BARE NOUNS IN BRAZILIAN PORTUGUESE

FOR TYPOLOGY STUDENTS

DRAFT

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0 INTRODUCTION

This paper examines a theoretical claim about the semantic denotation of nouns by Chierchia (1998) called the Nominal Mapping Parameter (NMP). The NMP predicts that bare nominals (i.e. nouns with no determiner) tend to be restricted to plural and mass nouns when they are in argument position, excluding proper names. However, recent work on bare nouns in Portuguese by Lopes (2006), Munn and Schmitt (1999; M&S 1999 from hereon), Schmitt and Munn (1999; S&M 1999 from hereon), and Schmitt and Kester (2004; S&K 2004 from hereon) shows that modern Brazilian Portuguese (BP) is an exception to this theoretical hypothesis by allowing bare singular count nouns in argument position; specifically as subject of a main clause. Crucially, it is the fact that BP has plural morphology and definite/indefinite articles that inflect for gender and number that makes BP bare nouns so exceptional (e.g. Chinese allows bare singular count nouns in argument position but lacks a plural morphology and an inflectional determiner system). I survey these issues through introducing BP data and the theoretical claims about such data. I conclude by drawing parallels between the proposed system of Schmitt and Kester (2004) and data in other languages.

1 CHIERCHIA'S THEORY AND BRAZILIAN PORTUGUESE DATA

Chierchia (1998) looks at the distribution of noun referentiality in a number of languages. He is specifically interested in nominal reference to 'kinds.' A 'kind' is defined by Chierchia

(1998:348) in the following way: "From an intuitive, pretheoretical point of view, kinds are generally seen as regularities that occur in nature. They are similar to individuals like you and me, but their spatiotemporal manifestations are typically 'discontinuous.'" In other words, the labels 'dog', 'horse', 'chicken', 'children', 'human' are kinds in that they do not denote, or refer, to any individual. Instead, they refer to a spatiotemporally discontinuous class of individuals that collectively make up a regularity of nature. This class of individuals, or natural kinds, shares at least one specific property, the property of belonging to a specific kind. Additionally, artificial products of nature such as 'television', 'car', and 'computer' are also kinds. To explain nominal reference to kinds Chierchia proposes the Nominal Mapping Parameter, which is based on binary values of whether or not the nominal element can occur as argument and/or predicate. The combination of these binary values predicts a range of specific constructions in the world's languages. The resulting typology is shown in (1).

(1) Nominal Mapping Parameter (NMP)[1] (Chierchia 1998, S&M 1999:341)

a. [+arg, -pred] (e.g. Chinese)
- generalised bare arguments
- all noun are mass nouns
- no plural morphology
- generalized classifier system

b. [-arg, +pred] (e.g. French)
- no bare nominals in argument position
- count/mass distinction
- morphological plural

c. [+arg, +pred] (e.g. English)
- bare mass nouns and plurals in argument position
- no bare singular count nouns
- plural morphology

[1] Chierchia includes some additional assumptions in his theory to account for languages that do not fit neatly into his system, but the details of these assumptions do not concern the data of BP discussed here.

d. [-arg, -pred] NONEXISTENT

The problem for the typology in (1) is that the behavior of modern BP bare noun arguments is not accounted for. BP allows bare plurals and mass nouns in argument position as well as bare singular nouns that refer to kinds. The following examples (2)-(5), taken from S&M (1999), and (6)-(9) show subject and direct object argument positions while the list in (10) compares acceptable forms of mass/count nouns that can appear in argument position in English and BP; (interlinear glossing of BP data in all examples is mine)

(2) a. Cheg-aram criança-s. Bare plural
arrive-PST.IND.3PL child-PL
'Children arrived.'

b. Cheg-ou criança-ø. Bare singular
arrive-PST.IND.3SG child-SG
'Children/the child arrived.'

(3) a. Ele compr-ou computador-es. Bare plural
he buy-PST.IND.3SG computer-PL
'He bought computers.'

b. Ele compr-ou computador-ø. Bare singular
he buy-PST.IND.3SG computer-SG
'He bought a computer/computers.'

(4) a. Criança-s lê-em revistinha-s. Bare plural
child-PL read-PRES.IND.3PL comic.book-PL
'Children read comic books.'

b. Criança-ø lê revistinha-ø. Bare singular
child-SG read-PRES.IND.3SG comic.book-SG
'Children read comic books.'

(5) a. Beija-flore-s são ave-s. Bare plural
humming.bird-PL BE.PRES.IND.3PL bird-PL

'Hummingbirds are birds.'

b. Beija-flor-ø é ave-ø. Bare singular
humming.bird-SG BE.PRES.IND.3SG bird-SG
'The Hummingbirds is a bird.'

(6) a. Dente-s mastig-am comida. Bare plural
tooth-PL chew-PRES.IND.3PL food
'Teeth chew food.'

b. Dente-ø mastig-a comida. Bare singular
tooth-SG chew-PRES.IND.3SG food
'Teeth chew food.'

(7) a. Tesoura-is cort-am fita. Bare plural
scissor-PL cut-PRES.IND.3PL ribbon
'Scissors cut (the) ribbon

b. Tesoura-ø cort-a fita. Bare singular
scissor-SG cut-PRES.IND.3SG ribbon
'Scissors cut (the) ribbon.'

(8) a. Eu gosto dente-s. Bare plural
I like tooth-PL
'I like (my) teeth.'

b. Eu gosto dente-ø. Bare singular
I like tooth-SG
'I like (my) teeth.'

(9) a. Eu compro tesoura-is. Bare plural
I buy scissor-PL
'I buy (some/the) scissors.'

b. Eu compro tesoura-ø. Bare singular
I buy scissor-SG
'I buy (some/the) scissors.'

(10)	Translation	English	Brazilian Portuguese
	'pair of shoes'	shoes/*shoe	sapatos/sapato
	'pair of scissors'	scissors/*scissor	tesourais/tesoura

'pair of paints'	pants/*pant	arqejar/arquejais
'set of keys'	keys/*key	chaves/chave
'set of teeth'	teeth/*tooth	dentes/dente

All of the bare nouns in (2)-(10) can also have accompanying determiners or articles that agree in number and gender. What is exceptional about BP is that these nouns may optionally occur without agreeing determiners or articles in argument positions. The BP nouns in (10) have the alternate forms whether they occur as subjects or objects in simple sentences as well as allowing optional determiners that must agree with the singular-count or plural-mass form. Another interesting observation that can be made is that the verb will agree with its argument no matter what. In fact, bare singular nouns with PL.3RD person inflection are ungrammatical. Additionally, only bare singular nouns yield ambiguous (i.e. singular or plural) interpretations as seen in the English translations; bare plural nouns never have a singular interpretation. In other words, when the bare noun is the subject argument of the predicate, agreement on the verb co-varies with the number value of the noun: bare plurals must have plural agreement marking on the verb while bare singulars must have singular agreement on the verb even though the semantic interpretation of bare singulars can be ambiguous.

S&M (1999) have applied Chierchia's typology of the three attested nominal reference types in (1a-c) to BP and concluded that they do not account for the data. They also conclude that it is not the case that bare singulars are simply bare plurals without a plural marker. The most obvious reason for this is the singular agreement on the verb. If bare singular nouns in BP were simply 'deficient' plurals (i.e. bare plural nouns with missing overt plural morphology) then one would expect to see the same verb agreement as with the bare plurals. This is not the case. S&M (1999:348-49) also conclude that bare singulars are not mass nouns by the following diagnostic.

The predicate *weigh two grams* requires individuation and is unacceptable with mass nouns, as the following example from S&M shows.

(11) a. *Ouro pesa duas gramas.
*'Gold weighs two grams.'

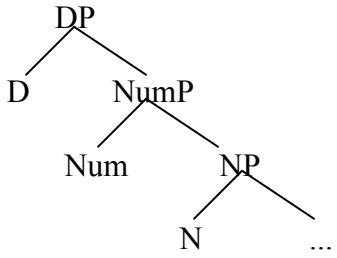
b. Oura é caro.
'Gold is expensive.'

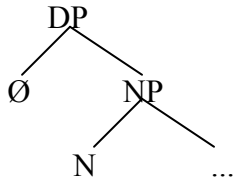
But if bare singulars behaved like mass nouns then they would also create unacceptable sentences like (11a) when in subject position. This is not the case, as (12) from S&M shows. This sentence is acceptable and does not show the same restrictions that (xxa) above does.

(12) Criança pesa 20 kilos nesta idade.
Child weigh-PRES.IND.3SG 20 kilos at-this age
'Children weigh 20 kilos at this age.'

Consequently, bare singular nouns and bare plural nouns behave similarly. Bare singulars denote names of kinds just as bare plurals do. Nor are bare nouns mass nouns. S&M (1999) conclude that in fact bare singular nouns denoting kinds lack number all together. In other words, it is not that they value number altogether differently than regular and mass nouns, but in fact that they are missing the agreement category of number. Assuming a theoretical framework that treats noun phrases (NPs) as determiner phrases (DPs)[2] and includes a number phrase (NumP) in the tree structure of DPs, the contrast between regular nouns and bare nouns is shown in (13) below, with (b) representing bare nouns.

[2] In the case of NPs with no determiner or article the DP head is assumed to be null; (cf. Abney 1987 for the first explicit proposal of this "DP hypothesis").

(13) a. 

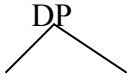
b. 

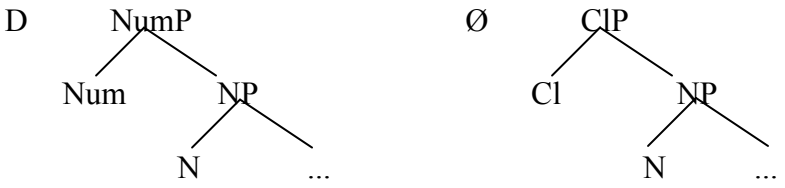
The model in (13b) does not explain why bare singular nouns always have singular agreeing verbs, but I will ignore this here in order to focus on the more recent proposals based on S&M (1999) that claim the structure in (13b) actually contains an unpronounced noun classifier. I will then briefly compare the more recent "classifier" claim to languages that unarguably have noun classifiers, judging the validity of the BP "classifier" claim in comparison with other data.

2 THE BRAZILIAN PORTUGUESE NOUN CLASSIFIER CLAIM

Schmitt and Kester (2004:238) define a classifier as a "divider of mass into countable units." They go on to specify bare singulars based on S&M (1999), stating that "What bare singulars lack is a number projection... whose function is to actually count units." In other words, bare singular nouns in BP can divide a mass into countable units but it does not, semantically speaking, actually count those units. In terms of the tree structures in (13), the new classifier claim would give the following structures; where (14a) is a regular noun with number agreement (determined by the NumP) in which countable units are counted, and (14b) represents the new classifier structure in which the classifier phrase (ClP) divides a mass noun into countable units but cannot actually count the units.

(14) a. 

b. 



Interestingly, Chierchia's typology only allows for one possible case of a classifier system to exist, the exemplary case being Chinese. If it is the case that BP has an unpronounced classifier system then Chierchia's typology must allow for more than one kind of classifier language. If BP has real noun classifiers (unpronounced as they are), or a general ClP, then the structures in (14) should be compatible with languages that do have unarguable noun classifiers. I introduce some general claims and data in the following section.

3 Classifiers In Other Languages

Many languages in the world have some kind of classifier system and to expect that they may all fit into Chierchia's system is perhaps overly optimistic. I will not analyze in depth any of the classifier systems here, nor will I try to fit them into Chierchia's typology of attested classifier language types. Instead, I provide some basic data and draw very general conclusions about the structural properties of noun classifiers based on Bowles (2006) in order to compare the results of S&M, M&S, and S&K.

In Bowles (2006) I argue that noun classifiers are a semi-lexical category in that they function similar to a determiner but they can also interact in semantic role assignment (Agent, Patient, Theme, Experiencer). Essentially, I provide data from various languages with noun classifiers and conclude by hypothesizing a tree structure, which I will give below. Some of the language data used in Bowles (2006) follows in (15).

(15)

AKATEK (Zavala 2000: 136-137)

a. **naj** me'
NCL$_{man}$ sheep
'the sheep'

b. **no'** txitam tu'
NCL$_{animal}$ pig DEM-DIST[3]
'these pigs'

c. 'ey jun **naj** 'icham me'
EXIST one **NCL$_{man}$** old.man sheep
'It was an old sheep.'

JAKALTEC (Grinevald 2000: 65)

d. xil **naj** xuwan **no7** [4] lab'a
saw **NCL$_{man}$** John **NCL$_{animal}$** snake
'John saw the snake.'

e. xil **naj** **no7**
saw **NCL$_{man}$** **NCL$_{animal}$**
'he saw it.' OR 'man non-kin saw animal.'

YIDINY (Dixon 1982: 185-186)

f. **mayi** imirr **bama**-al yaburu-Ngu julaal
NCL$_{vegetable}$-ABS yam-ABS **NCL$_{person}$**-ERG girl-ERG dig.PAST
'The girl dug up the yam.'

g. **minya** ganguul jana-ng **jugi**-il gubuma-la
NCL$_{animal}$-ABS wallaby-ABS stand-PRES **NCL$_{tree}$**-LOC black pine-LOC
'The wallaby is standing by the black pine.'

WANANO (Stenzel 2004: 411)

h. ~ata yoa-a, ~ku-iro die-ro-~ka
meanwhile do/make-V.NOM, one/a-NOM:SG dog-SG-DIM

pari-**taro-re** pari-**taro** hi-ri-**taro-re,**
lake-**NCL$_{lake}$-NCL$_{generic}$** lake-**NCL$_{lake}$** COP-NOM-**NCL$_{lake}$-NCL$_{generic}$,**

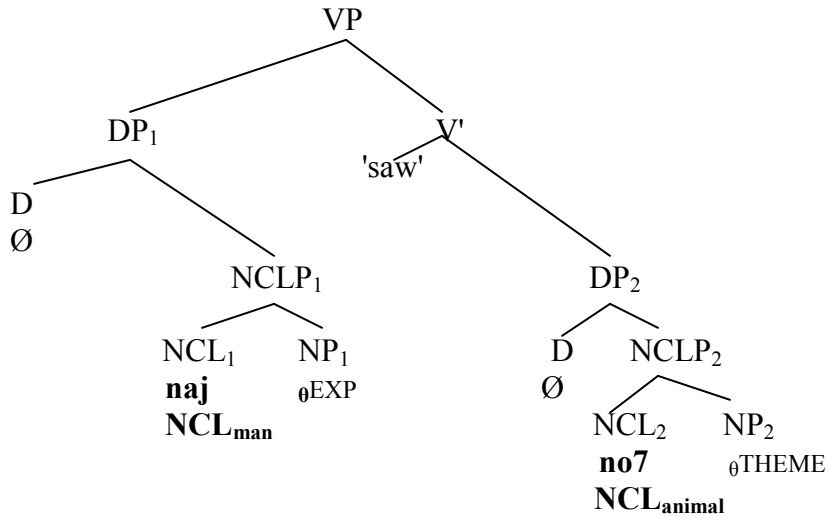
~bubu-bu-su thuti-a
go.quickly-shore-arrive bark-ASSERT.PERF
'Meanwhile, one little dog ran down to the shore of a lake (a lake like this) and barked.'

[3] See end of paper for abbreviations.
[4] /7/ = glottal stop; as found in typical literature on Mayan descriptive linguistics.

The data in (15) is clearly different from BP, at least in surface form, and they group together under a common definition, succinctly stated by Aikhenvald (2004: 81) as a "type of non-agreeing noun categorization device, their choice being determined by lexical selection, and not by matching any inflectional properties of nouns with any other constituents of a noun phrase." S&K's (2004) definition of a classifier as a "divider of mass into countable units" is not excluded under the more general definition given by Aikhenvald. In this sense, it is possible that BP has an unpronounced noun classifier.

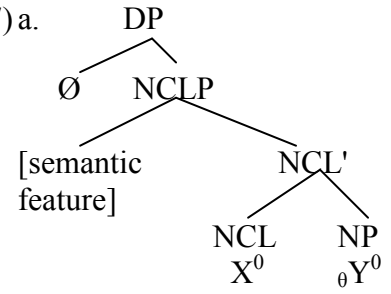
I now provide the general tree structure hypothesized in Bowles (2006) for the Jakaltek sentence of (15e) above.

(16) 'he saw it' OR 'man non-kin saw animal.'

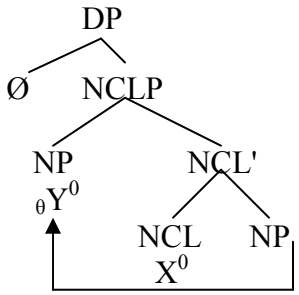


More specifically the DP for the noun with the classifier is shown in (17): here the derived word order between the classifier and the noun are shown where the lower noun ${}_{\theta}Y^{0}$ moves to the NCLP in (17b) because of some semantic feature; (${}_{\theta}Y^{0}$ = a noun head with a thematic semantic role: the superscript "0" signifies a head and the subscript "θ" signifies a thematic semantic role; X^{0} is the classifier head).

(17) a.



b.



The structures given in (17) are not incompatible with the one give in (14b). In fact, they are practically identical. The similarity of tree structures along with the compatibility of classifier definitions above suggests that it is possible that BP bare nouns do in fact have unpronounced noun classifiers that are lexically-semantically selected and function to semantically divide mass entities of kinds ('kind' as defined by Chierchia) into countable units. The fact that these units are not actually counted is seen in the ambiguity of plural/singular interpretation with bare singular nouns. Furthermore, the fact that bare nouns in BP do not behave like mass nouns can be explained by the notion that the unpronounced classifier functions to divide a mass entity – hence it is not really a mass noun because it has been semantically divided, though not actually counted. Many issues are still unaccounted for and need further investigation but I believe the

arguments for classifiers in BP is at least a claim worth investigating, given the suggestive, albeit theoretical, conclusions.

4 CONCLUSION

Following the work of Schmitt and Munn (1999) I have provided data from Brazilian Portuguese that shows Chierchia's (1999) Nominal Mapping Parameter (NMP) hypothesis is in need of revision or ammendation. Bare nouns in BP may occur in argument positions despite BP's inflectional determiner system and plural morphology – all of which are counter-evidence to Chierchia's universal typology of languages based on the NMP. I have also, following the work of Schmitt and Kester (2004), argued that it is possible that BP has unpronounced noun classifiers for bare nouns. The function of these classifiers is to divide mass entities into countable units but, crucially, not to actually count the units. I have provided some basic data from other languages, and following Bowles (2006), provided a general tree structure for noun classifiers in general. This tree structure is compatible with the structures given by Schmitt and Kester. I concluded that these theoretical hypotheses are at least suggestive of the fact that BP has unpronounced noun classifiers to the extent that future research is a worthwhile endeavor.

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ABBREVIATIONS
APR = apparent evidential
ASM = assumed evidential
AUX = auxiliary
BEN = benefactive case
DES = desiderative mood
EVD = evidential particle
INA = inanimate
NEG = negative
NR = nominalizer
NVIS = nonvisual evidential
PRES = present tense
POSS = possessive
PST = past
REC.PST = recent past
RSLT = resultative aspect
SCD = secondhand evidential
SPEC = specificity particle (dative case?)
VIS = visual evidential
1/2 = first and second person, singular or plural
3 = third person
F = feminine
M = masculine
PL = plural
S = singular