Countability in Ticuna

Submitted September 23, 2020

1 Introduction

Ticuna is a language isolate spoken by 40,000 (Lewis et al. 2014) to 70,000 (Instituto Socio-Ambiental 2017) people living in Brazil, Peru and Colombia. It provides robust evidence for a distinction between mass and count nouns. Ticuna count nouns are acceptable with numerals, plural marking, and the quantifiers equivalent to ‘many,’ ‘few,’ and ‘how many?’ Mass nouns, by contrast, are not acceptable in these environments, except under coercion to portion readings.

I collected the data which appears in this paper in the Ticuna town of Cushillococha, Peru, in fieldwork between 2015 and 2019. Most elicited examples were provided by three speakers: Lilia Witancort Guerrero (a woman, aged in her late thirties), Yaneth Cándido Guerrero (a woman, late thirties), and Katia Salate Cándido (a woman, early twenties). Other data, not directly bearing on the mass-count distinction, was elicited from Sótil Suárez González (a man, early forties), Angel Bitancourt Serra (a man, early sixties), and Deoclesio Guerrero Gómez (a man, early seventies). All six of these consultants are also fluent L2 speakers of Spanish.

Additionally, some examples are from my corpus of transcribed recordings of Ticuna. The corpus consists of ~116,000 words, primarily of conversation, and is publicly available in [Archive name redacted for anonymous review], along with my fieldnotes and recordings of the elicitation sessions. All language examples use IPA transcription. Raised numerals in examples denote lexical tone; 5 represents the highest tone.

This paper is organized as follows. §2 provides general background information on the grammar of Ticuna. §3 describes nominal and verbal plural marking in the language. Following this general discussion of the plural, I then investigate the distribution of nominal and verbal plurals with mass vs. count nouns. In §4, I examine the language’s numeral system, including the distribution of numerals with notional mass nouns vs. notional count nouns. Following the discussion of numerals, §5 details the language’s system of quantifiers other than numerals. I show that three of the language’s quantifiers combine only with count nouns, and three only with mass nouns. §6 explores measure phrases, and §7 summarizes and concludes.

2 Language Background

Ticuna displays noun class and a morphological distinction between alienable and inalienable nouns. Understanding noun class and the alienable-inalienable contrast is essential to understanding the syntax of noun
phrases in the language. Therefore, I briefly describe both systems. Other background information about the language can be found in documentary works such as Montes (1995), Soares (2000), and Santos (2005).

All Ticuna nouns, including derived nouns, are exhaustively divided into five noun classes, which I label with Roman numerals I through V. Noun class assignment is based primarily on semantic properties of the nominal referent, such as animacy. Most noun phrase constituents – determiners, demonstratives, third person pronouns, most quantifiers, and all relative clauses – agree in noun class with the head noun of their phrase.

Noun class assignment is insensitive to the mass-count distinction. All four classes that contain inanimates contain both mass and count nouns. Table 1 provides two example nouns for each class which contains inanimates: one notional mass noun, and one notional count noun. Class V does not contain mass nouns because it does not contain any inanimates. The far right column shows the form of the universal quantifier, a target of noun class agreement, for each class.

<table>
<thead>
<tr>
<th>Noun Class</th>
<th>Example Count Noun</th>
<th>Example Mass Noun</th>
<th>‘All’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td><em>ki³ʔtʃi¹</em> ‘knife’</td>
<td><em>di³ʔe⁴ru¹</em> ‘money’</td>
<td><em>gu⁵e⁵ma³</em></td>
</tr>
<tr>
<td>Class II</td>
<td><em>te³ra¹</em> ‘handsaw’</td>
<td><em>µu⁵⁵kɪr³a¹</em> ‘salt’</td>
<td><em>gu⁵kɪr³ma³</em></td>
</tr>
<tr>
<td>Class III</td>
<td><em>ɭu³¹e³</em> ‘canoe’</td>
<td><em>ɭɪʔu³⁵kɪr³ma³</em></td>
<td></td>
</tr>
<tr>
<td>Class IV</td>
<td><em>ta³ra⁵</em> ‘machete’</td>
<td><em>u⁵i¹kɪr³ma³</em> ‘manioc flour’</td>
<td><em>gu⁵tɪ⁵ma³</em></td>
</tr>
<tr>
<td>Class V</td>
<td><em>pa⁴kɪ³</em> ‘young woman’</td>
<td>n/a (no inanimates)</td>
<td><em>gu⁵kɪr³ma³</em></td>
</tr>
</tbody>
</table>

Because Class IV is the largest and morphologically default noun class, this paper employs the Class IV form as the citation form for quantifiers and other targets of noun class agreement.

Crosscutting the division into noun classes, nouns are also divided into alienable and inalienable possession classes. The defining characteristic of inalienable nouns is that they are unacceptable in isolation (1a). Instead, inalienable nouns must be possessed by an overt possessor, cliticizing to the last element of the possessor noun phrase and forming one prosodic word with it (1b, c). In contexts where an inalienable noun is not semantically possessed, such as (2), its morphological requirement for a possessor is filled by the default possessor (dflt.poss) morph na⁴³ ~ na³¹.

(1) a. *pa⁴te²e³*  
    ‘hat’  
    (Attempted reading: ‘hat’) (elicited)

b. Ka³ru¹ =pa⁴te²ʔe³  
   Carlos =hat  
   ‘Carlos’ hat’ (elicited)

c. ji³⁴ma³  
   tʃo³¹ =ɭɪ³ ɭu³¹ =e⁵ɛ³ =kɪ³ =pa⁴te²ʔe³  
   DEM.AN(II) 1SG =ACC learn -CAUS =NMLZ(II) =hat  
   ‘the hat of the one (Class II) who teaches me’ (elicited)

1Examples use the following abbreviations: 1 = first person, 2 = second person, 3 = third person, ACC = accusative, AL.Poss = alienable possession morpheme, ALL = allative, ANA = anaphoric demonstrative, CAUS = causative, ClfI = classifier incorporation, COP = copula, DEM = demonstrative, DET = determiner, DFLT.Poss = default possessor morpheme, DIM = diminutive, DIST = distal, EXCL = exclusive, IBEN = intransitive beneficiary case, IMP = imperative, IMPF = imperfective aspect, INCL = inclusive, INVIS = invisible referent marker, LOC = locative, NI = noun incorporation, NMLZ = nominalizer, OBJ = object, PL = plural, PROX = proximal, PURP = purposive case, REMPST = remote past, SBJ = subject, SC = subordinate clause type (inflection), SG = singular, SUB = subordinator, TOP = topic.
In contrast to inalienable nouns, alienable nouns are acceptable in isolation (3a). Moreover, when alienable nouns are possessed, they do not encliticize to the possessor. Instead, the alienable possession marker =a’ri³ encliticizes to the last element of the possessor. The alienable noun follows the possession marker, forming an independent prosodic word separate from the possessor (3b, c).

(3) a. ʁi⁷i³
   grandfather
   ‘grandfather, old man’ (elicited)

b. Ka’tu¹ =a’ri³ ʁi⁷i³
   Carlos =AL.POSS grandfather
   ‘Carlos’ grandfather’ (elicited)

c. ʃi⁷ma⁴ ʃa³⁷i³ =tʃo²² ʁi⁷i³ =a’ri³ ʁi⁷i³
   dem.ANA(II) man(II) 1SG =ACC learn -CAUS =NMLZ(II) =AL.POSS grandfather
   ‘the grandfather of the man who teaches me’ (elicited)

Properties of the nominal referent influence the division of nouns into alienable vs. inalienable classes – for example, almost all part terms are inalienable. However, as with noun class, the mass-count distinction fails to impact the division of nouns into alienable vs. inalienable. Rather, the alienable-inalienable distinction is relevant here mainly because some measure/container terms are lexicalized as inalienable nouns (§6).

3 Plural Marking

Within this section, §3.1 provides an overview of nominal and verbal plural markers in Ticuna, and §3.2 discusses the distribution of plural marking with mass vs. count nouns.

3.1 Introduction to Plural Marking

3.1.1 Nominal Plural

There is only one marker of nominal number in Ticuna: the plural enclitic =gɨ⁴. I refer to this morph as an enclitic rather than a suffix because (a) it attaches to the final element of the noun phrase, with no concord between constituents, and (b) it appears on multiple word classes, including on verbs.

The nominal plural =gɨ⁴ is acceptable with nouns of all noun classes; with alienable and inalienable nouns; and with nouns of all positions on the animacy hierarchy. It can even appear on proper nouns, yielding an associative plural reading (which is also available with human common nouns).

(4) provides examples of =gɨ⁴ on nouns of various positions on the animacy hierarchy. As (4) indicates, the nominal plural is optional on nouns of all animacy levels.

\[
\begin{align*}
na^{n} & = ta^{a}(-gi^{t}) = ?i^{t} / o^{t}ta^{a} (-gi^{t}) = ?i^{t} / du^{t}ti^{t}(-gi^{t}) = ?i^{t} \quad tfa^{n} = dau^{t} \\
\text{DEFLT.POSS} & = \text{lake} (-\text{PL}) = \text{ACC} / \text{chicken} (-\text{PL}) = \text{ACC} / \text{person} (-\text{PL}) = \text{ACC} \quad 1SG.SBJ= \text{see}
\end{align*}
\]

'I saw lakes / chickens / people.' (elicited)

(5) provides a corpus example of the associative plural reading of \(-gi^{t}\) on proper nouns.

(5) \(jiao^{t} = a^{t}ma^{t} o^{t}ti^{t} \quad De^{u^{t}} = -gi^{t} na^{t} = gu^{2} pe^{t} = gi^{t} = ? ni^{t}t^{i} \quad \text{DEM.DIST(IV)} = \text{INVIS} \quad \text{grandfather Deoclesio} = \text{PL} \quad 3(IV) = \text{LOC} \quad \text{live/sleep} = \text{PL} = \text{NMLZ:IV} 3(IV) \quad \text{SBJ.COP} \quad i^{t} = \text{Ma'}w'i'ti^{t} \quad \text{DET(IV)} = \text{place.name(IV)}
\]

'That (place), where Don Deoclesio and his family live, is (called) Ma’wi’ti’i.' (landscape description)

While consultants judge the plural to be optional on all types of count nouns, per (4), human nouns referring to pluralities essentially always bear the plural in corpus materials. By contrast, non-human animate nouns and inanimate nouns much less frequently bear the plural in corpus materials.

It is not clear to me exactly what conditions the variable realization of the plural on non-human animate and inanimate nouns. However, some possibilities can be eliminated. Based on corpus examples, definiteness is not the key influence in the distribution of the nominal plural. Bare non-human nouns with plural reference occur in existential contexts; novel contexts, such as (6); and familiar contexts, such as (7). It is clear that the bare nouns in (6) and (7) refer to pluralities both contextually and because the enclitic \(-gi^{t}\), which on verbs marks the presence of a plural argument, appears on the verb in both examples.

(6) Context: 'My father-in-law lived in the forest...'

\[
\begin{align*}
ta^{n} = ?i^{t} & = ma \ ga^{t} \quad nai^{n} = a’ri^{t} \quad ti’re^{t} = wa^{t} na’ri^{t}= ? i^{t} = gi^{t} \\
\text{big} & = \text{Nmlz(IV)} = \text{Info Det.Rempl tree(IV) 3(I)} = \text{AL.POSS} \text{port} = \text{ALL} 3(IV) \text{SBJ} = \text{stand.tree} = \text{PL}
\end{align*}
\]

'Large trees [no plural] stood [plural] in his port.' (landscape description)

(7) Context: Describing a picture of two chameleons crawling into a pile of sand. Every previous sentence in the discourse has referred to these same chameleons.

\[
\begin{align*}
n^{a^{t}} & = nje^{n}e^{n}ma^{t} \quad i^{t} \quad pu^{t}ma^{t} ri^{t} \quad na^{t}ne^{t}ki^{t} = te^{t}e^{t} = wa^{t} na^{t} = \text{pl} \\
\text{DEMPROX(IV)} = \text{chameleon(IV) DET(IV) now TOP sand} & = \text{powder} = \text{ALL} 3(IV) \text{SBJ} = \text{arrive} = \text{PL}
\end{align*}
\]

'Now these chameleons [no plural] are arriving [plural] in the sand.' (storyboard)

To summarize, the nominal plural enclitic is compatible with all types of count nouns. It has both canonical plural readings, available to all nouns, and associative plural readings, available to human nouns. The plural is optional: nouns without plural marking may still have plural reference. Additionally, bare nouns referring to pluralities can still trigger plural morphology on verbs, indicating that they are marked as plural at some level of representation.
3.1.2 Verbal Plural

Ticuna has at least five devices for indicating plural argument number on verbs. In this discussion, I will consider only one of these devices: number alternations in verb roots. Number alternations in verb roots – for example, suppletion of verb roots based on argument number – are relevant to the areal focus of this volume because they are attested in many language families present in Brazil, including Tupi (Lima 2017:1625n6), Macro-Jê (Bardagil Mas 2018:29), Panoan (Neely 2019:336), Naduhup (Obert, this volume), and Tukanoan (Farmer 2015:57-60). They are also relevant to the substantive focus, as Wilhelm (2006, 2008) observes that acceptability with 'inherently plural verbs' tracks the mass-count distinction in Dëne Sųłiné (an Athabaskan language spoken in Canada).

In Ticuna, number-alternating verb roots belong to a larger system of classificatory verbs, which can classify the internal argument of the verb in terms of animacy or shape (e.g., mu² 'put:AnimO' vs. ɨ⁴³ 'put:InamSgO' vs. wḛ¹ 'put:1-Dimensional.O') as well as number (nu⁴ 'put:InamPlO'). This system strongly resembles the system of classificatory verb roots in Athabaskan languages such as Diné (Fernald & Willie 2001, citing Willie 2000) and Dëne Sųłiné (Wilhelm 2008).

Number alternations occur primarily in intransitive verbs of motion and posture and transitive verbs of caused motion. The alternations distinguish only two number categories: singular and plural. They track the number of the subject for intransitive verbs (8), but the number of the object for transitive verbs (9a). Plural subjects do not license the plural forms for transitives (9b). Plural event number (multiple occurrences of the same event with the same participants) also does not license the plural forms.

(8) nu⁴a² ta⁴ [ ta⁴rɨ³= ṭo⁴³ / * ta⁴rɨ³= ṭãu⁴ ]
   here  Fut [ 1EXCL.SBJ= stay:PlS / * 1EXCL.SBJ= stay:SgS ]
   'We will stay [PlS / * SgS] here.' (elicited)

(9) a. Bi³tu⁵ ri¹ ta⁴rêc⁴ i⁴ o⁴ta² [ ni⁴= ma⁴ / na⁴= dai⁴ ]
   Victoria(IV) top two DET(IV) chicken(IV) [ 3(IV)SBJ= kill:SgO / 3(IV)SBJ= kill:PlO ]
   'Victoria killed [SgO / PlO] two chickens.' (elicited) [Sg A > Pl O]

b. wi⁴⁴Ti⁴ i⁴ wo⁴'ka¹ [ ti⁴= ma⁴ =gî⁴ / * ti⁴= dai⁴ =gî⁴ ]
   one DET(IV) cow(IV) [ 1EXCL.SBJ= kill:SgO =PL / * 1EXCL.SBJ= kill:PlO =PL ]
   'We killed [SgO / * PlO] one cow.' (elicited) [Pl A > Sg O]

If the internal argument of a number-alternating verb is first or second person plural, then it is obligatory to use the plural form of the verb, as shown by (8). If the internal argument is third person plural, on the other hand, either the singular or the plural form of the root is acceptable, per (9a). This holds for both non-human internal arguments, as in (9a), and human ones. Thus, the 'SgO/SgS' forms of these roots would be more accurately labeled number-neutral or underspecified. The 'PlO/PlS' forms, on the other hand, are specifically plural.

While the plural argument in (9b) happens to be quantified by a numeral, the plural forms of alternating roots do not require their arguments to be quantified or bear the nominal plural. Bare nouns referring to pluralities also license the plural forms. (10) demonstrates this: the PlO form of the verb 'transport' is acceptable even though the object, ṭo⁴³ni⁴ 'fish,' lacks the nominal plural.
(10) Context: I want you to bring me several (dead) fishes.

\[\text{nu}^n \text{ti}^i = \text{ta}^3 \quad \text{na}^4 = \text{na}^4 \quad \text{ja}^4 \quad \text{tfo}^5 \text{ni}^5\]

here 3(I) = ACC IMP = transport:InamPlO DET(fish(I)

'Bring the fishes here.' (elicited)

### 3.2 Plural and the Mass-Count Distinction

Acceptability with the plural is a clear test for distinguishing mass and count nouns in Ticuna. Mass nouns are unacceptable with the nominal plural. Additionally, for verbs which participate in number alternations, plural forms are unacceptable if the licensing argument is mass. Thus, both nominal and verbal plural marking are sensitive to the mass-count distinction.

#### 3.2.1 Mass Nouns are Incompatible with the Nominal Plural

Notional mass nouns are not compatible with the nominal plural enclitic \(-gi^4\) (11). Attempts to combine the nominal plural with mass nouns were always rejected by one consultant (LWG), and rejected for all but one case by another (KSC). The third consultant, YCG, accepted all of my examples of plurals on mass nouns. However, in every case she made comments indicating coercion to a portion reading (e.g., in 13 below).

(11) \# \text{ju}^n \text{ki}^r \text{ra}^l = \text{gi}^4 = \text{ta}^3 \quad \text{tfo}^3 \text{dau}^2

\# salt \text{PL} = \text{ACC 1SG.SBJ} = \text{see}

(Attempted: I saw salts.) (Rejected by KSC and LWG.)

When consultants did accept plurals on mass nouns, they always made comments indicating that the pluralized mass noun referred to a set of portions of the substance, as in the comments on (12) and (13). Additional questioning showed that pluralized mass nouns do not refer to large quantities of the substance – that is, pluralized mass nouns are not ‘plurals of abundance’ (Doron & Müller 2013).

(12) \text{u}^i \text{ti}^i = \text{gi}^4 = \text{ta}^3 \quad \text{tfo}^3 \text{dau}^2

\text{manioc.flour} = \text{PL} = \text{ACC 1SG.SBJ} = \text{see}

'I saw manioc flours.'

LWG comment: 'The flour was in bags.'

AHS: 'What if you saw a batch of manioc flour on the toasting gfriddle?' [plural of abundance reading]

LWG: 'No.'

(13) \text{de}^6 \text{fa}^3 = \text{gi}^4 = \text{ta}^3 \quad \text{tfo}^3 \text{dau}^2

\text{water} = \text{PL} = \text{ACC 1SG.SBJ} = \text{see}

'I saw waters.'

KSC comment: 'This would make sense if you saw many tanks of water.'

AHS: 'What if you saw a lot of water in the lake?' [plural of abundance reading]

KSC: 'No.'
(11) - (13) suggest the generalization that mass nouns may not occur with the plural except on a coerced portion reading. In order to test this generalization, I searched my corpus of Ticuna for tokens of four nouns (‘water,’ ‘money,’ ‘manioc flour,’ and ‘salt’) that seemed likely to be frequent and that I knew, from examples like (11) - (13), to be judged unacceptable with the plural in elicited data.

The corpus contained 87 tokens of ‘water,’ 48 of ‘money,’ 29 of ‘manioc flour,’ and 12 of ‘salt,’ giving a total of 176. Of the 176 tokens of these mass nouns, three tokens were marked with the plural – two tokens of ɨli ‘manioc flour’ and one of ɗiɤru ‘money.’ (14) is a corpus example of ɨli ‘manioc flour’ with the plural.

(14) Context: Talking about how Caballococha (provincial capital) did not have a market in the old days. When Ticuna people arrived from their houses to town, they would sit down next to the church. Then,

a. i’na’ɨu ɤɪɛɬiʔɪ, je’ma’ ɨkak’a ɨta’e’ɡɪɬ;

i’= na’= ɨu ɤɪɛɬiʔɪ =ɡɪɬ =ɡɪɬ je’=ma’ ɨkak’a =ɡɪɬ na’= =ta’e’ɡɪɬ =ɡɪɬ
IMPF 3.SBJ.SC= wait =PL =SUB there(ANA.REMPT) 3 =PURP 3(IV)SBJ= buy =PL
‘They would wait and (the townspeople) would buy (their produce) there,’

b. i’ ɨliɡɪɬ ri’ po’ɤɬiɡɪɬ je’ma’ʔɪki ni’ɪɬ;

i’ =ɡɪɬ ri’ =ɡɪɬ po’ɤɬiɡɪɬ =ɡɪɬ je’=ma’ʔɪki ni’ɪɬ
Det(IV) manioc.flour(IV) =PL and plantain =PL thus(ANA.REMPT) 3(IV)SBJ=COP
‘Like that (they would sell) manioc flours and plantains.’ (landscape description)

Given the imperfective aspect marking on the predicate in (14a) and the fact that manioc flour is conventionally sold in packaged portions, (14b) supports a reading conveying that people habitually sold multiple individual portions of manioc flour. This is a type of portion reading – the same reading which we saw licensing plurals on mass nouns in (12) and (13). The same is true of the other two examples of pluralized mass nouns in the corpus, one of which describes exactly the same eventuality as (14b) and one of which (with ‘money’) describes multiple events involving different portions of money.

Thus, corpus data about pluralized mass nouns is consistent with elicited data. Mass nouns very rarely occur with the plural in actual language use, and when they do, context always supports a portion reading.

3.2.2 Mass Nouns are Incompatible with Plural Verbs

Notional mass nouns are also incompatible with the plural forms of number-alternating verb roots. As with the nominal plural, consultants mostly rejected sentences, such as (15), which combined mass noun objects with the PLO forms of number-alternating transitive verbs.

(15) Context: I dropped off a quantity of manioc starch. It was not packaged in bags or containers.

# tɬi’pa’ka’ ęte’ma’ tʃa’= wo’
# manioc.starch there(ANA) 1SG.SBJ= discard:PLO

(Attempted: I left the manioc starches there.)
When consultants did accept sentences where mass noun objects combined with the PIO forms of number-alternating verbs, they invariably made comments indicating a reading of the mass noun object as referring to a plurality of portions of the substance, as in (16).

\[(16) \text{ ? de⁴³ʔa⁵ water } \text{ nu²a² here } \text{ na¹= IMP= transport:PIO } \text{ 'Bring the waters here.' (elicited)}\]

YCG comment: ‘You could say this if the water was in bags.’

Consultants repaired structures like (15) and (16) in two ways. Sometimes, they simply changed the PIO form of the alternating verb to the SgO form, as in (17). At other times, consultants repaired these structures by retaining the PIO form of the verb, but employing a measure phrase (formed with a container term) rather than a bare mass noun object. I return to this strategy in the discussion of measure phrases (§6).

\[(17) \text{ de⁴³ʔa⁵ water } \text{ nu²a² here } \text{ na¹= ʎe⁴³ transport:SgO } \text{ 'Bring the water here.' (elicited)}\]

Thus, despite the other similarities between Ticuna’s classificatory verbs and those of Athabaskan languages, the language’s number-alternating verb roots do not behave like those of Dëne Sųłiné with respect to combination with mass nouns. In Dëne Sųliné, the plural alternants of classificatory verbs do not combine with mass nouns, but neither do the singular alternants. Instead, Dëne Sųliné mass nouns combine with classificatory verbs unique to mass arguments (Wilhelm 2006:439). Ticuna, on the other hand, does not make this distinction between count and mass objects in its system of classificatory verbs. Instead, the language simply combines mass nouns with the singular/number-neutral forms of alternating verbs, treating them – for purposes of the classificatory verb system – like singular count nouns.

### 3.3 Number Marking: Summary

Ticuna displays extensive marking of number in both nominal and verbal domains. In the nominal domain, there is a single, optional plural enclitic which is compatible with all types of count nouns. This enclitic is not, however, compatible with notional mass nouns. Similarly, verbs participate in root alternations tracking argument number. Count arguments can license the plural alternants of number-alternating verbs, even if they do not bear the nominal plural. Mass arguments, on the other hand, cannot license the plural forms of alternating verbs. Thus, acceptability with plural marking, whether on the noun itself or on the predicate, clearly distinguishes mass and count nouns.

### 4 Numerals

I begin this section by introducing the numeral system of Ticuna (§4.1). I then discuss the distribution of numerals with mass vs. count nouns (§4.2).
4.1 Numerals and Their Syntax

The Ticuna speakers consulted for this study (and Cushillococha Ticuna speakers in general) only use two numerals of Ticuna origin: \( \text{wɨ₄⁴ʔi₄} \) 'one' and \( \text{ta²ʔre⁴} \) 'two.' They also know higher numerals of Ticuna origin equivalent to 'three' through 'ten,' but in practice they use Spanish numerals for all quantities above two. Therefore, this section will focus only on the equivalents of 'one' and 'two.'

Neither \( \text{wɨ₄⁴ʔi₄} \) 'one' nor \( \text{ta²ʔre⁴} \) 'two' can combine directly with any noun, whether mass or count. Instead, numerals – and in fact, all quantifiers in Ticuna – must combine with a noun that is introduced by a determiner. This is shown by (18), where omitting the determiner \( \text{ɟa⁴} \) leads to ungrammaticality.

(18) \( \begin{align*} &\text{ta²ʔre⁴} \quad \text{two} \quad \text{*(ɟa⁴)} \quad \text{*(det(I))} \quad \text{wo³ru³a¹} \quad \text{mirror(I)} \quad \text{tɨ³¹} \quad \text{3(I)} \quad \text{=ʔɨ̃³} \quad \text{=acc} \quad \text{tʃa³=} \quad \text{1sg.sbj=} \quad \text{dau²} \quad \text{see} \\ &\text{'}I saw two *(det) mirrors.' \quad \text{(elicited)} \end{align*} \)

While determiners are obligatory with all quantifiers, including numerals, I do not analyze them as numeral classifiers. This reflects three key properties of the determiners.

First, while determiners are obligatory in quantifier phrases, they are also obligatory in many environments that do not involve quantification. For example, all postverbal noun phrases – whether or not they contain quantifiers – must be introduced by determiners. Thus, a determiner must introduce the postverbal subject \( \text{wo³ru³a¹} \) 'mirror' in (19), even though it is not quantified. As such, determiners do not have the syntactic distribution of numeral classifiers.

(19) \( \begin{align*} &\text{ta⁴=} \quad \text{3(I)} \quad \text{sbj=} \quad \text{me⁴³} \quad \text{good} \quad \text{*(ɟa⁴)} \quad \text{*(det(I))} \quad \text{wo³ru³a¹} \quad \text{mirror(I)} \\ &\text{'}The *det mirror is good / *det Mirrors are good.' \quad \text{(elicited)} \end{align*} \)

Second, the determiners obligatorily introduce some types of nouns which cross-linguistically fail to occur with classifiers, such as first and second person pronouns. (20), where a determiner must introduce the first person inclusive pronoun \( \text{ɟi¹e²ma⁴} \), demonstrates that the obligatoriness of determiners in quantifier phrases extends to pronouns. Determiners’ compatibility with first and second person pronouns represents additional evidence that determiners do not have the syntactic distribution of numeral classifiers.

(20) \( \begin{align*} &\text{gu⁵ʔe²ma³} \quad \text{all(I)} \quad \text{*(a⁴)} \quad \text{ *(ijέo'ma³) ti¹=} \quad \text{me³¹kɨ³ma³} \quad \text{good.character} \quad \text{*det(I))} \quad \text{1incl 1incl.sbj=} \quad \text{1incl.} \\ &\text{'}All of *det us are morally good.' \quad \text{(elicited)} \end{align*} \)

Third, there are only two determiners. One, which I gloss as \text{det} and which has the forms \( \text{(ɟa}⁴ \text{I/II) ~ (ɟa}¹ \text{III)} \sim \text{i}⁴ \text{IV/V), can introduce nouns in any environment. The other, which I gloss as \text{det.rempst} and which has the invariant form \text{ga}⁴, can introduce nouns only in clauses with remote past temporal reference (part of a broader nominal tense phenomenon in the language; see Soares 2017). As suggested by the presence of just two determiners, the determiners do not classify nouns by shape or other physical properties; therefore, they also lack the semantics expected for numeral classifiers.
To summarize, the determiners of Ticuna do not have the syntactic distribution, semantics, or numerosity typical of numeral classifiers, including in other Amazonian languages (Seifart 2005; Seifart & Payne 2007). Consequently, rather than treat the determiners as classifiers, I assume that they are part of an obligatory structure which is necessary to license all nouns, like the determiners of Salish languages (Davis et al. 2014:e199-e204). To the extent that determiners do not appear with all nouns (e.g., they cannot appear on preverbal object noun phrases unless they are quantified), I assume that their under-realization has phonological motivations, driven by the determiners’ prosodic status as enclitics to the preceding word.

4.2 Numerals are Incompatible with Mass Nouns

While numerals cannot combine directly with any noun, the distribution of numerals still diagnoses the count-mass distinction. Combining a numeral with a determiner complemented by a count noun is always acceptable, whether the count noun is human (21a), nonhuman animate (21b), or inanimate (18). Nouns that combine with numerals normally do not bear the nominal plural, as shown by the absence of the plural =gɨ⁴ in (18) and (21).

(21) a. taʔre⁴ i⁴ tʃo⁴³ʔni⁵ =ʔɨ̃³ =acc tʃa³=1sg.sbj= see
   ‘I saw two fish.’ (elicited)

   b. na⁴=3 sbj=ŋe²ʔma⁴ be.in.place i⁴ det(IV) taʔre⁴ i⁴ ɬe³ʔtɨ̰²ʔɨ̃⁴ young.man(IV)
   ‘Two young men are there.’ (storyboard)

By contrast, consultants almost invariably rejected attempts to combine a numeral with a determiner complemented by a mass noun, such as (22).

(22) # taʔre⁴ i⁴ u³i¹ =ʔɨ̃³ tʃa³=1sg.sbj= see
    # two DET(IV) manioc.flour(IV) =acc 1sg.sbj= see
    (Attempted: I saw two manioc flours.)

Whenever consultants accepted structures like (22), they always made comments indicating a reading of the mass noun as denoting a culturally conventional portion of the substance. For instance, the consultant’s comment in (23) offers two different examples of this portion reading of the mass noun ka³pe⁴ ‘coffee.’

(23) taʔre⁴ ja⁴ ka³pe⁴ nu³a² pe=ɬe⁴³ aʔ? =ru⁵ɨ̃¹ purp
two DET(II) coffee(II) here 2pl= transport.InamSgO drink =purp
‘Y’all bring two coffees here, to drink.’ (elicited)

KSC’s comment: ‘You could say this to order two cups or two envelopes of (instant) coffee.’

The portion reading of (23) is not so prominent as to make this sentence unquestionably acceptable. While KSC accepted (23) on the portion reading indicated by her comment, another consultant – LWG – rejected it completely, requiring a measure phrase (§6) to allow a portion reading.
The portion reading appears to be the only licit reading available to mass nouns combining with numerals. Consultants rejected attempts to use the structure in (22) and (23) to quantify kinds of the substance. Instead, they preferred to employ an enclitic equivalent to English kind, as shown in (24).


\[
\begin{align*}
\text{Context: } & \text{I sell two kinds of salt in my store: iodized and non-iodized.} \\
\text{LWG’s comment: } & \text{This means you have two bags of the same kind of salt } [\text{portion reading}].
\end{align*}
\]

b. Consultant’s correction of (24a):

\[
\begin{align*}
\text{Consultant’s correction of (24a):} & \text{I have two kinds of salt } [\text{with enclitic 'kind']} \\
\text{LWG’s comment: } & \text{This means you have two bags of the same kind of salt } [\text{portion reading}].
\end{align*}
\]

The universal quantifier wi⁵tʃi¹gɨ¹ ‘every’ is derived from the numeral wi⁴tʃi¹ ‘one.’ Like numerals, wi⁴tʃi¹gɨ¹ ‘every’ cannot combine with determiners that introduce mass nouns (25).

(25) # wi⁴tʃi¹gɨ¹ a⁴ ju³⁵̃ ki⁴ra¹ =tʃa³ 1sg.tʃa³ =dau² (Attempted: I saw/examined every salt.)

4.3 Numerals: Interim Summary

Ticuna numerals do not combine directly with either mass or count nouns. Instead, numerals – and all other quantifiers – must combine with a noun introduced by a determiner. When this requirement is met, mass and count nouns do contrast in acceptability with numerals. Numerals can combine with determiners that introduce count nouns. They cannot combine with determiners introducing mass nouns, except on coerced portion readings of the mass noun.

5 Quantifiers Other Than Numerals

Other than numerals and numeral-derived quantifiers like ‘every,’ Ticuna displays at least six quantifiers which can quantify count nouns. Two quantifiers are strong (i.e., cannot appear in the pivot of an existential; Milsark 1974): gu⁵ʔɨ̃⁴(ma³) ‘all’ and nɨ³¹ma²ʔɨ̃⁴ ‘partitive some.’ The other four quantifiers are weak (can appear in the pivot of an existential): mu¹ʔɨ̃⁴(ma³) ‘many,’ no³¹ʔre⁵ ‘few,’ taʔu³⁵ ‘none,’ and µu⁵ʔre³ ‘how many?’. All of these quantifiers, except for no³¹ʔre⁵ ‘few’ and µu⁵ʔre³ ‘how many?’, display noun class agreement with their complement noun. Like numerals, Ticuna quantifiers always combine with nouns introduced by determiners, never with bare nouns.

1 I do not have data about whether numerals combining with mass nouns can also be read as quantifying over minimal parts of the noun (e.g., whether (24) is acceptable with the reading ‘I saw two grains of salt’).
Five of the six quantifiers either are transparently derived from nominalizations of verb roots, or can also be used (with no additional morphology) as existential/quantificational verbs. Table 2 shows the verb roots corresponding to each of the quantifiers just introduced.

<table>
<thead>
<tr>
<th>Quantifier</th>
<th>Related Verb</th>
<th>Quantifier’s Relationship to Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>guʔɨ̃⁴ma³ 'all'</td>
<td>gu¹ 'run out; be finished'</td>
<td>Nominalization of verb</td>
</tr>
<tr>
<td>muʔɨ̃⁴ma³ 'many'</td>
<td>mu⁴ 'exist many; be numerous'</td>
<td>Nominalization of verb</td>
</tr>
<tr>
<td>no⁴ʔre³ 'few'</td>
<td>no⁴ʔre³ 'exist few; be few'</td>
<td>Identical to verb</td>
</tr>
<tr>
<td>taʔuʔᵣᵣ 'none'</td>
<td>tauʔ 'negative existential'</td>
<td>Nominalization of verb</td>
</tr>
<tr>
<td>ɲṵ¹ʔre⁵ 'how many?'</td>
<td>ɲṵ¹ʔre⁵ 'how many are there?'</td>
<td>Identical to verb</td>
</tr>
</tbody>
</table>

(26) demonstrates that all of the quantifiers just listed are compatible with count nouns. As with numerals, nouns which combine with quantifiers usually do not bear the nominal plural enclitic; for example, none of the nouns in (26) display it.

(26) a. ni³¹ =ʔɨ̃³ = acc 1sg.sbj = see DET(III) | all(III) / SOME(III) / many(III) / few | DET(III)
3(iii) | = ga̰ṵ¹ cold = tʃi⁴ɨ³ = ClfI : liquid
'I saw all of the needles / some of the needles / many needles / a few needles.' (elicited)

b. taʔuʔᵣᵣ 'none' i⁴ det (IV) | u⁴ ku¹ | dau²
3(iii) | DET(III) needle = acc 1sg.sbj = see
'I saw no needles.' (elicited)

c. ɲṵ¹ʔre⁵ 'how many?' i⁴ det (IV) | u⁴ ku¹ | 3(iii) ɪ⁴ =ʔɨ̃³
3(iii) | DET(III) DET(III) = acc 2sg.sbj.sc = see = nmlz(III)
'How many needles did you see?' (elicited)

Of the six quantifiers which are compatible with count nouns, three quantifiers – guʔɨ̃⁴ma³ 'all,' taʔuʔᵣᵣ 'none,' and ni³¹maᵣᵣ 'partitive some' – are also compatible with mass nouns (27).

(27) a. guʔɨ̃⁴ma³ i⁴ det (IV) ɪ̱³̱ ri¹ na⁴ = ga̰ṵ¹ = tʃi⁴ɨ³
all(IV) | DET(IV) | water | top 3(iv)sbj = cold = ClfI : liquid
'All of the water is cold.' (elicited)

b. taʔuʔᵣᵣ i⁴ det (IV) | ɪ̱³̱ ri¹ na⁴ = na⁴ = tʃi⁴ɨ³
none(IV) | DET(IV) | water | top 3(iv)sbj = hot = ClfI : liquid
'None of the water is hot.' (elicited)

c. Context: You mixed white and yellow manioc flour together.

ni³¹maᵣᵣ i⁴ u⁴ i⁴ ri¹ na⁴ = tʃo̰¹
SOME(IV) | DET(IV) | manioc.flour | top 3(iv)sbj = white
'Some of the manioc flour is white.' (elicited)

The other three quantifiers which combine with count nouns – muʔɨ̃⁴ma³ 'many,' no⁴ʔre³ 'few,' and ɲṵ¹ʔre⁵ 'how many?' – are not acceptable with mass nouns. Instead, these three quantifiers alternate with quantifiers

³The only quantifier which is not related to a verb is ni³¹maᵣᵣ 'partitive some,' which is derived from the third person pronoun.
which are specific to mass nouns. I will now discuss each of the three count noun-specific quantifiers and their mass noun equivalents.

5.1  \textit{mu'ʔɨ̃⁴(ma³)} ‘many’

(28) demonstrates that the quantifier \textit{mu'ʔɨ̃⁴(ma³)} ‘many’ is not acceptable with mass nouns, except on the coerced portion reading represented by the comment.

\begin{verbatim}
(28) # mu'ki'ma³ ja⁴ na'''= gi³
  # many(II) DET(II) DFLT.POSS= blood
  (Attempted: many bloods)

Consultant’s comment: ‘But a lab tech could say this, talking about many test tubes of blood.’
\end{verbatim}

Instead of \textit{mu'ʔɨ̃⁴(ma³)} ‘many,’ mass nouns are quantified with the quantifier \textit{ta³¹ʔɨ̃⁴} ‘a lot.’ Like ‘many,’ \textit{ta³¹ʔɨ̃⁴} ‘a lot’ undergoes noun class agreement. In (29), it appears in the form for noun class II.

\begin{verbatim}
(29) ta³¹kɨ³ a.lot/big(II) DET(II) DFLT.POSS= blood
  ‘a lot of blood’ (elicited)
\end{verbatim}

The quantifier \textit{ta³¹ʔɨ̃⁴} ‘a lot’ is morphologically a nominalization of the verb root \textit{ta⁴³}. When predicated of a count noun, or used to modify a count noun, \textit{ta⁴³} is read as a stative verb meaning ‘be big.’ With count nouns, \textit{ta⁴³} is not read as a quantifier – even when it occurs in the prenominal position usually reserved for quantifiers, as in (30).

\begin{verbatim}
(30) ta³¹ʔɨ̃⁴ i⁴ du'iʔi³
  a.lot/big(IV) DET(IV) person
  ‘a big, i.e. fat, person’

Not: ‘a lot of people’ (elicited)
\end{verbatim}

When predicated of a mass noun, \textit{ta⁴³} functions as a quantificational existential verb meaning ‘be abundant,’ as shown in (31).

\begin{verbatim}
(31) Context: Describing a flood.
  na³= ta⁴³ =ʔi³fį³ i⁴ de⁴³ʔa³
  3(IV)SB= a.lot/big =really DET(IV) water(IV)
  ‘There was a lot of water.’ (landscape description)
\end{verbatim}

The verb \textit{mu⁴ ‘be abundant (count)},’ the root of \textit{mu'ʔɨ̃⁴(ma³)} ‘many,’ also functions as a quantificational existential verb. While \textit{ta⁴³ ‘be abundant’} selects a mass noun subject, \textit{mu⁴ ‘be abundant (count)}’ selects a count noun subject (32, cf. Table 2).

\begin{verbatim}
(32) Context: Describing what Cushillococha’s fish stocks were like in the 1960s-1970s.
\end{verbatim}
There were many tambaqui fish.’ (text: ‘When I was a child’)

Thus, the mass noun-specific quantifier ta³¹ʔɨ̃⁴ ‘a lot’ and its verbal root ta⁴³ ‘be big, be abundant (mass)’ behave exactly parallel to the count noun-specific quantifier mu¹ʔɨ̃⁴ ‘many’ and its root mu⁴ ‘be abundant (count).’ In each pair, the derived form functions as a noun phrase quantifier, and the underived (verb root) form acts as a quantificational existential verb.

5.2 no³¹ʔre⁵ ‘few’

Just like mu⁴ʔɨ̃⁴(ma³) ‘many,’ no³¹ʔre⁵ ‘few’ is unacceptable with mass nouns (33), except if the mass noun is coerced to a portion reading, as indicated by the comment.

(33) # no³¹ʔre⁵kɨ³ #
    # few(II) DET(II) salt(II)
    (Attempted: a few salts)

Consultant: ‘But you could say this if someone asked you how many bags of salt you had.

Instead of no³¹ʔre⁵ ‘few,’ mass nouns are quantified with i⁵¹ra³ʔɨ̃⁴ ‘a little’ (34).

(34) i⁵¹ra³kɨ³ a.little/small(II) DET(II) salt(II)

‘a little bit of salt’ (elicited)

The quantifier i⁵¹ra³ʔɨ̃⁴ ‘a little,’ exactly like its mass-quantifying counterpart ta³¹ʔɨ̃⁴ ‘a lot,’ is derived from a lexical verb. This verb root is i⁵¹ra¹. When the verb i⁵¹ra¹ is predicated of a count noun or used to modify a count noun, it is read as a property concept ‘be small.’ It does not yield a quantificational reading, even when it occurs prenominally, in the syntactic position where a quantifier would appear (35).

(35) a. i⁵¹ra³ʔɨ̃⁴ i⁴ ĩ³¹a¹ne¹a³kɨ¹wa⁵ rɨ¹,
    i⁵¹ra³ʔɨ̃⁴ i⁴ DET(IV) -a³kɨ¹ -dim =wa⁵ rɨ¹
    a.little/small(IV) DET(IV) town(IV) -DIM =ALL TOP
    In a small town (not: in a few towns),

b. wi⁴ʔi⁴ i⁴ ăče’ga’ki² du⁵ʔɨ̃⁴ti² gi⁴kɨ³ ĩe’ma⁴’gu² ri¹, īu⁵ʔɨ̃⁴ma³ i⁴=na⁴=ʎu³=ˈgɨ⁴gɨ⁴.

    wi⁴ʔi⁴ i⁴ ĩe’ga’ki² du⁵ʔɨ̃⁴ti² =gi⁴ =kɨ³ =0= ĩe’ma⁴= gu² ri¹ īu⁵ʔɨ̃⁴ma³ i⁴=
    one DET(IV) leader(IV) person =PL =PURP 3(IV)SUB.TOP all(IV) IMPF= na⁴= ˈAu⁴ =gi⁴
    3(IV)SUBJ =arrive =PL
    When a political leader calls the people (to have a community meeting), everyone comes.
    (But in bigger towns, they don’t.) (text: ‘Living in a small town’)

But while i⁵¹ra³ means ‘small’ when it modifies or is predicated of a count noun, it functions as a quantificational existential verb ‘be little, i.e. not be abundant’ when predicated of a mass noun (36).
(36) Context: Describing a stream at the height of dry season.

\[
\text{na}^4= i^{i^1}\text{ra}^1 =?i^1\text{t}^1 = i^4 \quad \text{de}^\omega?\text{ta}^1 \\
3(IV)\text{SBJ} = \text{a.little/small} =\text{really} \text{ DET(IV) water(IV)}
\]

'There’s very little water.' (yard description)

Thus, the quantifier \(i^{i^1}\text{ra}^{i^1} 'a little'\) exhibits the same pattern as the quantifier \(\text{ta}^{i^1}\text{ra}^{i^1} 'a lot'\) with respect to the contrast between count and mass nouns. Both items express quantification when combined with mass nouns, but size when combined with count nouns. Furthermore, this contrast extends to the verb roots from which the items are derived. The verb roots \(i^{i^1}\text{ra}^i 'be little, scarce'\) and \(\text{ta}^{i^1} 'be abundant (mass)'\) behave as quantificational existential verbs with mass subjects, but express size with count subjects.

5.3 \(\text{pu}^{i^1}\text{re}^5 'how many?'\)

The interrogative quantifier \(\text{pu}^{i^1}\text{re}^5 'how many?\)’ is also incompatible with mass nouns (37a). As with other quantifiers, coercion to a portion reading renders the item acceptable with mass nouns, per (37b).

(37) \(\text{pu}^{i^1}\text{re}^3 \quad i^4 \quad \text{de}^\omega?\text{ta}^3 \quad \text{na}^4 = \text{balde} =\text{gu}^2? \\
\text{how.many DET(IV) water(IV) 3(IV)SBJ = Sp:bucket =LOC}
\]

'How many waters are in the bucket?' (elicited)

a. Unacceptable if the bucket is filled with uncontained water [volume reading of mass noun]

b. Acceptable if the bucket is filled with individual bottles of water [portion reading of mass noun]

In lieu of \(\text{pu}^{i^1}\text{re}^5 'how many?\)’, questions about the quantity of mass nouns are asked with the quantifier \((\text{na}^3)\text{pu}^{i^1}\text{ra}^{i^1}\text{t}^1 'how much?'\), as in (38).

(38) Context: A bucket is filled with uncontained water.

\[
\text{na}^3\text{pu}^{i^1}\text{ra}^{i^1}\text{t}^1 \quad i^4 \quad \text{de}^\omega?\text{ta}^3 \quad \text{na}^4 = \text{pe}^2\text{ma}^4 \quad \text{t}^4 \quad \text{balde} =\text{wa}^1 \\
\text{how.much(IV) DET(IV) water(IV) 3(IV)SBJ = be.in.place DET(IV) Sp:bucket =ALL}
\]

'How much water is in the bucket?' (elicited)

The quantifier \((\text{na}^3)\text{pu}^{i^1}\text{ra}^{i^1}\text{t}^1 'how much?'\) is a nominalized form of the interrogative verb \(\text{pu}^{i^1}\text{ra}^{i^1} 'what size?'\). This predicate is used to ask about physical properties of count nouns – most prominently size, but also color, as in (39).

(39) Context: Parent holding up marble to child.

\[
\text{da}^{i^3}\text{e}^2 \quad \text{ta}^3 = \text{pu}^{i^1}\text{ra}^{i^1} \\
\text{DEM.PROX(I) 3(I)SBJ = be.what.size/color}
\]

'What color is this one?' (conversation)

The quantifier \((\text{na}^3)\text{pu}^{i^1}\text{ra}^{i^1}\text{t}^1 'how much?'\) and the interrogative verb \(\text{pu}^{i^1}\text{ra}^{i^1} 'what size?'\) are not derived from \(\text{pu}^{i^1}\text{re}^3 'how many?'\). Rather, all three items are derived from the interrogative formative \(\text{pu}^i?,\) which also appears in interrogative words that are not involved in quantification, such as \(\text{pu}^i?\text{gu}^2 'when?'.\)
5.4 Quantifiers: Interim Summary

Ticuna has six quantifiers, other than numerals, which can combine with count nouns. Three of these quantifiers are also compatible with mass nouns, and three – the equivalents to ‘many,’ ‘few,’ and ‘how many?’ – are not. Exactly we saw with plural marking and numerals, combining ‘many,’ ‘few,’ and ‘how many?’ with mass nouns is unacceptable, except under coerced portion readings of the mass noun.

Each quantifier which fails to combine with mass nouns corresponds to another quantifier which combines only with mass nouns. The count noun-specific quantifier mu³ʔɨ̃⁴(ma³) ‘many’ corresponds to the mass noun-specific quantifier ta³⁷ʔɨ̃⁴ ‘a lot.’ Likewise, count no³⁷ʔre⁵ ‘few’ corresponds to mass i³⁷ra³ʔɨ̃⁴ ‘a little,’ and count ny³ʔre⁵ ‘how many?’ corresponds to (na³)ny³ʔra³ʔɨ̃⁴ ‘how much?’ The mass noun-specific quantifiers are grammatically acceptable with count nouns, but with count nouns, they do not convey quantification. Instead, they are interpreted as property concept terms with size-related meanings, such as ‘big’ and ‘small.’ Thus, both unacceptability with count noun-specific quantifiers and acceptability with (quantificational readings of) mass noun-specific quantifiers represent diagnostics of the mass-count distinction in Ticuna.

6 Measure Phrases

Contemporary Ticuna does not have native-vocabulary units of measure. Instead, speakers express measurement using container terms. I call these constructions ‘measure phrases,’ but it would be equally accurate to label them ‘container phrases.’

Ticuna measure phrases with mass nouns behave like count noun phrases for the purposes of plural marking, compatibility with numerals, and compatibility with count-specific quantifiers. For example, when LWG rejected the use of a numeral with a mass noun in (40a), she suggested two different constructions with numerals quantifying measure phrases, (40b) and (40c), as better alternatives.

(40b) and (c) demonstrate two different possible structures which Ticuna measure phrases can display. Which structure appears in a particular measure phrase is determined by the alienable vs. inalienable status of the container (i.e., measure) term. In (40b), the container-denoting noun we³ɨ̃¹ ‘straight-sided container’ is inalienable, and therefore must be morphologically possessed by the numeral ta³ʔre⁴ ‘two.’ In (40c), the container-denoting noun ta³ʔfãû¹ ‘bowl’ (from Spanish tazón ‘bowl’) is alienable. Consequently, it appears as a free word rather than a possessum. In both cases, the container term appears before the noun, in the syntactic position typical of quantifiers.\(^4\)

(40) a. # ta³ʔre⁴ i⁴ de⁷ʔa³⁴ =ʔɨ̃³ ACC 1SG.SBJ= see dau²
    # two DET(IV) water(IV) =ACC 1SG.SBJ= see
    (Attempted: I saw two waters.)

b. ta³ʔre⁴ =we³¹ i⁴ de⁷ʔa³⁴ =ʔɨ̃³ ACC 1SG.SBJ= see dau²
    two =straight.sided.container DET(IV) water(IV) =ACC 1SG.SBJ= see

\(^4\)I do not have data on whether examples like (40b) and (40c) allow only interpretations involving concrete containers, or also interpretations referring to the quantities characteristic of those containers.
"I saw two tanks of water." (LWG’s first volunteered correction to 40a.)

c. taʔre⁴ i¹ taʔʃān¹ =āʔku¹ i¹ de⁴ʔa³ =ʔɨ̃³ iʃa³= dau²
two DET(IV) bowl =contents DET(IV) water(IV) =ACC 1SG.SBJ see

"I saw two bowls/bowlfuls of water." (LWG’s second volunteered correction to 40a.)

What is interesting about container terms in Ticuna is that they are not limited to the noun phrase. Rather, container terms can also be incorporated into the verb phrase, provided that the verb and container term meet the language’s general morphosyntactic requirements for argument incorporation (e.g., the container-denoting noun must be inalienable).

When a verb incorporates a container term, the container term appears as an enclitic to the verb and no longer appears on the mass-denoting noun phrase, as shown in (41).

(41) nu²a² na³ = (*-piʔʔ) ja⁴ juʔkiʔra⁴
here IMP>3OBJ= transport:PIO (*-NI:bag) DET(II) salt(II)

"Bring two bags of salt here." (elicited)

Despite the absence of the container term from the noun phrase in (41), the mass noun still behaves as count for purposes of plural marking. That is, the verb of the clause, which displays root alternations for number, appears in the plural form – a structure which would normally be unacceptable with a mass object (§3.2).

7 Conclusion

Evidence for the mass-count distinction is abundant in Ticuna. In the language’s system of plural marking, mass nouns are incompatible with both nominal and verbal plurals (§3). In quantifier system, mass nouns cannot combine with numerals (§4), nor with three of the six quantifiers available to count nouns. Instead, mass nouns combine with three quantifiers which select only mass nouns (§5). Combining mass nouns with plural marking, numerals, and count noun-specific quantifiers requires either coercion of the mass noun to a portion reading, as seen in examples throughout this study, or the use of a measure phrase (§6).

For reasons of space, this paper did not discuss all forms of number marking and quantification which exist in Ticuna, particularly in the richly lexicalized domain of verbal number. Future research should examine whether number markers which were not described in this study – such as verbal plural enclitics and number-alternating verb suffixes – also systematically distinguish between mass and count arguments.

Last, data collected for this study provided no evidence for further number-based divisions of the class of nouns, such as a distinction between true and ‘fake’ or aggregate mass nouns. While only a limited number of nouns were tested, all substance-denoting nouns tested patterned together on each of the criteria diagnosing the mass-count distinction, and all individual-denoting nouns patterned apart. Thus, future work should also examine whether Ticuna truly lacks aggregate mass nouns, as some nouns not explored in this study – for example, paʔniʔ ‘letter (document), written material’ – behave as aggregate mass nouns in other languages.
References


