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29 Non-verbal predication in Formosan languages

Abstract: This chapter provides an overview of non-verbal predication in Formosan languages, starting with a brief review of their major nominal and verbal characteristics, before showing how non-verbal predication resembles or differs from verbal predication and explaining the exclusion of certain constructions that should be considered instances of verbal rather than non-verbal predication. A classification of nominal, locative and possessive predication in Formosan languages with their morphosyntactic characteristics follows.

1 Introduction

1.1 Defining non-verbal predication

This chapter describes non-verbal predication in Formosan languages. I follow the definition proposed in Chapter 1 (Creissels, Bertinetto, and Ciucci, this volume) in treating non-verbal predicative constructions "as constructions giving rise to non-elliptical clauses analyzable as consisting of an argument phrase and a predicate phrase in which the property- or relation-denoting element that acts as the semantic nucleus of the predicate phrase is not a verb".[1]

Formosan languages exhibit two of the three types of non-verbal predicative constructions distinguished by Hengeveld (1992): the copula construction, as in (1) and the juxtaposition construction, as in (2). The third type is a typologically rarer predicative inflection construction, which Bertinetto et al. (2019) propose to split into two types (called Subtypes IIIa and IIIb in Chapter 1); none of them have been reported in the Formosan languages.

1 Haspelmath (2025) prefers to use the term "nonverbal clause" constructions and, following Stassen (1997), makes a distinction between predicational vs. non-predicational clauses.

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(1) Tsou
zou *amo=su* *'o* *pasuya?*
COP father=2SG.GEN NOM Pasuya
'Is Pasuya your father?'
(Council of Indigenous Peoples 2021)[2]

(2) Budai Rukai
agi *kai* *lasu*?
younger.sibling this guy
'Is he your younger brother?'
(Council of Indigenous Peoples 2021)

It is important to note that in a copula construction, the copula does not constitute the semantic nucleus of the predicate phrase; instead, the non-verbal predicate does, whatever the lexical class involved. Two types of evidence are advanced by Hengeveld (1992: 29) to support this claim: first, he shows, after Falk (1979: 19), that in non-verbal predicate constructions, the predicate rather than the copula imposes restrictions on the arguments. Compare ***Sheila*** *is* ***ill*** vs.******The table*** *is* ***ill*** and ***The table*** *is* ***round*** vs.******Sheila*** *is* ***round***. Second, he argues that the predicate (and not the copula) determines the number of obligatory arguments. Compare *This book is* ***fascinating*** vs. *This book is* ***identical to that one*** vs.**This book is* ***identical***. [2]

1.2 The Formosan languages: brief characterization

Fifteen Formosan languages, some of which include a variety of (sub-)dialects, are still spoken today more or less actively, the number of speakers ranging from fewer than a dozen to a few thousands. These include Atayal, Amis, Bunun, Kavalan, Kanakanavu, Pazeh-Kaxabu, Paiwan, Puyuma, Rukai, Saaroa, Saisiyat, Seediq, Thao and Tsou.[3] Yami, spoken on Orchid Island, is usually included in the literature on Formosan linguistics because it is technically located within Taiwanese jurisdiction, even though it linguistically belongs to the Batanic group (Malayo-Polynesian sub-branch) and is therefore typologically quite different. It will not be mentioned in this chapter.

2 Unless mentioned otherwise, data come from my own (unpublished) fieldnotes.

3 This linguistic categorization contradicts the governmental classification, which is itself rather complex. Until the late 1990's, the government officially recognized only nine ethnic groups/languages. Nowadays, sixteen are officially recognized, but this classification singles out Truku (which is part of Seediq) and Sakizaya (a dialect of Amis, Tsuchida 1988) as distinct languages while they form dialects of larger linguistic families. On the other hand, it does not recognize "Pazeh-Kaxabu" (Ferrell 1968), two dialects of the same language spoken in central Taiwan by less than ten fluent and communicatively competent speakers until the early 2020s.

Formosan languages differ as to how they express the relevant types of sentences, by means of either non-verbal or verbal predicates. To my knowledge, there is no in-depth language-specific or cross-linguistic description of this type of construction to date.

In the following, I first depict briefly the characteristics of Formosan languages that are relevant for understanding non-verbal predication.

Most Formosan languages are predicate-initial, with the subject occurring just after the predicate (VSO) or in sentence-final position (VOS); word order is fixed in certain languages (e.g., Atayal, Seediq) and more flexible in others (e.g., Paiwan). If a verb is followed by a clitic pronoun, word order is stricter, with the nominative pronoun usually occurring closer to the verb, as in (3a). As second-position clitics, pronouns usually move up and appear just after the negator, if it appears in initial position before the verb, as in (3b).

(3) Isbukun Bunun

a. *na=**tal-'isuh**=in=**ik.***
IRR=wash-take.a.shower=PRF=1SG.NOM
'I am going to take a shower.'
(L. Li 2018: 293)

b. ***ni=ik*** *'aip* *tal-bungu.*
NEG=1SG.NOM today wash-head
'I did not wash my head today.'
(L. Li 2018: 85)

The most important grammatical features concern voice marking on verbs and case marking on noun phrases, which compose the basis of a complex system of grammatical relations, as is typically found in Western Austronesian languages (De Busser 2024; see §2.1.2, ex. (8)). Core arguments are usually case-marked as nominative, oblique and genitive (e.g., Paiwan, Amis), thus distinguishing subject (marked as nominative) and non-subject, including the non-subject undergoer (usually marked as oblique) and the non-subject actor (marked as genitive). Some languages have undergone case attrition (e.g., Mantauran Rukai, Saaroa, Kanakanavu) or case syncretism (e.g., Atayal, Puyuma); others have much more complex case marking systems (e.g., Saisiyat). There is usually a distinction between common nouns (marked by a noun class marker,[4] with the vowel *a* or *u*) and personal nouns (marked by *i*); in some languages, case markers also exhibit other semantic properties such as referentiality,[5] definiteness and/or plu-

4 A case marker may be made up of two parts, the first indicating the case, and the second information about the noun class of the NP. This morpheme might occur independently without having to mark case, as in the case of Paiwan, cf. *ti* 'NOM.PN' or 'PN' or Amis *o* 'CN' (Wu 2006).

5 The notion of referentiality "involves, roughly, the speaker's intent to 'refer to' or 'mean' a nominal expression to have non-empty references – i.e. to 'exist' – within a particular universe of discourse." (Givón 1978: 293)

rality.[6] In some languages (e.g., Puyuma), core arguments must be co-indexed on the verbs. The nominative subject appears as an enclitic and the genitive non-subject actor appears as a proclitic: see, for instance, (4), where *isaw* 'Isaw' is marked as oblique, but is co-indexed by a third-person pronoun on the verb as one of the core arguments of the verb; non-core arguments (such as *paisu* 'money' in (4)) are never co-indexed on the verb.

(4) Nanwang Puyuma
tu**=trakaw-ay=**ku *na* *paisu* *kan* *isaw.*
3.GEN=steal-UVL=1SG.NOM NOM.DEF money OBL.SG Isaw
'Isaw stole money from me.'
(Teng 2009: 147)

Another characteristic relevant for the present study is the structure of noun phrases, with (i) two possible positions for determiners and case markers (before or after the noun) and (ii) the occurrence or absence of a ligature, depending on the language, as shown in (5a–c) (see Zeitoun and Huang 2024).[7]

(5) Mantauran Rukai
a. ***dhona'i*** ***'aolai*** *'a* *o-'ilape* *apoto=ni.*
that man/male TOP DYN.FIN-look.for stone=3SG.GEN
'As for that boy, he is looking for his stone(s).'
(Zeitoun 2007: 389)

Puljetji Paiwan
b. *si-qa~qivu* *nimadju* ***azua=a*** ***na-kuya.***
UVC-RED~tell 3SG.GEN that=LIG NA[7]-bad[STAT]
'He leaked out that bad news.'
(Huang 2012: 144)

Tsou
c. *mo* *meoisi* ***'e*** *mo* *kua'onga*
AV.REAL big[STAT] NOM AV.REAL black[STAT]
ci ***ngiao*** ***tan'e.***
REL cat this
'This black cat is big.' (Lit. 'This black (reference) which (is) a cat is big.')
(Zeitoun 2000a: 93)

6 Plurality is usually only marked for personal nouns (which include proper names and kin older than the speaker), as in Puyuma, and/or human nouns, as in Saisiyat.

7 The meaning of *na-* in *nakuya* 'bad' is ill-understood and thus remains unglossed. I follow conventions adopted in Formosan linguistics in indicating *na-* as NA.

1.3 Organization of this chapter

I first show how much non-verbal predication resembles or differs from verbal predication and explain the exclusion of certain constructions that are verbal (rather than non-verbal) in these languages (§2). The sections that follow aim at describing non-verbal predication. I will start with nominal predication (§3), a morphosyntactic type, and then I will address non-verbal constructions in relation with two semantic types of non-verbal predication: locative (§4) and possessive (§5). Concluding remarks are given in §6.

2 Structural properties

In this section, I briefly define nouns and verbs on the root level and on the word level (§2.1) as a background to establish the distinction between verbal and non-verbal predicates (§2.2). I then turn to missing lexical categories and show that they are conceptualized as verbs in most Formosan languages (§2.3).

2.1 Distinctions between nouns and verbs at the root level vs. word level

I first examine nouns and verbs as lexical categories (root level) (§2.1.1) before showing their structural properties as syntactic categories at the word level (§2.1.2).

2.1.1 Distinctions at the root level

There are two major open classes in Formosan languages, nouns and verbs, with substantial differences in transcategoriality. In some languages (e.g., Rukai), the distinction between nouns and verbs is rather clear-cut, with little lexical flexibility (Zeitoun 2007). For instance, stative verbs in Mantauran Rukai can be modified by *toramoro* 'very' (6a), but nouns cannot (6b).

(6) Mantauran Rukai

a. ***toramoro*** *ka* *ma-taadhi'i*
very LIG STAT.SUBJ-good
'very good'
(Zeitoun 2007: 67)

b. * ***toramoro*** *ka* *valrovalro*.
very LIG young.woman

The distinction between nouns and verbs might be more complex in other languages. In Puyuma, for instance, the root *takesi* 'study' is basically verbal because it can be used in an imperative clause without further derivation (7a). But when infixed with <*em*>, the reduplicated form *t*<*em*>*a~ka~kesi* can occur both as a verb meaning 'studying' (7b) and as a noun meaning 'student' (7c).

(7) Nanwang Puyuma
   a. ***takes-i*** *i* *sabak!*
      study-IMP LOC inside
      'Study inside!'
      (Teng 2008: 58)
   b. ***ta~ka~kesi****=ku.*
      <AV>~PROG~study=1SG.NOM
      'I am studying.'
      (Teng 2008: 58)
   c. *a* ***ta~ka~kesi****=ku.*
      NOM.INDF <AV>~PROG~study=1SG.NOM
      'I am a student.'
      (Teng 2008: 58)

In other languages, lexical roots are categorially neutral, and only derived and inflected stems are endowed with an identifiable category (Bril 2017: 361), as shown in the next section.

2.1.2 Distinctions at the word level

There seems to be no morphosyntactic test that applies across the board to all Formosan languages but verbs are usually marked as actor voice (AV),[8] as in (8a), or undergoer voice (UV), which subsumes UVP 'undergoer voice—patient', as in (8b), UVL 'undergoer voice—locative' and UVC 'undergoer voice—circumstantial'.[9] A noun can function as a verb when it is verbalized through a verbal affix, e.g., UVL marker or a stative marker, as shown in (9a–b).[10] What is important to note here is the distinction between "verb" (be it a verb at the root level or a denominal verb at the word level) and "nominal predicate" as discussed below, as they do not refer to the same grammatical entity.

8 Rukai is the sole language reported to display an active-passive dichotomy (Zeitoun 2007).

9 There are two things to note: (i) not all the Formosan languages exhibit that many voice distinctions; (ii) even in languages that exhibit full-fledged voice distinctions, this feature does not apply to all verbs. There is no way to make a general remark about which verbs are marked (or unmarked) for voice (with respect to verb classification, see Ross 2015).

10 This statement does not concern precategorial roots, e.g., Saisiyat *taew'an* 'house; build a house'.

(8) Kanakanavu

a. ***ni-k<um>aun=cu=ku*** *kamsia.*
PFV-<AV>eat=COS=1SG.NOM candy
'I have already eaten (a) candy/candies.'

b. ***ni-kaun=maku*** *kamsia.*
PFV:UVP-eat=1SG.GEN candy
'I ate the candy/candies.'

(9) Isbukun Bunun

a. ***dahpa-an*/*dahpa** *saikin* *mais* *susukan.*
illness-UVL/illness 1SG.NOM when injection
'I feel/felt aching when (I had) an injection.'
(L. Li 2018: 260)

Mantauran Rukai

b. ***ma-savare**-na*/****savare**-na* *lalake=li.*
STAT-young.man-still/young.man-still child=1SG.GEN
'My son is still a young man.'
(Zeitoun 2007: 69)

Voice interacts closely with mood (indicative and non-indicative) and aspect (perfective and imperfective). Languages differ in whether they distinguish realis and irrealis in the indicative, as exemplified in (10), or have grammaticalized perfective and imperfective as the most prominent aspectual features, as in (11). Most Formosan languages do not mark mood and aspect on underived nominals (the only known languages are Puyuma, Paiwan and Tsou) and only do so on deverbal nouns. Again, such grammatical features are not found in all languages or for all types of nominalization.

(10) Saisiyat

a. *yako* ***r<om>a'oe:*** *kinayhalan* *ka* *kasnaw.*
1SG.NOM <AV>drink one.ladle LIG soup
'I drank a ladle of soup.'
(Zeitoun, Chu, and kaybaybaw 2015: 321)

b. *yako* ***'am=r<om>a'oe:*** *kinayhalan* *ka* *kasnaw.*
1SG.NOM IRR=<AV>drink one.ladle LIG soup
'I will drink a ladle of soup.'

(11) Kanakanavu

a. ***c<in>a'uru=ke*** (*sua*) *ni-paca-a-in.*
<PFV.UV>sprinkle=3.GEN (NOM) PFV-pass-LOC.NMLZ-3.GEN
'She sprinkled salt where she passed.'

b. ***te***=*maku* ***kaɯn-ɯn*** *tanali* *isi* *si* *sa'o'o.*
IPFV=1SG.GEN eat-UVP peanut this because delicious[STAT]
'I will eat these peanuts because they are delicious.'

Nouns can be preceded (or followed) by demonstratives while verbs cannot, as in (12a–b).

(12) Mantauran Rukai
a. ***dhona'i*** ***'aolai*** *'a* *o-'ilape* *apoto=ni.*
that man/male TOP DYN.FIN-look.for stone=3SG.GEN
'As for that boy, he is looking for his stone(s).' (=7a)
(Zeitoun 2007: 389)
b. * ***dhona'i*** *o-'ilape* *apoto=ni.*
that DYN.FIN-look.for stone=3SG.GEN

In languages that exhibit auxiliary verbs, these can only co-occur with verbs, whatever the voice marking, as in (13a), and not with nouns, as shown in (13b).

(13) Squliq Atayal
a. ***wal*** ***gal-un*** *ni* *Tali'.*
PFV.PRF take-UVP GEN Tali
'Tali took it.'
(Chen 2022: 273)
b. * ***wal*** *ni* *Tali'* ***gal-un.***
PFV.PRF GEN Tali take-UVP

Some languages make a distinction between two types of genitive pronouns (see Teng and Zeitoun 2016). A verb cannot co-occur with a genitive pronoun marking possession but a noun can, as shown in (14). More specifically, in (14a), the nominal argument *manu* 'child' can take the genitive pronoun *-in* marking third-person possessor, cf. *manu-in* 'his child'. In (14b), the verb is marked by undergoer voice through the infixation of <*in*>. It cannot take the pronominal suffix *-in*. Rather, the non-subject actor is encoded through the genitive pronoun *=ke* (which never expresses possession). The reverse use of these pronouns in both examples leads to ungrammaticality.

(14) Kanakanavu
a. *t*<*in*><*m*>*angi* *manu-**in**/*=**ke**.*
<PFV><AV>cry child-3.GEN.PSR/*=3.GEN.NSA
'His/her/their child cried.'
(Zeitoun 2023: 251)
b. *s*<*in*>*a'ɯm=**ke**/*-**in*** *saviki.*
<PFV.ɯV>chew=3.GEN.NSA/*-3.GEN.PSR betelnut
'S/he chewed betelnuts.'

2.2 Structural properties of non-verbal vs. verbal predication

The above discussion shows that it is challenging to make generalizations on the noun vs. verb distinction in Formosan languages as they are grammatically very diverse. Still, a number of similarities and dissimilarities between non-verbal and verbal predication can be found, as outlined below.

2.2.1 Similarities between non-verbal and verbal predication

Three types of similarities can be found between non-verbal and verbal predication, though they do not apply to all Formosan languages: (i) word order of predicate and pronominal argument (if any) in affirmative and negative clauses, (ii) type of negator, (iii) marking of plurality.

A. Same word order in negative and affirmative (non-)verbal clauses
Non-verbal predication resembles verbal predication, as outlined in §1.2, in that the predicate usually occurs in initial position. If followed by a pronominal argument, then the nominative, usually a second-position clitic – attaches closer to the predicate, as in (15a–b).

(15) Isbukun Bunun
Nominal predication
a. ***maluspingaz****=ik.*
woman=1SG.NOM
'I am a woman.'
(L. Li 2018: 83)
Verbal predication
b. ***simul****=ik* *sui* *sia* *'abus.*
borrow=1SG.NOM money LOC Abus
'I borrow(ed) money from Abus.'
(L. Li 2018: 83)

The alternative, subject-initial word order in Thao, Saisiyat and Kaxabu is found in both non-verbal and verbal predication, as shown in (16a–b).

(16) Kaxabu
Nominal predication
a. *ita* *ka* ***tatawan****=****a*** ***saw****.*
1PL.INCL.NEUT COP Taiwan=LIG person
'We are Taiwanese.'
(Lim 2022: 184)

Verbal predication

b. *isiw* *ka* ***m-a-usa-(a)y*** *tshay?*
2SG.NEUT TOP AV-PROG-go-PROJ where
'Where are you going?'
(Lim 2022: 190)

B. Same negator

In Amis, Bunun, Paiwan, Saaroa, Rukai, Thao and Tsou the negator co-occurring with non-verbal and verbal predication is the same. An example is given in (17a–b), which is drawn from Mantauran Rukai.

(17) Mantauran Rukai

a. *ka* *'oponoho-**ka**=li.*
CONEG Mantauran-NEG=1SG.GEN
'I am not Mantauran.'

b. *ka* *o-kane-**ka**=li.*
CONEG DYN.FIN-eat-NEG=1SG.GEN
'I did not eat.'

In other languages, such as Atayal, Kanakanavu, Kavalan, Kaxabu, Puyuma, Saisiyat and Seediq, the negator is different and can be taken as a test to distinguish between these two types of predication, as further discussed in §3.2.2.

C. Marking of plurality

Though there is little information on this aspect in the literature of Formosan languages, in at least two of them, Rukai and Bunun, there is plural agreement, as marked by affixation and/or reduplication, between a nominal predicate referring exclusively to a human subject, as illustrated in (18). A similar plural agreement is found with a stative verb (i.e., in a verbal clause), as shown in (19). Note that the subject might also be an animate argument or, less commonly, refer to a non-animate NP.

(18) Mantauran Rukai

a. ***'avai**=lrao.*
woman=1SG.NOM
'I am a woman.'
(Zeitoun 2007: 340)

a'. ***a'ivivai**=nai.*
PL:RED:woman=1PL.EXCL.NOM
'We are women.'
(Zeitoun 2007: 340)

Isbukun Bunun
b. *naia* *hai* ***'uvaz.***
3SG.MED.NOM TOP child
'He/she is a child.'
(L. Li 2018: 128)
b'. *naian* *hai* ***'u~va~vaz.***
3PL.MED.NOM TOP child~PL~child
'They are children.'
(L. Li 2018: 128)

(19) Mantauran Rukai
a. *ma-**voti**~voti'i* *dhona* *kapa-ngiao-nga.*
STAT-PL~blind that all-cat-SUP
'All the cats are blind.'
(Zeitoun 2007: 341)
Isbukun Bunun
b. *ma-**pu**~putul* *'inaitia* *bainu* *s<in>suaz*.
STAT-PL~short 3PL.GEN bean INST.NMLZ<PFV>plant
'The beans they planted are small-sized.'
(L. Li 2018: 128)

2.2.2 Dissimilarities between non-verbal and verbal predication

There are a number of dissimilarities between non-verbal and verbal predication. First, a non-verbal predicate has no voice morphology, as shown in (20a–b).

(20) Saichia Paiwan
a. *ku=kava* *a-icu.*
1SG.GEN=dress NOM-this
'This is my dress.'
(A. Chang 2006: 78)
Saaroa
b. *kana'ana* *ia* *hlahlusa=ku.*
3.NEUT TOP man=1SG.GEN
'He is my man (=my husband).'
(Pan 2018: 59)

Second, non-verbal predication never takes optative, hortative or imperative marking. Third, there is only one argument, the subject, introduced by a case marker in languages where case marking is compulsory, as in verbal predication, but there is no non-verbal predication indexed for two different arguments, as illustrated in (6) above. Fourth, if a

copula is present in a language (e.g., Kaxabu, Paiwan, Tsou, Puyuma), this copula never attracts pronominal clitics, whereas auxiliary verbs, negators, etc. do.

(21) Nanwang Puyuma

a. ***amau*** ***kuiku*** *na* *sa~senay.*
COP 1SG.NEUT NOM.DEF <AV>PROG~sing
'The one who was singing is me.'
(Teng 2008: 193)

b. * ***amau=ku*** *na* *sa~senay.*
COP=1SG.NOM NOM.DEF <AV>PROG~sing

Fifth, in certain languages, there is a distinction between genitive pronouns, which only occur on verbs, and possessive pronouns co-occurring with nouns, whether they function as argument of a verb or as a non-verbal predicate. An example is given in Puyuma in (22). In (22a–b), *nanku* and *nantu* both refer to the possessor, and are marked for case (nominative). In (22b), *tu=* refers to the non-subject actor, marked as genitive. This clitic cannot mark possession, as shown by the ungrammaticality of (22c).

(22) Nanwang Puyuma

a. ***nanku*** *ruma'* *idrumu.*
1SG.PSR.NOM house that.NOM
'That house is mine.'
(Teng 2008: 200)

b. ***tu=****kasu-aw* ***nantu*** *padrek-an.*
3.GEN=take-UVP 3.PSR.NOM back-NMLZ
'She took her backpack.'
(Teng 2008: 49)

c. * ***nantu*** *kasu-aw* ***tu=****padrek-an*
3.PSR.NOM take-UVP 3.GEN=back-NMLZ

The occurrence of aspect and mood marking has not been fully described for non-verbal predication, but it seems to be rather restricted. It has been reported in Paiwan, where the perfective clitic *na=* can convey a past interpretation, as shown in (23),[11] in Puyuma, with the occurrence of the perfective *la* 'already' (24a) and the imperfective *driya* 'still' (24b), and in Tsou, where the aspectual morpheme *nia*, analyzed as a "periphrastic auxiliary of experiential perfect" (H. Chang 2015: 177), is found in contrast with the auxiliary verb *tena*, as shown by the comparison between (25a–b).

11 On the other hand, the irrealis *uri=* has not been reported to occur with nominal predicates.

(23) Paiwan
na=*ku*=*kava* *a-icu.*
PFV=1SG.GEN=dress NOM-this
'These were my clothes.'
(A. Chang 2006: 78)

(24) Nanwang Puyuma
a. *a* *bulrabulrayan*=***la*** *a* *walak.*
NOM.INDF lady=PFV NOM.DEF child
'The child became a lady.'
(Teng 2008: 118)
b. *a* *lalak*=*mi*=***driya***.
NOM.INDF child=1PL.EXCL.NOM=IPFV
'We were still children.'
(Teng 2008: 120)

(25) Tsou
a. *'o* ***nia*** *la* *kingatu* *zou* *mo'o.*
NOM EXP HAB chief COP Mo'o
'Mo'o is the ex-chief.'
(H. Chang 2015: 172)
b. *'o* ***tena*** *la* *kingatu* *zou* *mo'o.*
NOM IRR HAB chief COP Mo'o
'Mo'o is the chief-to-be.'
(H. Chang 2015: 172)

I showed above that in other Formosan languages, such as Mantauran Rukai, for instance, a noun has first to be verbalized to occur with aspectual markers, which cannot occur on non-verbal predicates (see ex. (9b) above).

2.3 Missing lexical categories

The Formosan languages lack a class of adjectives. Semantically, adjectival concepts are expressed through stative verbs, which form a subclass of verbs (Zeitoun and Huang 2000). In some languages, numerals and quantifiers can also be treated as (stative) verbs. In many languages, numerals used in predicate position are made up of a bound numeral form and an affix, including (i) sortal affixes, e.g., Paiwan vs. *mane-lrima* [HUM-five] 'five (humans)' (as opposed to *lrima* 'five (things)' (P. Li 2006: 148)), (ii) verbal affixes, e.g., Mantauran Rukai *matara-dho'a* [catch-two] 'catch two (prey)' (Zeitoun 2007: 264), *mo-teu* [get-three] 'get three preys' (Tung et al. 1964: 612), (iii) time and iteration affixes, e.g., Tsou *mi-teu-hi* [ORD-three-REC] 'three days', (iv) dimensional

affixes, e.g., *ta'a-tolro-lo* [arm's.lengths-three-REC] 'three times two arm's lengths' and (v) ordinal affixes, which can further combine with iteration affixes, e.g., Mantauran Rukai *'a-paka-lrima-le* [ORD-for-five-REC] 'on the fifth (day)'. Their status as verbs is difficult to determine since in most languages, they are not marked with any voice marker and do not carry aspect and mood information, a characteristic shared by non-verbal predicates. However, it is clear that in many languages, e.g., Paiwan, Rukai, Tsou, Kanakanavu, Thao, Kavalan, they belong to verbs. In Tsou, they are always preceded by auxiliary verbs, as any other type of (lexical) verb, as in (28), and in Rukai, they are always prefixed by the stative morpheme *ma-*, as shown in (29). Numeral predication will not be further discussed in this chapter.

(26) Tsou

a. ***mo*** ***coni*** *'o* *oko='u.*
AV:REAL one NOM child=1SG.GEN
'I have a child.' (Lit. 'My child is one.')

b. ***mo*** ***bonʉ*** *to* *tacʉmʉ* *'o* *oko='u.*
AV:REAL eat OBL banana NOM child=1SG.GEN
'My child ate a banana.'

(27) Mantauran Rukai
ma-eaea *dhakerale* *aleve* *'oponoho.*
STAT.FIN-one:RED river below Wanshan
'There was a river at the foot of the village.'
(Zeitoun 2007: 259)

Likewise, predicates heading existential/possessive and locative clauses have been shown to be a subclass of verbs, as shown in §5 (Zeitoun et al. 1999; Teng 2008; Zeitoun 2024).

3 Nominal predication

For the sake of clarity, I first describe nominal predication in terms of the structures involved, i.e., juxtaposition vs. occurrence of a copula (§3.1). I then turn to the variation that may arise if the non-verbal predicate is negated (§3.2). In the last section, I provide an overview of the constructions in which nominal predicates are found (§3.3).

3.1 Structure of nominal predication

3.1.1 Juxtaposed NPs

Most Formosan languages (Atayal, Bunun, Kavalan, Kanakanavu, Paiwan, Rukai, Saaroa, Saisiyat, Seediq and Thao) exhibit non-verbal predication involving the juxtaposition of NPs, as shown in (28) (see also ex. (20)).

(28) Thao
a. *Baraubaw naam=a kataunan.*
Baraubaw 1PL.INCL.GEN=LIG village
'Baraubaw is our village.'
(Jean 2018: 54)
Mantauran Rukai
b. *dhona'i a-olrolai laalake='o.*
that PL-child child:PL=2SG.GEN
'Those children are your children.'
(Zeitoun 2007: 330)

In Paiwan, Kavalan, Puyuma, and Amis, nominal predicates are preceded by noun markers. In Paiwan (29) and Kavalan (30), such a noun marker only precedes proper nouns.

(29) Saichia Paiwan (A. Chang 2006)
a. *nu=nema=anga a-icu.*
2SG.GEN=what=SUP NOM-this
'This is your stuff.'
(A. Chang 2006: 289)
b. ***ti** Zepul=aken*
PN Zepul=1SG.NOM
'I am Zepul.'
(A. Chang 2006: 78)

(30) Kavalan
a. *aizipna*[12] *tama=su, uu patudan=su?*
3SG.NOM father=2SG.GEN DISJ teacher=2SG.GEN
'Is he your father or your teacher?'

12 The Formosan languages used to be predicate-initial languages, but under the influence of Mandarin Chinese, some speakers may move the subject in initial position, regardless of the type of clause (affirmative, negative, interrogative, etc.).

b. *aizipna* ***ti*** *Abas, uu ti Api?*
3SG.NOM PN Abas DISJ PN Api
'Is she Abus or Api?'

In Amis, nominal predicates referring to both common nouns or personal nouns are always preceded by a noun marker, as shown in (31).

(31) Amis
a. *o sito kako.*
CN student 1SG.NOM
'I am a student.'
b. *ci Panay kako.*
PN Panay 1SG.NOM
'I am Panay.'

In Puyuma, nominal predicates must be preceded by an indefinite case marker (32).

(32) Nanwang Puyuma
a. ***a*** *tipul=ku.*
NOM.INDF Tipul=1SG.NOM
'I am Tipul.'
(Teng 2008: 191)
a *k-i<a>ndang-an idri.*
NOM.INDF STAT-<A>afraid-NMLZ this.NOM
'This (person) is a dangerous person.'
(Teng 2008: 191)

3.1.2 Occurrence of a copula

To my knowledge, only four languages, Paiwan, Kaxabu, Tsou and Puyuma, exhibit a copula, which differs quite significantly in form and function.

In Paiwan, the occurrence of the copula *mana* yields a change in word order, which is seemingly identical to that of Mandarin Chinese, though at this point there is no reason to suspect that this is a calque. The predicate occurs after the copula rather than before (33a–b). When two nouns are juxtaposed, on the other hand, the predicate appears in initial position (i.e., unmarked position) (33c).

(33) Saichia Paiwan
a. ***ti*** *Cemedas mana ku=cekel.*
PN Cemedas COP 1SG.GEN=spouse
'Cemedas is my husband.'
(A. Chang 2006: 77)
b. * *ku=cekel mana* ***ti*** *Cemedas.*
1SG.GEN=spouse COP PN Cemedas
(A. Chang 2006: 77)
c. *ku=cekel* ***ti*** *Cemedas.*
1SG.GEN=spouse PN Cemedas
'Cemedas is my husband.'
(A. Chang 2006: 77)

In Kaxabu, the nominal predicate must be preceded by the copula *ka* (34a), which originally functioned as a topic marker and still does in some Formosan languages (e.g., Tona Rukai). It cannot be analyzed as a topic marker in such constructions because it is compulsory (34b) while a topic marker is not (34c). In such instances, there is a strong case for calque from Taiwanese Southern Min, a language Kaxabu people speak fluently and has become the language of everyday life.

(34) Kaxabu
a. *yaku* ***ka*** *kaxabu=a sau.*
1SG.NEUT COP Kaxabu=LIG person
'I am Kaxabu.'
(Lim 2022: 326)
b. * *yaku Ø kaxabu=a sau.*
1SG.NEUT Ø Kaxabu=LIG person
(Lim 2022: 149)
c. *yaku* (***ka***) *m<en>e-ken=lia.*
1SG.NOM (TOP) <PFV>AV-eat=COS
'I have already eaten.'
(Lim 2022: 149)

Tsou has a copula, *zou*, which may or not precede the nominal predicate and occurs in complementary distribution with the auxiliary verbs that always precede verbal predicates (Tung 1964; Zeitoun 2000).

(35) Tsou
(*zou*) *Paicʉ na a'o.*
COP Paicʉ NOM 1SG.NEUT
'I am Paicʉ.'

In Puyuma, there is an opposition between juxtaposed NPs, in which the predicate is indefinite, as in (32) and nominal predicates which are introduced by a copula and are definite, as in (36). While juxtaposed NPs are instances of inclusion predication, nominal predicates preceded by a copula express identity predication.

(36) Nanwang Puyuma

amau	*idri*	***na***	*unan*	*na*	*m-ekan.*
COP	this.NOM	NOM.DEF	snake	NOM.DEF	AV-eat

'The one that ate is this snake.'
(Teng 2008: 192)

3.2 Negative clauses

3.2.1 Same negator in nominal and verbal clauses

In nominal predication with juxtaposed NPs, the major difference among Formosan languages concerns the use of the choice of the negator in nominal and verbal clauses. In most instances, and unless mentioned otherwise, negation is symmetric (Miestamo 2003, 2007).[13]

The same negation marker for verbal and non-verbal predication are found in Amis, Bunun, Tsou, Paiwan, Saaroa, and Thao, as shown in (37). In Amis, nominal predicates (38a) are negated in the same way as stative verbs (38b), i.e., the negator *ca'ay* is followed by the morpheme *ka-*, which attaches to the noun class marker, as in (38a), or the stative verb, as in (38b).

(37) Isbukun Bunun

a. ***ni*** *saia* *mabananaz.*
NEG 3SG.NOM.DIST man
'He is not a man.'
(L. Li 2018: 130)

a'. ***ni***=*ik* *'aip* *tal-bungu.*
NEG=1SG.NOM today wash-head
'I did not wash my head today.'
(L. Li 2018: 85)

13 "[S]ymmetric negative constructions do not differ from non-negatives in any other way than by the presence of the negative marker(s)" while asymmetric negative constructions do exhibit structural differences with their affirmative counterparts (Miestamo 2007: 556).

Tsou

b. ***o'a*** *zou=s'a* *yatatiskova* *no* *cou*
NEG COP=EVID person OBL Tsou
na *taini.*
NOM 3SG
'He/she is not Tsou.'
(based on Zeitoun 2000a: 93)

b'. ***o'a*** *m-o* *oengʉtʉ* *'e* *oko.*
NEG AV-REAL sleep[AV] NOM child
'The child did not sleep.'
(based on Zeitoun 2000a: 121)

(38) Central Amis

a. ***ca'ay*** ***ka****-ci* *panay* *kako.*
NEG CONEG-PN Panay 1SG.NOM
'I am not Panay.'
(Wu 2006: 135)

b. ***ca'ay*** ***ka****-fa'edet* *k-o-ni* *a* *kohaw.*
NEG CONEG-hot[STAT] NOM-CN-this LIG soup
'This soup is not hot.'
(Wu 2006: 135)

3.2.2 Different negator in nominal and verbal clauses

Seediq, Atayal and Kaxabu have two different negators: cf. Seediq *uxe* / *ini*, Mayrinax Atayal *yakaat* / *ini* and Kaxabu *uzay* / *ini*. In these three languages, *ini*[14] always co-occurs with verbal predicates, while *uxe*, *yakaat* and *uzay* are both found with nominal and verbal predicates. Examples are given in (39a–b) and (40a–b) to illustrate Seediq and Atayal respectively.

(39) Seediq

a. ***ini*** *lingis* *ka* *Temi.*
NEG cry NOM Temi
'Temi did not cry.'
(Sung 2018: 114)

14 The negator *ini* might be reconstructed at the Proto-Austronesian (PAN) level, as shown in Lin (2011: 196).

b. ***uxe*** *sense* *ka* *Dakis.*
NEG teacher NOM Dakis
'Dakis is not a teacher.'
(Sung 2018: 112)

(40) Atayal
a. ***ini'*** *aras* *cu'* *qusia'* *ku'* *'ulaqi'.*
NEG bring[AV] OBL.NREF water NOM.REF child
'The child did not bring water.'
(Huang 1995: 61)
b. *yakaat=cu* *'ulaqi'* *ni'* *Yumin.*
NEG=1SG.NOM child GEN Yumin
'I am not Yumin's child.'
(Huang 1995: 114)

It is important to note that in addition to the nominal/verbal dichotomy mentioned above, the verbs that are negated by *uxe* and *yakaat* in Seediq and Atayal are marked for voice, i.e., they do not appear in their bare forms. They occur in their bare forms when following the negator *ini*. This contrast is illustrated in (41a–a') and (41b–b').

(41) Seediq
a. ***ini*** lingis/*l<m>ingis *ka* *Temi.*
NEG cry/*<AV>cry NOM Temi
'Temi did not cry.'
(Sung 2018: 95)
a'. ***uxe=ku*** *m<n>eyah/*eyah* *ani* *tx~texal.*
NEG=1SG.NOM <AV><PFV>come/*come any RED~once
'I never been here once.'
(Sung 2018: 63)
Atayal
b. ***ini'=cu*** *qaniq/*m<in>aniq.*
NEG=1SG.NOM eat/*AV<PFV>eat
'I did not eat.'
(Huang 1995: 114)
b' ***yakaat=cu*** *m<in>aniq/*qaniq.*
NEG=1SG.NOM AV<PFV>eat/*eat
'I did not eat.'
(Huang 1995: 114)

The situation in Kaxabu is more complex because this language has become subject-initial, with many morphosyntactic changes (see Lim and Zeitoun 2024). In Kaxabu, a nominal predicate is negated by *uzay* 'is not', which can occur alone in disjunctive

clauses or as an answer to a question (42). The copula *ka* does not occur with *uzay*, which requires a juxtaposition strategy – in this case, negation is symmetric in Miestamo's (2003) terms – and if *ka* appears (this usage is rare), it functions as a topic marker, its primary function, as in (43).

(42) Kaxabu
a. *imini* ***uzay*** *yaku=a* *beleben.*
this NEG 1SG.NEUT=LIG banana
'This is not my banana.'
b. *atun* ***uzay*** *takaat.*
Atun NEG teacher
'Atun is not a teacher.'
c. *imisiw* *ka* *kabas* *iu* ***uzay****?* ***uzay****!*
that COP wood.plank DISJ NEG NEG
'Is that a wood plank or not? No!'

(43) Kaxabu
yaku *ka* ***uzay*** *kaxabu,* *iu* ***uzay*** *utakay.*
1SG.NEUT TOP NEG Kaxabu DISJ NEG Hakka
yaku *ka* *tapulu.*
1SG.NEUT COP Taiwanese
'I am not Kaxabu nor am I Hakka. I am Taiwanese.'
(Lim 2022: 326)

The negator *uzay* can also occur with verbal predicates, but in this case, what is negated corresponds to a cleft sentence (44a–b). Such an analysis can be obtained by comparing *uzay* with *ini*, the negator of verbal predicates (45a–b).[15] Note that *ini* never co-occurs with nominal predicates (46).

(44) Kaxabu (Based on Lim 2022: 327)
a. *yaku* ***uzay*** *me-ken* *dadas* *hann.*
1SG.NEUT NEG AV.GER-eat sweet.potato FP
'What I did was not eating sweet potatoes.'

15 This hypothesis is also supported by comparing Kaxabu with Pazeh, its closest relative (i.e., both are dialects of the same language), which is more conservative.

(i) Pazeh
uzay *yaku* *ka* *hapet* *me-ken* *dadas.*
NEG 1SG.NEUT TOP like[STAT] AV-eat sweet.potato.
'It is not me who likes to eat sweet potatoes.'
(Li and Tsuchida 2001: 47)

b. *yaku* ***uzay*** *mu-dok* *inusat.* *mu-dok* *dalum* *hann.*
1SG.NEUT NEG AV.GER-drink wine AV-drink water FP
'What I did was not drinking wine. I drank water.'

(45) Kaxabu
a. *yaku* ***ini*** *me-ken* *dadas.*
1SG.NEUT NEG AV-eat sweet.potato
'I did not eat sweet potatoes.'
(Lim 2022: 327)
b. *yaku* ***ini*** *mu-dok* *inusat.* *mu-dok* *dalum* *hann.*
1SG.NEUT NEG AV-drink wine AV-drink water FP
'I did not drink wine. I drank water.'

(46) Kaxabu (Lim 2022: 326)
a. *yaku* ***uzay*** *kaxabu=a* *saw.*
1SG.NEUT NEG Kaxabu=LIG person
'I am not Kaxabu.'
b. * *yaku* ***ini*** *kaxabu=a* *saw.*
1SG.NEUT NEG Kaxabu=LIG person

Kanakanavu, Kavalan and Puyuma also distinguish between nominal and verbal predicates, but these languages need to be individually discussed because of their differences.

Kanakanavu has two negators, *ka'an* and *kuu* in complementary distribution. The morpheme *ka'an* only negates nominal predicates (47a) and stative verbs (48b), *kuu* only negates dynamic verbs (47b)–(48b').

(47) Kanakanavu
a. *iiku* *ia* *kanakanavu=ku,* ***ka'an****=ku* *pakisia.*
1SG.TOP TOP Kanakanavu=1SG.NOM NEG=1SG.NOM plain
'I am Kanakanavu, I am not from the plains (i.e., Taiwanese).'
b. * *iiku* *ia* *kanakanavu=ku,* ***kuu****=ku* *pakisia.*
1SG.TOP TOP Kanakanavu=1SG.NOM NEG=1SG.NOM plain

(48) Kanakanavu
a. *ara-kuracʉ* *cau* *isa.*
INCHO-angry[STAT] person that
'That person is angry.'
b. ***ka'an****=ku* *kuracʉ.*
NEG=1SG.NOM angry[STAT]
'I am not angry.'
b'. * ***kuu****=ku* *kuracʉ.*
NEG=1SG.NOM angry[STAT]

Saisiyat makes use of the same negator *'oka'* with dynamic and stative verbs, as shown in (49a–b). The negator *'oka'* is followed by the ligature *='i* and by the dynamic verb, as in (49a). The suffix *-k* is suffixed to the ligature *='i* if the verb that follows is stative (49b). The negator *'oka'* serves as the main negative predicate in possessive clauses and is glossed as 'do/did not have' and is followed by a case marker introducing the patient object, as in (49c).[16] Nominal predicates are always negated by *'okik*, as in (50) (see Zeitoun, Chu, and kaybaybaw 2015).

(49) Saisiyat
   a. *koko'* *moi'* ***'oka'='i*** *si'ael* *ka* *tawmo'.*
      grandmother Moi NEG=LIG eat ACC banana
      'Grandmother Moi does/did not eat a banana.'
      (Zeitoun, Chu, and kaybaybaw 2015: 374)
   b. *hini* *tatini'* ***'oka'='i-k/'okik*** *be'e:.*
      this old.(wo)man NEG=LIG-STAT/NEG:LIG:STAT angry
      'That old (wo)man is not angry.'
      (Zeitoun, Chu, and kaybaybaw 2015: 375)
   c. *yako* ***'oka'*** *ka* *rayhil.*
      1SG.NOM do.not.have ACC money
      'I have no money.'
      (Zeitoun, Chu, and kaybaybaw 2015: 365)

(50) Saisiyat
   a. *latar* ***'okik*** *hi* *'okay.*
      outside NEG NOM Okay
      'There is no (one called) Okay outside.'
      (Zeitoun, Chu, and kaybaybaw 2015: 365)
   b. *yako* ***'okik*** *yaba'* *nisho'.*
      1SG.NOM NEG father 2SG.GEN
      'I am not your father.'
      (Zeitoun, Chu, and kaybaybaw 2015: 368)
   c. *hiza* ***'okik*** *'in='obay=a* *p<in>ata:waw-an.*
      that NEG PSR=Obay=PSR <PFV>work-PAT.NMLZ
      'That's not what Obay did.'
      (Zeitoun, Chu, and kaybaybaw 2015: 369)

16 The negator *'oka'* must have been grammaticalized from PAN *uka 'not exist' and now serves to negate dynamic and stative verbs. It also serves as the main negative predicate in possessive clauses.

Kavalan and Puyuma make a clear-cut distinction between negative and affirmative nominal predication. In Kavalan, the negator *mai* co-occurs with dynamic and stative verbs, as in (51a–b), and *ussa* negates nominal predicates, as in (51c).

(51) Kavalan
  a. ***mai*** *matiw sa taypak tama=ku.*
     NEG AV:go LOC Taipei father=1SG.GEN
     'Father did not go to Taipei.'
     (Hsieh 2018: 103)
  b. ***mai*** *missi aizipna.*
     NEG STAT:fat 3SG.NOM
     'He/she is not fat.'
     (Hsieh 2018: 103)
  c. ***ussa*** *patudan ti angaw.*
     NEG teacher PN Angaw
     'Angaw is not a teacher.'
     (Hsieh 2018: 103)

In Puyuma, nominal predicates – no matter whether they are identity or inclusion – are negated by *ameli* (Teng 2008: 211). The main difference is that if the nominal predicate is an inclusive predicate, as in (57a), *ameli* occurs in sentence-initial position and attracts the pronominal subject if any, i.e., negation is asymmetric. Compare (32) and (52a). If the nominal predicate marks identity, on the other hand, as in (52b), the negator *ameli* replaces the copula *amau* and there is juxtaposition. However, there is no structural differences between affirmative and negative clauses (cf. the occurrence of the nominative case marker *na* 'NOM.DEF') except for the replacement of the copula *amau* by *ameli*, and negation is thus symmetric (Teng 2008: 211). Compare (36) and (52b).

(52) Nanwang Puyuma
  a. ***ameli****=ku a puyuma.*
     NEG=1SG.NOM NOM.INDF Puyuma
     'I am not Puyuma.'
     (Teng 2008: 32)
  b. *an mulralriaban i,* ***ameli*** *na karanangtantaw*
     when AV:sea.worship TOP NEG NOM.DEF DIST:their
     na palrakuan?
     NOM.DEF men's.house
     'When doing sea worship, don't their various men's houses do it separately?'
     (Lit. 'When doing sea worship, isn't it their respective men's houses?')
     (Teng 2008: 99)

3.3 Complex non-verbal constructions

In addition to equational clauses (including identity or inclusive predication clauses) introduced above, nominal predicates are found in most languages in (pseudo-)clefts, as in (53) and interrogative clauses, as in (54). The focused sentence-initial predicate (in bold) is juxtaposed to the subject, consisting of a headless relative clause built on a nominalized predicate. Some examples are given below:

(53) (Pseudo-)cleft clauses
Kavalan (H. Chang 1997: 155–156)
a. ***ti*** ***Utay*** *ya* *qan* *tu* *Raaq.*
NOM.PN Utay NOM.CN <AGT.NMLZ>eat OBL wine
'It is Utay who is drinking wine.'
a'. ***Raaq*** *ya* *qan-an* *ni* *Utay.*
wine NOM.CN eat-PAT.NMLZ GEN Utay
'It is the wine that Utay drank.'
Mantauran Rukai (Zeitoun 2007: 360)
b. ***'elrenge*** *ta-(a)mo-kaava'i.*
Elrenge AGT.NMLZ-IRR-come
'It is Elrenge who will come.'
b'. ***Takanao*** *ta-ki-kaava'i.*
Takanao AGT.NMLZ-NEG-come
'It is Takanao who did not come.'
Thao
c. ***Lujan*** *sa* *ma-thakaw.*
Lujan CN STAT.NMLZ-greedy
'Lujan is the one that is greedy.'
(Blust 2003: 167)
c'. ***yaku*** *sa* *p<in>athay* *sa* *izay=a* *shput.*
1SG.NOM CN <PFV.PAT.NMLZ>beat CN that=LIG person
'The one whom that person beat is me.'
(Blust 2003: 282)

(54) Interrogative clauses
Kavalan
a. ***tiana*** *me-nanum=ay* *tu* *zanum=ku?*
who AGT.NMLZ-drink.water=REL OBL water=1SG.GEN
'Who drank my (glass of) water?'
(Hsieh 2018: 49)

a'. ***niana*** *kilim-an=su?*
what seek-PAT.NMLZ=2SG.GEN
'What are you looking for?'
(Hsieh 2018: 48)

Mantauran Rukai

b. ***aanga=i*** *ta-kane* *velevele?*
who=3SG.GEN AGT.NMLZ-eat banana
'Who ate the banana?'
(Zeitoun 2007: 359)

b'. ***aanga=i*** *ka-dhalam-ae='o?*
who=3SG.GEN STAT-like/love-PAT.NMLZ=2SG.GEN
'Whom do you like/love?'
(Zeitoun 2007: 361)

Thao

c. ***tima*** *sa* *munsaháy?*
who CN AV:come.here
'Who came by?' (Lit. 'The one coming by is who?')
(Blust 2003: 857)

c'. ***numa*** *sa* *in-ara* *thithu?*
what CN PFV.PAT.NMLZ-take 3SG.NEUT
'What did he take?'
(Blust 2003: 303)

4 Locative predication

Amis and Paiwan are among the few Formosan languages that have retained the prepositional use of Proto-Austronesian (PAN) *i 'LOC', as shown in (55a–b), which are examples of verbal (rather than non-verbal) predication.[17]

17 Other types of adverbial, e.g., comitative or benefactive, are treated as verbal, and will not be further discussed in this paper. For comitative constructions, the reader is referred to Teng (2009) and papers included in this publication. Benefactive can be rendered in different ways, through, for instance, the use of a different voice marking (cf. UVC, as in Atayal (Huang 1995), Puyuma (Teng 2008) or Saisiyat (Zeitoun et al. 2015)), the use of an oblique case marker, as in Rukai (Zeitoun 2000, 2007), or the use of a dative case marker, as in Saisiyat (Zeitoun et al. 2015).

(55) a. Amis
ma-foti' *ci* *Aki* ***i*** ***to*** ***kaka-an.***
AV-sleep NOM.PN Aki PREP OBL elder.sibling-OBL
'Aki sleeps at the elder brother's place.'
(Huang et al. 1998: 24)

b. Paiwan
na-mangetjez *ti* *Palang* ***i*** ***tua*** ***mamazangiljan.***
PFV-AV:come NOM.PN Palang PREP OBL RED:chief
'Palang came to the chief's place.'
(Huang et al. 1998: 24)

An example of non-verbal locative predication – a juxtaposition construction in Amis – is in (56a).[18] The preposition *i* can be negated by the predicative negator *cai* (or *ca'ay*) and prefixed by *ka* 'CONEG' (56b), as in the case of negated nouns and stative verbs (see (38)).

(56) Central Amis
a. ***i*** ***ka-wili*** ***no*** ***loma'*** *ko* *cawka* *niira.*
PREP DIR-left GEN house NOM kitchen 3SG.GEN
'His/her kitchen is on the left of the house.'
(Wu 2006: 77)

b. *cai* *ka-**i*** ***ka-wili*** ***no*** ***loma'*** *ko* *cawka* *niira.*
NEG CONEG-PREP DIR-left GEN house NOM kitchen 3SG.GEN
'His/her kitchen is not on the left of the house.'
(Wu 2006: 78)

Very few Formosan languages have kept this prepositional/adverbial predication usage. In Puyuma, for instance, *i* has been integrated into the case marking system and is homophonous with the nominative case marker *i,* as in (57).

(57) Katripul Puyuma
ulra ***i*** ***patraran*** *i* *nani.*
be.at LOC outside NOM my.mother
'My mother is outside.'
(Teng 2018: 80)

18 In existential/possessive and locative clauses, the verbal predicate is *ira*, made up of the locative *i* which attaches to the bound demonstrative |*ra*| 'that'. This is what is found in many Formosan languages.

In Rukai, Paiwan and Thao, the morpheme *i* is a prefix that attaches to a nominal entity (noun or demonstrative), the derived form consisting in a denominal verb. In Mantauran Rukai, *i-valrio* [at-village] means 'to rest' (58a), and in Puljetji Paiwan, *i-tju-umaq* [LOC-be.at-home] can appear in the imperative form, as in (58b), a further indication that this is a verb form rather than a locative predicate. In Thao, the morpheme *i* is attaches to *taun* 'house' and the whole chunk forms a locative verb, which can be the host of the modal clitic *a=*, as shown in (58c).[19]

(58) a. Mantauran Rukai
ma-vahe'=iae *mani* *iki* *valrio* ***i-valrio***.
STAT-tired=1SG.OBL then be.at village LOC-village (=to rest)
'I am tired so I am resting at home.'
(Zeitoun 2007: 377)

b. Puljetji Paiwan
*ka-**i**-tju-(u)umaq-u!*
STAT-LOC-be.at-house-IMP
'Stay at home!'
(Huang 2012: 143)

c. Thao
a=m-u-tusi *ti* *Tuba* *Qariawan* *m-alhkakrikriw,*
IRR=AV-go-here PN Tuba Puli AV-RED:work
antu ***a=i-taun*** *m-alhkakrikriw* *qa?*
NEG IRR=LOC-house AV-RED:work QST
'Will Tuba come to Puli to work or will he work at home?'
(Jean 2018: 203)

Saisiyat is the Formosan language that possesses the highest number of prepositions (see Zeitoun, Chu, and kaybaybaw 2015: 151–153). They can be the nucleus of a non-verbal predicate, as shown in (59).

(59) Saisiyat
korkoring ***ray*** ***taew'an*** ***'abo'***.
child LOC home inside
'The child is inside the house.'
(Zeitoun, Chu, and kaybaybaw 2015: 367)

19 Wang (2004: 259) treats *i* as a free morpheme, and thus a preposition, as in Amis and Paiwan, but this analysis is not tenable in view of a comparison with other Formosan languages; it has become a verbalizer as in Rukai and Paiwan.

5 Possessive predication

Predicates heading existential/possessive and locative clauses have been shown to be a subclass of verbs (Zeitoun et al. 1999; Teng 2008; Zeitoun 2023). More specifically, possessive predication is encoded by a verb[20] which usually means 'exist' (S-possessee type, genitive-possessor subtype, see Chapter 1), as in (60) and less commonly 'have' (transpossessive type), as in (61), where there is a direct object marked by the accusative case (see Zeitoun 2000c, 2023).

(60) Squliq Atayal
nyux *pila'=mu.*
exist money=1SG.GEN
'I have money.' (Lit. 'My money exists.')
(Huang and Hayung 2018: 114)

(61) Saisiyat
tatini' ***hayza:*** *ka* *taew'an.*
old.(wo)man have ACC house
'The old (wo)man has a house.'
(Zeitoun, Chu, and kaybaybaw 2015: 365)

Verbs encoding the S-possessee type predication are usually made up of the locative prefix *i-*, which attaches to a deictic, as shown in Tona Rukai (62)[21] (see Zeitoun et al. 1999 and §4). Some verbs have grammaticalized from demonstratives, as in Kavalan (63). (63a) shows the occurrence of the deictic *yau* 'that' and (63b) illustrates the existential verb *yau*, which is grammaticalized from the deictic *yau* (Jiang 2006; Hsieh 2018). Again, one might raise some objection about the verbal status of *yau* and argue that it is a copula.

(62) Tona Rukai
i-*a-kai* *paiso=li.*
at-REAL-this money=1SG.GEN
'I have money.' (Lit. 'My money exists.')

20 I follow here the well-accepted analysis of Huang (2008: 18–21), who treats *nyux* 'exist (immediate)' and *cyux* 'exist (remote)' as verbs of existence, possession and location but it might not be excluded that these morphemes are actually copulas.

21 In Rukai (Paiwan and all other languages where the prefix *i-* 'at' (LOC) is used as verbalizer, grammaticalized from an earlier PAN preposition *i), it is clear that the derived form functions as a denominal verb. It can occur in the imperative, attract pronominal clitics, and co-occur with aspectual markers. Compare, for instance, Budai Rukai: *i-a-balriw* [LOC-REAL-village] '(lit) at/be in the village, rest' with *i-a-kai* [LOC-REAL-this] '(lit.) at/be here, exist/have'.

(63) Kavalan

a. *kisu-an=na=pa* *na* *tazungan* *a* ***yau*** (*'nay*) *sunis=ku.*
kiss-UVP=3.GEN=IRR GEN woman LIG that money=1SG.GEN
'That woman will kiss my child.'
(Hsieh 2018: 81)

b. ***yau*** *kelisiw=ku.*
exist money=1SG.GEN
'I have money.' (Lit. 'My money exists.')
(Hsieh 2018: 84)

In a few languages, verbs are marked for locative voice, as in Bunun and Seediq (64a–b), i.e., the location (cf. *=ik* 'I', *=ku* 'I' in (64a–b)) being selected as the subject of the clause.

(64) Isbukun Bunun

a. *'aiz(a)-**an**=ik* *'uvaz.*
exist-UVL=1SG.NOM child
'I have a child.' (Lit. 'I am a person at whose place a child exists.')

Seediq

b. *niq-**an**=ku* *pila.*
exist-UVL=1SG.NOM money
'I have money.' (Lit. 'I am a person at whose place money exists.')

In Bunun, Puyuma, Saisiyat and Rukai, we find genitive, possessive and locative pronouns which may function as possessive predicates. Again, this kind of structure has been barely studied in the Formosan languages and such a topic would deserve further investigation.

Bunun has no possessive pronouns, only genitive pronouns. Unlike other Formosan languages where genitive pronouns encode both possessors and non-subject actors, in Bunun genitive pronouns only mark possession. Of interest though is that a genitive pronoun can occur clause-initially. It functions as part of the possessive predicate of the clause. In such clauses, word order is rather strict. Compare (65a) and (65a'). The genitive pronoun is followed by the nominative subject and a nominal phrase introduced obligatorily by *tu* – compare (65b–65b'), which introduces the second part of the predicate and thus such clauses can be viewed as instances of possessor raising (L. Li 2018: 429–431). Both (65) and (65b) are instances of inverse-possessive predication.

(65) Isbukun Bunun (L. Li 2018: 430)

a. ***'inak*** *'aupa* *kasu* *tu* *masnanava?*
1SG.GEN QST 2SG.NOM LIG teacher
'Are you my teacher?'

a'. * ***'inak*** *masnanava* *'aupa* *kasu?*
1SG.GEN teacher QST 2SG.NOM

b. ***'inak*** *saian* ***tu*** *pinilumah.*
1SG.GEN 3SG.MED.NOM LIG daughter-in-law
'She is my daughter-in-law.'
b'. * ***'inak*** *saian* ***Ø*** *pinilumah.*
1SG.GEN 3SG.MED.NOM Ø daughter-in-law

In Saisiyat, possessive case markers attach to the first element of the possessor phrase rather than to the full NP, as shown in (66a–b).

(66) Saisiyat (Zeitoun, Chu, and kaybaybaw 2015: 208)
a. *kinaat* ***'inoka=hiza=a*** *ma'iaeh.*
book PSR=that=PSR person
'The book is that person's.'
a'. * *kinaat* ***'inoka=hiza*** *ma'iaeh=**a**.*
book PSR=that person=PSR
b. *rayhil* ***'inoka=shay-'isani=a*** *ma'iaeh.*
money PSR=from-here=PSR person
'The money belongs to someone from here.'
b'. * *rayhil* ***'inoka=shay-'isani*** *ma'iaeh=**a**.*
money PSR=from-here person=PSR

In the Rukai dialects, oblique pronouns can serve as the subject of possessive predicate, as shown in (67).

(67) Tanan Rukai
lalake=li ***nomia.***
child=1SG.GEN 2PL.OBL
'You are my children.'

6 Concluding remarks

In this chapter, I have given an overview of non-verbal predication in Formosan languages. Among non-verbal predicates, nominal predicates form the most homogenous category and the easiest to define, while there are not enough available descriptions in the Formosan languages to account for inverse-possessive constructions. Future research might better characterize these constructions.

I have shown nominal predication in declarative equational clauses (including identity or inclusive predication clauses), (pseudo-)clefts and (nominal) interrogative clauses, usually made up of non-verbal predicate juxtaposed to a nominal argument.

Only four languages (Paiwan, Kaxabu, Tsou and Puyuma) have been shown to exhibit a copula, but this kind of morpheme differs quite significantly in form and function, as argued in §3.1.2. Atayal, Seediq, Kaxabu, Kanakanavu, Kavalan and Puyuma distinguish nominal and verbal predicates, but no clear generalization can be obtained, since each of these languages are characterized by a number of idiosyncracies.

Non-verbal locative predication is only found in Amis and Saisiyat. One reason is that, in many Formosan languages, the reflex of the Proto-Austronesian (PAN) preposition *i 'LOC' has become a prefix that has a verbalizing function; in other words, a denominal verb occurs in locative and possessive predication in most Formosan languages. Note, however, that in Bunun, Puyuma, Saisiyat and Rukai, we find genitive, possessive and locative pronouns functioning as possessive predicates, a type of construction that deserves further study.

Abbreviations and conventions

ACC	accusative
AGT	agent
AV	actor voice
CN	common noun marker
CONEG	co-negator
CONJ	conjunction
COP	copula
COS	change of state
DEF	definite
DIR	directional
DISJ	disjunctive
DIST	distal
DYN	dynamic
EVID	evidential
EXCL	exclusive
EXP	experiential perfect
FIN	finite
FP	final particle
GEN	genitive
GER	gerund
HAB	habitual
HUM	human
INCHO	inchoative
IMP	imperative
INCL	inclusive

INDF	indefinite
INST	instrument
IPFV	imperfective
IRR	irrealis
LIG	ligature
LOC	locative
MED	medial
NEG	negation
NEUT	neutral
NMLZ	nominalization
NOM	nominative
NREF	non-referential
NSA	non-subject actor
OBL	oblique
ORD	ordinal
PAT	patient
PFV	perfective
PL	plural
PN	personal noun marker
PREP	preposition
PRF	perfect
PROG	progressive
PROJ	projective
PSR	possessor
QST	question marker
REAL	realis
REC	recurrent
RED	reduplication
REF	referential
REL	relativizer
SG	singular
STAT	stative
SUBJ	subjunctive
SUP	superlative
TOP	topic
UV	undergoer voice
UVC	undergoer voice—circumstantial
UVL	undergoer voice—locative
UVP	undergoer voice—patient
||	bound morpheme
*	(i) reconstructed morpheme in the text; (ii) ungrammatical sentence (before an example)

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