⁴. ŋu¹
    3NR.SBJ- arrive
3.2 Which intransitive verbs can incorporate?

While there are no restrictions on incorporation by the semantics of the incorporated noun, the argument structure of verb does significantly restrict the possibilities for subject incorporation. Within intransitives, incorporation is possible with all stative verbs and most unaccusative verbs. It is marginal or ungrammatical with unergative verbs, although speakers' judgments on the acceptability of examples such as (13) vary. (I do not have a language-internal test for distinguishing unaccusatives from unergatives; my categorization of verbs here is based on translation equivalence in Spanish.) (11) provides some examples of incorporation of the animate nouns *ne⁴ 'son' and *a³ki³ 'daughter' into stative verbs, (12) for unaccusative verbs. (13) illustrates the unacceptability of incorporation with some unergative verbs.

I exemplify with kin terms here on the principle that if highly animate nouns like these can participate in incorporation, then nouns lower on the animacy hierarchy should also be able to participate, but I have not yet checked these facts with less animate nouns.

(11) Incorporation into stative verbs
   a. tʃa³ja²-ne⁴.
      tʃa³-  ja²  *ne⁴
      1SG.SBJ- be.mature -NI:son
      'My son is an adult.' (GE.DGG.20150801, GE.LCS.20160711)
   b. tʃa³i⁵ra¹-a³ki¹.
      tʃa³-  i⁵ra¹  *a³ki¹
      1SG.SBJ- be.small -NI:daughter/child
      'I am giving birth (idiomatic reading).'  'My daughter/underspecified child is a baby (literal reading).' (GE.DGG.20160709, GE.LCS.20160711)

(12) Incorporation into unaccusative verbs
   a. tʃi³ha³-ne⁴.
      tʃi³-  ha³  *ne⁴
      1SG.SBJ- run.away -NI:son
      'My son ran away (e.g. from school).' (GE.LCS.20160613)
   b. tʃa³ri³ŋu³-ne⁴
      tʃa³-  ri³-  ŋu³-ne⁴
      1SG.SBJ- VCL- fall.high.to.low -NI:son
      'My son fell down (e.g. from a tree).' (GE.LCS.20160613)

(13) Incorporation into unergative verbs unacceptable
   a. *tʃi³-do³ra³-ne⁴ (1SG.SBJ-lie-NI:son), intended: 'My son is lying'
   b. *tʃa³-a³ʔu³-ne⁴ (1SG.SBJ-cry-NI:son), intended: 'My son is crying'
   c. *tʃa³-ku³-gi³-a³ki¹ (1SG.SBJ-laugh-NI:daughter), intended: 'My daughter is laughing'
   d. *na⁴-wi²ɟa³-e³-na³ti³ (3NR.SBJ-sing-NI:father), intended: 'My father is singing'
   (GE.DGG.20160709, LCS.20160611,20160709)
Intransitive stems which are derived from nouns with the denominal verbalizer \(-e^4\), such as (fishhook-VBLZ) 'fish with hook and line,' or from transitive verbs with the antipassive \(-ta^2e^3 \sim -te^3\) cannot incorporate their subjects. However, I view this as a result of the general ban on incorporation of unergative subjects rather than as a morphological restriction, since antipassives are necessarily unergative, and all of my examples of denominal verbs derived with \(-e^4\) are also unergative activity verbs. Likewise, intransitive quirky case verbs do not allow subject incorporation, presumably also because they are unergative.

There are also important distinctions in the productivity of incorporation within the class of statives. When speakers are asked to translate clauses with stative verbs that attribute a time-stable property to the subject -- for example, size, quantification, color, and evaluation predicates (the sort of concepts that are lexicalized as adjectives in other languages) -- they consistently volunteer translations with incorporated subjects (14a), and judge structurally similar analytic sentences to be awkward or ungrammatical (14b). Analytic sentences with predicates of this type are judged as much better if the non-incorporated subject is marked as a topic with the topic marker \(r^i\), as in (14c), providing more evidence that an information-structural preference for topics not to be incorporated may be in play.

(14) Subject incorporation with the stative verb \(ta^{43}\) 'be big' (GE.LCS.20160613)

a. Best version (volunteered) has incorporation: \(t\hat{a}^3\hat{a}^{43}p\hat{a}^4t\hat{a}^3\)
   \(1SG.SBJ\) be.big -NI:house
   'My house is big.'

b. Worst version (rejected) is analytic with no topic marker: \(*t\hat{o}\hat{o}^3p\hat{a}^4t\hat{a}^3 n\hat{a}^4t\hat{a}^{43}\)
   \(1SG.PSS\) house 3NR.SBJ be.big
   intended: 'My house is big.'

c. Consultant’s repair to (b) is analytic with topic marker: \(t\hat{o}^3p\hat{a}^4t\hat{a}^3 r^i n\hat{a}^4t\hat{a}^{43}\)
   \(1SG.PSS\) house TOP 3NR.SBJ be.big
   'My house, it’s big.'

Speakers do not display this kind of preference for incorporated over analytic predicates with stative verbs which express less time-stable properties, such as posture verbs. In addition, the preference for incorporation of stative subjects is much stronger when the subject is a part term than when it belongs to another semantic class.

### 3.3 Are clauses with subject incorporation different from other intransitive clauses?

Underived intransitive stems in CT display two distinctive morphosyntactic properties, other than inability to assign the accusative case to a patient, which distinguish them from transitive verbs. First, a closed class of CT verb roots exhibits suppletion based on the number of the absolutive argument. Intransitive verbs with number suppletion, such as \(\eta^3\) (sg.S; root homophonous with ‘fall’) \(\sim j^i\) (pl.S) ‘drown, pass beneath surface of water,’ undergo the suppletion if and only if the subject is plural. Likewise, transitive verbs such as \(m\hat{a}^1\) (sg.O) \(\sim d\hat{a}^2\) (pl.O) ‘hit, kill,’ undergo suppletion if and only if the patient is plural. This suppletion is conditioned by participant number, not by pluractionality, because there is no suppletion in predicates which refer to a repeated action where the absolutive argument is singular.
(15) shows that when suppleting intransitive roots incorporate their subject, they still undergo the suppletion. More interesting, the suppletion is still conditioned by the number of the original subject -- not the raised possessor which acts as subject of the incorporated predicate. Thus the subject agreement in (15) is first person singular, but the root appears in its suppletive plural form. This is the only case, to my knowledge, in which singular subject agreement is compatible with the plural subject form of a suppling intransitive verb.

(15) Suppleting verb with subject incorporation still undergoes suppletion
\[ tʃa³ɟi¹ne⁴ \]
\[ tʃa³- \ ji¹ \ *ne⁴ \]
\[ 1SG.SBJ- become.underwater.PLSBJ -NI:son \]

'My sons drowned.' (GE.LCS.20160711)

Second, when intransitive verbs bear directional affixes, the path denoted by the directional is attributed to the subject, while with transitives, the path is attributed to the object. Thus, compare the intransitive stem \[ ã¹-ẽ⁴ \] (row-dir:across) 'cross (a body of water) by rowing' with \[ ku³¹-ẽ⁴ \] (kick-dir:across) 'kick something so that it crosses a space (e.g. soccer ball across the field)' (not: 'cross by kicking'). CT directionals prototypically occur with motion and caused motion verbs. These verbs tend to be unable to incorporate their subjects, presumably because they are unergative. As a result, I have not yet been able to test the interaction of subject incorporation with directionals.

4 Transitive Stems

4.1 Which nouns can incorporate?

4.1.1 Inalienably possessed nouns

Inalienably possessed nouns which are the objects of transitive predicates may incorporate into the verb. (16) illustrates object incorporation. In the analytic version of this (regrettably violent) sentence, (16a), the object is the inalienable noun *ne⁴ 'son.' It is possessed and licensed by the referential noun \[ Ka³ru¹ \], and is also assigned accusative case by the verb \[ ɸa³¹ʔ⁳ \] 'hit with swinging motion.' The object and the verb form separate phonological and morphological words. In the incorporated version of the sentence, (16b), *ne⁴ 'son' appears as an affix to the verb. The incorporate forms a single phonological word with the root, and additional verbal affixes generally follow the incorporate rather than intervening between it and the root. The former possessor of the incorporate is promoted to object and assigned the accusative case (modulo its word class and position on the animacy hierarchy relative to the agent).

(16) Incorporation of transitive patient marked with accusative (GE.SSG.20160716)

a. Analytic version: \[ Ka³ru¹*ne⁴ʔɨ̃³tʃa³ ɸa³¹ʔi³ \]
\[ Ka³ru¹ \ *ne⁴ -ʔɨ̃³ tʃa³ - ɸa³¹ʔi³ \]
\[ pers.name son -ACC 1SG.SBJ- hit.swinging \]
'I hit Carlos' son.'

b. Incorporated version: \[ Ka³ru¹ʔɨ̃³tʃa³ ɸa³¹ʔi³*ne⁴ \]
\[ Ka³ru¹ʔɨ̃³ tʃa³ - ɸa³¹ʔi³ \ *ne⁴ \]
\[ pers.name -ACC 1SG.SBJ- hit.swinging -NI:son \]
'I hit my son.'
As with intransitives, there are no apparent semantic restrictions on the set of inalienably possessed nouns which can undergo incorporation into transitive stems. Also as with intransitives, when the patient NP consists of one inalienable noun possessed by another, both nouns can incorporate. The original patient appears closer to the verb root, and is followed by the original possessor (17).

(17) Two patient incorporates (GE.LCS.20160721) 
\[
\text{tʃo}^{31} \text{-gi}^{3} \text{i}^{5} \text{- tʃa}^{3} - \text{jo}^{4} \text{-}\text{pa}^{3} \text{-t}^{4} \text{ku}^{2} \text{-t}^{3}
\]
\[
1\text{SG.PRO} \text{-REFL} \text{VCL-} 1\text{SG.SBJ- cut.with.scissors} \text{-PL.O} \text{-NI:digit.nail} \text{-NI:foot}
\]
'I cut my toenails.'

4.1.2 Promoted possessor construction with alienable nouns

The promoted possessor construction described in §3.1.2, involving incorporation-like treatment of an alienably possessed noun, also applies in transitive clauses. The transitive promoted possessor construction can occur when the object of a transitive clause consists of an alienably possessed noun possessed by another noun or pronoun, as in (18a). The construction has three attributes, illustrated by (18b). First, as in the intransitive construction, the verb bears the affix or clitic -a¹rɨ³. Second, also as in the intransitive construction, -a¹rɨ³ is immediately followed by the noun which was the object in the corresponding analytic construction, and the erstwhile object bears the affix -ã¹. Third, the former possessor of the object is promoted to object and assigned accusative case. (The allotony on the verb root ma² in 18b is due to a phonologically predictable polarity effect.)

(18) Promoted possessor construction with transitive object (GE.LCS.20160715) 
   a. Analytic version: jì²ma⁴ ja³ti¹ tʃo³¹ri¹ ku³ti¹ ni⁴ma¹. 
      jì²ma⁴ ja³ti¹ tʃo³¹ri¹ ku³ti¹ ni⁴- ma¹
      DEM man 1SG.POSS pig 3NR.SBJ- kill
      'That man killed my pig.'
   b. Promoted possessor version: jì²ma⁴ ja³ti¹ ri¹ tʃo³¹ri³ ni⁴ma⁵-a¹ri³ ku³ti¹-ã¹. 
      jì²ma⁴ ja³ti¹ ri¹ tʃo³¹ -r³ ni⁴- ma⁵ -a¹ri³ ku³ti¹ -ã¹
      DEM man 1SG.PRO -ACC 3NR.SBJ kill -PR.POSS pig -AL>INAL
      'That man killed my pig.'

4.2 Which kinds of objects can incorporate?

Object noun phrases in CT, such as the object in (16a), are canonically marked with the accusative case. However, many object noun phrases with non-human reference are zero-marked, and a significant minority of verbs assign a case other than the accusative to their (semantic) patients. In this section, I discuss incorporation of zero-marked objects, then (the impossibility of) incorporation of objects marked with oblique case.

In CT, whether the patient of a transitive clause is assigned the accusative case depends primarily on the relative position of the patient and agent on the animacy hierarchy (human > animal > inanimate). Where the agent is higher than the patient on the animacy hierarchy, as in (19a), the patient will typically not be assigned the accusative. Nevertheless, the zero-marked patient can still incorporate, as in (19b). Following incorporation, the former possessor of the object is
raised to object. Whether the raised possessor is marked with the accusative following incorporation is determined by the relative positions of the agent and the raised possessor on the animacy hierarchy, not the relative position of the agent and the old (incorporated) object. Thus, even though the original object in (19a), *ɨ³na³ ‘domestic animal,’ is zero-marked, the raised possessor in (19b) must be marked with the accusative.

(19) Incorporation of transitive patient not marked with accusative (GE.LCS.20160715)
   a. Analytic version: ku³ʔɨ³na³ tʃa³ʔu³
tu³火花 -sp. poss 1sg. sbj -pierce
   'I wounded your domestic animal by piercing it (e.g. I shot it with an arrow).'
   b. Incorporated version: ku³ʔɨ̃³tʃa³ʔu³ʔɨ³na³
tu³火花 -sp. pro -acc 1sg. sbj -pierce -NI:domestic.animal
   'I wounded your domestic animal by piercing it.'

A significant number of CT verbs assign 'quirky' case: they can take a non-subject argument with the thematic role of patient, but assign this argument a case other than the accusative. Patients which are assigned an oblique case cannot incorporate, as shown for the patient of pa⁷ 'hug' in (20). In line with the strong cross-linguistic tendency toward an absolutive pattern in incorporation, agents also cannot incorporate (21).

(20) Patients assigned non-accusative case cannot incorporate (GE.LCS.20160715)
tʃau¹ne⁴wa⁵ tʃa³pa⁷.
tʃau¹-  ne⁴-ALL 1sg. sbj -pug
   'I hugged my son.'
Incorporation unacceptable: *tʃa³pa⁷ne⁴

(21) Agents cannot incorporate (GE.LCS.20160601)
tʃau²ne⁴ o³ta⁵ ni⁴mg¹.
tʃau²- ne⁴ o³ta⁵ 3nr. sbj -kill
   'My son killed the chicken.'
Incorporation unacceptable: *o³ta⁵ ni⁴mg¹ne⁴, *o³ta⁵ tʃi³mg¹ne⁴

4.3 Which verbs can incorporate their objects?

While the objects of most psychological predicates are marked with the accusative, they cannot incorporate. (22) demonstrates the unacceptability of incorporation with the emotion verbs ge⁵tʃa⁷ ‘love’ and o⁷ ‘dislike,’ and (23) provides an equivalent example for the perception verb no⁷gi³ ‘touch, perceive (properties of Obj) by touching it’ (cf. dau⁴ ‘touch, lay hands on Obj so as to do sth with it’).

(22) Emotion verbs assign accusative, but cannot incorporate object
   a. Ambitransitive verb o⁷ ‘dislike (tr.), be lazy (intr.)’ (GE.LCS.20160715)
   Ka³ru¹ʔɨ³na³ʔɨ̃³tʃa³ʔo⁷
Ka³ru¹ *ɨ³na³ -ʔɨ³ tʃa³- ʔo¹
personal.name domestic.animal -ACC 1SG.SBJ- dislike
'I don't like Carlos' dog.'
Incorporation unacceptable: */# Ka³ru¹ɨ̃³tʃa³ʔo¹ʔɨ³na³

b. Ambitransitive verb ňe⁵tʃa¹ɨ̃ 'love, respect (tr.), be sad (intr.)' (GE.SSG.20160716)
Ka³ru¹ne⁴ʔɨ³³tʃa³ ňe⁵tʃa¹ɨ̃
Ka³ru¹ personal.name son - ACC 1SG.SBJ- love
'I love/respect Carlos's son.'
Incorporation unacceptable: */# Ka³ru¹ɨ̃³tʃa³ ňe⁵tʃa¹ɨ̃ne⁴

(23) Perception verb 'touch' assigns accusative, but cannot incorporate object (GE.LCS.20160715)

Ka³ru¹tʃi⁵ru¹ʔɨ³³tʃi³ŋo⁴gɨ¹
Ka³ru¹ personal.name cloth(es) - ACC 1SG.SBJ- touch.to.perceive
'I'm touching Carlos' clothes/cloth (e.g. to see if it's soft).'
Incorporation unacceptable: */# Ka³ru¹ɨ̃³tʃi³ŋo⁴gɨ¹tʃi⁵ru¹

The fact that the objects of these verbs cannot be incorporated presumably reflects that the 'objects' of perception and emotion occupy the semantic role of stimulus rather than that of patient. (It is noteworthy, but probably not relevant here, that psych verbs are unusual among CT predicates in that most of them are multitransitive -- i.e. can be used as intransitives, intransitives with quirky case objects, or transitives, with each argument structure generating a slightly different interpretation.) Perhaps for this reason, consultants judge clauses which have incorporation with psychological predicates to be unacceptable, but still understandable. This is also their judgment of clauses with incorporation of unergative subjects, while they find proposed sentences which involve incorporation of agents to be nonsensical.

Other than the rule against incorporation of the objects of psych predicates, and the interactions of incorporation with other voice- and valence-adjusting morphology discussed in §??, there are no other systematic semantic or morphological restrictions on which verbs may incorporate their objects. A few caused motion verbs, such as ga⁴ 'move an animate being,' idiosyncratically fail to incorporate their objects, but many other caused motion verbs can incorporate. The unusual verbs a³ and ňe⁵, described in §??, effectively must incorporate their objects.

4.4 Possessor raising

Possessor raising to reflexive/reciprocal pronoun. Reflexivity and reciprocity are expressed in CT by a single set of free reflexive/reciprocal pronouns. Therefore, when the subject of a clause is co-referential with the possessor of the object (as in 'Sue, cut her, hair') and incorporation takes place, the raised possessor object can only be realized as a reflexive pronoun (24). Where the subject and co-referential reflexive pronoun are plural, the clause allows either a reciprocal reading (25a) or a distributed reflexive reading (25b).

(24) Possessor raising to reflexive pronoun, singular subject (GE.SSG.20160716)
(tʃau¹'gi¹) tʃa³ja³u³ja⁴e²
tʃau¹ -gi¹ tʃa³ -ja³u³ ja⁴e²
1SG.PRO -REFL 1SG.SBJ- wash -NI:hair
'I'm washing my hair.'

(25) Possessor raising to reflexive/reciprocal pronoun, plural subject

a. Reciprocal: to³¹ma³-gɨ⁴ ri¹ to³¹giⁱ ti⁴jo⁴*e⁴-gi⁴
   to³¹ -ma³ -gi⁴ ri¹ to³¹ -gi⁴ ti⁴- jo⁴ *ja⁴*e² -gi⁴
   1EXCL.PRO-REFL TOP 1EXCL.SBJ- cut.with.scissors -NI:hair -PL
   'We're cutting each other's hair.' (GE.SSG.20160716)

b. Distributed reflexive: ni³¹-gi¹ na⁴ba²*e⁵ti⁵*-gɨ⁴
   ni³¹ -gi¹ na⁴- ba² *e⁵ti³ -gɨ⁴ -ʔɨ⁴
   3NR.PRO-REFL 3NR.SBJ- pour -NI:space.above -REFL-SUB
   'Each of them was pouring water over the top (of his/her head, while bathing).' (maw 1:38)

**Omission of raised possessor.** The reflexive pronoun in a clause like (24) is optional, as shown above. Clauses which have incorporation and do not have an overt raised possessor can always be read as reflexive, and the reflexive reading is strongly preferred if the incorporated object is a part term (26c). However, the object of such a clause can also be read as having an underspecified possessor that is not coreferential with the subject (26a,b).

(26) Omission of raised possessor allows reflexive and underspecified possessor readings (GE.LCS.20160711, GE.SSG.20160716)

a. Non-part term: tfa³-i³-pa⁴ta³ (1SG.SBJ-make-NI:house) 'I'm building (my/his/a) house'

b. Non-part term: tfa³-ja³1u³-tfi⁵ru¹ (1SG.SBJ-wash-NI:cloth/es) 'I'm washing (my/our/his/some) clothes'

c. Part term: tfa³-ja³1u³-ja⁴e² (1SG.SBJ-wash-NI:hair) 'I'm washing my hair', ?/# 'I'm washing the hair (loose hair, in preparation for making a wig)'

4.5 Are clauses with object incorporation like other transitive clauses?

It is surprising that the raised possessor can be omitted in (26) above, since CT does not generally permit omission of accusative arguments. This raises the possibility that clauses with object incorporation may more closely resemble intransitive clauses than transitive clauses. In this section, I therefore examine the behavior of originally transitive clauses with object incorporation in three morphosyntactic contexts where prototypical intransitive and transitive predicates differ. These contexts, as in §3.3, are the intransitive beneficiary construction, verb root suppletion, and directionals.

First, when transitive verb roots undergo root suppletion by participant number, the suppletion is controlled by the number of the object -- in a non-incorporated clause, the accusative argument. When a suppling verb incorporates its patient, the suppletion is still conditioned by the number of the patient. The number of the raised possessor is irrelevant, even though the possessor is the formally accusative argument. (27a) illustrates this with a singular possessor of a plural patient, (27b) with a plural possessor of a singular patient. As with the similar phenomenon in intransitive verbs, this is the only case (to my knowledge) in which the plural object allomorph of a transitive verb root is allowed with a singular accusative argument.

(27) Suppletion in transitive clauses with incorporation is conditioned by number of incorporated patient, not number of accusative argument (GE.20160715.LCS, GE.20160716.SSG)
a. Plural patient, singular accusative argument, plural allomorph
\[ tʃo^{31}ʔɨ³na⁴dai²*ʔɨ³na^3i^4 Ka^3ru^1 \]
\[ tʃo^{31} -ʔɨ³na^4 -dai^2 -*ʔɨ³na^3 i^4 Ka^3ru^1 \]
1SG.PRO-ACC 3NR.SBJ-kill.PLOBJ -NI:domestic.animal NCL personal.name
'Carlos killed my domestic animals.'

b. Singular patient, plural accusative argument, singular allomorph
\[ Ka^3ru^1 to^{31}*ʔɨ³na⁴ to^{31}ni^4*ʔɨ³na^3ni⁴\]
\[ Ka^3ru^1 to^{31} -ʔɨ³ni⁴ -ma^1 *ʔɨ³na^3 personal.name 1EXCL.PRO-ACC 3NR.SBJ-kill.SGOBJ -NI:domestic.animal \]
'Carlos killed our (single) domestic animal (e.g. our cow).'

Third, when a prototypical transitive verb bears a directional, the path of the directional is attributed to the object. In transitive clauses with object incorporation, the path of the directional is still attributed to the incorporated patient, not to the raised possessor accusative argument (??). On this issue, transitive clauses with object incorporation resemble transitive clauses more closely than intransitive clauses, in which the path would be attributed to the subject.

(28) Path of directional is attributed to incorporated patient, not to accusative argument
\[ (tʃo^{31}gi^1) tʃa^3*mu^2e^1gu^1ne^4 \]
\[ tʃa^3 -mu^2 -e^1gu^1 -ne^4 \]
1SG.SBJ send.animate -DIR:round.trip -NI:son
'I sent my son back (to the place where we came from).’ Not: ‘I sent my son while going back.’ (GE.SSG.20160716, GE.LCS.20160719)

Note that the incorporate follows the directional affix in (??). The opposite order, with the directional outside the incorporate, is ungrammatical. This is one of two exceptions to the generalization that incorporates immediately follow the root and precede all other verbal morphology. The other exception involves the lexicalized causative \[ me^{41}ʔe^3 \] 'fix, clean, make ready,' discussed in §???

5 Interactions of incorporation and other verbal morphology

5.1 Valence-preserving morphology

Valence- and word-class-preserving verbal affixes, such as aspectual and verbal number affixes, are permitted on stems with incorporation and exhibit the same behavior as on undervived stems of the same transitivity (modulo the discussion of directionals above). In addition, clauses with incorporation may be nominalized with the language's full array of nominalizers and used as relative clauses, arguments, or sentential complements. Clauses with incorporation are also treated the same as other intransitive clauses for the purposes of clause-linking constructions. CT displays only one clause-linking construction that is sensitive to which arguments are shared between the clauses. This is the adverbialized subordinate clause construction, in which the subordinate and matrix clause must share a subject. When a clause with subject incorporation participates in this construction, the formal subject as marked after incorporation -- not the incorporated subject -- is treated as subject for purposes of the coreference requirement, as shown in (29).
Subject after incorporation is subject for purposes of switch-reference (GE.LCS.20160712)

\[ tfį³° da¹³° ne⁴ á³° ki² i⁸° faj³° nu¹ \]

\[ tfį³ da¹³° *ne⁴ -á³° ki² i⁸° tfaj³° -uju \]

1SG.SBJ- be.sick -NI:son -ADV.BZ IMPF- 1SG.SBJ- arrive

'I arrived with/in the same manner as my sick son.'

Incorporation displays more complex interactions with enclitics. Here, I define enclitics loosely as morphologically bound elements which can appear on words of multiple classes and which scope over a phrase rather than a word. CT displays a large number of enclitics. They can divided semantically into three groups: (a) information-structural clitics such as = ma³re³ 'just (in contrast to a superior or contextually more expected alternative)'; (b) quantifying clitics, such as = i⁸ra¹ 'first', the plural/pluraional = gi⁴, and the distributives = tfį³gi³ and = ta³ni³; and (c) adverb-like clitics, such as = i⁸tfį³ 'very (V), real (N)' and = i⁸ra¹ 'a little bit (V), sort of (N).'</p>

Textual examples indicate that all of the clitics listed in the preceding paragraph, as well as others in each category, can appear on verbs with incorporated subjects and objects. In all of my examples of this type, the clitic on the verb scopes over the entire clause. When a clitic scopes over the (original) subject or object, however, that constituent cannot incorporate, as shown by (30) for subject incorporation under the scope of the quantifying clitic = i⁸ra¹. I suspect that this is due to the preference for NPs with information-structurally prominent referents not to be incorporated (cf. §3.1).

Quantifying clitic = i⁸ra¹ 'first' and subject incorporation

a. Incorporation impossible when = i⁸ra¹ scopes over NP

Ctx: A man has several children, only one of whom is a boy. All of them are sick. The boy got sick first.

\[ *ni⁴° da¹³° ne⁴° i⁸° ra¹ \]

\[ ni°° da¹³° *ne⁴ = i⁸° ra¹ \]

3NR.SBJ- be.sick -NI:son = first

intended: 'His son was sick first.' (GE.LCS.20160711)

consultant's volunteered repair is analytic: na°ne⁴ i⁸° ra¹ ni⁴° da¹³° we¹ 'The son was sick first'

b. Incorporation impossible when = i⁸ra¹ scopes over NP

Ctx: Several families have sick sons. One man's son got sick before all the other boys did.

\[ *ni⁴° da¹³° ne⁴° i⁸° ra¹ \]

intended: 'His son was sick first.' (GE.LCS.20160711)

consultant's volunteered repair is a focus construction:

\[ ji²° ma⁴° ja² ti¹ na°ne⁴° ra¹ ni⁴° ni⁴° ja⁴° i⁴° da¹³° we¹ ki³ \]

That man's son was the first to be sick' (focus expressed by copular construction with relative clause)

c. Incorporation possible when = i⁸ra¹ scopes over entire clause

Ctx: A teacher is constantly absent from his job, but it is because of a series of unfortunate events; the first event in the series was that his son got sick.

\[ ni°° da¹³° we¹° i⁸° ra¹, ri¹ na° ma³° ni³° na³° ti³° ja³° \]

\[ ni°° da¹³° *ne⁴ = i⁸° ra¹ ri¹ na⁴° - ma³° ni³° - na³° ti³° - ja³ \]

3NR.SBJ- be.sick -NI:son = first and 3NR.POSS wife 3NR.PRO -DAT 3R.SBJ- run.away

'First his son got sick, then his wife left him...' (GE.LCS.20160712)
5.2 Incorporation and other valence-altering morphology

CT displays three valence-altering derivational processes: a causative, an antipassive, and a passive construction. The antipassive affix -\textit{ta}\textsuperscript{õ}\textsubscript{e}\textsuperscript{ã} simply cannot co-occur with incorporation. The subject of an antipassive cannot incorporate, and one cannot use the antipassive to delete the raised possessor object of a verb stem with patient incorporation. Passive verbs can incorporate their subjects, as shown in (31), but I have very little data on this point, for two reasons. First, passive sentences with subject incorporation can also be read as transitive sentences in which the patient has been incorporated, the raised possessor and the subject are coreferential, and the raised possessor is therefore omitted, per the second gloss in (31). Second, the CT passive is difficult to elicit in general, because it is expressed by omitting the object and, for some verbs, changing the morphological class of the verb; consultants often reject attested passives from texts because of the lack of an object.

(31) Passive with subject incorporation (GE.LCS.20160715, GE.SSG.20160718)
\texttt{tʃi³ma̰¹ne⁴}
\texttt{tʃi³-}
\texttt{1sg.sbj -ma̰¹ kill -ne⁴-NI:son}
\begin{itemize}
  \item a. 'My son was killed/hit.' (passive reading)
  \item b. 'I killed/hit my son.' (reflexive possessor drop reading)
\end{itemize}

Incorporation is also permitted with stems derived with the causative affix -\textit{ẽ}\textsuperscript{⁴}\textit{ẽ}\textsuperscript{³}. When an intransitive verb is causativized, the causee argument is assigned the accusative. This causee may incorporate if, and only if, the intransitive root from which the causative is derived permits incorporation of its subject (32). If an intransitive root does not allow subject incorporation, for example because it is unergative, then the causative derived from it also does not allow incorporation (33). Incorporated causees must precede the causative.

(32) Causative of \textit{da̰¹we¹} 'be sick' permits causee incorporation
\texttt{tfō³¹ʔɨ̃⁵ni⁴da̰¹we¹ne⁴}\texttt{ẽ⁴ʔẽ³}
\texttt{tfō³¹ -ʔɨ̃⁵ ni⁴- da̰¹we¹ be.sick -ne⁴-NI:son -ẽ⁴ʔẽ³}
\begin{itemize}
  \item 'He made my son sick.' (GE.SSG.20160716)
\end{itemize}

(33) Causatives of unergatives do not permit causee incorporation
\begin{itemize}
  \item a. *\texttt{tʃa³-pu³ra³kɨ⁴-a³kɨ¹-ẽ⁴ʔẽ³} (1sg.sbj-work-NI:daughter-CAUS), intended: 'I made my daughter work'
  \item b. *\texttt{tʃa³-ku⁴³gɨ¹-a³kɨ¹-ẽ⁴ʔẽ³} (1sg.sbj-laugh-NI:daughter-CAUS), intended: 'I made my daughter laugh'
\end{itemize}

When a transitive verb is causativized, both the causee and the (original) patient argument are assigned the accusative. The causee cannot incorporate, presumably because it is the agent of the lower clause. The patient can incorporate and precedes the causative, except in the case of the lexicalized causative stem \textit{me}\textsuperscript{õ}\textit{ẽ}\textsuperscript{⁴}\textit{ẽ}\textsuperscript{³} (be.good-CAUS) 'make ready, clean, good,' the incorporated patient must follow the stem. (34) demonstrates the acceptability of patient incorporation and unacceptability of causee incorporation with a causativized transitive.

(34) Causative of \textit{φa³¹ʔi³} 'hit with swinging motion' permits incorporation of patient, but not causee (GE.SSG.20160716)
a. Analytic version: tʃau¹a³ki³³ tʃau¹ne⁴i³³ tʃa³ϕa³1i³3 -e⁴ẽ³³
   tʃau¹ - a³ki³³ -i³³ tʃau¹ - ne⁴i³³ - tʃa³ - ϕa³1i³3 -e⁴ẽ³³
   1SG.POSS- daughter - ACC 1SG.POSS- son - ACC 1SG.SBJ- hit.swinging - CAUS
   'I made my daughter hit my son.'

b. Incorporated version: # tʃau¹ne⁴i³³ tʃa³ϕa³1i³3 -a³ki³³ẽ⁴ẽ³³
   intended: *I made my daughter hit my son'; only possible reading: 'I made my son hit my daughter.'

6 Special cases

The verb roots a³ 'have possessum,' ɲe⁴ 'lack possessum,' and wə³'e³ 'want' treat their objects in a way is strikingly different from the object syntax of all other verb roots, but most resembles patient incorporation. In addition, numerals and noun phrases can participate in attributive constructions which do not include any lexical verb, but resemble incorporation in many of the same ways as constructions with a³ 'have' and ɲe⁴ 'lack.' Here I discuss first the object syntax of a³ 'have' and ɲe⁴ 'lack,' before continuing to wə³'e³ 'want' and to verbless attributive constructions.

6.1 a³ 'have' and ɲe⁴ 'lack'

The verb roots a³ 'have' and ɲe⁴ 'lack' are prototypically used with inalienably possessed nouns and noun classifiers. In this use, shown in (35a,b), both roots must be immediately followed by the noun or classifier denoting the possessum, which forms a single phonological word with the root. An NP coreferential with the possessum can appear in the comitative/instrumental case, prototypically preceding the noun (35c). This construction is not incorporation within the meaning of the act, because there is no equivalent analytic construction which uses the same verb roots. To analytically express the possession of an inalienably possessed noun (or its negation), one must employ an existential construction with the default possessor form of the noun.

(35) a³ 'have' and ɲe⁴ 'lack' with inalienably possessed nouns (GE.SSG.20160718)
   a. tʃa³-ʃa³-ta⁴ʔa² 'I have a grandchild.'
   b. tʃa³-ɭe⁴-ta⁴ʔa² 'I don't have a grandchild.'
   c. wɨ⁴³ʔi⁴i⁴mestiza-ma³-a³-na³-ɭa³-mq³ 'He is married to a mestiza.' (hbu)

a³ cannot be used to express possession of an alienably possessed noun; the verbless attributive construction is used instead. ɲe⁴, however, can be used with alienably possessed nouns. In this use, the root bears the affix a³ri³, followed immediately by the noun, which bears the affix -ā³, as in (36). This is structurally very similar to the promoted possessor construction found with other verb roots and inalienably possessed nouns. Unlike ordinary verbs that participate in the promoted possessor construction, though, ɲe⁴ can never take a non-incorporated (phonologically free, preverbal, potentially accusative) object.

(36) Promoted possessor-like construction with ɲe⁴ 'lack' (GE.SSG.20160718)
   tʃa³-ʃa³-ɭa³-a³-ri³ i³3 -ā³.
   tʃa³ - ɲe⁴ - a³-ri³ i³3 -ā³
   1SG.SBJ- lack.inal - PR.POSS firewood - AL>INAL
   'I don't have firewood.'
6.2 \textit{wa̰¹e³} 'want'

The verb root \textit{wa̰¹e³} 'want' is morphologically unique. This verb may take as its object either an NP or a sentential complement. When \textit{wa̰¹e³} takes an non-SAP NP object, two syntactic treatments of the object are possible. In one, shown in (37a-c), the subject (i.e. the experiencer of the wanting) appears as a prefix or proclitic to the first word of the object NP, and \textit{wa̰¹e³} is affixed to the last word of the NP. The NP may be a bare alienable noun (37a), a possessed inalienable noun (37b), or a complex NP composed of a noun and its modifiers (37c). It is surprising that if the object NP is inalienably possessed, the subject marker here is not sufficient to license it; it must have its own licensing prefix (37b).

(37) Circumfix-like construction with \textit{wa̰¹e³} 'want' (GE.SSG.20160718)

a. \textit{tf}a³-pe⁴ʔtʃi²-\textit{wa̰¹e³} 'I want a basket'

b. \textit{tf}a³-tʃau¹-pa¹-\textit{wa̰¹e³}
   1SG.SBJ- 1SG.POSS- hammock want
   'I want my hammock.'

c. \textit{tf}a³-ta³re⁵-tʃa³ra⁵-tʃi¹ɨ̃⁴-\textit{wa̰¹e³}
   1SG.SBJ- two NCL machete NCL be.sharp-very -NMLZ want
   'I want two sharp machetes.'

The alternative to this construction is one in which \textit{wa̰¹e³} behaves like any other transitive verb, with the object NP appearing before the verb and the presence of a 3NR object marked on the verb with the prefix \textit{na}³-, as in (38). Whether the analytic construction or the circumfix-like construction with \textit{wa̰¹e³} is preferable in a given sentence appears to depend mostly on the phonological size of the NP, but both are always possible.

(38) \textit{ta³re⁵-tʃa³ra⁵-tʃi¹ɨ̃⁴-\textit{wa̰¹e³}}
   'I want two sharp machetes.' (GE.SSG.20160718)

6.3 Verbless attributive construction

The verbless attributive construction occurs with alienably possessed NPs -- both underived alienably possessed nouns (39a), and those derived from inalienably possessed nouns via possession by another noun or the default possessor prefix (39b). In this construction, the subject to which the possession is attributed appears as a prefix or proclitic to the first word of the NP denoting the possessor. The last word of the possessed NP is then followed by the 'inalienating' morph -ã̰¹. The possessed NP may be of some size, as shown in (39c). Note that the subject markers here are not the same as the inalienable possession markers (e.g. the 1SG marker is the verbal subject marker \textit{tf}a³- and not the inalienable possession prefix \textit{t}fau¹-).

(39) Verbless attributive construction (GE.LCS.20160719)

a. \textit{tf}a³=pe⁴ʔtʃi²-ã̰¹ 'I have a basket'

b. \textit{tf}a³-na Antonio-\textit{wa̰¹e³} (1SG-DPOSS-flesh-ALINAL) 'I have meat' (i.e. flesh of an animal; equivalent with \textit{a}³ means 'I have flesh,' speaking of one's own body)

c. \textit{tf}a³-tʃō⁴³-\textit{mt}⁵-ã̰¹
tʃa³- ta⁴³ -ʔɨ̃⁴ i⁴ tʃõ⁴³ʔni⁵ -ã̰¹
1SG.SBJ- be.big -NMLZ NCL fish -AL>-INAL
'I have big fish.' (GE.SSG.20160718)

The attributive construction is significantly different if the first element in the possessed NP is a numeral. In this case, the subject prefix appears preceding the numeral. If the possessed NP consists only of a numeral and an inalienably possessed noun, then the inalienably possessed noun appears immediately following the numeral and forming a single phonological word with it. No noun class particle or possessor prefix intervenes between noun and numeral (40a). No additional morphology appears on the inalienable possessum. If the possessed NP includes an alienably possessed noun, then the promoted possessor element -a¹rɨ³ appears following the numeral. The other elements of the NP appear next, followed by the inalienator -ã̰¹ (40b).

(40) Verbless attributive construction with numerals

a. Numeral + inalienable noun
   tʃa³wɨ⁴³ʔi⁴i⁴ne¹
   tʃa³- wi⁴³ʔi⁴ *i⁴ne¹
   1SG.SBJ- one -body
   'I have only one body.' (GE.SSG.20160718)

b. Numeral + alienable noun
   tʃa³ta³re⁵a¹rɨ³pe⁴ʔtʃi²ã̰¹.
   tʃa³- ta³re⁵ -a¹rɨ³ -pr.poss pe⁴ʔtʃi² -ã̰¹
   1SG.SBJ two -PR.POSS basket -AL>-INAL
   'I have two baskets.' (GE.LCS.20160719)

c. Numeral + NP headed by alienable noun
   tʃa³ta³re⁵a¹rɨ³pe⁴ʔtʃi²i⁴ta⁴³ʔɨ̃⁴ã̰¹.
   tʃa³- ta³re⁵ -a¹rɨ³ pe⁴ʔtʃi² i⁴ ta⁴³ -ʔɨ̃ -ã̰¹
   1SG.SBJ two -PR.POSS basket NCL be.big -NMLZ -AL>-INAL
   'I have two big baskets.' (GE.LCS.20160719)