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**Equational predication and possessive modification:  
 Revisiting the NP-NP juxtaposition niche hypothesis**

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Outline of this presentation:

1. What is the NP-NP juxtaposition niche hypothesis?
2. Pointing out its problems
3. Defining terms used in this study and examining another language sample
4. Conclusion: There is no correlation between the uses of N-N juxtaposition
5. Further research question: What is a trigger for N-N juxtaposition?

**1. What is the NP-NP juxtaposition niche hypothesis?**

**The NP-NP juxtaposition niche hypothesis** proposed by Frajzyngier et al. (2002)

–the use of a copula in the unmarked present tense form depends on the availability of the formal niche NP-NP, i.e., a sequence of two noun phrases without any additional markers

- (i) if NP-NP is not used for an attributive function, the equational clause may be encoded by NP-NP without any markers:

(1) Hdi (Afro-Asiatic; Frajzyngier et al. 2002: 165)

a. Equational clause & Attributional function

*M̀nd-á ráyá mbítsá.*

man-GEN hunt Mbitsa

‘Mbitsa is a hunter.’

- (ii) if NP-NP encodes an attributive function, the equational clause must be marked by some other means, namely a copula:

(2) Mwaghavul (Afro-Asiatic; Frajzyngier et al. 2002: 162–63)

a. Equational clause

*Wur a wat.*  
 he COP thief  
 'He is a thief.'

b. Attributive function

*siwol laa*  
 money child  
 'child's money'

From these claims, they conclude that if a language exploits a formal niche for a function, it cannot use the same niche for another function.

## 2. Pointing out its problems

But this hypothesis has several problems:

(i) The definitions and uses of some terms used in Frajzyngier et al (2002) are unclear.

–for example, although they restrict the scope of their analysis to nominal and pronominal NPs (Frajzyngier et al. 2002: 156), their study includes other word classes such as adjectives, as seen in (3).

(3) Mina (Afro-Asiatic; Frajzyngier et al. 2002: 167)

*Ñkùá fés.*  
 goat small  
 'The goat is small.'

(ii) They miss some functions that are also expressed by N-N juxtaposition.

–confirm their claim: if a language exploits a formal niche for a function, it cannot use the same niche for another function.

But if one wants to make such a claim, one must consider all functions that the formal niche (namely, N-N juxtaposition) can express.

As will be seen, N-N juxtaposition can express other functions than predication and

modification.

(iii) Their analysis is biased in their choice of languages and areas.

–**three** language families (Afro-Asiatic, Indo-European, Sino-Tibetan) account for **51%**, and **five** language families (Afro-Asiatic, Indo-European, Sino-Tibetan, Austronesian, Uto-Aztecan) account for **63%** of the sample (see Table 1).

–**two** areas (Africa and Eurasia) account for **70 %** of the sample (see Figure 1).

**Table 1: The sample languages in Frajzyngier et al. (2002)**

<b>Language</b>	<b>Family</b>	<b>Area</b>
Hausa	Afro-Asiatic	Africa
Mwaghavul	Afro-Asiatic	Africa
Miya	Afro-Asiatic	Africa
Gidar	Afro-Asiatic	Africa
Mina	Afro-Asiatic	Africa
Hdi	Afro-Asiatic	Africa
Lele (Chad)	Afro-Asiatic	Africa
Dangaleat	Afro-Asiatic	Africa
Kisi	Atlantic-Congo	Africa
Lango (Uganda)	Nilotic	Africa
Central Kanuri	Saharan	Africa
Gooniyandi	Bunaban	Australia
Yidiñ	Pama-Nyugan	Australia
Kayardild	Tangkic	Australia
French	Indo-European	Eurasia
English	Indo-European	Eurasia
Russian	Indo-European	Eurasia
Polish (literary)	Indo-European	Eurasia
Polish (non-literary)	Indo-European	Eurasia
Japanese	Japonic	Eurasia
Halh Mongolian	Mongolic-Khitian	Eurasia
Athpariya	Sino-Tibetan	Eurasia
Mandarin Chinese	Sino-Tibetan	Eurasia

Old Chinese	Sino-Tibetan	Eurasia
Limbu	Sino-Tibetan	Eurasia
Turkish (spoken)	Turkic	Eurasia
Panamint	Uto-Aztecan	North America
Pipil	Uto-Aztecan	North America
Dehu	Austronesian	Papunesia
Kilivila	Austronesian	Papunesia
Lavukaleve	Isolate	Papunesia
Siroi	Nuclear Trans New Guinea	Papunesia
(Ayachucho) Quechua	Quechuan	South America



**Figure 1: Geographic distribution of the sample in Frajzyngier et al. (2002)**

### **3. Defining terms used in this study and examining another language sample**

Instead, the present study uses a sample of **40 languages from different families** distributed throughout the world. All the languages in the sample allow a zero copula (see Table 2 and Figure 2).

The present study uses terms defined more clearly:

Noun:

Noun is a word that is used as an argument of a verb, that is, indicates reference as information packaging function without any additional markers (cf. Haspelmath 2023).

N-N juxtaposition:

N-N juxtaposition is a structure in which two nouns appear next to each other without any additional markings between them, and each of Ns is not marked by formal markers that indicate a relationship between them such as flags and/or indexes.

In many languages, N-N juxtaposition can express:

Modification; Predication; Coordination; Compound

Modification (Croft 2022: 12, 34, 710):

Modification is a kind of information packaging. It provides additional information about the referent and enriches the specification of the referent for the hearer.

Predication (Croft 2022: 12, 34, 722) :

Predication is a kind of information packaging. It is what the speaker is asserting about the referents in a particular utterance.

Coordination (cf. Croft 2022: 682; Haspelmath 2007:1):

Coordination is a syntactic construction in which two or more units are construed as part of a complex figure information packaging.

Compound (cf. Croft 2022: 678):

Compound is a word in which two roots are combined in a single.

I use the term *use* as a cover term for a few deferent meanings:

**Modification use**

- possession
- alienable
- inalienable
- restrictive
- appositive

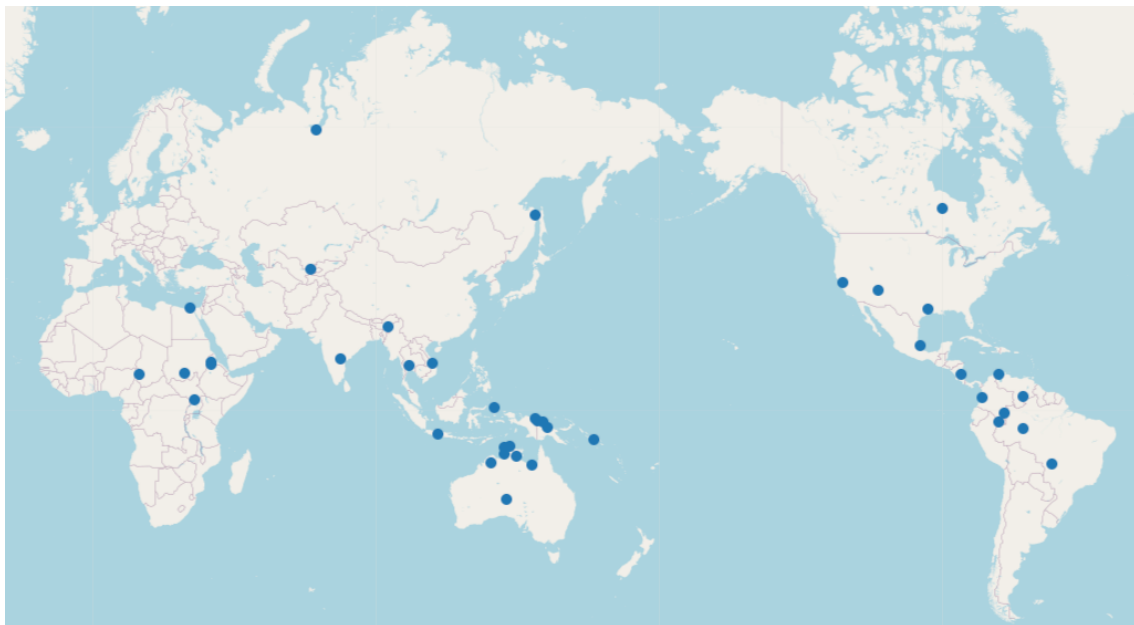
**Predication use**

- equational
- classificational

**Coordination use**

- conjunction
- disjunction
- adversative coordination

Of course, other uses and meanings can be expressed by N-N juxtaposition out of my sample, even within my sample, but it is sufficient to test the hypothesis.



**Figure 2: Geographic distribution of the sample**

**Table 2: The sample languages**

<b>Language</b>	<b>Family</b>	<b>Area</b>
Egyptian Arabic	Afro-Asiatic	Africa
Nara	Isolate	Africa
Bagirmi	Central Sudanic	Africa
Acoli	Nilotic	Africa
Kunama	Kunama	Africa
Tima	Katla-Tima	Africa
Pitjantjatjara	Pama-Nyungan	Australia

Iwaidja	Iwaidjan Proper	Australia
Tiwi	Isolate	Australia
Ngarinyin	Worrorran	Australia
Mullukmulluk	Northern Daly	Australia
Kayardild	Tangkic	Australia
Ngalakgan	Gunwinyguan	Australia
Amur Nivkh	Nivkh	Eurasia
Thai	Thai-Kadai	Eurasia
Telugu	Dravidian	Eurasia
Tundra Nenets	Uralic	Eurasia
Northern Uzbek	Turkic	Eurasia
Angami Naga	Sino-Tibetan	Eurasia
Sedang	Austroasiatic	Eurasia
Alabama	Muskogean	North America
Salinan	Salinan	North America
Yecuatla Totonac	Totonacan	North America
Rama	Chibchan	North America
Severn Ojibwa	Algic	North America
Hopi	Uto-Aztecan	North America
Standard Indonesian	Austronesian	Papunesia
Sentani	Sentanic	Papunesia
Kobon	Nuclear Trans New Guinea	Papunesia
Lavukaleve	Isolate	Papunesia
Imonda	Border	Papunesia
Bukiyip	Nuclear Torricelli	Papunesia
Sahu	North Halmahera	Papunesia
Epena	Chocoan	South America
Yagua	Peba-Yagua	South America
Sanumá	Yanomamic	South America
Paumari	Arawan	South America
Wayuu	Arawakan	South America
Bororo	Bororoan	South America
Tanimuca-Retuarã	Tucanoan	South America

Contrary to the NP-NP juxtaposition niche hypothesis proposed by Frajzyngier et al (2002), in almost all languages N-N juxtaposition can have a few uses.

In Nara, N-N juxtaposition can have a predication use when its subject is in the third person plural. In addition, it can have a modification use.

(4) Nara (isolate; Eritrea)

a. Equational (Omda Ibrahim Elnur 2016: 73)

*Uk-ku oo dongor-a-ge.*  
 this-PL my daughter-PL-3PL  
 ‘These are my daughters.’

b. Restrictive modification (Omda Ibrahim Elnur 2016: 39)

*hadi beesta*  
 leather shoes  
 ‘leather shoes’

In Sentani, N-N juxtaposition can be used for predication and modification. According to Mayer (2021: 64), in some cases, multiple interpretations are possible.

(5) Sentani (Sentanic)

a. Equational & kinship relation (Mayer 2021: 63)

*Awansi Jacobus mænggə fa.*  
 Awansi Jacobus girl young  
 ‘Awansi is Jacobus’s daughter.’

b. Classificational (Mayer 2021: 63)

*Awansi mænggə fa.*  
 Awansi girl young  
 ‘Awansi is a girl.’

c. Part-whole relation (Mayer 2021: 45)

*imaə puma=nə*  
 house top=in  
 ‘on the top of the house’



## d. Multiple interpretations (Mayer 2021: 64)

*pu*                      *wail*  
 water                    life  
 ‘living water’ or ‘the water is alive’ or ‘the life of water’

## e. Multiple interpretations (Mayer 2021: 39)

*taj*                      *m-æko*  
 1SG.POSS            1PL.POSS-father  
 ‘my father’ or ‘It is my father.’

In Yecuatla Totonac, N-N juxtaposition can be interpreted as coordination (or apposition) and/or a predication.

## (6) Yecuatla Totonac (Totonacan; MacKay 1999: 403)

*wɪn*    *qɑt*    *min-kɪw*  
 this    big    2POSS-tree  
 ‘this big one, your tree; this big one is your tree’

In Sanumá, N-N juxtaposition can have a predication use. And this can also express an ownership relation (although it is less common) and it shows ambiguity in terms of whether it is interpreted as a predication use or a modification use (Borgman 1990:127).

## (7) Sanumá (Yanomamic)

## a. Equational (Borgman 1990: 21)

*Ki*    *ipa*    *ulu*    *a.*  
 that    my    child    3SG  
 ‘That is my child.’

## b. Classificational (Borgman 1990: 21)

*Hisa*                      *sa.*  
 young man            1SG  
 ‘I am a young man.’

## c. Ownership relation (Borgman 1990: 127)

*Katimani*            *tötö*    *sai*    *pö*  
 Katimani            3PL    house    3PL



<i>Biz-ning</i>	<i>yurt-imiz</i>	<i>chaman.</i>
1PL-GEN	country-POSS.1PL	flower garden

‘Our country is a flower garden.’

- c. Restrictive modification (Bodrogligeti 2003: 244; gloss added)

<i>elektr</i>	<i>arra</i>
electricity	saw

‘electric saw’

In Standard Indonesian, N-N juxtaposition can have a predication use. Also, N-N juxtaposition can have a modification use. It usually expresses an ownership relation, but according to Sneddon et al. (2010: 150), it could mean a kinship relation, too.

- (10) Standard Indonesian (Austronesian; gloss added)

- a. Equational (Sneddon et al. 2010: 242)

<i>Ini</i>	<i>keputusan</i>	<i>saya.</i>
this	decision	my

‘This is my decision.’

- b. Classificational (Sneddon et al. 2010: 242)

<i>Dia</i>	<i>guru.</i>
3SG	teacher

‘She is a teacher.’

- c. Ownership relation (Sneddon et al. 2010: 148)

<i>rumah</i>	<i>Tomo</i>
house	Tomo

‘Tomo’s house’

- d. Kinship relation (Sneddon et al. 2010: 150)

<i>ibu</i>	<i>Suparjo</i>
mother	Suparjo

‘Suparjo’s mother’

For the data of all languages of my sample see Appendix.

#### 4. Conclusion: There is no correlation between the uses of N-N juxtaposition

In this presentation, I have claimed that there is no correlation between the uses of N-N juxtaposition. Or rather, in almost all languages of my sample, N-N juxtaposition can express a few uses. It seems that one of the motivations for proposing the NP-NP juxtaposition niche hypothesis is to avoid the ambiguity in interpretation of the formal niche, but in many cases, N-N juxtaposition does not show ambiguity in its meaning because we can interpret it in terms of the meanings of nouns, context (information structure), word order, and/or intonation.

#### 5. Further research question: What is a trigger for N-N juxtaposition?

The present study has revealed that ambiguity plays no role in the use of a copula (and other formal markers, such as genitive flags) and N-N juxtaposition. But at the same time, a few issues are left unclear. Here I show two examples, below.

(11) I do not know

- (i) what triggers N-N juxtaposition
- (ii) whether some uses shown in this presentation are related to one another or not

These issues require further research. Thus, I leave them for further research.

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# Appendix

Language	Family	Area	Predication use	Modification use	Coordination use	Compound use
Egyptian Arabic	Afro-Asiatic	Africa	Yes: Eid (1991: 41)	Yes: Gary & Gamal-Eldin (1982: 48-49)	No: Gary & Gamal-Eldin (1982: 33-34)	Yes: Gary & Gamal-Eldin (1982: 118)
Nara	Isolate	Africa	Yes: Omda Ibrahim Elnur (2016: 72-73)	Yes: Omda Ibrahim Elnur (2016: 39; 139)	No: Omda Ibrahim Elnur (2016: 49-50)	?
Bagirmi	Central Sudanic	Africa	Yes: Stevenson (1969: 163)	Yes: Stevenson (1969: 57)	No: Stevenson (1969: 182-183)	Yes: Stevenson (1969: 55)
Acoli	Nilotic	Africa	Yes: Heine & König (2010: 29-30)	Yes: Heine & König (2010: 61)	No: Heine & König (2010: 98)	Yes: Heine & König (2010: 62)
Kunama	Kunama	Africa	Yes: Bender (1996: 41)	No: Bender (1996: 18-19)	No: Bender (1996: 23)	Yes: Bender (1996: 12)
Tima	Katla-Tima	Africa	Yes: Alamin (2009: 202)	Yes: Alamin (2009: 131)	Yes?: Alamin (2009: 305-306)	Yes: Alamin (2009: 303)
Pitjantjatjara	Pama-Nyungan	Australia	Yes: Langlois (2004: 85); Eckert & Hudson (1988: 104)	Yes: Langlois (2004: 84)	Yes: Langlois (2004: 118)	Yes?: Langlois (2004: 32)
Iwaidja	Iwaidjan Proper	Australia	Yes: Capell (1962: 164)	Yes: Capell (1962: 155)	Yes: Capell (1962: 160)	Yes?: Capell (1962: 158)
Tiwi	Isolate	Australia	Yes: Lee (1987: 285-286)	Yes: Osborne (1974: 74)	Yes: Lee (1987: 230)	Yes: Lee (1987: 98)
Ngarinyin	Worrorran	Australia	Yes: Coate & Oates (1970: 66)	Yes: Spronck (2015: 39)	No: Spronck (2015: 38)	Yes: Coate & Oates (1970: 23)
Mullukmulluk	Northern Daly	Australia	Yes: Birk (1976: 153)	Yes: Birk (1976: 106)	Yes: Birk (1976: 158)	?
Kayardild	Tangkic	Australia	Yes: Evans (1995: 314)	Yes: Evans (1995: 244; 248)	Yes: Evans (1995: 250; 395)	Yes: Evans (1995: 197)
Ngalagan	Gunwinyguan	Australia	Yes: Merlan (1983: 57)	Yes: Merlan (1983: 82)	Yes: Merlan (1983: 148)	?
Amur Nivkh	Nivkh	Eurasia	Yes: Nedjalkov & Otaina (2013: 37)	Yes: Nedjalkov & Otaina (2013: 9)	No: Nedjalkov & Otaina (2013: 58)	?
Thai	Thai-Kadai	Eurasia	Yes: Iwasaki & Ingkaphirom (2005: 228-229)	Yes: Iwasaki & Ingkaphirom (2005: 65-66)	No: Iwasaki & Ingkaphirom (2005: 10)	Yes: Iwasaki & Ingkaphirom (2005: 37)
Telugu	Dravidian	Eurasia	Yes: Krishnamurti & Gwynn (1985: 308-309)	No: Krishnamurti & Gwynn (1985: 76)	Yes: Krishnamurti & Gwynn (1985: 325-328)	Yes: Krishnamurti & Gwynn (1985: 51)
Tundra Nenets	Uralic	Eurasia	Yes: Nikolaeva (2014: 254-256)	Yes: Nikolaeva (2014: 165; 171)	Yes: Nikolaeva (2014: 414-415; 428)	Yes: Nikolaeva (2014: 167)
Northern Uzbek	Turkic	Eurasia	Yes: Bodrogligeti (2003: 1125)	Yes: Bodrogligeti (2003: 244)	Yes: Bodrogligeti (2003: 143)	Yes: Bodrogligeti (2003: 241)
Angami Naga	Sino-Tibetan	Eurasia	Yes: Kuolie (2006: 116; 213)	Yes (apposition): Kuolie (2006: 168)	No: Kuolie (2006: 167)	Yes: Kuolie (2006: 77)
Sedang	Austroasiatic	Eurasia	Yes: Smith (1979: 116-117)	Yes: Smith (1979: 76-77)	No: Smith (1979: 154)	Yes: Smith (1979: 79)
Alabama	Muskogean	North America	Yes: Lupardus (1982: 217)	No: Lupardus (1982: 94-100)	No: Lupardus (1982: 239; 254)	Yes: Lupardus (1982: 102)
Salinan	Salinan	North America	Yes: Shaul (2020: 83)	No: Shaul (2020: 49-50; 80)	No: Shaul (2020: 106-107)	Yes: Shaul (2020: 42)
Yecuatla Totonac	Totonacan	North America	Yes: MacKay (1999: 404-405)	No: MacKay (1999: 347-352)	Yes: MacKay (1999: 403)	Yes: MacKay (1999: 371-372)
Rama	Chibchan	North America	Yes: Grinevald (1990: 96; 130)	Yes: Grinevald (1990: 94)	Yes?: Grinevald (1990: 239)	Yes: Grinevald (1990: 67)
Severn Ojibwa	Algic	North America	Yes: Todd (1970: 79)	No: Todd (1970: 32-34)	Yes: Todd (1970: 41)	Yes: Todd (1970: 113)
Hopi	Uto-Aztecan	North America	Yes: Langacker (1977: 40)	No: Jeanne (1978: 112-125)	Yes: Langacker (1977: 160)	Yes: Langacker (1977: 72)
Standard Indonesian	Austronesian	Papunesia	Yes: Sheddon (2010: 242)	Yes: Sheddon (2010: 148-150)	No: Sheddon (2010: 347)	Yes: Sheddon (2010: 26-28)
Sentani	Sentanic	Papunesia	Yes: Mayer (2021: 63-64)	Yes: Mayer (2021: 45)	No: Mayer (2021: 39)	yes: Mayer (2021: 37)
Kobon	Nuclear Trans New Guinea	Papunesia	Yes: Davies (1981: 11)	Yes: Davies (1981: 57)	Yes: Davies (1981: 72-73)	Yes: Davies (1981: 57)
Lavukaleve	Isolate	Papunesia	Yes: Terrill (2003: 240)	Yes: Terrill (2003: 93)	Yes: Terrill (2004: 431)	Yes?: Terrill (2003: 93)
Imonda	Border	Papunesia	Yes: Seiler (1985: 154)	No: Seiler (1985: 62-63)	No: Seiler (1985: 68)	Yes: Seiler (1985: 63)
Bukiyip	Nuclear Torricelli	Papunesia	Yes: Conrad & Wogiga (1991: 90-91)	Yes: Conrad & Wogiga (1991: 61)	Yes: Conrad & Wogiga (1991: 64)	?
Sahu	North Halmahera	Papunesia	Yes: Visser & Voorhoeve (1987: 59)	Yes (apposition): Visser & Voorhoeve (1987: 54)	Yes: Visser & Voorhoeve (1987: 54)	No?: Visser & Voorhoeve (1987: 35)
Epena	Chocoan	South America	Yes: Harms (1994: 33-34)	Yes: Harms (1994: 50-51)	No: Harms (1994: 55)	Yes: Harms (1994: 54)
Yagua	Peba-Yagua	South America	Yes: Payne (1985: 58)	Yes: Payne (1985: 155)	Yes: Payne (1985: 97-98)	Yes: Payne (1985: 138)
Sanumá	Yanomamic	South America	Yes: Borgman (1990: 21)	Yes: Borgman (1990: 37; 127)	Yes?: Borgman (1990: 34; 57-59)	Yes?: Borgman (1990: 137)
Paumari	Arawan	South America	Yes: Chapman & Derbyshire (1991: 168)	No: Chapman & Derbyshire (1991: 257-259)	No: Chapman & Derbyshire (1991: 189)	Yes?: Chapman & Derbyshire (1991: 266)
Wayuu	Arawakan	South America	Yes: Ehrman (1972: 149)	Yes (apposition): Ehrman (1972: 47)	No: Ehrman (1972: 47-49)	Yes: Ehrman (1972: 27)
Bororo	Bororoan	South America	Yes: Crowell (1979: 39-41)	No: Crowell (1979: 214-218)	No: Crowell (1979: 241-247)	?
Tanimuca-Retuará	Tucanoan	South America	Yes: Strom (1992: 129)	Yes: Strom (1992: 5; 48)	No: Strom (1992: 39)	Yes: Strom (1992: 24)