How to distinguish between nouns and classifiers in Binominal Naming Constructions?
Answers from two Amazonian languages

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Introduction - Research question

- Two unrelated languages of Western Amazonia:
    - Harakmbut (isolate, Peru) △
    - Mojeño Trinitario (Arawak, Bolivia), △

Introduction - Research question

- Steve Pepper's list of 100 complex concepts: Mojeño Trinitario

simple	23%
N-N compound	12%
borrowing	12%
N with classifier	21%
other derivation	10%
other devices	32%
sample size	52 items for 45 entries

Introduction - Research question

- Classifiers in Western Amazonian languages as derivational devices on nouns (Aikhenvald 2000; Seifart & Payne 2007)
- Classifiers commonly assumed to originate in nouns (Mithun 1986; Aikhenvald 2000)

- Analytical problem: among Binominal Naming Constructions, how to distinguish between the derivational use of classifiers on nouns (1) and noun-noun compounds (2)?

Harakmbut
(1) N-CLF derived nouns
    a) *siro-pi*   metal-CLF:stick   'knife' (cf. Hart 1963: 1)
    b) *siro-pu'*   metal-CLF:cylindrical;hollow   'metal tube' (cf. Hart 1963: 1)

(2) N-N compounds
    a) *ndumba-kuwa*   forest-dog   'bush dog' (Helberg 1984: 252; Tripp 1995: 194)
    b) *äwït-ku*   giant.otter-head   'giant otter's head' (Hart 1963: 3)

Introduction - Research question

- "One problem hinges on **how we distinguish bound roots from derivational affixes**." (Lieber and Stekauer 2009)

- To distinguish compounding from derivation: investigation within and beyond Binominal Naming Constructions… because Mojeño and Harakmbut show classifiers in other morphosyntactic contexts

- Larger research question: **How to distinguish classifiers from bound nouns**?

  ○ "Bound nominal roots including classifiers form a continuum from rather lexical to more grammatical elements" (Admiraal and Danielsen 2009: 81)

  ○ "There are often some nouns that seem to lie on the threshold between classifiers and specific nouns" (Dixon 1986:106)

N-N compounds vs. N-CLF derived nouns

N-N compounds: N2 is usually a bound noun

Independent nouns
may occur as nominal heads without morphology

MT
wiye	n-wiye-ra
ox	1SG-ox-PSD
'ox'	'my ox'

H
pagn	ndo'-edn	pagn
father	1SG-GEN	father
'father'	'my father'	

rarely found as N2 in N-N compounds, and rarely incorporated within a verb

Bound nouns
never occur as nominal heads without morphology

MT
n-juma	jma-re
1SG-sickness	sickness-NPSD
'my sickness'	'sickness'

H
ndo'-edn-ndik	wa-ndik
1SG-GEN-name	NPF-name
'my name'	'name'

often found as N2 in N-N compounds, and incorporated within a verb

N-N compounds

Most common: endocentric compounds:
- N2 is a bound noun, the formal and semantic head of the compound
- N1 is semantically subordinate (Scalise & Bisetto 2009)

MT

(1)   su   kasiki-yeno
         ART.F   cacique-wife
         'a cacique's wife'

H

(3)   kaimäri-mbogn
         zungaro-lip
         'lip of a zungaro fish'

But also exocentric compounds:

(2)   kwoysumu
         kwoyu-sumu
         horse-snout
         'mountable ox' (Sp. buey caballo)

(3) can also be used as an exocentric compound, to refer to a person whose lips resemble these of a zungaro fish

N-CLF derived nouns

- In both MT and H, most CLF have broader semantics than Ns (except repeaters).
- Lieber and Stekauer 2009: "roots in some sense have more semantic substance than affixes."

	CLF	N
MT	-pi 'CLF.rope' (for belts, snakes, songs, words, activities,...)	giore 'snake'
MT	-pewo'u 'CLF.hand' (repeater)	-wupe 'hand'
Harakmbut	-pu' 'CLF:cylindrical;hollow' (in V for bamboo, glasses, bottles)	-pu' 'bamboo'
Harakmbut	-pi 'CLF:stick' (in V for sticks, arrows, pencils, pens)	-pi 'stick'

N-CLF derived nouns

Meaning built upon semantic properties of both N and CLF

MT   to   yuk-**pi**

           ART.NH fire-CLF:rope

           'a candle'

                      to   sawari-**omo**

                      ART.NH tobacco-CLF:liquid

                      'tobacco juice'

H   pera'-**po**

           rubber-CLF:round

           'plastic ball' (Hart 1963: 5)

                      siro-**po**

                      metal-CLF:round

                      'tin can' (Hart 1963: 1)

CLF cannot be considered a formal head.

Classifiers vs. bound nouns

Classifiers vs. bound nouns: roadmap

Comparison of bound nouns and CLF:

1) form & meaning

2) phonological integration

3) syntactic distribution

4) function on N and in V

1. Classifiers vs. bound nouns: form & meaning

Mojeño Trinitario

- 28 classifier suffixes

- most are CV, without an obvious relationship to a N (Ns are at least bisyllabic)

    -pi CLF.rope   ≠ *giore* 'snake'

- others show a formal and semantic relationship to a N (CLF meaning is more general, often about shape)

    - same form, related meaning

        -pu'i CLF.round&smooth   // *-pu'i* 'island'

    - related form, related meaning

        -ju'e ~ *-je* CLF.interior   // *-ju'e* 'stomach'

1. Classifiers vs. bound nouns: form & meaning

If suspect element shows either formal and/or semantic distinction between its function in word formation and as an NP head, it is considered a CLF.

to	n-ijare-**m'i** (< mu'i)
ART.NH	1SG-name-**CLF:environment**
'my birthday'	

to	ta-**em'i**	ma 'chane < im'i (a+i = ae)
ART.NH	3NH-**phys_prop**	ART.M person
'the shape of a man'		

If suspect element shows neither formal nor semantic distinction between its function in word formation and as an NP head, it is considered a N.

to	manka-**chpu**
ART.NH	mango-**trunk**
'the mango tree trunk'	

to	ta-**chupu**	(to)	manka
ART.NH	3NH-**trunk**	(ART.NH)	mango
'the trunk of a mango tree'			

1. Classifiers vs. bound nouns: form & meaning

Harakmbut

- about 7 CLF suffixes; CV (some independent nouns are also monosyllabic, e.g. *kä* 'type of pineapple')
- all show a relationship to a bound N:
    - (a) same form, related meaning (shape; quality):

-mba'	CLF:2.dimensional	-mba' 'hand'	bodypart
-pe	CLF:disk	-pe 'jaw, chin, cheek'	bodypart
-pa	CLF:rod	-pa 'penis'	bodypart
-pu'	CLF:cylindrical;hollow	-pu' 'bamboo'	plant
-nda	CLF:fruit	-nda 'fruit'	plant part

    - (b) same form, bound noun just denotes the shape of CLF:

-pi	CLF:stick	-pi 'stick'
-po	CLF:round	-po 'something round'

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2. Classifiers vs. bound nouns: phonological integration

Mojeño Trinitario

CLF and N in compounds behave identically as part of the word for stress placement, phonotactics and rhythmic syncope (Rose 2017).

V-**CLF**

nsio**pue**ko(< n-siopo)
nu-siopo-**e**-ko
1SG-enter-CLF:water-ACT
'I enter water'

N-**N**

wak**ae**chkopa (< waka)
waka   **ichko**-pa
cow   excrement-CLF
'cow dung'

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2. Classifiers vs. bound nouns: phonological integration

Harakmbut

CLF and N in compounds behave identically as part of the word for stress placement

N
s<u>i</u>ro
'metal'

N
t<u>a</u>re
'manioc'

N-**CLF**
si<u>ro</u>-**pi**
metal-CLF:stick
'knife' (cf. Hart 1963: 1)

N-**N**
ta<u>re</u>-**mba'**
manioc-hand;leaf
'manioc leaf'

3. Classifiers vs. bound nouns: syntactic distribution

	Harakmbut		Mojeño Trinitario	
	bound N	CLF	bound N	CLF
as NP head	✓	✗	✓	✗
on numerals	✓	✗	✓	✓
on adjectives	✗	✗	✓	✓
on nouns	✓	✓	✓	✓
in verbs	✓	✓	✓	✓

MT: multiple classifier system (Aikhenvald 2000)

3. Classifiers vs. bound nouns: syntactic distribution

MT: **CLF** and **bound N** show shared distribution

NUM-CLF
no	api-**na**-no	'chañ(e)-ono
ART.PL	two-**CLF:h.pl**	person-PL

'two persons'

ADJ-CLF
to	chope-**gie**	wkugi
ART.NH	big-**CLF:cyl**	tree

'the big trunk'

V-CLF
n-semo-**pi**-ko
1SG-be_angry-**CLF:rope**-ACT
'I am angry at words'

NUM-N
api-**pgienu** (<pigienu)
two-**neck**
'two necks'

ADJ-N
ema	'chope-**tupara'o**.
3M	big-**charge**

'the biggest responsability'

V-N
tvio'iriko
ti-ve-**o'i**-ri-ko
3-take_out-**fruit**-PLURACT-ACT
'he collects fruits'

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3. Classifiers vs. bound nouns: syntactic distribution

Harakmbut

- **numerals** are free morphemes; never take CLF
- yet **bound N** may form one prosodic word with NUM (b), unlike free N

'I have two hands'

(a)

ïh-tö-ë-ÿ	**mbotta'**	**wa-mba'**
1SG.IND-SOC-be-1.IND	two	NPF-hand

(b)

ïh-tö-ë-ÿ	**mbotta'-mba'**
1SG.IND-SOC-be-1.IND	two-hand

'I have two dogs'

ïh-tö-ë-ÿ	*mbotta'*	*kuwa*
1SG.IND-SOC-be-1.IND	two	dog
[kuwa: free noun]		

- **adjectives** never take CLF

ïh-tö-ë-ÿ	wa-'i	mboro'-nda
1SG.IND-SOC-be-1.IND	NPF-foot	big-NDA

'I have big feet'

3. Classifiers vs. bound nouns: syntactic distribution

	Harakmbut		Mojeño Trinitario	
	bound N	CLF	bound N	CLF
as NP head	✓	✗	✓	✗
on numerals	✓	✗	✓	✓
on adjectives	✗	✗	✓	✓
on nouns	✓	✓	✓	✓
in verbs	✓	✓	✓	✓

- In both H and MT, head of NP is a context restricted to N
- In H: N and CLF share 2 environments, 2 other restricted to N
- In MT: N and CLF share the same distribution, except for head of NP

4. Classifiers vs. bound nouns: functions on N

→ But same distribution does not mean same function, e.g. on N:

Types of noun incorporation	Harakmbut		Mojeño Trinitario	
	bound N	CLF	bound N	CLF
word formation	✓	✓	✓	✓
categorization	X	X	X	✓

• MT: multifunctional classifier (Krasnoukhova 2012): same set used for categorization, derivation and some agreement:

CLF on N with derivational function
       to   yuk(u)-**pi**
       ART.NH   fire-CLF:rope
       'a candle'

CLF on N with categorizing function
       to   aramre-**pi**
       ART.NH   barbed_wire-CLF:rope
       'barbed wire'

4. Classifiers vs. bound nouns: functions in V

Types of noun incorporation (Mithun 1984)	Harakmbut		Mojeño Trinitario	
	bound N	CLF	bound N	CLF
Type I: lexical compounding	✓	✗	✓	✗
Type II: manipulation of case	✓	✗	✓	✓
Type III: backgrounding in discourse	✓	✓	✗	✓
Type IV: classifying with 'coreferential' NP	✗	✓	✗	✓

4. Classifiers vs. bound nouns: functions in V

Mojeño Trinitario

V-**N**

Type I: lexical compounding

t-vi-**o'i**-ri-ko
3-take_out-**fruit**-PLURACT-ACT
'The man collects fruits.'

Type II: manipulation of case

na-ech-**kute**-cho-po   eto
3PL-cut-**hindleg**-ACT-PFV   NH
povre   sorare
poor   animal
'They cut off the hindleg of the poor animal.'

V-**CLF**

Type II: manipulation of case
n-eja-**j**-ko   to   tyuraji
1SG-sit-**CLF:shapeless**-ACT   ART.NH   mud
'I am (heap-)sitting in the mud.'

Type III: backgrounding in discourse
p-eja-**pue**-gi-a
2SG-sit-**CLF:ground**-ACT-IRR
'Please sit down (on the floor).'

Type IV: classifying with 'coreferential' NP
t-eja-**me**-re-ko   te   pjo
3-sit-**CLF:fabric**-PLURACT-ACT   PREP DEM
ñiye'e   estera
3M-POSS   mat
'The man is (fabric-)sitting on a mat.'

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4. Classifiers vs. bound nouns: functions in V

Harakmbut

N-V

Type I: lexical compounding

| ndo'-edn | wa-nda-po | | ö-**më'**-a' |
| 1SG-GEN | NPF-CLF:fruit-CLF:round | | 3SG.IND-**liver**-say |

'My belly is making noise.' (lit. 'liver-says')

Type II: manipulation of case

| mbe-**ku**-ti-kot-uy-ne | | apoare'-a | ta'mba-ya |
| 3SG>1/2SG-**head**-UP-fall-DIST.PST-IND | | papaya-NOM | swidden-LOC |

'A papaya fell on my head in the swidden long ago.'

4. Classifiers vs. bound nouns: functions in V

Harakmbut

CLF-V

Type III: backgrounding in discourse
pera	o-n-ka	änï,	o-mbewik-po	eskalera-te,	änï
pear(Sp)	3SG.IND-SPAT-do	FILLER	3SG.IND-go.up-DEP	ladder(Sp)-LOC	FILLER

'He is picking pears, eh, going up on a ladder, eh'

o-ma-**nda**-e-a,		o-ma-**nda**-e-a	änï,	kanasta-yo,
3SG.IND-VPL-**CLF:fruit**-get-TRVR		3SG.IND-VPL-**CLF:fruit**-get-TRVR	FILLER	basket(Sp)-LOC

'He is taking/collecting them (the fruits), eh, in a basket.'

Type IV: classifying with 'coreferential' NP
men	kösö	ya-**po'**-sak-on?
which	pot	3SG.DUB-**CLF:round**-break-PFV.PAT

'Which pot is breaking?'

Conclusion

Conclusion - The issue

Two very similar binominal naming constructions in 2 Western Amazonian languages: N-N & N-CLF derived noun

- Raises the issue of synchronic distinction b/w Ns and CLFs

- Various answers to this tricky descriptive task

  o Gill 1957 on MT: some bound nouns are used as classifiers
  o Admiraal and Danielsen 2014 on Baure (Arawak): CLF are a type of nominal roots
  o This talk
    - offers some criteria to distinguish CLF from N
    - suggests that their similarities point to the grammaticalization route from bound nouns to classifiers

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Conclusion - Some answers

Criteria to distinguish CLF from N are to be looked for beyond complex nouns:

	Harakmbut	Mojeño Trinitario
• CLF formally or semantically distinct from Ns	✗	✓
• CLF have a categorizing function on N	✗	✓
• CLF cannot function as NP head	✓	✓
• CLF have a categorizing function when incorporated in verbs	✓	✓

Conclusion - Back to the origin

- Similarity in use of bound N and CLF points to a series of source constructions for the development of classifiers through grammaticalization (more grammatical function, abstraction and extension of meaning, phonetic erosion)

- Fabb (1998:68): "diachronic loss of transparency (both formal and interpretive) can be seen in the process whereby a part of a compound becomes an affix"

- The grammaticalization of CLF did not involve the shift from an independent item to a bound one, but occurred only **after** the element became bound to the root through compounding (with loss of referentiality and case role) (cf. Mithun 1997 on lexical affixes)

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Extras   N-N compounds

N-N compounds differ from:

- nouns modified by another noun (two words, N2 specifies N1, both can be independent Ns), only in MT

ñi	'chane	'jiro
art.m	person	man

    'the man'

- genitive constructions

MT (two NPs, N1 is a bound noun, N2 is POSS)   H (two NPs: N1 POSS_er, N2 POSS_ed)

to	t(a)-og'e	to	kwoyu		apetpet-en	hak
art.nh	3nh-body	art.nh	horse		jaguar-GEN	house

'the body of the horse'   'the jaguar's den'

N-CLF derived nouns

CLF are not referential, their general function is modifying. Cf. Mithun 1986

→ CLF cannot be considered a semantic head.

CLF are not formal heads either.

in MT, CLF are not specialized with a particular gender
to   wayo-si
art.nh   deer_fly-clf:round
the deer fly

su   ty-jop-si
art.f   2-be_white-CLF:round
the white-haired woman

Syncope in MT

N-CLF

ptiku
peti-ku
house.UNPOSD-CLF:hollow
'room'

N-N

kchiipeno
kchiru-peno
hormiga-house.POSS
'hormiguero'

Classifiers vs. bound nouns: syntactic distribution

In both MT and H, head of NP is a context restricted to N.

Cf. Lieber and Stekauer 2009 "bound roots can be distinguished from affixes only by virtue of also occurring as free forms"

MT

to	yuk-pi		*to	ta-pi		to	yuku
art.nh	fire-CLF:rope		art.nh	3nh-CLF:rope		art.nh
'fire'			'a candle'		

su	kasikiyeno		su	ñiyeno		ñi	kasiki
su	kasiki-yeno		su	ñi-yeno		ñi	kasiki
art.f	cacique-wife		art.f	3M-wife	art.m	cacique
'a cacique's wife' {elicited}			'the wife of the cacique' {elicited}		