

Nouns and Noun Phrase Structures of Formosan Languages

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15.1	Introduction	470
15.2	Noun Classes	471
15.2.1	<i>Common Nouns</i>	471
15.2.2	<i>Personal Nouns</i>	475
15.2.3	<i>Locative Nouns</i>	477
15.2.4	<i>Temporal Nouns</i>	479
15.3	Noun Phrase Structure	480
15.4	Case Markers	483
15.4.1	<i>Syntactic Functions</i>	485
15.4.1.1	Distinction between Subject and Non-subject Arguments	486
15.4.1.2	Case Syncretism	488
15.4.1.3	Gradual Loss of Case Markers	489
15.4.2	<i>Semantic Functions</i>	490
15.5	Prepositions	492
15.6	Pronouns	494
15.6.1	<i>Personal Pronouns</i>	494
15.6.1.1	Morphological Characteristics	494
15.6.1.2	Syntactic Characteristics	498
15.6.1.3	Ordering of Pronouns	500
15.6.2	<i>Impersonal Pronouns</i>	502
15.6.3	<i>Demonstrative Pronouns</i>	503
15.7	Conclusion	504
	Acknowledgments	504
	References	504

15.1 Introduction

The present chapter deals with nouns and noun phrase structures. It first defines noun classes (§15.2) and noun phrase structures (§15.3) before focus-

ing on case markers (§15.4), prepositions (§15.5), and pronouns (§15.6). The particular choice of topics is not fortuitous. Nouns or nominals may function as the head of a nominal phrase or the argument of a predicate/verb¹ and can be replaced by a pronoun. In most languages, they are marked for case by a co-occurring marker, which may also encode semantic distinctions including noun class, referentiality, definiteness, and plurality. In some languages, they may also be preceded by a preposition.

Since the early 1990s, there have been various typological and language-specific studies on case marking and pronominal systems (see, for instance, P. Li 1997, Huang et al. 1999, Ochiai 2009, Teng 2015, Wu 2015) as well as nominal morphology (Zeitoun 2007, Teng 2008, Zeitoun et al. 2015, L. Li 2018), and this chapter draws on these numerous references.²

15.2 Noun Classes

Nouns can usually be divided into four categories, based on morphosyntactic (rather than semantic) tests that may differ across languages: common nouns (§15.2.1), personal nouns (§15.2.2), locative nouns (§15.2.3), and temporal nouns (§15.2.4).

15.2.1 Common Nouns

Common nouns denote concrete or abstract entities. They are not marked for gender in Formosan languages and are also usually unmarked for number. Plurality, if ever expressed overtly, is encoded either through reduplication or through affixation. In some languages, common nouns take different case markers from personal nouns (§15.3.2).

Common nouns are distinguished from personal nouns and locative nouns in that they can be modified by a numeral (with or without a measure word) (1a–b). For the sake of clarity, we indicate the head of the nominal phrase in boldface in each of the following examples.

(1) Nanwang Puyuma (Teng 2008, p. 53)

- a. *drua me-nau-a a mia-drua a [trau]_{HEAD} i, ...*
 come AV-see-PROJ NOM.INDF HUM-two NOM.INDF person TOP
 ‘Two people came to see, ...’

1 Their function as predicate is not addressed in this chapter.

2 There are over 30 publications on this topic, and we are unable to cite them all in such a short overview.

Saaroa (Pan 2012, p. 58)

- b. *ma-aru a u-sua tɔpɔhlana [sulhatu]_{HEAD}=isa Langui.*
 STAT-exist NOM NHUM-two booklike book=3SG.GEN Langui
 'Langui has two books.' (Lit. 'Langui's two books exist.')

Common nouns can also be modified by a nominalized clause that functions as a relative clause (2a–b). Note that in (2a), the subject (a nominalized clause), *ni baki' Parain haehway kashpinhaehway* 'the shoes that Grandfather Parain wore', occurs in initial position. The noun *haehway* 'shoe' functions as the head of the noun phrase (NP). Its relationship to the derived verb, *kashpinhaehway* 'which were worn', is indicated through nominalization. In (2b), the nominalized clause precedes the head of the complex NP.

(2) Tungho Saisiyat (Zeitoun et al. 2015, p. 481)

- a. [*ni baki' Parain [haehway]_{HEAD}*
 GEN grandfather Parain shoe
ka-sh-p<in>haehway 'ashkan-en ray kabat babaw.
 REAL-UVG-DYN<PFV>put.on.shoes put-UVF LOC chair above
 'The shoes that Grandfather Parain wore are left on the chair.'

Isbukun Bunun (L. Li 2018, p. 394)

- b. *m-ililiskin=ik mas [is-tina kaidavusan habas*
 AV-RED:miss=1SG.NOM OBL belong.to-mother wine.made before
tu [davus]_{HEAD}.
 LNK wine
 'I often miss the wine that was made by Mother before.'

They can be modified by a numeral (or quantifier) (3a), a demonstrative (3b), or a possessor noun (3c).

(3) Nanwang Puyuma (Teng 2008, p. 99)

- a. *mi-suan=mi dra [suan]_{HEAD} dra³*
 have-dog=1PL.INCL.NOM OBL.INDF dog OBL.INDF
sa-a
 one-NPERS
 'We have one dog.'

3 In Nanwang Puyuma, there is case agreement between a noun and the (verbal/numeral) mod-

b. Mantauran Rukai (Zeitoun 2007, p. 99)

'akosaae='o ka taadhia'-e 'ina [navini='o]_{HEAD}'
 how.much=2SG.GEN LNK good-STAT.NMLZ this dress=2SG.GEN
 'How beautiful your (traditional) dress is!'

Hsiukulan Amis (Wu 2022, p. 34)

c. ma-kapah ko [mata]_{HEAD} ni ina.
 STAT-beautiful NOM eye GEN.PN mother
 'Mother's eyes are beautiful.'

Common nouns typically distinguish between human and nonhuman referents⁴ through various morphosyntactic means (see P. Li 2006, this handbook, Chapter 38). For instance, they can be distinguished in terms of their occurrence with different quantifiers, as in (4), and cardinal numbers, as in (5).

(4) Quantifiers

a. Kavalan

mazemun kaput 'many friends' muwaza wasu 'many dogs'

b. Saisiyat

haebaan (ka) ma'iaeh 'many persons' 'akoy (ka) rayhil 'a lot of money'

(5) Cardinal numbers

a. Isbukun Bunun

ta-tini tu maluspinaz 'one woman' tasa tu kamasia 'one candy'

b. Kanakanavu

ta-tulu saronai 'three men' u-tulu tutui 'three pigs'

c. Kavalan

kin-tulu sunis 'three children' u-tulu sudad 'three books'

ifier. An example of a numeral modifier is given in (3a). The following example is an illustration of verbal modifier:

(i) Nanwang Puyuma (Teng 2008, p. 54)

a. tu=alrak-aw na [kiping]_{HEAD} na bulray.
 3.GEN=take=UVP NOM.DEF clothes NOM.DEF beautiful
 'They took the beautiful clothes.'

4 Common nouns marked as [+human], e.g., 'child', 'man', 'woman', must be distinguished from personal nouns that include proper nouns, e.g., *Mo'o*, *Langui*, and kinship terms (usually, speakers' older kin), e.g., 'mother', 'father', 'elder sibling', 'grandmother', 'grandfather', 'grandparent' (see §15.2.2).

In some languages, such as Isbukun Bunun and Kanakanavu, common [+human] nouns may undergo reduplication to convey a plural meaning, e.g., Bun *'uvaz* 'child' vs. *'uvavaz* 'children', Kan *manu* 'child' vs. *ma-manu* 'children'; common [-human] nouns cannot; cf. Bun *'asu* 'dog' vs. **'a-'asu*, Kan *tammi* 'sweet potato' vs. **tam~tammi* 'sweet potatoes'.⁵ In Mantauran Rukai and Tunggho Saisiyat, common [+human] nouns may take a prefix (cf. Mt Rukai *a-*, Saisiyat *la-*) to express the plural meaning; common [-human] nouns are unmarked for plurality. Compare Mt Rukai *tamatama* 'middle-aged man' vs. *a-tamatama* 'middle-aged men', but *ta'olro* 'dog' vs. **a-ta'olro*. and Tunggho Saisiyat *korkoring* 'child' vs. *la-korkoring* 'children', but *boay* 'fruit' vs. **la-boay*.

Note that certain common nouns (whether derived or underived) may function as measure words,⁶ e.g., 'bucket', 'cup/glass', 'trunk (of tree)'.

(6) Tunggho Saisiyat

- a. *ma'an too' (ka) talobong ralom ra'oe(:)-en.*
 1SG.GEN three (LNK) glass water drink-UVP
 'I drank three glasses of water.'

Saaroa (Pan 2012, p. 57)

- b. *u-cani takupilhi suva*
 NHUM-one bowl noodles
 'one bowl of noodles'

Central Amis (Tang 2004, p. 403)

- c. *tulu (a) kanicaw (a) futing*
 three (LNK) basket (LNK) fish
 'three baskets of fish'

d. Taoshan Atayal (Tang 2004, p. 402)

- cyugal bakit sayhuy*
 three basket taro
 'three baskets of taro'

5 Except for *tam~tammi*, the other reduplication pattern consists of partial reduplication, that is the reduplication of a consonant followed by a vowel.

6 The term "derived" means nominalized, as in (i):

(i) Tunggho Saisiyat

'ae'hae' p<(in)akme(:)-an shi'shi' ma'an senge(:)-en ray ralom.
 one <PFV>take.in.handful-LOC.NMLZ rice 1SG.GEN immerse-UVP LOC water
 'I immersed a handful of rice in water.'

The verb *pakme*: 'to take in handful' is nominalized through the infixation of <(in)> 'PFV' and *-an* 'LOC.NMLZ'.

Thao (Blust 2003, p. 206)

- e. *shakish tata wa bangqir*
 camphor.laurel one LNK trunk
 'one trunk of camphor laurel'

Isbukun Bunun (L. Li 2018, p. 383)

- f. *dusa hauzahauza tu tilas*
 two sack LNK husked.rice
 'two sacks of husked rice'

Aikhenvald (2000, pp. 116–117) argues that measure words differ from classifiers in that (i) they do not fill an obligatory slot in the numeral-noun construction; (ii) they often have a lexical meaning on their own (unlike mensural classifiers); (iii) their usage is often related to the distinction between mass and count nouns; (iv) they are used in a type of construction that is also employed for other purposes; and (v) there is a limited number of such words in non-classifying languages. They also have a restricted distribution.

15.2.2 Personal Nouns

The distinction between common nouns and personal nouns is found in nearly all Formosan languages, with a few exceptions, such as Tsou. Personal nouns usually include proper names and kinship terms (older than the speaker), as shown in (7a–b). In (7a), *temu* 'grandparent' is suffixed by *-taw* 'his/her'; in (7b), *temuwan* 'grandchild' is cliticized by *tu=* 'his/her'.

(7) Nanwang Puyuma (Teng 2008)

- a. *tu=padrek-aw i temu-taw kana*
 3.GEN=carry.on.back-UVP NOM.SG grandparent-his/her OBL.DEF
walak.
 child
 'The child carried his grandmother on his back.' (p. 150)

- b. *amau tu=temuwan=yu.*
 COP 3.PSR=grandchild=2SG.NOM
 'You are her grandson.' (p. 98)

In Mantauran Rukai, personal nouns also include household names and insults (see Zeitoun 2007)

(8) Mantauran Rukai (Zeitoun 2007, pp. 120–121)

Singular	Gloss	Plural	Gloss
<i>taka=li</i>	'my elder sibling'	<i>la-ataka=li</i>	'my elder siblings'
<i>ngapolo=ʔ</i>	'Blockhead!'	<i>la-ngapolo</i>	'Blockheads'
< <i>ngapolo</i>	'foreskin/prepuce'		

Personal nouns are characterized by the possibility of being marked as (associative) plural. Marking is found either on the case marker, as in Amis, Paiwan, and Puyuma, e.g., Central Amis *c-a Panay* 'Panay (and other people)' vs. *ci Panay* 'Panay', or on the noun, as in Rukai, e.g., Mantauran Rukai *l-iina=li* 'my mother (and aunts)' vs. *ina=li* 'my mother'. In Saisiyat, plural marking can be found on the case marker (9a) or the (proper) noun that follows (9b), but never on both (9c).

(9) Tungho Saisiyat

a. *m-wai'* *hi* *la-baki'*.

AV-come NOM PL-grandfather

'Grandfather (and friends/relatives) came.' (Zeitoun et al. 2015, p. 209)

b. *m-wai'* *hi-l* *baki'*.

AV-come NOM-PL grandfather

'Grandfather (and friends/relatives) came.' (ibid.)

c. **m-wai'* *hi-l* *la-baki'*.

AV-come NOM-PL PL-grandfather

Personal nouns and kinship terms can be preceded by a prefix meaning 'late' (i.e., deceased), e.g., Suliq Atayal *k-pasang* 'late Pasang', *k-aya* 'late mother' (Huang & Hayung 2018, p. 30), Tungho Saisiyat *ka-parain* 'late Parain', *ka-baki'* 'late grandfather', Kavalan *pati-Utay* '(the) late Utay', *pati-bai=ku* 'my late grandmother' (Li & Tsuchida 2006, p. 17).

In most Rukai dialects, there is a distinction between kinship terms such as 'grandfather', 'grandmother' (or 'grandparent'), 'father', and 'mother' and common nouns such as 'old (wo)man', 'middle-aged (wo)man', cf. Mantauran Rukai *ama=li* 'my father' vs. *tamatama* 'middle-aged man'. In other Formosan languages, such a distinction is not found, and (older generation) kinship terms may behave like personal nouns or common nouns. Consider the address term *ci baki* 'Grandfather' in Northern Amis, which functions as a proper noun vs. the reference term *u baki* 'grandfather', which is a common noun (Bril, this handbook, Chapter 42). Identically, in Paiwan, *ti kaka* 'elder sibling'

functions as a proper noun in opposition to *a kaka* 'younger sibling', which functions as a common noun.

15.2.3 Locative Nouns

Locative nouns include nouns referring to locations (10), toponyms (11), orientation, and directional nouns (12).

(10) Nouns referring to locations

- | | | |
|------------------|------------------|------------|
| a. Isbukun Bunun | <i>lumah</i> | 'house' |
| b. Paiwan | <i>vavua</i> | 'field' |
| c. Saisiyat | <i>taew'an</i> | 'house' |
| d. Kavalan | <i>naung</i> | 'mountain' |
| e. Budai Rukai | <i>drakerale</i> | 'river' |

(11) Toponyms

- | | | |
|--------------------|--------------------|-------------|
| a. Isbukun Bunun | <i>tumpu</i> | 'Dongpu' |
| b. Paiwan | <i>taihuku</i> | 'Taipei' |
| c. Saisiyat | <i>lamsong</i> | 'Nanchuang' |
| d. Kavalan | <i>patRunganan</i> | 'Hsinshé' |
| e. Mantauran Rukai | <i>'oponoho</i> | 'Wanshan' |

(12) Orientation/directional nouns

- | | | |
|--------------------|----------------------|-------------------|
| a. Isbukun Bunun | <i>ngadah</i> | 'inside' |
| b. Paiwan | <i>casaw</i> | 'outside' |
| c. Saisiyat | <i>(h)ikor</i> | 'behind' |
| | <i>kapnae'mishan</i> | 'north' |
| d. Kavalan | <i>ngayaw</i> | 'in front' |
| | <i>waRi</i> | 'east' |
| e. Mantauran Rukai | <i>vila'a</i> | 'beside, next to' |

Nouns referring to a location usually function as common nouns, and the distinction in their locative function is marked through the case marker that precedes the noun. In Nanwang Puyuma, for instance, the noun *ruma* 'house' is preceded by the nominative case marker *na* when it is a common noun (13a), but the locative case marker *i* when it encodes a location (13b), unless it is preceded by a personal pronoun (13c).

(13) Nanwang Puyuma (Teng 2008)

- | | |
|-----------------------------|---------------|
| a. <i>ma-trina na</i> | <i>ruma.</i> |
| STAT-big | NOM.DEF house |
| 'The house is big.' (p. 54) | |

- b. *tr*<*em*>*ekel=ku i ruma.*
 <AV>drink=1SG.NOM LOC house
 'I drink (wine) at home.' (ibid.)
- c. **tr*<*em*>*ekel=ku i kantu ruma.*
 <AV>drink=1SG.NOM LOC OBL.DEF/3.PSR house

The morphosyntactic properties of location nouns, toponyms, and orientation/directional nouns in terms of affixation, reduplication, and co-occurrence with case markers and/or prepositions vary across the Formosan languages. What is interesting to note, on the one hand, is that the preposition *sia* in Isbukun Bunun can only co-occur with location nouns (14a) and toponyms (14b), but not with orientation/directional nouns (14c). In Saisiyat, on the other hand, the locative case marker *ray* cannot co-occur with a place name when the verb denotes movement (15c).

(14) Isbukun Bunun (L. Li 2018)

- a. *pa-ka-'utan-un saikin tina' takna sia*
 CAUS-do-sweet.potato-UVP 1SG.NOM mother yesterday PREP
huma.
 field
 'Mother made me dig sweet potatoes in the field yesterday.' (p. 197)
- b. *tunu(h)~tunuh-us 'usul sia kalingku-'asang katavin.*
 RED~landslide-UVP:OBL earthquake PREP Hualien-village last.year
 'The earthquake destroyed Hualien City last year.' (p. 195)
- c. *mal-anuhu saia *sia/∅ nata.*
 in.the.state.of-sit 3SG.NOM PREP/∅ outside
 'He/She sits/sat outside.' (p. 201)

(15) Tungho Saisiyat (Zeitoun et al. 2015)

- a. *sho'o ka-'inoan m-wai' ray/*∅ kakishkaatan?*
 2SG.GEN REAL-when AV-come LOC/∅ school
 'When did you come to school?' (p. 206)
- b. *ririm'anan ray/*∅ kapayhaehilaan paynaehpoe' ka haehila.*
 morning LOC/∅ east move.through NOM sun
 'In the morning, the sun rises in the east.' (p. 190)

- c. *sho'o ka-'inoan m-wai' Ø/*ray lamsong?*
 2SG.GEN REAL-when AV-come Ø/LOC Nanchuang
 'When did you come to Nanchuang?' (p. 206)

Different locative and directional prefixes can attach to nouns encoding location, orientation/direction, or toponyms, e.g., Mantauran Rukai *i-valrio* 'be in the village, rest' < *valrio* 'village', Nanwang Puyuma *m-u-isatr* 'go up (AV)' < *isatr* 'up', Isbukun Bunun *ku-'asang* 'go to the village' < *asang* 'village', Kuljaljaw Paiwan *pa-sa-timur* 'toward Timur' < *timur*, Kavalan *pa-sa-zi/pa-sa-zui* 'come here, toward here; bring here' < $|zi|/|zui|$ 'here' (Li & Tsuchida 2006, p. 231), Thao *pan-na-raus* (~ *man-na-raus*) 'go downhill (AV)' < *raus* 'downhill' (Blust 2003, p. 120), Thao *pa-ku-na-nay* (~ *ma-ku-na-nay*) 'come (AV)' < $|nay|$ 'proximate location, here' (Blust 2003, pp. 637–638), Saisiyat *pay-hini* (~ *may-hini*) 'go through here (AV)' (< *hini* 'here') (Zeitoun et al. 2015, p. 547), Mantauran Rukai *tali-'oponoho* 'from the Mantauran village' < *'oponoho* 'Mantauran (village)'.

15.2.4 Temporal Nouns

Temporal nouns situate an action or a state along a temporal axis. They may refer to a punctual time, as in (16), or a period/interval of time (usually derived from common nouns), as in (17).

(16) Temporal nouns referring to a punctual time

- | | | |
|--------------------|-----------------|----------------------------|
| a. Isbukun Bunun | <i>takna</i> | 'yesterday' |
| b. Paiwan | <i>nutiaw</i> | 'tomorrow' |
| c. Saisiyat | <i>kaysa'an</i> | 'today' |
| d. Kavalan | <i>nawsiRab</i> | 'the day before yesterday' |
| e. Mantauran Rukai | <i>mene</i> | 'now, today' |

(17) Temporal nouns referring to a period/interval of time

- | | | |
|--------------------|---------------------|--|
| a. Isbukun Bunun | <i>hamisan</i> | 'winter' |
| b. Paiwan | <i>kalavevean</i> | 'spring' (< <i>veve</i> 'sprout') |
| c. Saisiyat | <i>kakmango'an</i> | 'taboo season' (< <i>mango</i> 'taboo') |
| d. Puyuma | <i>ka'umayan</i> | 'working time in the field' (< <i>'uma</i> 'cultivated field') |
| e. Mantauran Rukai | <i>kalapahatrae</i> | 'time for the rice harvest' (< <i>pahai</i> 'rice') |

Temporal nouns are distinguished from the other subclasses in that, unless they constitute an argument (i.e., subject) of the verb, they are unmarked for case, as shown in (18a–c). Their position in a sentence varies cross-linguistically.

Temporal adjuncts occur in medial or final position in Paiwan and Bunun. In Saisiyat, however, they occur in initial position or just after the first noun phrase (which is usually the subject).

(18) Sandimen Paiwan (Chang 2006, p. 60)

- a. *na=k⟨em⟩esa ti zepulj tua 'avay* Ø/**tua katiaw*.
 PFV=⟨AV⟩cook NOM Zepulj OBL rice.cake Ø/OBL yesterday
 'Zepulj cooked rice cakes yesterday.'

Isbukun Bunun (L. Li 2018, p. 203)

- b. *ma-i-uvaiv saikin lai'lai tu tauntaun* Ø/**mas takna*.
 AV-PFV-change 1SG.NOM car LNK tire Ø/OBL yesterday
 'I changed a tire/tires of a car yesterday.'

Tungho Saisiyat (based on Zeitoun et al. 2015, p. 182)

- c. Ø/**ray kahia' yami ki 'okay rima' ray*
 Ø/LOC yesterday 1PL.EXCL.NOM COM Okay go LOC
pong~pongaeh-an.
 RED~flower-LOC.NMLZ
 'Yesterday, Okay and I went to the garden.'

15.3 Noun Phrase Structure

The structure of noun phrases in Formosan languages can be schematized as in (19) and (21), with two possible positions for case markers, noun class markers (if any), and demonstratives, depending on the type of language.

In the first group of languages, case markers, nouns class markers, and demonstratives occur in prenominal position (i.e., before the noun or noun phrase) with or without a ligature. In Rukai, Thao, Pazeh-Kaxabu, and Kavalan, these three types of prenominal elements are mutually exclusive, as shown in (19A) and further illustrated in (20a–b). In Amis, Puyuma, and Paiwan, case markers, noun class markers, and demonstratives co-occur, as shown in (19B). In Amis, the noun class marker is attached to the case marker, while in Paiwan, it follows immediately the ligature, as shown in (20c–d').

(19) A. Case markers, noun class markers, and demonstratives in prenominal position, but mutually exclusive

- a. DEM/CM NP (e.g., Mantauran Rukai)
 b. DEM/NM/CM LNK NP (e.g., Thao, Pazeh-Kaxabu, Kavalan)

language, there is no ligature between the modifying elements and the noun or noun phrase (22a–b). In Bunun, the postnominal demonstrative is also case-marked, as in (22c).

- (21) a. (CM) NP DEM (e.g., Kanakanavu)
 b. CM NP DEM (e.g., Atayal, Seediq, Kavalan, Tsou)
 c. (CM) NP=DEM:CM (e.g., Bunun)

(22) Kanakanavu

- a. *ni-matisa'u manu isi tongingi.*
 PFV-AV:catch child this mouse
 'This child caught a mouse.'

Tsou (Zeitoun 2000, p. 93)

- b. *mo meoisi 'e mo kua'onga ci ngiao tan'e.*⁸
 AV.REAL big NOM AV.REAL black REL cat this
 'This black cat is big.' (Lit. 'This black (reference), which (is) a cat, is big.')

Isbukun Bunun (L. Li 2018, p. 237)

- c. *ma-baliv tina=a mas tau tu 'ispapatas pinak.*
 AV-buy mother=NOM.DIST OBL three LNK pen for.me
 'Mother bought three pens for me.'

In all Formosan languages, adnominal demonstratives are distinguished in terms of visibility and distance. There is usually a three-way contrast between proximal (i.e., 'this [+vis, +near (speaker)]') and (more) distal referents (i.e., 'that [+vis, +near hearer]' vs. 'that' [-vis, +far (from speaker/addressee)]). In some languages (e.g., Amis, Bunun, and Puyuma), adnominal demonstratives are also marked for case (Liu 1999, L. Li 2018). In Puyuma, a distinction in number between singular and plural is also made (Teng 2008).

Depending on the languages, relative clauses may precede and/or follow the head—both orders are possible in Atayal (Huang & Hayung 2018), Puyuma (Teng 2008), and Amis (Wu 1995), for instance, but the relative can only precede the head in Bunun (L. Li 2018) and Tsou (Chang & Pan 2018)—with or without a ligature between the relative clause and the head noun, as shown in (23a–b) (see also (2a–b)).

8 In Tsou, case markers and adnominal demonstratives agree in terms of distance, i.e., a case marker that implies that the referent is present at speech time needs to co-occur with an adnominal demonstrative of the same kind.

(23) Squliq Atayal (Huang & Hayung 2018, p. 199)

- a. *cyux maniq mami' qu kneril ka m<n>wah*
 PROG AV.eat rice NOM.REF woman LNK AV<PFV>come
shera'
 yesterday
 Lit. 'The woman that came yesterday is eating rice.'

Tsou (Chang & Pan 2018, p. 117)

- b. *mi=cu acuhu moyomo 'o moso mimo ci*
 AV.REAL=COS all drunk NOM AV.REAL AV.drink REL
ma~mameoi.
 RED~old.man
 'The old men that are drinking wine are all drunk.'

15.4 Case Markers

In this section, we focus on "case markers," which are (pre)nominal phrase markers with syntactic and semantic functions. Case markers have also been referred to as "relation markers" by Tsuchida (1980, p. 91) and "construction markers" by Ferrell (1982) and Cauquelin (1991, p. 42). We adopt the term "case markers" because in many Formosan languages, they still exhibit a primordial case-marking function. Payne (1997, p. 100) mentions that "case marking is the morphosyntactic categorization of noun phrases that is imposed by the structure within which the noun phrase occurs. Adpositions [i.e., prepositions and postpositions] are free of such configurational constraints." Payne's (1997) "rule of thumb" can be illustrated by Saisiyat, in which the case marking of a noun phrase as accusative,⁹ as in (24a), or dative, as in (24b), is determined by the grammatical subcategorization of the verb.

(24) a. Tungho Saisiyat (Zeitoun et al. 2015, p. 203)

- 'oya' 'a-mo-bay ka/*no korkoring soe'hae' ka kakaat.*
 mother IRR-AV-give ACC/DAT child take:one LNK pen
 'Mother will give one pen to the child.'

9 Unlike most other Formosan languages, which make a basic distinction between the subject (marked as nominative) and the non-subject (marked as oblique), Saisiyat distinguishes between different cases, cf. accusative, dative, locative, and comitative (see Yeh, this handbook, Chapter 55).

- b. *'oya' 'am=baeiw no/*ka korkoring soe'hae' ka kakaat.*
 mother IRR=buy[AV] DAT/ACC child take:one LNK pen
 'Mother will buy one pen for the child.'

In some Formosan languages, e.g., Kanakanavu, Thao, Kaxabu-Pazeh, and Mantauran Rukai, the occurrence of (certain) case markers is no longer compulsory, and their function is fading. In such circumstances, the term "case markers" might not be appropriate, and different analyses have been proposed. Wang (2003), for instance, uses the term "determiner" for Thao, where all case relations (nominative, accusative, and genitive) are encoded by the same markers as in (25a–d). Synchronically, they would be better characterized as noun class markers, with *ti* only preceding personal nouns, *sa* and *na* only co-occurring with common nouns.

(25) Thao

- a. *pintata ti ina sa bailu.*
 cook PN mother CN bean
 'Mother is cooking beans.' (Zeitoun 2022, p. 17)
- b. *mahaha na atu.*
 STAT.furious CN dog
 'That dog is furious.' (Blust 2003, p. 418)
- c. *a=lhay yaku ti ama latata=wa patashan.*
 IRR=give 1SG.NEUT PN Father one=LNK book
 'I will give Father a book.' (Zeitoun 2022, p. 18)
- d. *kawi taqtaq-in ti ama.*
 wood chop-UVF PN Father
 'Father is chopping wood.' (Blust 2003, p. 971)

As shown in (26a–b), within a complex noun phrase, *sa* can only be understood as modifying the noun *taun* 'house', and *ti*, 'Kilash' (26a). When the two nominal markers are inverted—*sa* preceding Kilash, and *ti* modifying *taun*—the sentence becomes ungrammatical, as shown in (26b).

(26) a. Thao (Zeitoun 2022, p. 20)

- isáy sa nak=a taun, miabariz sa ti Kilash=a taun.*
 at:here CN 1SG.GEN=LNK house next.to CN PN Kilash=LNK house
 'My house is here and next to Kilash's house.'

- b. **isáy sa nak=a taun, miabariz ti sa Kilash=a*
 at:here CN 1SG.GEN=LNK house next.to PN CN Kilash=LNK
taun.
 house

We distinguish “case markers” from “case marking” that reflects the coding system of the arguments in a language and include all case forms (including enclitics, as in Bunun and the Rukai dialects of the “lower three villages”, Maga, Mantauran, and Tona).

Case markers in Formosan languages usually form complex systems that carry two distinct functions, syntactic (§15.3.1) and semantic (§15.3.2).

15.4.1 Syntactic Functions

On the syntactic level, case markers indicate the grammatical relation of the noun phrases that they precede. Each noun phrase can be only preceded by a single case marker, as shown in (27a–b).¹⁰

(27) Tsou

- a. *moso eobako to oko 'o amo.*
 AV-REAL-REM beat[AV] OBL child NOM father
 ‘Father beat the child.’

- b. **moso eobako to ta oko 'o amo.*
 AV-REAL-REM beat[AV] OBL OBL child NOM father

Nonetheless, a case marker can co-occur with a preposition, as in (24a), or with a noun class marker,¹¹ as in (28b).

(28) Kuljaljau Paiwan

- a. *tjuvuru a pusalasaladj i ta quma*
 many.HUM NOM helpers LOC OBL field
 ‘There are many helpers (or workers) in the field.’ (W. Huang 2012, p. 44)

¹⁰ We will not discuss in this chapter the stacking of multiple cases (e.g., genitive on top of nominative) attached to a contrastive topic noun phrase, as discussed in Chen (2018).

¹¹ In Paiwan, when *ti* alone precedes a noun phrase, it carries a dual function, i.e., as a case marker and a noun class marker; but when it co-occurs with a demonstrative as in (20b), it functions solely as a noun class marker. Tang (2006) proposes a different analysis, in which the nominative is zero-marked in Paiwan, and *ti* is only a noun class marker.

- b. *na=mangetjez azua ti Palang.*
 PFV=AV:come NOM:that PN Palang
 'That (person called) Palang came.'

15.4.1.1 Distinction between Subject and Non-subject Arguments

There is a basic distinction between the subject and non-subject arguments. Typologically, the Formosan languages can be divided into three main groups:

- In the first group of languages (including Saaroa, Bunun, Rukai, Puyuma, and Tsou), there is a dichotomy between the nominative marking the grammatical subject and the oblique encoding all other arguments, as shown in (29a–b). Nanwang Puyuma has undergone case syncretism in its nominal marking, but non-subject actors are coreferenced through a proclitic on the verb, as in (29c).

(29) Isbukun Bunun (L. Li 2018, p. 530)

- a. *na=mahtu=in a sia lukis=a m-istaba mais pit'ia mas*
 IRR=can=PRF NOM SIA tree=NOM.DIST AV-burn if cook OBL
na=kaun-un tu maz~mazmaz=dau.
 IRR=eat-PAT.NMLZ LNK RED~whatever=EVID
 '... and (we) would be able to burn the wood if (we) cooked food that would be eaten and the like.'

Budai Rukai (Zeitoun 2007, p. 148)

- b. *ky-a-lama ku daane=su ki omaomas.*
 AGT.PASS-REAL-burn NOM house=2SG.GEN OBL person
 'Your house was burned by someone.'

Nanwang Puyuma (Teng 2008, p. 109)

- c. *tu=trakaw-ay=ku dra paisu kan Isaw.*
 3.GEN=steal-UVL=1SG.NOM OBL.INDF money OBL.SG Isaw
 'Isaw stole money from me.'

Tsou is peculiar in that it exhibits a two-way distinction, with a dichotomy between the nominative, encoding the grammatical subject, and the oblique, marking all other arguments except locative noun phrases, which are marked by *ne*. In Kananavu, a distinction is made between the nominative argument (marked by *sua*, which is no longer productive) and the locative, marked by *na* (30). Note that *na* never co-occurs with core arguments nor any other type of adjuncts.

(30) Kanakanavu (Zeitoun & Teng 2022, p. 40)

kili-o na takiringa sua talisi!

tie-IMP.UVP LOC basket NOM rope

'Tie the rope to the basket!'

- A second group of languages (including Paiwan, Amis, and Seediq) exhibit a three-way distinction, as shown in (31a–c). In Paiwan, the nominative encodes the grammatical subject, the genitive marks the non-subject actor, and the oblique marks all other arguments, as shown in (31a). In Seediq, however, oblique arguments are always unmarked, as opposed to the nominative subject and the non-subject actor, as in (31b).

(31) Laiyi Paiwan (A. Chang 2018, p. 48)

a. *si-sansiyav tazua siyav ti kui ni 'ama.*

UVC-cook.soup NOM.that soup NOM.PN Kui GEN.PN father

'Father cooked soup for Kui.'

Tgdaya Seediq (Sung 2022, p. 52)

b. *wada baruy-un na Watan ka dheran di.*

PFV sell-UVP GEN Watan NOM ground SFP

'That land was sold by Watan.'

- In the third group of languages (including Kavalan, Pazeh, Yami, Saisiyat, and Atayal), case markers are categorized into four or more sets. In Kavalan and Pazeh, there is a distinct locative case marker (32a). In Saisiyat and Atayal, there is also a comitative case marker (32b).

(32) Kavalan (Li & Tsuchida 2006, p. 29)

a. *m-azas tama-na tu sunis-na matiw sa naung*

AV-take father-3.GEN OBL child-3.GEN AV.go LOC mountain

s<m>araw.

<AV>hunt

'The father took his child to go hunting on the mountain.'

Tungho Saisiyat

b. *korkoring ki 'aehoe' makakshiae'.*

child COM dog AV:play.together

'The child and the dog are playing together.'

15.4.1.2 Case Syncretism

There are instances of case syncretism in various Formosan languages, including Mayrinax Atayal, Saisiyat, Rukai, and Puyuma. In Mayrinax Atayal and Saisiyat, for example, case syncretism takes place between the nominative, which marks the subject, and the accusative, which marks the (direct or indirect) object, as in (33) and (34), respectively. Atayal and Saisiyat differ in a number of respects: case syncretism only occurs with personal nouns (but never with common nouns) in Atayal (where NOM, ACC, and DAT are all marked by *i*); word order in Atayal is largely fixed, there is no ambiguity in (33). There is no such contrast in Saisiyat, i.e., case syncretism applies to both personal and common nouns.

- (33) Mayrinax Atayal (L. Huang 1995a, p. 94)
m-uwah kariariax i m-itaal i yaya'=nia' i Yumin.
 AV-come often LNK AV-see ACC mother=3SG.GEN NOM Yumin
 'Yumin often comes to see his mother.'

- (34) Tungho Saisiyat (Zeitoun et al. 2015, p. 209)

- a. *m-wai' hi-l baki.*
 AV-come NOM-PL grandfather
 'Grandfather (and friends/relatives) came.'
- b. *'obay k<om>oring hi-l 'oemaw.*
 Obay <AV>beat ACC-PL Oemaw
 'Obay beats/beat Oemaw (and friends/relatives).'

In Tona and Maga Rukai, case syncretism is found for common nouns marked as nominative and oblique, as shown in (35).

- (35) Tona Rukai (Zeitoun 2007, p. 149)
ky-a-akame na coaw na boathi.
 AGT.PASS-REAL-roast OBL person NOM sweet.potato
 'The sweet potatoes were roasted by someone.'

In Nanwang Puyuma, non-subject noun phrases encoding locations, undergoers, or non-subject actors—all of which function as both adjuncts and non-core arguments—are marked as oblique. The distinction between these noun phrases lies in the obligatory occurrence on the verb of a pronominal proclitic that co-refers with the non-subject actor, as in (36a); there is no cross-referencing with adjuncts, as shown in (36b) and (36c).

(36) Nanwang Puyuma (Teng 2008)

a. *tu_i=padrek-aw* *i* *temu-taw* *kana*
 3.GEN=carry.on.back-UVP NOM.SG grandparent-his/her OBL.DEF
walak_i.

child

'The child carried his grandmother on his back.' (p. 150)

b. *kurudung=ku* *miedreng kana* *tutui*.
 lean.against=1SG.NOM AV.sleep OBL.DEF puppy

'I leaned against the puppy to sleep.' (p. 151)

c. *tu_i=lasedr-aw* *i* *temu-taw_i* *kana* *buwang*.
 3.GEN=hide-UVP NOM.SG grandparent-his/her OBL.DEF hole/cave

'He hid his grandmother in the cave.' (p. 150)

Non-subject actors exhibit the same distribution as possessors, as shown in (37a–b), and Teng (2009, p. 831) concludes that the "genitive and oblique are syncretized in all subcategories of nouns in Nanwang Puyuma."

(38) Nanwang Puyuma (Teng 2009, p. 831)

a. *tu=kedreng-aw kan* *Senayan*
 3.GEN=pull-UVP OBL.SG Senayan

'He was pulled by Senayan.'

b. *bulray ku=kabung kan* *Senayan*
 beautiful 3.PSR=hat OBL.SG Senayan

'Senayan's hat is beautiful.'

15.4.1.3 Gradual Loss of Case Markers

In certain Formosan languages and dialects, e.g., Mayrinax Atayal, Tsou, and Puyuma, the occurrence of case markers is compulsory. In other languages (Squiliq Atayal (Wulai variety), Saisiyat, Rukai, Kavalan, Kananavu, Saaroa, and Pazeh-Kaxabu), we can observe the gradual loss of case markers, and this may generate other changes, e.g., a fixed word order, as in (39a–b), or topicalization, as in (40b).

(39) Squiliq Atayal (Wulai variety)

a. *cyux* *m-ima'* *Tali'* *Sayun*.

PROG.REM AV-wash Tali Sayun

'Sayun is washing Tali (there).' (L. Huang 1995b, p. 276)

- b. *cyux m-ima' Sayun Tali'.*
 PROG.REM AV-wash Sayun Tali
 'Tali is washing Sayun (there).'

(40) Kanakanavu

- a. *canpe t<um>angi manu isi.*
 just.now <AV>cry child this
 'This child cried just now.'
- b. *manu isi ia canpe t<um>angi.*
 child this TOP just.now <AV>cry
 'As for the child, (he) cried just now.' (Zeitoun & Teng 2022, p. 91)

15.4.2 *Semantic Functions*

On the semantic level, case markers usually specify the subclass of the noun that they precede: in a majority of Formosan languages, there is a dichotomy between "common-noun case markers," usually ending in the vowels *-a* or *-u* (~*-o*), e.g., Amis *ku* 'NOM.CN', Mayrinax Atayal *ku* 'NOM.CN', Paiwan *a* 'NOM.CN', Tona Rukai *na* 'NOM.CN', and Puyuma *na* 'NOM.CN', and "personal-noun case markers," generally containing, e.g., Amis *ci* 'NOM.PN', Mayrinax Atayal *i* 'NOM.PN', Paiwan *ti* 'NOM.PN', Tona Rukai *ki* 'NOM.PN', and Puyuma *i* 'NOM.PN' (Tang et al. 1998). An example is given in (41):

- (41) Mayrinax Atayal (L. Huang 1995, p. 26)
si-baiq i' Baicu' ni Yumin ku' ruwas.
 UVC-give ACC Baicu GEN Yumin NOM.REF book
 'Yumin gave the book to Baicu.'

Case markers also provide information related to the associative plurality, definiteness, referentiality, or identifiability of a noun, but these last four distinctions are less prototypical.

Associative plurality is grammatically marked by the suffixation of *-a* in Amis and Paiwan, as in (42), and *-l* in Saisiyat, as in (34a–b); it is only found on case markers preceding personal nouns.

(42) Sandimen Paiwan

- a. *dukul-in ni Palang ti Kuljelje.*
 beat-UVP GEN.PN Palang NOM.PN Kuljelje
 'Palang beat Kuljelje.'

- b. *dukul-in ni-a Palang ti-a Kuljelje.*
 beat-UVF GEN.PN-PL Palang NOM.PN-PL Kuljelje
 'Palang (and friends/relatives) beat Kuljelje (and friends/relatives).'

Definiteness is overtly marked in Puyuma and distinguishes referents that are identifiable in a given context from those that are not. It is a decisive criterion in subject selection in this language, as shown by the contrast between (43a) and (43b). In (43a), *kabung* 'hat' is indefinite and can only function as a peripheral argument. It is definite in (43b) and is the subject of the verb 'lend'.

(43) Nanwang Puyuma (Teng 2008, p. 57)

- a. *ku=pabultras-ay dra kabung i Lrugi.*
 1SG.GEN=lend-UVL OBL.INDF hat NOM.SG Lrugi
 'I lent Lugi a hat.'
- b. *ku=pabultras-anay kan Lrugi na kabung.*
 1SG.GEN=lend-UVC OBL.SG Lrugi NOM.DEF hat
 'I lent the hat to Lugi.'

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 [...] If a nominal is 'non-referential' or 'generic' the speaker does not have a commitment to its existence within the relevant universe of discourse. Rather, in the latter case, the speaker is engaged in discussing the genus of its properties, but does not commit him/herself to the existence of any specific individual member of that genus" (Givón 1978, p. 293). Identifiability involves the recognition of the referent by the speaker. The notions of referentiality and identifiability (including visibility and distance) are best illustrated in Tsou, as in (44) (see Tung 1964, Zeitoun 2005, Chang & Pan 2018).

(44) Tsou

- a. *mo bonu ta snutu 'e/*o amo.*
 AV.REAL.REM eat[AV] OBL banana NOM father
 'Father is eating a banana.' (Father can be seen eating the banana at speech time)
- b. *mo bonu to snutu 'o/*e amo.*
 AV.REAL.REM eat[AV] OBL banana NOM father
 'Father is eating a banana.' (Father is not seen at speech time)

- c. *mo* *bonu no sn̄tu na amo.*
 AV.REAL.REM eat[AV] OBL banana NOM father
 'A father is eating a banana.' (The father is unknown to the speaker and the addressee)
- d. *mo* *bonu nca sn̄tu co amo.*
 AV.REAL.REM eat[AV] OBL banana NOM father
 'Father is eating a banana.' (Father can be heard but is not seen at speech time)

An overview of the semantic distinctions encoded by case markers in Formosan languages is listed in Table 15.2.

TABLE 15.2 Semantic distinctions encoded by case markers in Formosan languages

	Distinction between common/ personal nouns	Plurality (personal nouns)	Referentiality	Definiteness
Amis	+	+	-	-
Atayal	+	-	+	-
Saisiyat	+	+	-	-
Puyuma	+	+	-	+
Kavalan	+	-	-	-
Paiwan	+	+	-	-
Pazeh	-	-	-	-
Bd Rukai	-	-	+	-
Tsou	-	-	+	-
Bunun	-	-	-	-
Kanakanavu	-	-	-	-
Saaroa	-	-	-	-
Seediq	-	-	-	-

15.5 Prepositions

The distinction between prepositions and case markers is tenuous and difficult to establish within specific (Formosan) languages and cross-linguistically. Prepositions are even treated as a conspicuous part of speech. While in (28a)

a preposition can co-occur with a case marker in Paiwan (thus establishing its status quite clearly), the alleged Bunun preposition *sia* (L. Li 2018) has not only the same prenominal position but also a distribution identical to other case markers (e.g., it can co-occur with postnominal demonstrative enclitics, which are also marked for case).

What can be ascertained is that most Formosan languages lack prepositions, including Atayal, Kanakanavu, Kavalan, Rukai, Saaroa, Thao, and Tsou. Amis and Paiwan exhibit only one preposition, *i*. Saisiyat (Zeitoun et al. 2015, pp. 151–154), Truku Seediq (Lee 2022, pp. 45–47), and Siraya (Adelaar 2011) are reported to have five or more prepositions. Prepositions usually introduce a location-oriented semantic role (i.e., locative/source/path/goal) (45a) or a temporal adjunct (45b).

(45) Tunggho Saisiyat (Zeitoun et al. 2015, p. 151)

- a. *rayhil 'inaray ka-roton-an ka rayhil*
 money from REAL-gather-LOC.NMLZ LNK money
sh<in>ibaeae.
 <PFV.UVP>borrow
 '(I) borrowed money from the bank.'

- b. *sho'o 'aring kakhayza'an tabin 'isahini kin=bain.*
 2SG.NOM from in.the.past until nowadays INTENS=lazy
 'You have always been very lazy.' (Lit. 'From before until now, you have always been very lazy.')

They may also express other semantic relations, e.g., comitativity (46a), reason (46b), possession (46c), partitivity (46d), and ablative (46e) in Siraya.¹²

(46) Siraya (Adelaar 2011)

- a. *ni-paki-valey nein ta rawey lam ki Rarenan tñ*
 PST-seek-find 3PL.GEN NOM child with DEFLT Mother 3SG.GEN
 'they found the child with its mother' (ii:11) (p. 87)
- b. *aley ka kiñm-ən ta ma~mang k'=äta ki Heidang*
 reason LNK seek-UVP NOM RED~what LNK=PROX DEFLT Heathen
 'because the Heathens seek after all these things' (vi:32) (p. 86)

¹² We follow the analysis of Adelaar (2011), knowing that an adposition can also surface as a clitic or a substantive, "i.e., nouns or verbs, that say something about the semantic role of an adjacent noun phrase in the clause" (Payne 1997, p. 86).

- c. *a timang-a ta k-äyä-n ki pa-pïtu*
 POSS who-SBJV NOM V1-have.as.wife-UVP DEFLT RED~seven
k'=äna?
 LNK=DIST
 'whose wife of these seven [brothers] will she be?' (xxii:28) (p. 88)
- d. *na alak ti David*
 PART offspring PN David
 'a son of David's' (xxii:42) (p. 86)
- e. *mäka-rbo*
 AO4.come.from-inside
 'from inside' (viii:28) (p. 87)

Payne (1997, p. 86) mentions that one origin of prepositions can be found in nouns and verbs. Indeed, in Siraya, *lam* 'companion' is a noun that functions as a comitative preposition when followed by a noun or noun phrase (46a) (see Adelaar 2011, p. 87).

15.6 Pronouns

Pronouns can be classified as personal, impersonal, demonstrative, reflexive, and interrogative. In this section, we give a brief overview of the first three types of pronouns. Reflexive pronouns are discussed in the chapter on valency changing (see L. Li, this handbook, Chapter 19), and interrogative pronouns are treated in the chapter on interrogative constructions (see Tsai, this handbook, Chapter 23).

15.6.1 *Personal Pronouns*

In this section, we examine the morphological (§15.6.1.1) and syntactic (§15.6.1.2) characteristics of personal pronouns before turning to their ordering (§15.6.1.3).

15.6.1.1 Morphological Characteristics

Morphologically, personal pronouns lack a gender distinction, but make a distinction in inclusivity, i.e., inclusive pronouns refer to both the speaker and the addressee (and, optionally, one or more third-person referents), while exclusive pronouns refer only to the speaker and one or more third-person referents, but not to the addressee. There is a plural distinction in third-person pronouns

in Pngawan Atayal, Pazeh, Saisiyat, Saaroa, Mantauran Rukai, and Isbukun Bunun, marked either by *-a*, as in Paiwan *tjaymadju* '3SG.OBL' vs. *tjayamadju* '3PL.OBL', or *l(a)-*, as in Tunggho Saisiyat *sia* '3SG.NOM' vs. *la-sia* '3PL.NOM' (see Zeitoun 2009). In Tsou as well as most Rukai dialects (with the exception of Budai), there is a distinction in visibility, as in Tanan Rukai *=ini* 'his/her (+vis)' vs. *=idra* 'his/her (-vis)'.

There is a distinction between "free" pronouns, which are not cliticized to any host (47), and "bound" pronouns (usually clitics), which attach to a verb (48a), a negator (48b), an auxiliary (48c), or a noun (48d). Note that Saisiyat and Amis are the only two languages that have free pronouns.

- (47) Saisiyat (Zeitoun et al. 2015, p. 217)
nisho' kano' 'arash-en 'ini 'oya'?
 2SG.GEN what bring-UVF DAT mother
 'What did you bring for Mother?'
- (48) Kanakanavu (Teng & Zeitoun 2016)
- a. *ni-k<um>o'oru=cu=ku tammi.*
 PFV-<AV>dig=COS=1SG.NOM sweet.potato
 'I already dug sweet potatoes.' (p. 138)
- b. *kuu=ke cu'ur-e taniaru*
 NEG=3.GEN.NSA see-UV.DEF sun
 'She didn't see the sun.' (p. 143)
- c. *te=kita <um>a~avun cau ni-ara-[a]ka.*
 IPFV=1PL.INCL.NOM <AV>RED~bury person PFV-INCH-bad
 'We will bury the dead person.' (p. 138)
- d. *sua si-pu'a vura isi=ia vantuku manu=maku.*
 NOM INST.NMLZ-buy rice this=TOP money child=1SG.GEN.PSR
 'As for this rice that was bought, my child's money was used.' (p. 146)

Most Formosan languages exhibit both free and bound pronouns, with a few exceptions: Saisiyat and Amis only exhibit free pronouns, while Mantauran Rukai has mostly bound pronouns, along with a topic pronominal set whose distribution is rather limited. With respect to "free pronouns," in Amis and Saisiyat, there is a distinction between two pronominal sets encoding possession, genitive (referring to the possessor and the non-subject actor) vs. possessive, as shown in (49). In all other Formosan languages, there is only one

genitive set (with dual functions). In Puyuma, there are three sets of genitive pronouns marking possession. The first marks nominative arguments, and the second and third mark definite vs. indefinite obliques, as in (50).

(49) Tungho Saisiyat (Zeitoun et al. 2015)

a. 'an=kizaw=a masa' bishbish.
 POSS=Kizaw=POSS eye hurt
 'Kizaw's eyes hurt.' (p. 207)

b. ni kizaw masa' bishbish.
 GEN Kizaw eye hurt
 'Kizaw's eyes hurt.' (ibid.)

c. (h)inohas ni hia' lakay-en?
 window GEN who break-UVF
 'Who broke the window?' (p. 216)

(50) Nanwang Puyuma (Teng 2008)

a. nanku ba~berek-an=ka garem.
 NOM.DEF/1SG.PSR RED~leave-NMLZ=PFV now
 'Now, it's about time for my departure.' (p. 139)

b. me-nga~ngara draku ka-inaba-an.
 AV~RED-wait OBL.INDF/1SG.PSR STAT-good-NMLZ
 'He was waiting for my getting well.' (p. 254)

There are two noteworthy points concerning bound pronouns, specifically the presence or absence of nominative enclitics and genitive proclitics.

With the exception of Tsou and Tona/Maga Rukai, Formosan languages lack third-person bound nominative pronouns. In Tsou, the third-person pronominal enclitics =*ta* 'he/she (NOM)' and =*hin'i* 'they (NOM)' refer to a visible participant (51a). In Tona and Maga Rukai, the proclitic *ni*= 'he/she (NOM)' encodes volition (51b). Third-person nominative pronouns are commonly derived from demonstratives and exhibit the same distribution as nouns and noun phrases.

(51) Tsou (Zeitoun 1992, p. 19)

a. o'a da=ta=s'a meelɯ xuxuxumasi bonɯ to snɯmɯ.
 NEG HAB=3SG.NOM=NEG AV.can every.day AV.eat OBL banana
 'He cannot eat a banana every day.'

Tona (Wang 2003, p. 85)

- b. *si ni=kibooboo moane ki tatava ko*
 and 3SG.NOM=ask 2PL.OBL NOM middle-aged.man OBL
kidredrem-ini
 heart=3SG.GEN
 ‘... (my) father wants to ask you (something) ...’

Paiwan and Puyuma have a “full”¹³ set of genitive proclitics (52), and Saaroa a “partial” set (53) (see the discussion on their syntactic distribution in § 15.6.1.2). These genitive proclitics encode the non-subject actor.

(52) Saichia Paiwan (Chang 2006, p. 414)

- a. *'au ku=veluc-in sa ku=talem-an.*
 INTRJ 1SG.GEN=uproot-UVP then 1SG.GEN=plant-UVL
 ‘Well, I uprooted (them), and then I planted (them).’

b. Nanwang Puyuma (Teng 2008, p. 110)

- ku=lukluk-anay na kinsas.*
 1SG.GEN=wrestle-UVC NOM.DEF policeman
 ‘I wrestled with the policeman.’

(53) Saaroa (Teng & Zeitoun 2016, p. 153)

- a. *tinuun-a=cu=ailhaku a ki-ruvana*
 weave/embroider-UVP=COS=1SG.GEN.NSA REAL-evening
vanukanuka.
 trousers
 ‘Last night I wove/embroidered trousers.’
- b. *cuu=tinuun-a=cu a ki-ruvana*
 2SG.GEN.NSA=weave/embroider-UVP=COS REAL-evening
vanukanuka.
 trousers
 ‘Last night you wove/embroidered trousers.’

13 By “full” and “partial,” we make a distinction between pronouns that occur in all persons and those that only occur in some of them. In Saaroa, proclitics are found in the second and third persons (with a distinction in plurality in the former, but not in the latter).

15.6.1.2 Syntactic Characteristics

Personal pronouns also exhibit a basic distinction between the subject argument, marked as nominative,¹⁴ and non-subject, marked as genitive, when encoding the non-subject actor, and oblique when referring to the non-subject undergoer. In languages that exhibit a larger number of pronominal sets, other case relations might be overtly marked, as in Saisiyat (see Yeh 1991, Zeitoun et al. 2015). The number and the function of case markers and pronominal forms are usually identical, with a few exceptions.¹⁵

There are two points that are noteworthy. First, there is a contrast between “neutral” pronouns (as in Atayal, Puyuma, Kaxabu, Paiwan, Seediq, and Tsou) and “topic” pronouns, reported in Rukai. Neutral pronouns exhibit a rather free distribution in the sentence, without any coreference to a bound pronoun, as in (54). Topic pronouns only occur sentence-initially in topic position and are obligatorily cross-referenced on the predicate with a nominative pronoun that functions as the subject, as in (55).¹⁶

(54) Mayrinax Atayal (Huang et al. 1998, p. 176)

a. *ki' kuing ga' pa-qaniq cu' qulih.*

NEUT 1SG.NEUT TOP FUT-eat[AV] ACC.NREF fish

‘As for me, I will eat fish.’

b. *tayhuq ki' kuing 'i' Yumin.*

arrive[AV] LOC 1SG.NEUT NOM Yumin

‘Yumin arrived at my place.’

c. *m-hahapuy ni' kuing 'i' yaya'.*

AV-cook BEN 1SG.NEUT NOM mother

‘Mother is cooking for me.’

14 Mantauran Rukai is peculiar in that in negative clauses, a genitive rather than a nominative pronoun is used to refer to the actor following the predicative negator *-ka*.

(i) Mantauran Rukai (Zeitoun 2007, p. 163)

o-dholro-na-ka=li ka dhoadhaace.

DYN.FIN-can-still-NEG=1SG.GEN NEG DYN.SBJV:walk

‘I still cannot walk.’

15 Tsou, for instance, has a locative (case ?) marker *ne*, but no locative pronominal set.

(i) Tsou (Chang & Pan 2018, p. 40)

mo=c'o anou ne emoo 'o oko.

AV.REAL.REM=only alone LOC house NOM child

‘The child is alone at home.’

16 One reviewer suggests that in Atayal, neutral pronouns are pro-indexed, and that in Rukai, they are cross-indexed.

(55) Mantauran Rukai (Zeitoun 2007, p. 298)

a. *ilrae_i 'a o-tipitipi=ira_i=ine ana lroolai.*
 1SG.TOP TOP DYN.FIN-beat=1SG.NOM=3SG.OBL that child
 'As for me, I beat the child.'

b. **ilrae_i 'a o-tipitipi=∅_i=ine ana lroolai.*
 1SG.TOP TOP DYN.FIN-beat=∅=3SG.OBL that child

Second, while genitive pronouns encoding the non-subject actor always cross-reference with a full noun or noun phrase in Puyuma (56), pronominal cross-reference is optional in Paiwan (A. Chang 2006, pp. 70–71) and Tgdaya Seediq (Ochiai 2009, pp. 42–44).¹⁷ In Kanakanavu, the non-subject actor pronoun =*ke* '3.GEN.NSA' never co-occurs with a coreferent noun if the noun appears in the same clause (57a–b), but it can co-occur with that noun if it is topicalized, as in (57c).

(56) Nanwang Puyuma

a. *tu_i=trakaw-aw na paisu kan Isaw_i.*
 3.GEN=steal-UVF NOM.DEF money OBL.SG Isaw
 'Isaw stole the money.' (Teng 2008, p. 147)

b. **∅_i=trakaw-aw na paisu kan Isaw_i.*
 ∅=steal-UVF NOM.DEF money OBL.SG Isaw

(57) Kanakanavu

a. *ni-patupun=ke_i ∅_i tacau urapaca vatu isi.*
 PFV.UV-throw=3.GEN.NSA ∅ dog use stone this
 'He/she/they threw this stone at the dog.'

b. **ni-patupun=ke_i manu_i tacau urapaca vatu isi.*
 PFV.UV-throw=3.GEN.NSA child dog use stone this

c. *manu_i isi=ia ni-patupun=ke_i tacau urapaca vatu isi.*
 child this=TOP PFV.UV-throw=3.GEN.NSA dog use stone this
 'As for this child, he threw this stone at the dog.'

17 Clitic doubling in Tgdaya Seediq is also found with nominative pronouns, as shown in (i):

(i) Tgdaya Seediq (Ochiai 2009, p. 43)

wada=ku=na bbe-un ka yaku ciida.
 PST=1SG.NOM=3SG.GEN beat-UVF NOM 1SG that.time
 'He beat me at that time.'

15.6.1.3 Ordering of Pronouns¹⁸

There are three types of languages in terms of the ordering of pronouns: (1) subject > non-subject, (2) actor > non-actor, and (3) 1st/2nd person > 3rd person.

In the first group of languages, which includes Rukai, the subject takes precedence over non-subject arguments, as in (58).

(58) Mantauran Rukai

a. *o-tipitipi=lra=imia'e.*

ACT:DYN.FIN-beat=1SG.NOM=2SG.OBL

'I beat you.' (Zeitoun 2007, p. 335)

b. **o-tipitipi=imia'e=lrao.*

ACT:DYN.FIN-beat=2SG.OBL=1SG.NOM

c. *'i-tipitipi=lra=imia'e.*

PASS-beat=1SG.NOM=2SG.OBL

'I am/was beaten by you.' (Zeitoun 2007, p. 335)

d. **'i-tipitipi=imia'e=lrao.*

PASS-beat=2SG.OBL=1SG.NOM

In Kananavu, there is a contrast between AV and UV clauses. In AV clauses, the subject encoded as a nominative clitic precedes the non-subject oblique, as shown in (59a–b). In UV clauses, when the subject is a first- or second-person participant, it is encoded as a nominative clitic, which occurs on the verb or the auxiliary. The non-subject actor cannot be overtly marked, i.e., it is impossible to have a series of two clitics in UV clauses (58c–d).

(59) Kananavu

a. *ma-'icupu=ku kasua.*

STAT-be.afraid=1SG.NOM 2SG.OBL

'I am afraid of you.'

b. **ma-'icupu kasua=ku.*

STAT-be.afraid 2SG.OBL=1SG.NOM

18 Billings has conducted a significant amount of research on this topic within Optimality Theory. Readers are referred to Billings & Kaufman (2004).

c. 'esi=*kasu* *itar-un*.
 PROG=2SG.NOM wait-UV
 '(I) am waiting for you.'

d. *'esi=*kasu=maku* *itar-un*.
 PROG=2SG.NOM=1SG.GEN.NSA wait-UV

In Amis, Isbukun Bunun, and Kavalan, the actor always precedes the undergoer, as shown in (60).

(60) Isbukun Bunun (P. Li 1997, p. 319)

a. *madu'=ik=su'*.
 STAT:like=1SG.NOM=2SG.OBL
 'I like you.'

b. **madu'=su'=ik*.
 STAT:like=2SG.OBL=1SG.NOM

c. *ludah-un=ku=as*.
 beat-UVP=1SG.OBL=2SG.NOM
 'I beat you.'

d. **ludah-un=as=ku*.
 beat-UVP=2SG.NOM=1SG.OBL

The Atayalic languages (Atayal and Seediq) are characterized by the merging of pronominal clitics, with a rather complex distribution. As shown in L. Huang (1995, pp. 28–36), in Mayrinax, singular and plural first- and second-person pronouns always precede third-person pronouns. If first- and second-person pronouns co-occur, a singular referent takes precedence over a plural referent (61a–b). When two first- and second-person plural pronouns co-occur, the patient always takes precedence over the actor (61c–d).¹⁹

19 There are also fused forms in Atayal, as for instance *misu'* 'I (GEN) + you (NOM)'.

(i) Mayrinax Atayal (L. Huang 1995a, p. 32)

a. *tuting-un=misu'*.
 hit-UVP=1SG.GEN+2SG.NOM
 'I hit you.'

b. **tuting-un=su'=mu*.
 hit-UVP=2SG.NOM=1SG.GEN

(61) Mayrinax Atayal

a. *tuting-un=mi'=cimu.*

beat-UVP=1SG.GEN=2PL.NOM

'I beat you all.'

b. **tuting-un=cimu=mi'.*

beat-UVP=2PL.NOM=1SG.GEN

c. *tuting-un=cimu=niam.*

beat-UVP=2PL.NOM=1PL.EXCL.GEN

'We beat you all.'

d. **tuting-un=niam=cimu.*

beat-UVP=1PL.EXCL.GEN=2PL.NOM

Mergers of pronominal clitics are also found in Truku Seediq, as shown in (62) (see Holmer 1996, Chang 1997, Ochiai 2009):

(62) Truku Seediq (Tsukida, pers. comm., November 4, 2022)

a. 1SG.NOM + 2SG.GEN =*ku* + =*su* → =*saku* (*=*ku=su*, *=*su=ku*)b. 2SG.NOM + 1SG.GEN =*su* + =*mu* → =*misu* (*=*su=mu*, *=*mu=su*)c. 2PL.NOM + 1SG.GEN =*namu* + =*mu* → =*maku*
(*=*namu=mu*, *=*mu=namu*)

15.6.2 Impersonal Pronouns

Impersonal pronouns refer to an indefinite entity and only occur in generic contexts. They are only found in the Rukai dialects, with the exception of Tanan, cf. Mt =*mao* 'NOM/GEN' and =*imae* 'OBL', Budai and Labuan =*mado* 'NOM', and Tona *kimade* 'NOM', *modoa* 'OBL', =(i)*made* 'GEN'.

(63) Tona Rukai (Wang 2003, p. 118)

a. *a-no maem=ini=nga na belebele ka*
TOP-when.IRR STAT:ripe=3SG.GEN=COS NOM banana TOP
w-a-doo kimade kwane.
ACT-REAL-can IMPRS.NOM DYN.SBJV:eat
'When bananas become ripe, one can eat them.'

b. *a-no sida'an=imade na alapi ka ma-tateleke.*
TOP-when.IRR live=IMPRS.GEN OBL slate TOP STAT-cool
'If one lives in a slate house, he will feel cool.'

- c. *toloan=ini kidra no ma'itikikay=(i)ni modoa,*
 origin=3SG.GEN that when.IRR tell=3SG.GEN IMPRS.OBL
ty-a-maloloy kidra mya.
 tell-REAL-RED:story that DYN.SBJV:so
 'I will narrate it the way it was told to us.'

15.6.3 *Demonstrative Pronouns*

Demonstrative pronouns are found in a majority of Formosan languages and exhibit the same distribution as noun phrases. They can refer to human and nonhuman referents and are distinguished in terms of visibility and distance (see §15.3). In Amis, demonstrative pronouns are marked for case, as shown in (64). In Rukai, demonstrative pronouns are marked for plurality, as shown in (65).

(64) Hsiukulan Amis

- a. *so'ot-en koni i tartar.*
 bundle-UVF NOM.this LNK pillar
 'Attach this to the pillar!' (Wu 2022, p. 52)
- b. *o paimpican no mako kora.*
 CN pencil.box GEN 1SG.GEN NOM.that
 'That is my pencil box.' (Wu 2018, p. 54)

(65) Mantauran Rukai (Zeitoun 2007, p. 303)

- a. *aanga=i ana/ana'i?*
 who=3SG.GEN that
 'Who is he/she?'
- b. *aanga=i ana-lo/ana'i-lo?*
 who=3SG.GEN that-PL
 'Who are they?'

In Rukai and Isbukun Bunun, (free) third-person pronouns are derived from demonstratives.

(66) Maga Rukai (Huang et al. 1998, p. 191)

- a. *o-slara kidri vlaki na athoo.*
 ACT-chase that child OBL dog
 'That child chases/chased a dog.'

- b. *o-slara kidri na athoo.*
 ACT-chase that OBL dog
 'He/She chases/chased a dog.'

15.7 Conclusion

The nominal morphology of the Formosan languages is rather complex, and in a short chapter such as this, we have necessarily had to focus on a handful of topics without going into detail, among which have been noun classes, which are distinguished morphosyntactically; the array of noun-phrase structures; variation among case markers in terms of number and function, along with their simplification as a result of case syncretism and gradual loss in certain languages; prepositions as a suspicious category; free and bound pronouns; and the issues of coreferencing, indexing, and internal ordering.

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