Number and the Count/Mass Distinction in Kaingang

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Abstract:

This paper presents a preliminary description of the count/mass distinction in Kaingang, a Jê language spoken in southern Brazil. First, we show that there is no plural morphological marker for nouns. We show that, despite this, morphological processes in verbs (suppletion, reduplication, and prefixation of the morpheme *kyg-*) can express plurality of events (iterativity) as well as the pluralization of verbal arguments. Second, we show that constructions with numerals and quantifiers can be used to distinguish count from mass nouns in Kaingang. Count nouns can be combined directly with numerals whereas mass nouns require a counting/measuring unit in these constructions. Likewise, count nouns occur with the count quantifier *'e* 'many' with a cardinal interpretation, whereas mass nouns occur with the quantifier *mág* 'a lot' with a volume interpretation. We also show that some mass nouns, in contexts where the counting/measuring unit is salient, can be directly combined with numerals/count quantifiers.

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Marcia Nascimento; Gean Nunes Damulakis; Suzi Lima

INTRODUCTION

This paper aims to describe the count-mass distinction in Kaingang (Jê subfamily, Macro-Jê family, Rodrigues, 1986) which is spoken in southern Brazil, in the states of Rio Grande do Sul, Santa Catarina, Paraná and São Paulo (in the southeast). The current population of Kaingang people is estimated to be more than 37,000 (IBGE, 2010). About 60% of this population speaks the Kaingang language (NASCIMENTO, 2017). The data presented in this paper was collected in the Indigenous Land Nonoai, in the north of the state of Rio Grande do Sul, with four native-speaker consultants. The elicitation plans were created based on the "mass-count distinction" questionnaire prepared by Lima and Rothstein (2020). The questionnaire explores the distribution and interpretation of notionally count nouns (such as *child*, *paca*, *chair*, *banana*, etc.) and notionally mass nouns (such as *water*, *rice*, *blood*, etc.) in different types of constructions:

1) Constructions with numerals: across languages, count nouns can often be directly combined with numerals (*three pacas/children/bananas*), while mass nouns cannot (**three rice*), except in coercion scenarios[1]. Mass nouns often only occur in numeral constructions if a noun denoting a container/unit of measure is inserted in the sentence (*three <u>pots of</u> rice/three <u>kilos of</u> rice*).

2) Constructions with quantifiers: in some languages, there are restrictions on the distribution of quantifiers. For example, *many* in English occurs with count nouns (*many children*), but not with mass nouns (**many honey*). In these cases, a container/measure unit is required (*many bottles of honey*) or the speaker would use another type of quantifier (*much honey*) that is compatible with mass nouns.

3) Constructions with plural morphemes: in some languages, the distribution of plurals is sensitive to the count-mass distinction. In Brazilian Portuguese, for example, count nouns can be pluralized freely, while mass nouns may only be pluralized in restricted, coercion contexts (see, for example, DOETJES, 1997).

The examples presented in (1)-(3) above are just some of the patterns observed across languages in describing the mass-count distinction. Lima and Rothstein (2020), as well as many other studies (which will be discussed in Sections 1 and 5), show that there is variation in the distribution and interpretation of count and mass nouns across languages which points to the need for descriptive studies of count/mass systems in languages such as Kaingang. A preliminary description of the count/mass distinction in Kaingang was presented by Damulakis and Nascimento (2017) at a workshop organized by Lima and Rothstein (2020).

In this paper, we discuss the distribution and interpretation of count and mass nouns in constructions with numerals and quantifiers in Kaingang. We also show that, despite the absence of plural marking in nouns, morphological processes in verbs (reduplication, suppletion, and prefixation of the morpheme *kyg-*) can be

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[1] Several papers (for example DOETJES, 1997; FRISSON; FRAZIER, 2005; PELLETIER 1975; WIESE; MAILING, 2005, among many others) show that, in some restricted contexts (when the counting/measuring unit is conventionalized and salient in the context), mass nouns can combine directly with numerals: in a restaurant, for example, a Brazilian Portuguese speaker might say *três cafés, por favor* 'three coffees, please' referring to three cups of coffee. We return to this discussion in Section 2 when we discuss constructions with numerals in Kaingang.

used to express the plurality of events (iterativity) and the distinction between singular and plural in verbal arguments, especially in the internal argument.

Two of the quantifiers attested in this language are important in this analysis, as their distribution is sensitive to the count/mass distinction. The first occurs in constructions with mass nouns (*mág*, which we can translate as 'much') and the second occurs in constructions with count nouns (*'e*, which we can translate as 'many'). We will show that some mass nouns can be combined with *'e* expressing cardinality. Together with numerals, these quantifiers may shed light on the distinction between count and mass nouns in Kaingang, due to their distribution and interpretation.

1. Interpretation of Nouns

Natural languages vary with respect to the availability and interpretation of number marking on nouns (CHIERCHIA, 1998, 2010; LIMA; ROTHSTEIN, 2020; PELLETIER, 2012; ROTHSTEIN, 2017, among others). Whereas in some languages, only count nouns can be pluralized (as in Portuguese), in others both mass and count nouns can be pluralized (as observed in Ojibwe (MATHIEU, 2012), among many other languages). There are also languages in which nouns lack number marking and can be interpreted as either singular or plural (as observed in Karitiana (MÜLLER; STORTO; COUTINHO-SILVA, 2006) and Dëne Sųłiné (WILHELM, 2008), among many other languages).

Kaingang is one such language where there is no number marking on nouns. However, according to Nascimento (2017), number is expressed as a verbal category in Kaingang, where verbal plurality seems to express plurality of actions and/or plurality of participants. According to D'Angelis (2004), there are two ways to express the distinction between "single vs. multiple or repetitive action" in verbs: i) by alternation of the verb form, i.e., one for single actions and another for multiple actions (verbal suppletion), as in (1); or ii) through reduplication of the verbal root, as in (2). That is, for D'Angelis (2004), verbal suppletion (as well as reduplication) can express "multiplicity or repetition of action".

Suppletion
(1a) *Kasónh*   *tóg*   *kasor*   **mãn**
       Kasónh   NUC[2]   dog   catch.SG[3]
       'Kasónh held the dog'

(1b) *Kasónh*   *tóg*   *kasor*   *(ag)* **genh**
       Kasónh   NUC   dog   catch.PL
       'Kasónh held the dogs (in one or many events)'

Reduplication
(2a) *Pedro*   *vỹ*   *mĩg*   *vé.*
       Pedro   NUC   jaguar   see
       'Pedro saw (one or more) jaguar(s)'

(2b) *Pedro*   *vỹ*   *mĩg*   *vigvé.*
       Pedro   NUC   jaguar   see.RED
       'Pedro saw jaguars (in one or many events)'

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[2] According to Nascimento, NUC means 'sentence nucleus' and is a functional category responsible for licensing matrix sentences in Kaingang. These particles are called 'subject markers' by Wiesemann (1967, 2002).

[3] Other abbreviations in glosses: ADV (adverb); SG (singular); RED (reduplication); PL (plural); MASC (male); FEM (female); LOC (locative); ASP (aspect); 1 (first person); 3 (third person).

Examples (1) and (2) show that bare nouns (nouns unmarked for number, not occurring with determiners) in Kaingang can have a singular or plural interpretation. For example, *kasor* 'dog' can have a singular or plural interpretation, depending on the context and verb form.

The sentence in (1b) – where the plural suppletive form of the verb 'to catch' (*génh*) is used – is preferably interpreted as 'Kasónh held more than one dog (in a single event)'. However, the reading 'Kasónh held more than one dog in multiple events' is also possible.

In sentences with reduplicated verbs, as in (2b) where the verb 'see' is reduplicated (*vigvé* 'see.RED'), the sentence is preferentially interpreted as referring to multiple jaguars seen by Pedro, in one or multiple contexts. However, a reading in which Pedro saw a single jaguar multiple times is also possible, albeit dispreferred. Again, these observations suggest that bare nouns in Kaingang can have either a singular or plural interpretation. However, when the plural suppletive form or the reduplicated form of the verb is used, the plural interpretation of the noun is favored.

There is also a third way of expressing a plurality of events and arguments, that is, by prefixing the morpheme *kyg-* to verbs[4]. Let us illustrate this morphological process using the suppletive forms of the verb 'hit', *tãnh/rãn* (compare (3a) and (3b)):

(3a)   *Kasónh*   *tóg*   *kasor*   **tãnh**.
         Kasónh   NUC   dog   hit.SG
         'Kasónh hit the dog'

(3b)   *Kasónh*   *tóg*   *kasor*   **rãn**.
         Kasónh   NUC   dog   hit.PL
         'Kasónh hit the dog (many times = 'spanked')'

The suppletive form of 'hit' is compatible with the prefix *kyg-* (*kygrãn ~ kygrẽn* 'hit') (3c):

(3c)   *Kasónh*   *tóg*   *kasor*   *kyg-rãn*.
         Kasónh   NUC   dog   PL-hit.PL
         'Kasónh hit (repeatedly) the dogs (= 'spanked')'

The singular form of suppletive verbs (e.g. *tãnh* [*~tẽnh*]) (3b) cannot be reduplicated to express a multiple event or a plurality of objects (3d), nor can it be the basis for affixing the morpheme *kyg-* (3e).

(3d)   **Kasónh*   *tóg*   *kasor*   **tãgtãnh**.
         Kasónh   NUC   dog   hit.SG.RED

(3e)   **Ag*   *tóg*   *kasor*   *kyg-tãnh*.
         3PL   NUC   dog   PL-hit.SG

We should also point out the existence of pronominal particles in Kaingang that express gender and number, as illustrated in (4). These particles may occur with nouns that denote humans and some nouns that

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[4] Not all verbs in Kaingang can be prefixed with *kyg-*. Besides *kygrãn* 'to hit', some other verbs that accept the morpheme *kyg-* are: *kygfy* 'to plait', *kygfa* 'to wash clothes', *kygtẽg* 'to treat (the disease)', *kygnũnh* 'to pluck the feathers', *kygfy* 'to cry'. Although there seems to be some common semantic trait between these verbs, such as denoting events that may involve a repeated action, we intend to investigate the contexts of use of *kyg-* and plural suppletive forms in future studies. That is, if the two processes are associated with the plurality of events and the plural interpretation of arguments, the next step is to describe the contexts in which only one of these morphological processes can occur.

denote animals. D'Angelis (2004) states that these pronominal particles can be omitted when multiplicity is expressed through verbs. Such pronominal particles convey gender and number. In (5), we can see an example of a sentence with these particles (compare it with the sentences in (2)) where the verb is not reduplicated). The omission of a pronominal particle can lead to the interpretation that it is a male animal, as in (2a).

(4)   Pronominal particles (markers of number-gender)

	Singular	Plural
Masc	*ti*	*ag*
Fem	*fi*	*fag*

(5)   *Pedro*   *vỹ*   *mĩg*   *ag (fag)*   *vé.*
        Pedro   NUC   jaguar   MASC.PL (FEM.PL)   see.SG
        'Pedro saw (the) jaguars'

According to D'Angelis (2004), the co-occurrence of an expression that might convey number (pronominal particles, numerals, or quantifiers) and verb reduplication or suppletion is optional. It is interesting to note that there are differences in the interpretation of the sentences when pronominal particles, numerals or quantifiers co-occur with reduplication/suppletion as opposed to when they do not co-occur. The sentence in (2b), without the pronominal particle, expresses iterativity ('Pedro saw a jaguar and then the other(s)'); on the other hand, the sentence in (5), in which a pronominal particle is used, is interpreted as the jaguars having been seen at the same time. This is not observed for nouns that cannot be marked with particles that express gender-number, such as the noun *no* 'arrow', as we see in (6), with the reduplication, and in (7), with the suppletive forms.

(6a)   *Pedro*   *vỹ*   *no*   *vé.*
        Pedro   NUC   arrow   see.SG
        'Pedro saw (one or more) arrow(s)'

(6b)   *Pedro*   *vỹ*   *no*   *vigvé.*
        Pedro   NUC   arrow   see.RED
        'Pedro saw arrows (in many events)'

(6c)   **Pedro*   *vỹ*   *no*   *ag (fag)*   *vigvé/vé.*
        Pedro   NUC   arrow   MASC.PL (FEM.PL)   see.RED

(7a)   *Pedro*   *vỹ*   *no*   *fón.*
        Pedro   NUC   arrow   sell.SG
        'Pedro sold (one or more) arrow(s)'

(7b)   *Pedro*   *vỹ*   *no*   *vãm.*
        Pedro   NUC   arrow   sell.PL
        'Pedro sold arrows (in many events)'

(7c)   **Pedro*   *vỹ*   *no*   *ag (fag)*   *vãm.*
        Pedro   NUC   arrow   MASC.PL (FEM.PL)   sell.PL

In sum, in this section we have shown that there is no number marking on nouns in Kaingang. We show that verbal suppletion, verbal reduplication and the verbal prefix *kyg* are associated with the plurality of events and can also influence the interpretation of nouns as singular or plural. Bare nouns allow for a singular or plural interpretation, similarly to other languages described as number-neutral, such as Karitiana and Dëne Sųłiné (cited above), among many others.

2. NUMERALS

The numeral system in the Kaingang language is basically expressed through five numerals: *pir* 'one', *régre* 'two', *tẽgtũ* 'three', *vẽnhkẽgra* 'four' and *pẽnkar* 'five'. In terms of frequency, numerals from 1 to 3 are most used. After five, the system works by composition (6-10): *pẽnkar kri ũn pir* 'five plus one', *pẽnkar kri ũn régre* 'five plus two', *pẽnkar kri tẽgtũ* 'five plus three', *pẽnkar kri vẽnhkẽgra* 'five plus four' and *pẽnkar régre* 'twice five' and so on[5]. In this section we discuss the distribution of the following nouns in numeral constructions:

A.   Notionally count nouns: *krẽkufár* 'fish', *no* 'arrow', *kãkénh* 'canoe'.
B.   Notionally mass nouns (substances): *óré* 'mud', *goj* 'water'.
C.   Aggregates [see Section 5]: *ãgóro* (~*ẽgóro*) 'vegetables', *kuge* 'belongings'.

The results show that count nouns can be combined directly with numerals as in (8a), expressing cardinality, unlike mass nouns, which cannot combine directly with numerals (8b). We also note that some mass nouns, such as *goj* 'water', *mỹg* 'honey' and *kyvénh* 'blood', can be combined directly with numerals. However, this only happens in contexts where a counting unit (e.g. a noun denoting a container such as 'cups' or 'bottles' in 'three cups/bottles of water') is salient in context (8c).

(8a)   *krẽkufár*   *tẽgtũ*
        fish   three
        'three fishes'

(8b)   **óré*   *tẽgtũ*
        mud   three

(8c)   *goj*   *tẽgtũ*
        water   three
        'three (cups/bottles of) water'

In Kaingang, we also observe that numerals cannot co-occur with reduplicated or plural suppletive verbal forms, as illustrated in the comparison between examples (9a) and (9b)[6]:

(9a)   *Pedro*   *vỹ*   *no*   *vigvé/vãm*
        Pedro   NUC   arrow   see.RED/sell.PL
        'Pedro saw/sold arrows (in multiples events)'

(9b)   **Pedro*   *vỹ*   *no*   *tẽgtũ*   *vigvé/vãm*
        Pedro   NUC   arrow   three   see.RED/sell.PL

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[5] These compositional forms are likely innovations in the language occurring after Portuguese contact.
[6] This restriction might be subject to inter-speaker variation.

One last characteristic of numerals that we would like to point out in this section is the fact that they can be adverbialized. For example, *pir* 'one' becomes *pin* 'once' (10a), *régre* 'two' becomes *régrég* 'twice', and *tẽgtũ* 'three' becomes *tẽgtũnh* 'three times' (10b). When adverbialized, they are used to quantify events, not individuals, which is why sentence (10c) is ungrammatical:

(10a) | *Goj* | *kron* | *pin* | *isóg* |
| water | drink | once | 1SG.NUC |

'I drank water once'

(10b) | *Goj* | *kron* | *régrég (tẽgtũnh)* | *isóg* |
| water | drink | twice.ADV (three.ADV) | 1SG.NUC |

'I drank water twice (three times)'

(10c) | **Goj* | *kron* | *régré (tẽgtũ)* | *isóg* |
| water | drink | two (three) | 1SG.NUC |

Another pair of examples that corroborates this observation is presented in (11):

(11a) | *Kasor* | *tẽgtũ* | *ve* | *isóg* |
| dog | three | see | 1SG.NUC |

'I saw three dogs'

(11b) | *Isóg* | *kasor* | *ve* | *tẽgtũnh* |
| 1SG.NUC | dog | see | three.ADV |

'I saw (one or more) dog(s) three times'

Sentence (11b) cannot be used in a context where the speaker saw three dogs at once. In turn, sentence (11a) can be used in a context where the speaker saw three dogs a single time.

In summary, in constructions with numerals only count nouns can be directly combined with numerals. Mass nouns require a counting or measuring unit. In contexts where the counting unit is salient, some mass nouns can be directly combined with numerals. However, these constructions are restricted to specific contexts. As such, it is possible to hypothesize that this is a case of coercion – more specifically, that it is a case of coercion known as the 'universal packager' (DOETJES, 1997; PELLETIER, 1975; WIESE; MAILING, 2005, among many others) – where a mass noun has a count interpretation (such as *dois cafés, por favor* 'two coffees, please' in Brazilian Portuguese).

3. QUANTIFIERS

In this section, we discuss the distribution of the quantifiers *'e* 'many' and *mág* 'much'. We investigated the distribution of the following nouns in constructions with quantifiers:

A.   Notionally count nouns: *krẽkufár* 'fish', *no* 'arrow'.
B.   Notionally mass nouns (substances): *óré* 'mud', *vãjãn* 'food', *aroj* 'rice', *rãgró* 'bean', *goj* 'water', *mỹg* 'honey' and *kyvénh* 'blood'.
C.   Aggregates [see Section 5]: *ãgóro* 'vegetables', *kuge* 'belongings'

The results show that the distribution of these quantifiers is influenced by the count-mass distinction. The quantifier *'e* 'many' can be combined directly with count nouns (12), quantifying over objects (with a cardinal reading):

(12)   *Pedro*   *vỹ*   *no*   *'e*   *nĩ*
       Pedro   NUC   arrow   many   ASP
       'Pedro has many arrows'

In contexts where the counting unit is salient, mass nouns may be combined directly with the quantifier *'e*. In these contexts, the speaker is referring to the cardinality of portions of the salient substance (*goj 'e* 'many cups/bottles of water'). Another example that supports this argument is (13), where the noun *kyvénh* 'blood' is directly combined with the quantifier *'e* 'many'[7]. In this case, the speaker is referring to several portions of blood (i.e. blood stains or containers of blood):

(13)   *Kyvénh*   *'e*   *vigve*   *isóg*
       blood   many   see.RED   1SG.NUC
       'I saw many blood stains or many containers of blood'

When combined with mass nouns, the quantifier *mág* 'much' triggers a volume interpretation (e.g., *goj mág* 'much water').

(14)   *Runja*   *ki*   *goj*   *mág*   *tỹ*   *nĩ*
       bowl   LOC   water   much   NUC   ASP
       'There is much water in the bowl'

It is interesting to note that *mág* may occur with count nouns, but only with an adjectival reading, as illustrated in (15):

(15)   *Pedro*   *tỹ*   *no*   *mág*   *nĩ*
       Pedro   NUC   arrow   big   ASP
       'Pedro has a big arrow'

Some substance denoting nouns that refer to food have bivalent behavior when combined with these quantifiers. This is the case of *aroj* 'rice' and *rẽgró* 'beans'. When referring to the raw grains, these nouns can be combined with *'e*. When referring to the cooked grains, they are interpreted as mass (continuous) nouns similar to *kórẽ* 'porridge'; in this case, these nouns can be combined with *mág*. Consider the examples in (16), comparing sentences with *aroj* 'rice':

(16)
a)   *Marcia*   *fi*   *tỹ*   *aroj*   *mág*   *nĩ*
       Marcia   FEM   NUC   rice   much   ASP
       'Marcia has much rice (cooked)'

b)   *Marcia*   *fi*   *tỹ*   *aroj*   *'e*   *nĩ*
       Marcia   FEM   NUC   rice   many   ASP
       'Marcia has many (grains of) rice (raw)'

In sum, in this section we discussed the distribution and interpretation of two quantifiers. We observed that *'e* 'many' is associated with a cardinal interpretation (number of objects) and *mág* 'much' is associated

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[7] From the nouns tested, this behavior (substance-denoting nouns being directly combined with the count quantifier *'e*) was attested with the following nouns: *goj* 'water', *mỹg* 'honey' and *kyvénh* 'blood'.

with a volume interpretation (volume of a portion of a substance). Although *'e* is a count quantifier, it can directly combine with some mass nouns (when the counting unit is salient in the context). On the other hand, *mág* 'much', a mass quantifier, can occur with count nouns with an adjectival interpretation (a large object/individual). This pattern is not uncommon and has been observed in other South American Indigenous languages, as we will discuss in Section 6.

4. An Observation Regarding the Category 'Aggregates'

In this study, we investigated some nouns that, in languages such as English, are categorized as 'object mass nouns' (see, for example, Chierchia (2010). That is, they are grammatically mass nouns, despite the fact that they can refer to a plurality of objects. This is the case, for example, for nouns such as 'furniture' which are mass in English (that is, cannot be directly combined with numerals) but can refer to many different objects (table, chair, etc.). The 'object mass nouns' class is not attested in all languages. In some, nouns that denote a plurality of objects are encoded as mass nouns, while in others they do not form a class distinct from count nouns. In our study, we explored the distribution of two nouns that have a similar meaning to object mass nouns attested in some other languages (such as *ẽgóro* 'vegetables' and *kuge* 'belongings') to assess whether they would show a distribution similar to count or mass nouns. We present here two preliminary observations on the distribution of these nouns in Kaingang.

First, we note that the two nouns tested (*ẽgóro* 'vegetables' and *kuge* 'belongings') can be directly combined with numerals (just like count nouns in the language):

(16)	*Ẽgóro*	*tẽgtũ*	*ve*	*isóg*
	vegetables	three	see.SG	1SG.NUC
	'I saw three vegetables'			

(17)	*Kuge*	*tẽgtũ*	*ve*	*isóg*
	belongings	three	see.SG	1SG.NUC
	'I saw three belongings'			

Second, we would like to point out that the noun *ẽgóro* 'vegetables' does not have the same distribution as the noun *kuge* 'belongings' in constructions with suppletive verbs. Consider the examples (18a)-(18b):

(18a) *Ẽgóro*	*kam (kre*)*	*isóg*	(18b) *Kuge*	*fón (vãm)*	*isóg*
vegetables	pick.SG/(PL)	1SG.NUC	belongings	sell.SG/(PL)	1SG.NUC
'I picked vegetables'			'I sold (someone's) belongings'		
(18c) *Ẽgóro*	*vigve*	*isóg*	(18d) *Kuge*	*vigve*	*isóg*
vegetables	see.RED	1SG.NUC	belongings	see.RED	1SG.NUC
'I saw vegetables'			'I saw (many sets of) belongings'		

The noun *ẽgóro* 'vegetables' cannot occur in sentences with the plural suppletive form of some verbs (e.g. *kre* 'pick.PL', *kugpe* 'wash.PL' etc) nor with the reduplicative form of others (e.g. *nignénh* 'to cook.RED'); however, it is compatible with some reduplicated verbs (18c). The noun *kuge* 'belongings' can occur in constructions with suppletive verbs and with reduplicated verbs.

In principle, these nouns do not seem to form an independent class of count nouns in Kaingang. However, in future studies, we intend to investigate other nouns that have a similar meaning to object mass

nouns attested across languages. Furthermore, we intend to investigate the distribution of these nouns in constructions with quantifiers to explore similarities or differences in comparison with other count nouns.

5. The Count-mass Distinction in Other Macro-Jê Languages

The distribution pattern of count and mass nouns in Kaingang is quite similar to the pattern observed in other Macro-Jê languages. Chart (1) summarizes the distribution of count and mass nouns in constructions with numerals, quantifiers and number marking for languages from this family, based on previous studies. It should be noted that, with the exception of Maxakali, all the languages in the table belong to the Jê subfamily, like Kaingang.

Chart 1 - Studies on the count-mass distinction in Macro-Jê languages.

	Which nouns can be combined directly with numerals?	Which nouns can be pluralized?	Quantifiers
Maxakali (NEVINS; SILVA, 2020)	Count nouns.	Animate nouns, anthroponyms, toponyms.	*xeka* and *kutĩynãg* (interpreted as 'big' and 'small', respectively, with count nouns; interpreted as 'a lot' and 'a little', respectively, with mass nouns). *xohi*, *punethok* ('many'), *tĩy-nãg* ('few') only compatible with count nouns.
Panará (BARDAGIL, 2020)	Count nouns.	Animate nouns (some speakers of the language also pluralize inanimate nouns).	*inkjêti* 'many(s)' or *kiti* 'few(s)': compatible with count and mass nouns.
Mẽbengokre (SALANOVA, 2020)	Count nouns (mass nouns can occur directly combined with numerals in coercion contexts).	A subset of human-denoting nouns.	*Kwy* 'some', *kuni* 'all': can be combined directly with count and mass nouns. *'õ*: different interpretations depending on the noun it is combined with (count/mass).
Parkatêjê (LIRA; FERREIRA, 2021)	Count nouns (mass nouns can combine with numerals in contexts in which the counting unit is salient).	Human-denoting nouns.	Some quantifiers are compatible with count and mass nouns; others are restricted to either count nouns (e.g., *jarêtêti* 'many') or mass nouns (e.g., *tuti* 'much').

Source: Adapted and translated the Lima and Rothstein (2020, p. 195).

The distribution of number marking in the aforementioned languages is independent of the count-mass distinction. Other lexical features constrain distribution of number marking.

As observed in other Macro-Jê languages, the count-mass distinction in Kaingang can be observed through the analysis of the distribution of nouns in constructions with numerals and quantifiers.

Final Considerations

In this paper we discussed the interpretation of nouns, the absence of number morphology in nouns, and the distribution of numerals and quantifiers in Kaingang.

In summary, we observed that bare nouns can have a singular or a plural interpretation. We also observed that there is no number marking in nouns, that is, there is no morpheme that is exclusively associated with number. We have also observed that some nouns (nouns that refer to humans and some of the nouns that refer to animals) may be marked by pronominal particles that express number and gender (*ag* and *fag*, cf. (4)). With nouns that cannot occur with these particles, number can only be expressed by quantifiers, numerals, or by morphological processes on verbs.

Suppletion, verbal reduplication and prefixation of the morpheme *kyg-* are associated with the plurality of events and the singular *versus* plural distinction in arguments. We observed that verbal reduplication and plural suppletion are unattested in sentences in which the noun (in the object position) is combined with a numeral.

As for numerals, we have shown that only count nouns can be directly combined with them. In some restricted contexts – when the counting unit is salient in the context – some mass nouns can occur directly combined with numerals. This phenomenon in Kaingang seems to be similar to the coercion process observed in other languages (universal packager), such as in Portuguese (*dois cafés, por favor* 'two coffees, please').

Finally, as for quantifiers, only count nouns can be combined directly with the count quantifier *'e*. In these constructions, the speaker is referring to a cardinality of individuals. On the other hand, the quantifier *mág* only occurs with mass nouns and is associated with the volume reading (mass). As observed in numeral constructions, some mass nouns, in restricted contexts, can be combined directly with the count quantifier *'e*.

References

BARDAGIL, Bernat. Number morphology in Panará. *Linguistic Variation*, Amsterdam, v. 20, n. 2, p. 312-323, 2020.

CHIERCHIA, Gennaro. Mass nouns, vagueness and semantic variation. *Synthese*, Netherlands, v. 174, n. 1, p. 99-149, 2010. DOI: https://doi.org/10.1007/s11229-009-9686-6

CHIERCHIA, Gennaro. Reference to kinds across language. *Natural Language Semantics*, Netherlands, v. 6, n. 4, p. 339-405, 1998. DOI: https://doi.org/10.1023/A:1008324218506

D'ANGELIS, Wilmar da Rocha. Concordância verbal de número em Kaingáng: algumas pistas. *Liames*, Campinas, v. 4, p. 71-81, 2004.

DAMULAKIS, Gean Nunes; NASCIMENTO, Marcia. Count, mass, and number in Kaingang. *In*: A TYPOLOGY OF COUNT, MASS AND NUMBER IN BRAZILIAN LANGUAGES, 1., 2017, Rio de Janeiro. *Workshop* […]. Rio de Janeiro: Museu do Índio, 2017.

DOETJES, Jenny Sandra. *Quantifiers and selection*: on the distribution of quantifying expressions in French, Dutch and English. Leiden: The Hague, 1997.

FRISSON, Steven; FRAZIER, Lyn. Carving up word meaning: portioning and grinding. *Journal of Memory and Language*, New York, v. 53, n. 2, p. 277-291, 2005.

IBGE - INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. *Censo demográfico*. Rio de Janeiro: IBGE, 2010.

LIMA, Suzi; ROTHSTEIN, Susan. A typology of the mass/count distinction in Brazil and its relevance for mass/count theories. *Linguistic Variation*, Amsterdam, v. 20, n. 2, p. 174-218, 2020.

LIRA, Ingryd Moraes de Moraes; FERREIRA, Marília de Nazaré de Oliveira. Descrição de nomes contáveis e massivos em Parkatejê. *Liames*, Campinas, v. 21, p. 1-19, 2021.

MATHIEU, Eric. On the mass/count distinction in Ojibwe. *In*: MASSAM, D. (ed.). *Count and mass across languages*. Oxford: Oxford University Press, 2012. p. 172-198.

MÜLLER, Ana; STORTO, Luciana; COUTINHO-SILVA, Thiago. Number and the mass/count distinction in Karitiana. *In*: WORKSHOP ON STRUCTURE AND CONSTITUENCY IN LANGUAGES OF THE AMERICAS, 11., 2006, Vancouver. *Proceedings* […]. Vancouver: UBC, 2006. p. 122-135.

NASCIMENTO, Marcia. *Evidencialidade em Kaingang*: descrição, processamento e aquisição. 2017. 184 f. Tese (Doutorado em Linguística) - Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2017.

NEVINS, Andrew; SILVA, Mario Coelho. Maxakalí has suppletion, numerals and associatives, but no plurals. *Linguistic Variation*, Amsterdam, v. 20, p. 2, p. 271-287, 2020.

PELLETIER, Francis Jeffry. Lexical nouns are both +mass and +count, but they are neither +mass nor +count. *In*: MASSAM, D. (ed.). *Count and mass across languages*. Oxford: Oxford University Press, 2012. p. 9-26.

PELLETIER, Francis Jeffry. Non-singular reference: some preliminaries. *Philosophia*, Netherlands, v. 5, n. 4, p. 451-65, 1975.

RODRIGUES, Aryon Dall'Igna. *Línguas brasileiras*: para o conhecimento das línguas indígenas. São Paulo: Loyola, 1986.

ROTHSTEIN, Susan. *Semantics for counting and measuring*. Cambridge: Cambridge University Press, 2017.

SALANOVA, Andrés Pablo. Counting and measuring in Mẽbengokre and the count/mass distinction. *Linguistic Variation*, Amsterdam, v. 20, n. 2, p. 300-311, 2020.

WIESE, Heike; MALING, Joan. Beers, kaffi, and schnapps – different grammatical options for 'restaurant talk' coercions in three germanic languages. *Journal of Germanic Linguistics*, Cambridge, v. 17, n. 1, p. 1-38, 2005.

WIESEMANN, Ursula Gojtéj. *Introdução na língua Kaingang*. Rio de Janeiro: Summer Institute of Linguistics, 1967.

WIESEMANN, Ursula Gojtéj. *Kaingang-Português*: dicionário bilíngue. Curitiba: Editora Evangélica Esperança, 2002.

WILHELM, Andrea. Bare nouns and number in Dëne Sųłiné. *Natural Language Semantics*, Netherlands, v. 16, p. 39-68, 2008.