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Non-verbal predication: Results and perspectives

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1. Preliminaries

As detailed in Chapter 1, the present collection adopts the approach proposed by the seminal works of Hengeveld (1992) and Stassen (1997), according to which non-verbal predication may be expressed by three major strategies:

- Type I: copula construction;
- Type II: juxtaposition construction;
- Type III: predicative inflection construction.

The first two types are self-explaining (see examples in Chapter 1). Type III, whose main features are recapitulated at the beginning of Section 3, can be subdivided into Subtypes IIIa and IIIb as suggested by Bertinetto, Ciucci, and Farina (2019). Chapter 1 (§3.4) also mentions a fourth type, resulting from the combination of Types I and III (see §3.2 below).

The fundamental reason to adhere to the Hengeveld-Stassen framework is the need to maintain a cross-linguistically consistent typological view of how the same semantic content is expressed despite the morphosyntactic differences between languages, particularly relating to presence vs. absence of the copula. The copula construction includes an element that may exhibit verbal features but is not a true verb; hence, it cannot be identified as the predicate. In a copula clause, the assignment of the semantic/syntactic roles is governed by a non-verbal element that is the true predicative nucleus. See, for instance, *Max is able to surprise anybody* / *capable of whatever* / *susceptible to any influence*, as opposed to, e.g., **Max is capable to whatever*, since the predicate *capable* requires an argument marked by the preposition *of*. The argument structure is ostensibly governed by the adjectival predicate rather than by the copula.

Chapter 1 pointed out the main semantic issues relating to non-verbal predication (to which we return in Section 4) and underlined the major functional domains of adverbial predication, i.e. locational and possessive predication (see Section 6 below), both of which can, however, be expressed by verbal constructions in many languages. Sections 2 and 5 address the accessibility to the predicative function by the different lexical categories, also analyzing their morphological behavior. Section 7 treats the somehow marginal but related topic of ostensive predicators. Section 8 deals with syntactic and pragmatic issues. Section 9 focuses on the different types of copula and their origin. Finally, Section 10 highlights unresolved matters and perspectives for future research.

The present editors offered their Position Paper (slightly revised as Chapter 1) to the contributors as a general typological orientation, with no intention to impose a straitjacket. Most of them adhered to the approach proposed, with a few exceptions that deserve to be pointed out so that the reader can understand each contribution in its terms. Aikhenvald's chapter contrasts "copula

clauses" and "verbless clauses", with the latter corresponding to our Type II (presumably also including Type III). Güldemann and Pratchett's chapter analyzes the different syntactic constructions in the Ju languages based on the number of elements in the clause rather than on the above itemized syntactic strategies and their semantic functions.

Likewise, the questionnaire submitted to our contributors (to be found at the end of Part 1 in Vol. I and at the beginning of Vol. II, see the Table of Contents) was intended as a list of issues to be considered rather than addressed in a fixed order. Each contributor adopted the presentation strategy that best fit their expository needs. However, all contributors were asked to fill in their answers, which, together with the chapters themselves, were an essential input to the present chapter. The interested scholar can consult the whole set of answers at the following link: https://www.degruyter.com/books/978311220966-0. Note, however, that the present chapter does not follow the order of the queries in the questionnaire, whose sequence is organized in terms of grammar components, i.e. roughly: structure of the lexicon (Part 1), syntax (Part 2), semantic functions (Part 3), morpho-syntax (Parts 4–5). Here, we reshuffled the topics according to a consistent expository logic. Since the goal of this chapter is to sum up the findings concerning the most salient issues of non-verbal predication, the exposition inevitably puts the internal organization of the individual language/family in the background. However, the reader can easily recover it from the dedicated chapter and the corresponding questionnaire answers.

As for the choice of languages, we are aware that our sample is in no way a carefully balanced set. We aimed to have descriptions relating to all major areas of the world, but space limitations and the availability of competent scholars had to be considered. We are happy to say that, with very few exceptions, all the specialists we contacted were ready to collaborate; only one contributor dropped out on the way, which accounts for the poor coverage of Australian languages. As one can perceive from the table of contents, the sequence of chapters in this book is organized according to a rough geographical criterion, traveling westwards from eastern Asia and southwards within each continental area.

For ease of the reader, in the following sections, we put in bold the names of the families/languages mentioned in the table of contents. Please note, however, that the labels **Paleosiberian** and **Papuan** are purely conventional, i.e. do not imply any genetic relationship but mere geographical proximity.

2. Nouns and adjectives in predicative function

A preliminary issue concerns the lexical categories that can participate in non-verbal predication. This section addresses the situation for nouns and adjectives as the two most prominent classes in non-verbal predication (to the extent, of course, that adjectives exist as an autonomous class in a given language). We consider the availability of adjectives and their classes (§2.1) and the morphological properties of adjectives and nouns (§2.2). The remaining lexical classes, which are more likely to undergo language-specific constraints relative to the predicative function, are treated in Section 5.

2.1. On the availability of adjectives and their behavior

The adjective class is variably present in the world's languages, and, when it exists, it may exhibit nominal or verbal features. Unsurprisingly, this is what we observe in our sample. Three main sets stand out although their boundaries are rather fuzzy:

- languages in which adjectives have noun(-like) morphology and neatly diverge from verbs;
- languages in which adjectives are a subclass of verbs;
- languages in which the very status of the adjectival class is debatable.

There are, however, intermediate situations. Some large language families present a fragmented situation.

In some languages, adjectives are neatly manifested as distinct from verbs and clearly (or essentially) exhibit nominal features. This occurs in the two Sino-Tibetan languages **Caijia** and **Waxiang**,[1] in **Old Zamuco**,[2] and in all Papuan languages of our sample (**Nungon**, **Teiwa**, **Tidore** and **Mian**). For instance, Teiwa adjectives, unlike verbs, do not display the realis/irrealis opposition. In **Tungusic** languages, adjectives in predicative position mostly behave like nouns and the same applies to **Turkic** and **Zaparoan** languages. **Maltese** has a class of adjectives that can be directly used as adnominal modifiers, with noun-like or dedicated morphological patterns. The adjective class in Northwestern Mexico **Uto-Aztecan** languages divides into a small set of non-derived adjectives and a large set of adjectives derived by adding suffixes also used for deverbal nominalization; in their predicative behavior, they are mostly distinct from verbs and similar to nouns or adverbs. **Pano** languages have a distinct adjective class, but attribution may also be conveyed by a nominal predicate, an adverbial predicate or even (as in Chakobo) a non-agentive verb. **Guaycuruan** languages mostly have adjectives although in the southern ones words expressing property concepts are divided between nouns and verbs; depending on the language, property words exhibit nominal or verbal features.

One also finds mixed situations where the existence of adjectives, or their nominal vs. verbal nature, varies from one language to another. **Cushitic** languages are a clearly mixed case. In many East Cushitic languages, property concepts are expressed by verbs; by contrast, most Central and Highland East Cushitic languages have a class of adjectives that are essentially treated as nouns. **Uralic** languages have a morphosyntactic class of adjectives, but they are not always clearly distinguishable. In Permic, adjective and adverbial predicates have a specific plural marker, distinct from that of nouns. In Saami, many adjectives, but no nouns, have a special form for the predicative role. In Mordvin and Samoyedic languages, non-verbal predicates (adjectives, nouns and even nouns in adverbial cases or non-finite verb forms) can be inflected like verbs, and in Erzya Mordvin this is more frequent with adjectives than with nouns. In Samoyedic, there is a group of property concepts encoded as verbs. **Paleosiberian** languages offer a similar picture. Ket adjectives are distinct from verbs but also from nouns since, unlike the latter, they take the predicative inflection when used predicatively. By contrast, Yukaghir and Nivkh have property concepts as a subclass of verbs, while Chukchi and Alyutor adjectives, although very verb-like, show some peculiarities. Family-internal variation has also been pointed out for **Mande** languages. Mandinka has no construction analyzable as adjectival predication. Among the lexemes that act as qualifying modifiers of nouns, some behave like typical verbs or like a subclass thereof, while others can be used predicatively in the form of derived verbs, and yet others are used in combination with the same copula elements as nouns (although they do not coincide with nouns).

In some languages, the adjective class is relatively small. This happens in some **Arawak** lects and in the **Chicham** family, where adjectives are distinct from verbs. **Cuwabo** (Bantu) also has a very restricted morphosyntactic class of adjectives that behave like nouns in predicative function, but property concepts are usually expressed by verbs. Among the **Nilotic** languages, some have extensive sets of adjectives whose morphosyntactic behavior is similar to that of nouns, but in those with few adjectives there is a tendency to conjugate them as stative verbs. As for **Oceanic** languages, the most common situation is to have two distinct classes: a few pure adjectives and an open class of adjectival verbs that exhibit TAM and negative polarity inflection. Only the latter lexemes are compatible with the predicative function, except that they can modify a noun directly. Teanu is untypical since adjectives and verbs are two formally distinct classes in all contexts. The very definition of the adjective class is an unresolved matter in the **Ngumpin-Yapa** group (Pama-Nyungan) and also in Somali and the related Omo-Tana languages of East **Cushitic**.

[1] Most Waxiang verbs may be directly converted into nouns without being morphologically marked for this function.

[2] Besides inflecting for gender, Zamucoan adjectives, unlike many nouns, do not take possessive markers.

Lushootseed (Salishan) and **Ju** languages have no morphosyntactically distinct class of adjectives and this is also observed in **Mataguayan** and **Yupik-Inuktitut-Unangan** languages (aka Eskimo-Aleut), where the attributive function may be expressed with appositive nouns or suffixes on nouns. In **Formosan** languages, by contrast, adjectival concepts are expressed by stative verbs. Likewise, in **Algonquian** languages, notional equivalents of property-denoting items are either verbs or bound elements, whose exact status is often not well understood yet. In **Western Apache**, property concepts are lexified as stative verbs and can sometimes be fused with nouns to yield a noun-stative verb compound, which is, however, not used predicatively. However, in **Hän Athabaskan** there is some evidence for a class of adjectives, whose behavior is similar to that of nouns. **Tupian** languages, which are known to lack adjectives, take the other path since attribution is expressed by predicative nouns characterized by a specific set of person markings.

2.2. Morphological features of nominal and adjectival predicates

Nominal and adjectival predicates may or may not retain all the morphological features they have in argument (nouns) or attributive position (adjectives). Accordingly, this section will highlight two main sets:

- languages in which nouns and adjectives (where the latter exist) show no difference between argument and predicative function;
- languages that exhibit a difference, however manifested. Here again, the sets' boundaries are not sharp.

Equal (or at least largely similar) treatment of nouns and adjectives in both predicative and non-predicative role is observed in the **Uto-Aztecan** languages of northern Mexico, **Arawak**, **Chicham**, **Guaycuruan**, **Maltese**, **Turkic**, and also **Zaparoan** although this can be stated with absolute certainty only for Iquito. This also applies to **Cushitic** languages, some of which, however, lack adjectives, and is trivially true for the Papuan language **Nungon**, considering the lack of number and gender exponence (but possessive markers are allowed on predicative nouns). In **Pano** languages, nominal and adjectival predicates mostly preserve their features, including plural marking on the last word of the NP. Two **Formosan** languages (Isbukun Bunun and Mantauran Rukai) retain the plurality feature in predicative nouns.

Some languages lack adjectives but have nouns that show no difference (minor adjustments aside) between argument and predicative position. This is the case for **Siyuewu Khroskyabs** (Sino-Tibetan), **Lushootseed**, **Mataguayan**, **Ju**, and the **Ngumpin-Yapa** languages. One can also mention **Western Apache**, and this extends to the adjectives of **Hän Athabaskan**, which are an absolute rarity in this family. Similarly, **Nilotic** nouns in predicative function show no feature change unless they are used to express a contingent state, as in Eastern Nilotic Turkana, where, however, they turn into derived verbs. Whether Nilotic adjectives retain their features or are changed into stative verbs depends on the language and the adjective involved.

Feature retention is but partial in **Tungusic** predicative adjectives, which optionally retain number agreement; in Evenki, predicative adjectives show no case agreement. Likewise, **Uralic** predicative nouns mostly preserve their features, but in the Finnic dynamic/transformative and contingent predication (respectively expressed by the translative and essive case) number agreement may be omitted in the predicative function with both nouns and adjectives. In the rest of the family, lack of number agreement is a general characteristic of predicative adjectives. In Mari, this extends to nominal predicates. As mentioned in the previous section, most Saami adjectives have a dedicated predicative form (like some languages mentioned right below). In **Caijia** and **Waxiang** (Sino-Tibetan), predicative adjectives take sentence-final modal marking and can host inchoative and "currently-relevant-state" particles.

In other languages, the predicative and non-predicative positions are differently marked. In **Cuwabo** (Bantu), predicative nouns undergo the process of High Tone Deletion, which qualifies as a predicative inflection construction (see §3.2). Mutatis mutandis, this is also observed in **Old**

Zamuco, where a dedicated predicative form is common to both nouns and adjectives and is characterized by superficially simpler forms, except for the plural marker when needed and, with adjectives, gender agreement. Likewise, **Algonquian** predicative nouns take modifying preverbs (adjectival and numeral). They are incompatible with determiners and cannot have number and gender marking; possessive marking is either obligatory or forbidden. In the **Papuan** languages Teiwa, Tidore and Mian, predicative nouns cannot take the determiner that marks gender.

In some languages, the difference stems from the fact that nouns and adjectives in predicative position show markers they don't show in argumental position (in the case of nouns) or attributive position (in the case of adjectives). This occurs in **Mande** and in the **Oceanic** languages. **Tupian** nouns, with marginal exceptions, have no inflection. The person marking of nominal predicates formally coincides with the possessive markers, except for some peculiarities of the third person (besides, some Tupi-Guarani languages have a "translative" case marker to indicate a temporary property or state).

The **Yupik-Inuktitut-Unangan** nominal roots (rather than fully-fledged words) that serve as the basis of predicative constructions do not exhibit specific marking but, at any rate, give rise to verbal rather than non-verbal predication. For the **Paleosiberian** group, there is not enough information on the preservation of morphological features in predicative nouns and adjectives.

3. Construction types: distribution, restrictions, origin

As detailed in Chapter 1 (Section 3), non-verbal predication can be expressed via three main strategies: copula (Type I), juxtaposition (Type II) and predicative inflection (Type III), which divides — as suggested by Bertinetto, Ciucci, and Farina (2019) — into Subtypes IIIa and IIIb, both much rarer than the first two types.

In Subtype IIIa, the non-verbal predicate is provided with some marker, in most cases cross-referencing the subject. Diachronically, the inflections mostly stem from the fusion of a copula element, whatever its origin, but they may also consist of pronominal markers, possibly coinciding with markers also used to express the possessive function. In the latter case, the non-verbal predicate merely inflects for person, while in the former case they may include TAM morphology.

The even less frequently observed Subtype IIIb is instead characterized by the non-verbal predicate exhibiting a morphologically light form prototypically coinciding with the root/stem, while the argument status of the subject is morphologically marked by overt exponents. Subtype IIIb is confined to nouns and adjectives, whereas Subtype IIIa has no principled restrictions but only language-specific ones.[3] A plausible assumption is that the opposition of predicative vs. argument form in Subtype IIIb might have originated from the fusion of a definiteness marker with non-predicative nouns, with subsequent analogical extension to adjectives. A similar hypothesis has been proposed for Ancient Aramaic (Cohen 1984: 582). Some evidence for this scenario can be found in **Cuwabo**, but for other families (like **Zamucoan**) this can only be stated as a speculation.

Although both subtypes are orthogonal to the copula strategy, there are sporadic manifestations of the mixed Type IV (see Chapter 1, §3.4), where the predicative inflection (of either subtype) combines with the copula. This may be regarded as an incipient sign of the demise of Type III.

In the next sections, we address the distribution of the main types (§3.1), and then we focus on Subtypes IIIa and IIIb (§3.2). Finally, we deal with the variable manifestation of TAM features in non-verbal predication (§3.3).

[3] In the **Zamucoan** languages, Subtype IIIb also applies to numerals, but this is no real exception because they inflect like nouns.

3.1. Types of construction: their distribution and competition

In this subsection, we analyze the distribution of the construction types in our sample, collapsing Subtypes IIIa and IIIb, whose respective distribution is spelled out in the next section.

One notable datum emerging from our survey concerns the degree of internal consistency of the language families. Some of them are, if not perfectly, at least relatively homogeneous with regard to the syntactic strategy/ies adopted; other families, like **Uralic**, **Algonquian**, **Tupian**, **Pano**, **Mataguayan**, **Nilotic** and **Mande**, make diverse choices. Moreover, even a restricted sample like ours shows a surprising variety concerning the combination of strategies found in a single language. This section points out the following main groupings:

- languages that (almost) exclusively use the copula construction; languages that (almost) exclusively use the juxtaposition construction;
- languages that alternate the copula and the juxtaposition construction; languages that alternate all three major types.

The different mixtures of these strategies is governed by language-specific criteria. Although none of the languages analyzed in this book seems to lack alternatives to Type III (even though dominantly used) we hesitate to offer this as a generally valid conclusion. The exclusive use of Types I and II is, instead, a documented option.

To begin with, a small set of languages exclusively exploit the copula construction: this is the case for most Finnic and Saami languages among **Uralic**, for the **Ju** languages, despite some structures that come close to being juxtaposition constructions, and for most **Zaparoan** languages, with the notable exception of Arabela (see below).

Juxtaposition as the only or largely dominant strategy is observed in **Lushootseed** (Salishan), **Guaycuruan** and in the Papuan languages **Teiwa** and **Nungon** although in the latter language one can detect the incipient stage of a copula creation process. Juxtaposition is pervasive in **Arawak**, while the copula strategy is found in just some lects of the family.

Some numerical data can be extracted from two typological databases: in the Grambank (Skirgård et al. 2023a,b), the use of the copula for nominal predication is attested in 56.78% of the 2,029 languages for which data are available. In nominal predicative constructions, the majority of African and Eurasian languages use the copula, but this is not the case in the majority of Papunesian and Australian languages. In the WALS, the juxtaposition construction is possible in 175 of the 386 languages surveyed (45.34%) (Stassen 2013a). However, in the languages showing copula or juxtaposition in either database, that construction is not necessarily the only strategy employed.

Indeed, juxtaposition and copula may coexist in the same language, with varying dominance of one over the other. In **Nilotic** languages, interrogative clauses prefer juxtaposition in lects that regularly use a copula in declarative statements; in Lopit, in particular, juxtaposition is used in adverbial predication, whereas nominal predication requires a copula. The copula construction prevails in the two Sino-Tibetan languages **Caijia** and **Waxiang**, with juxtaposition limited to the domains of age, dates, weights and measures. The copula strategy is also preponderant in the **Pano** family: juxtaposition is generally restricted to present-referring declarative clauses and is absent in Matses; in Shipibo-Konibo, however, no obvious functional factors motivate the selection of either juxtaposition or copula construction. The dominance of the copula is likewise observed in **Maltese**, especially in identity predication, and is the default strategy in all **Tungusic** languages, juxtaposition being an option with the present tense and in sentences with third-person subjects. However, Nanai, and marginally Even, also show the predicative inflection pattern. The copula construction prevails in **Mande** languages although some (like Dzuun, Bobo, Soso and Jalonke) have a robust presence of the juxtaposition strategy; in Maninka and Kakabe, the copulae can be optionally dropped if a focalization marker is present. Although juxtaposition and copula constructions are the two major types in **Cushitic** languages, with the former mostly limited to nominal predication and TAM-unmarked clauses, one can find instances of predicative inflection in a few lects.

The juxtaposition construction prevails instead in **Western Apache** and **Oceanic** (but see the following subsection for further qualifications concerning Subtype IIIa). This also applies to **Ngumpin-Yapa** languages, except that locational predication employs the copula when the locative expression is in clause-initial position; in questions, however, the copula is not required. Among the few Oceanic languages that have copula elements, Lo-Toga requires it in combination with negation, TAM markers and adjectival predicates. A large dominance of juxtaposition is likewise observed in the **Formosan** languages albeit four of them also exhibit the copula construction. Of these, only two may alternate these strategies: in Puyuma, the copula is used for nouns in identity predication; in Paiwan, the copula brings about a constituent order change, with the subject preceding the predicate. Polynesian languages (**Oceanic**) have an intermediate status since they appear to have developed an optional copula.

The predicative inflection construction alternates with the copula construction in **Cuwabo**, which has two copulae obligatorily used in non-present-referring contexts, but also two complementary distributed predicative inflection strategies, sometimes combined with the copula (thus implementing Type IV). In **Tidore**, the frequently used juxtaposition alternates with the predicative inflection construction in most contexts, excluding adverbial predicates consisting of prepositional phrases; the predicative inflection construction is instead prevailing in **Mian**, another Papuan language.

Some languages/families have a kind of greedy approach to the syntactic arrangement of non-verbal predication since they combine all major patterns although the choice is largely governed by grammatical or pragmatic parameters. This is most evident in Mordvin and Samoyedic among **Uralic**. All five **Paleosiberian** languages considered in our sample make use of copula and juxtaposition strategy, with the latter mainly found with TAM-unmarked clauses and (especially in Chukchi and Alyutor) in clauses with third-person subjects; in addition, all but Nivkh have some form of predicative inflection, which in Ket is conditioned by the predicate's word class. In Yukaghir, the predicative inflection appears to be in free variation with the copula construction. The former pattern has been pointed out as the original strategy in the Tupi-Guarani languages among **Tupian** and is still alive in some lects of this branch. As for the copula construction, it is found in many Tupian languages, except for the Tupi-Guarani branches I-III (excluding Siriono), i.e. precisely those where the predicative inflection construction is still largely vital. However, some Tupi-Guarani languages exhibit the juxtaposition strategy in identity predication, as contrasted with the predicative inflection strategy in inclusion predication. In Northwestern Mexico **Uto-Aztecan** languages, juxtaposition and copula are the two main strategies, with the former only found in present-referring contexts and the copula preferred in adverbial predication; however, the Tepiman languages also use verb-like inflections (Type III) in non-present-referring situations. Arabela is an exception among **Zaparoan** languages because it shows all three major strategies, with the copula required when TAM morphology is needed and the predicative inflection restricted to SAP subjects. In **Chicham** languages, the juxtaposition construction competes with the predicative inflection construction based on the enclitic copula, which in turn alternates with the independent copula in specific contexts. **Old Zamuco** has all three major types although the predicative inflection construction dominates; another Zamucoan language, Ayoreo, has built an invariable copula that competes with the predicative inflection construction. **Turkic** languages are characterized by the use of the predicative inflection strategy, especially required by SAPs, but also display juxtaposition and copula construction. The copula is required in negative clauses, while juxtaposition typically occurs in positive and present-referring clauses, and mostly with third-person subjects (but see the next section with regard to the interpretation of the third-person marking). However, Iran-Turkic varieties and Azerbaijani lack juxtaposition. Furthermore, a special feature of Turkic is that more than one copula can occur in the same clause in a peculiar copula-stacking format. All **Mataguayan** languages use the predicative inflection strategy although Nivaĉle and Wichi also use juxtaposition; Wichi is the only Mataguayan language exhibiting a copula.

As already remarked, some languages in our sample only or mostly use verbal constructions. This occurs in **Yupik-Inuktitut-Unangan** and also in **Algonquian**, where, however, juxtaposition, copula and predicative inflection are also found, e.g., in Blackfoot and Menominee.

3.2. Subtypes IIIa and IIIb: their distribution and competition

As explained at the beginning of Section 3 (and as detailed in Chapter 1, §3.3), the predicative inflection construction (Type III) splits into two subtypes. In this subsection:

- we itemize languages that, more or less largely, exploit the IIIa or the IIIb strategy;
- in both sets, we highlight the occasional presence of Type IV, which combines I and III;
- we conclude by mentioning languages that make use of both Subtypes IIIa and IIIb.

It is worth repeating here that, to the best of our knowledge, Type III always coexists with at least another predicative strategy, even in languages where it has a dominant position. Hence, the information in this section should be viewed as an integration of Section 3.1.

Some of the languages in our sample are known to prominently feature Subtype IIIa. This is the case for several **Uralic** languages. In Mordvin, non-verbal predicates can be inflected like verbs in person and tense; however, this pattern alternates with the copula and the juxtaposition strategy depending on TAM values, person and discourse factors. As for the Samoyedic languages, Nenets, Enets and Nganasan allow the predicative marker on both nouns and adjectives, whereas Selkup disallows it for adjectives. There are also TAM constraints since past-tense marking on non-verbal predicates is possible in Nenets and Enets but not in Nganasan. In addition, these languages occasionally give rise to the mixed Type IV. Subtype IIIa is also dominant in **Turkic**, where non-verbal predicates are provided with markers of pronominal origin cross-referencing SAP subjects. Even predicates consisting of a personal pronoun can feature this sort of markers. Significantly, since the third person is zero-marked, it could be argued that the construction used with non-SAP participants completes the Subtype IIIa paradigm rather than implementing the juxtaposition strategy. At any rate, the copula is required in negative clauses and to flag TAM values in non-present-referring contexts. With SAPs, mixed constructions (Type IV) may occur, with both person affixes and copula. The **Mataguayan** languages Nivaĉle, Maka and Wichi form Subtype IIIa by adding the pronominal verbal affixes to nominal predicates, while in Chorote such prefixes are identical to the possessive markers.

Among the **Paleosiberian** languages, Ket alternates the predicative inflection of Subtype IIIa and the juxtaposition strategy, with subject-agreeing suffixes on adjectives, adverbs, numerals, and with a selection of case markers on nouns; the copula is instead required in past-referring contexts. In Chukchi and Alyutor, the agreement markers only occur with SAP subjects, and in Yukaghir the predicative inflection appears to be in free variation with the copula construction. As for **Tungusic**, Nanai (and its close relative Uilta) uses possessive suffixes to index the subject of non-verbal predicates in present-referring situations (mostly limited to SAPs), while the predicative inflection of Even is confined to a specific type of emphatic construction. **Chicham** languages are another case in point. The frequently used Subtype IIIa gives way to the copula in remote-past contexts and in most dependent clauses, but the alternation cannot be straightforwardly ascribed to functional categories and is better treated in terms of compatibility with specific verbal suffixes.[4] In Baure, an exception among the pervasively juxtapositional **Arawak** languages, non-verbal predicates carry the "copula suffix" *-wo* with the subject markers (Subtype IIIa). In most **Oceanic** languages (juxtapositional on the surface), the possessive markers may be affixed on nominal predicates; in addition, most lects allow TAM markers to accompany the non-verbal predicates, whatever

[4] Overall (present volume) points out some neighboring languages that might have imported the use of the enclitic copula by contact with Chicham. The Amazonian isolate Kandozi-Chapra makes use of an invariant enclitic copula construction. In Ecuadorian Kichwa, possibly because of Shuar influence, the copula *ga-* is encliticized to the nominal predicate, whereas in the other Quechuan languages it is a prosodically independent word (Muysken 2010).

the lexical category. One can thus conclude that Subtype IIIa is relatively widespread in this family. Northwestern Mexico **Uto-Aztecan** languages, although mostly exploiting the juxtaposition and the copula construction, build Subtype IIIa by attaching inflectional suffixes (likely coming from verb-like copulae) to the non-verbal predicate head; in particular, the Tepiman languages use verb-like inflections in non-present-referring contexts, sometimes in combination with the copula (mixed Type IV). Arabela deviates from the copula strategy of the remaining **Zaparoan** languages by using the predicative inflection construction IIIa with SAPs. In the Papuan language **Tidore**, non-verbal predicates, excluding prepositional-phrases predicates, can cross-reference the subject with the same pronominal prefixes as verbs. In **Mian** (except for questions), the predicative status of the non-verbal constituent is signaled by the "predicator" enclitic *=o*. In a few **Nilotic** languages, the person markers show the morphophonological consequence of the fusion of a former copula, which, by contrast, turned into a focus marker in other Nilotic lects. As in Turkic, but limited to specific contexts, the zero-marked third person gives a noun a predicative interpretation in and by itself. **Formosan** languages border the Subtype IIIa pattern when the non-verbal predicate is followed by a cliticized pronominal argument.

Subtype IIIb is especially manifested in Zamucoan and Tupian languages. **Old Zamuco** pervasively exploits this strategy although it marginally exhibits a copula construction, which can occasionally give rise to the mixed Type IV. In the most typical cases, however, the copula is orthogonal to Subtype IIIb, as clearly observed in the still-spoken Ayoreo language. When the subject consists of lexical elements that do not inflect (pronouns, quantifiers, question words, adverbials), Subtype IIIb applies vacuously, thus yielding the appearance of mere juxtaposition. Among **Tupian**, various Tupi-Guarani languages characteristically use the predicative inflection construction of Subtype IIIb, which is supposed to be the original strategy. This also occurs, albeit limited to some adjective classes, in most Saami lects, thus deviating from the predominant inclination towards Subtype IIIa observed in some **Uralic** languages (see above).

The coexistence of Subtype IIIa and IIIb within a language family is observed in **Cushitic**, where the predicative inflection strategy concerns a minority of lects. Subtype IIIa is found in Beja (Northern Cushitic) and different subgroups of Highland East and North Cushitic languages (Arbore and 'Afar). An intermediate stage, namely the incomplete cliticization of the copula before turning into an affix, may be proposed in some cases. Subtype IIIb, whereby the "absolute" form of a noun may have predicative value in and by itself, is instead manifest in Konso and some languages of the Dullay varieties, such as Ts'amakko, Harso-Dobase and Gawwada, as well as in many Oromo varieties. On careful analysis, something similar can be said about **Tupian**. Over and above the Tupi-Guarani languages that use Subtype IIIb, there are many more in which the person markers (essentially coinciding with possessive prefixes) attached to nouns in juxtaposed nominal predicates could be viewed as giving rise to a kind of Subtype IIIa construction, similar to what is observed in the Oceanic languages. This might have conspired to the gradual demise of Subtype IIIb in various Tupi-Guarani lects, in which the former morphological flagging of non-predicative elements (including the subject) was either dropped or has become an inert relic. Whatever the case, **Cuwabo** goes one step further because the two subtypes clearly coexist in a single language, competing with the copula strategy. Subtype IIIb occurs with third-person subjects and consists in the deletion of a high tone normally found on nouns and adjectives; Subtype IIIa is instead used with SAPs and consists in the cliticization of subject indexes fused with the copula *a*.[5]

Some of our collaborators remarked that, in some languages, nouns have an omnipredicative potentiality (specifically, the **Oceanic** and **Tupian** families and Wichi within **Mataguayan**). This topic requires further study and in particular an exact definition of the features that regulate the functional shift of non-verbal elements into predicates, so as to avoid the risk of overextending the

[5] Guérois (present volume) notes that this mechanism of High Tone Deletion also occurs in Lusoga (Uganda) but is otherwise rare in Bantu. Indeed, in several Western and Southern Bantu languages, a high tone is added to nouns used predicatively, a strategy of inflection that rather falls within Subtype IIIa.

notion of "omnipredicativity" to juxtapositional constructions as such, thus making it a vacuous notion.

3.3. Verbal marking on non-verbal predicates

In this section, we address the presence of TAM and person markers on/with non-verbal predicates. Copulae play a crucial role in this respect since their primary function is to give expression to (at least part of) such values. The purely locational or similative "(semi-)copulae", which preserve a semantic content of their own, are dealt with in Sections 6.1 and 6.3.

Excluding languages in which non-verbal predication has a marginal role, i.e. **Yupik-Inuktitut-Unangan** and **Algonquian**,[6] this section sets out:

- languages that use the copula construction, either exclusively or combined with other strategies, and are thus expected to have verbal markers;
- languages that are likely to preserve verbal(-like) markers in Subtype IIIa of the predicative inflection construction;
- languages that, maybe less expectedly, variously combine the juxtaposition strategy with independent verbal(-like) markers;
- languages that, by contrast, do not present verbal markers (one reason being that they make use of Subtype IIIb).

A frequently pointed out purpose of the copula is to express TAM and/or subject agreement markers. This does not only occur in languages that systematically exploit the copula construction, like Finnic and Saami languages among **Uralic**, but also in **Ju**, **Mande** and most **Zaparoan** languages. The copula as TAM-carrier can be pointed out for languages in which the copula strategy alternates with juxtaposition, like **Siyuewu Khroskyabs**, **Turkic**, **Pano**, **Maltese** and **Nilotic**. In **Paleosiberian**, in addition to the obligatory use of the copula in past-referring contexts, the languages that exploit Subtype IIIa have verb-like subject agreement marking on non-verbal predicates. The same occurs in **Cuwabo** when this type of construction is used, as well as in Arabela, a deviant language in the **Zaparoan** family, which (despite the absence of TAM morphology) shows verb-like person agreement on non-verbal predicates. Among Northwestern Mexico **Uto-Aztecan** languages, Pima Bajo is the only one that encodes adjectival predications in non-present situations without using the copula or (as in Yaqui) a copulative suffix. One can find TAM and person markers also in languages where the copula construction has a minor role compared with juxtaposition, like the **Ngumpin-Yapa** and the Polynesian (**Oceanic**) languages. In **Arawak** languages, verb-like copulae (for those lects that have them) typically have all the aspects and modalities as any verb, while juxtaposition occurs with fewer TAM values as well as limitations on occurrence in serial verb constructions. In **Caijia** and **Waxiang**, clause-final particles expressing aspectual-modal values are generally found with all non-verbal predicates, while, by contrast, no TAM markers (Waxiang) or a restricted set thereof (Caijia) accompany the copula. In **Nungon**, although a light verb with locative meaning may be used to specify temporal reference and subject person/number marking, juxtaposition may freely get a temporal interpretation from the context.

Subtype IIIa of the predicative inflection construction can be expected to share some of its characteristics with the copula construction, since the morphological markers often stem from the fusion of copula elements with the verb root. In languages that typically use Subtype IIIa, like the Mordvin lects (**Uralic**), non-verbal predicates can be inflected like verbs for person (except for the third persons in the present tense) and for tense, although with some limitations. Among the Northern Samoyedic languages, past-tense marking on non-verbal predicates is possible in Nenets and Enets but not in Nganasan. In all these lects, both noun and adjective predicates can carry the

[6] Note, however, that Algonquian indexicals can bear some TAM markers related, or even identical, to those found on verbs.

person suffixes of the verbal conjugation. **Chicham** languages freely allow TAM and person agreement on non-verbal predicates. The same occurs in the **Mataguayan** lects that adopt Subtype IIIa, albeit with some restrictions concerning aspect and with the mood-marking slot typically unfilled. The non-verbal predicates of **Turkic** languages share with verbs the subject-agreement markers that build up Subtype IIIa, but the copula is required in non-present-referring contexts.

As for juxtaposition (Type II), a verbless strategy, one might surmise that TAM features are absent as a matter of principle. This is indeed what happens in **Guaycuruan**, **Western Apache** and the **Cushitic** lects that favor the juxtaposition strategy. It also happens in the Papuan languages **Teiwa** and **Nungon** although a locative verb of the last language may occasionally be used with overt TAM markers in a sort of light verb construction. However, Type II cannot be ignored in this connection, because juxtaposed non-verbal predicates may be accompanied by particles conveying TAM values. This occurs in most **Oceanic** languages. Lo-Toga is an exception: it contrasts standardly juxtaposed nominal predicates with those marked for TAM or negation, which require a dedicated copula. In the Papuan languages **Teiwa** and **Tidore**, non-verbal clauses are marked for illocutionary force with dedicated enclitics, just like clauses with finite verbs. This also occurs in **Mian**, which, however, favors Subtype IIIa. **Formosan** predicative nouns mostly do not host TAM features, but in some lects (like Puyuma) the distinction *vis-à-vis* verbs is less clear.

In such cases, one might raise the issue (as done in the chapter on **Oceanic**) of whether a juxtaposition construction endowed with TAM marking should be regarded as inherently verbal, owing to a kind of omnipredicative inclination consisting in the intercategorial transfer of features from verbs to noun roots. Whatever the case, these languages show a tendency towards Subtype IIIa, and this may also be proposed for **Lushootseed** when juxtaposed non-verbal predicates host the same pronominal subject clitics and particles that accompany verbal predicates. The omnipredicative hypothesis might be entertained, at any rate, for those **Tupian** languages in which TAM markers identical to those used in verbal predication can be attached to nouns, providing them with a sort of inchoative interpretation that can be translated as ‘become x/act as x’ (see Bertinetto 2006 on Western Guarani). Such inchoative reading is also relevant for **Pano** languages when verbal morphology is added to juxtaposed nouns, adjectives and adverbs/postpositions.

TAM exponents and person agreement markers are expected to lack in Subtype IIIb, and the former markers are of course absent in radically tenseless **Old Zamuco** (Bertinetto 2014). However, the particles with evidential import that often integrate the **Tupian** non-verbal predication clauses are also observed in languages that adopt Subtype IIIb. Verbal features lack in **Tungusic** non-verbal predicates, except for the subject indexation in the predicative inflection of Nanai and, marginally, Even (Subtype IIIa).

4. Semantic issues

This section summarizes the main semantic topics explored in the chapters. We begin with the distinction between inclusion and identity (§4.1). In some languages, non-verbal predication may express the difference between a temporary vs. permanent property or state (§4.2). Section 4.3 deals with the interaction between non-verbal predication and information structure.

4.1. Inclusion vs. identity predication and the definiteness/specificity parameter

Non-verbal predication embraces a diverse constellation of semantic functions whose exact definition is a matter of debate, with a lack of consensus mirrored by the terminological Babel. Terms such as identificational, equational, characterizing, specificational, etc., receive different interpretations from different scholars. In Chapter 1 (§4.1–4.2), we chose to concentrate on the two most salient readings, which we called “inclusion” and “identity”. The latter reading is reserved for nouns and pronouns, namely the only elements possessing referential value, while inclusion has no principled restrictions on lexical elements, since it consists of assigning a property to a referent by

relating it to a specific set. Inclusion and identity are not only sufficiently easy to detect but also the object of contrastive treatment in some languages. Investigating further semantic nuances would have been an impossible task also due to the absence of reliable cross-linguistic data. Although in this subsection we maintain the above-mentioned terminology, the reader should be aware that some of our contributors, as explained in the respective chapters, preferred using different terms: Alexandre François speaks of "equative", "adjectival" and "ascriptive" (i.e., inclusion as limited to nouns) predication; Elizabeth Zeitoun conflates both inclusion and identity into "equational"; Alexandra Aikhenvald adopts the same solution with respect to nominal predicates, whereas she uses "attributional" for adjectival predicates.

This section distinguishes:

- languages that exploit determinacy/specificity markers to highlight identity predication;
- languages that mark the contrast identity vs. inclusion predication, at least to some extent, by using other grammatical devices;
- languages that do not mark the contrast.

It is worth noting that, among the grammatical devices used to express this contrast, the different types of non-verbal predication construction may play a role. The contrast may also be conveyed by syntactic means, such as constituent order or the presence of focus markers; see Section 4.3 for details.

Identity predication is characterized by the determinacy/specificity of the nominal or pronominal predicate. Any language has some way to indicate determinacy/specificity via demonstratives, pronouns, possessives or genitive constructions, but some languages have dedicated morpholexical devices, such as definite articles. This is observed in our sample. In Hungarian (the only **Uralic** language with a fully-fledged system of definite and indefinite articles), definiteness marking can signal identity; similarly, in the Mordvin languages, nouns can be marked as definite with dedicated suffixes. **Maltese** employs the definite article in identity predication, which is more frequently expressed with the pronominal copula than with juxtaposition. In most **Mande** languages, definiteness marking on nominal predicates may signal identity, while non-referential nouns in negative or interrogative contexts may be in the bare form to underline inclusion. In this family, Jeli is the only language that uses distinct constructions: the nominal predicate has no flagging in identity predication but takes a locative postposition in inclusion predication. In Kalenjin languages (**Nilotic**), there is a formal marker, called "selective marker", that brings about the specific/determinate reading of the NP. Another Nilotic subbranch, Bari, has a gender-sensitive marker that may be regarded as a definite article; in Päkoot, case marking may express determinacy.

Some languages distinguish inclusion and identity by exploiting different grammatical devices, often restricted to some lects within a given family. In Finnish (**Uralic**), the case contrast nominative vs. partitive may be recruited for this purpose. The partitive case indicates divisible plurality or uncountability and consequently class membership if it marks the predicate; the nominative implies instead the indivisibility of the referent and thus can flag identity predication. In the written variety of Erzya Mordvin (**Uralic**), the identity predicate is mostly associated with juxtaposition, while inclusion predication preferably selects the predicative inflection construction (Subtype IIIa). Some Tupi-Guarani languages (**Tupian**) display a "referrer" suffix *-a*, which typically marks nouns designating a specific referent (apart from proper names, which are inherently specific); in identity clauses, this morpheme flags both the subject and the predicate noun; when instead it is omitted on the nominal predicate, the bare root conveys the inclusion meaning, thus implementing Subtype IIIb.

Western Apache can mark the distinction to some extent by using different copulae. Among the **Algonquian** languages, Arapaho and Blackfoot have distinct strategies for identity and inclusion, while the contrast is not overtly expressed in other languages. **Old Zamuco** clauses based on the so-called "SAP-copula", with a free pronoun as a subject, might be specialized for identity predication according to the available description of the language; likewise, the use of third-person pronouns or demonstratives in both subject and predicate phrase expresses identity. In addition, the non-specificity of a nominal referent may be overtly expressed by the dedicated "argument indeterminate form", which typically flags nominal predicates in *what*/*which*-questions.[7] In **Cuwabo**, while various strategies are used for inclusion, identity predication is by default expressed by the copula *li*; in the latter case, the process of High Tone Deletion does not operate, thus preventing Subtype IIIb from applying.[8] In **Caijia** and **Waxiang**, modification of the predicate noun may play a role in underlining inclusion, e.g., by inserting a bare classifier before the head noun. Among the Papuan languages, **Teiwa** distinguishes the two readings by employing different kinds of pronouns; by contrast, **Mian** inverts the position of subject and predicate in identity predication and, in addition, drops the clitic *=o* from the predicate, thus turning the predicative inflection of Subtype IIIa into the juxtaposition type.

The contrast between inclusion and identity may lack formal expression, as frequently observed in the world's languages. In our sample, this occurs in **Siyuewu Khroskyabs**, **Turkic**, **Paleosiberian** languages, **Tungusic**, **Yupik-Inuktitut-Unangan**, **Hän Athabaskan**, **Lushootseed**, **Arawak**, **Chicham**, **Guaycuruan**, **Mataguayan**, **Pano**, **Zaparoan**, **Ju**, **Tidore** and **Nungon**. Some families include, however, deviant lects. Most **Cushitic** languages have no distinction, but Kambaata, K'abeena and possibly other Highland East Cushitic lects have a copula specialized for identity predication. Similarly, among Northwestern Mexico **Uto-Aztecan** languages, Guarijío uses the juxtaposition construction for proper inclusion in present-referring clauses, whereas the copula *=(h)u* is required for identity; a different copula (*ini*/*iné*) is instead required for both inclusion and identity predications in non-present-referring contexts. Among the **Formosan** languages, Puyuma is an outlier: it contrasts inclusion and identity using juxtaposition vs. copula construction, and the nominal predicate is preceded by an indefinite case marker in inclusion predication; furthermore, two different negators occur in the two readings.

Although inclusion and identity are not generally distinguished in **Oceanic** languages, Wayan Fijian uses two different copulae to mark the contrast. In Tahitian, identity predicates can be conveyed by juxtaposition, and although the quasi-copula *ʻo* (so considered according to a possible interpretation) is optional with most NPs, it has become almost systematic in identity predicates, whereas inclusion predicates require the particle *e* (possibly an indefinite determiner). As for **Ngumpin-Yapa** languages, although inclusion and identity clauses are not usually distinguished, the copula construction appears to be disfavored in the latter case; besides, in Warlpiri, identity clauses can be signaled by prosodic criteria. In Iquito (**Zaparoan**), a determiner may signal identity, while there is no sufficient information for Arabela and Sápara. Blackfoot and Fox (**Algonquian**) have a non-specific nominal marker, but further research is needed, and this also applies to the locational constructions of **Chicham** languages, in which specificity might play a role. A lack of information has been pointed out for the **Paleosiberian** languages.

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[7] Zamucoan languages mostly use the Subtype IIIb construction, with no distinction for identity vs. inclusion. Arguments are marked by the so-called "argument form", used by default, or by the "argument indeterminate form" to overtly indicate the non-specificity of the referent.

[8] Guérois (present volume) notes that in Bemba (spoken in Zambia), High Tone Deletion is used for inclusion, while identity requires a copula.

4.2. Contingent vs. permanent qualification of non-verbal predicates

The contingent/temporary vs. permanent qualification of the referent is a relevant semantic parameter for inclusion predication, with the Spanish contrast between the copulae *ser* and *estar* often pointed out as the standard example. Not all languages have codified ways to convey this opposition, and this can be observed in several languages of our sample. In this section, we only mention those that mark the contrast. Some of our contributors, however, refrained from providing a firm conclusion: for **Chicham**, the available morphosyntactic descriptions are incomplete, and for **Nilotic** even, at times, contradictory.

Although some languages have grammatical ways to convey the contrast at stake, not all exploit them systematically. In **Western Apache**, one of 22 verbs may be used, but it should be remarked that most of them are not copulae, and therefore do not implement non-verbal predication. In **Maltese**, contingent states can be expressed with a special locative copula, while the juxtaposition strategy is neutral to the permanent vs. contingent distinction. In **Arawak**, the distinction is only attested for Tariana. Among the **Pano** languages, Iskonawa and Matses use two different copulae although this might be restricted to adjectives. Based on the existing descriptions of **Tungusic** languages, Udihe has a way to mark the distinction, and the **Paleosiberian** languages Ket and Alyutor might do so through the appropriate marking of adjectival predicates. In various **Uralic** languages, this contrast can be expressed by case inflection (essive or translative), most typically with adjectives rather than nouns. Among Papuan languages, **Tidore** can signal permanent properties by adding the nominalizing prefix *ma-* to the adjectives. A homophonous prefix *ma-* seems to have this function in the **Formosan** language Paiwan, but this needs further study.

4.3. Information structure and constituent order

As noted in Chapter 1 (§5.4), non-verbal predicative constructions may have a special interaction with information structure. This section shows that:

- in some languages, the constituent order may vary depending on the semantic type of non-verbal predication;
- or else it may be the only element allowing speakers to disambiguate the subject from the predicate in the juxtaposition construction;[9]
- focus marking or topicalization may in turn involve a change in the constituent order or in the type of predicative construction, or else may require dedicated morphemes.

In the **Uralic** languages that do not use the predicative inflection construction, the constituent order identifies the predicate and its argument. The basic order can vary in Hungarian and Mordvin inclusion predication when the subject has definite marking. Innu (**Algonquian**) uses juxtaposition with a different constituent order for identity and inclusion: respectively, argument first and predicate first. Information structure plays a crucial role in **Lushootseed**, where the rheme is automatically the predicate, and the theme is the subject, regardless of the parts of speech. The rigid predicate-initial order is the only way to disambiguate the subject and the non-verbal predicate since the language only uses juxtaposition. Tarahumara (**Uto-Aztecan**) has a topic marker that may occur in non-verbal predication; when it is used in juxtaposition constructions that express ostension, the constituent order is reversed. In **Chicham** languages, the predicate is in clause-final position, whether verbal or non-verbal. There are, however, instances of nominal predication where a clause-initial pronoun hosts an enclitic copula, and it is then unclear whether the initial pronoun is the argument or the predicate. In **Guaycuruan** and **Mataguayan**, existential and possessive predication employ the same predicator, but while in the former clauses the constituent order is flexible, it is

[9] Gong and Uehara (2023) note that verb-initial languages tend to express nominal predication through the juxtaposition construction, which is the only strategy in 47.7% of their sample of 65 verb-initial languages and is allowed in a further 29.2% of languages.

rigid in the latter. The constituent order is predicate-copula-argument in Iquito (**Zaparoan**), but when a focused constituent is fronted, it hosts the copula as a second position clitic. In **Ngumpin Yapa** languages, the basic constituent order can be reversed in inclusion predication, but it is unclear whether this is related to the use of a topic marker. In these languages, bound pronouns are usually placed in the second position by default, but this may vary depending on the language and verbal vs. non-verbal predication.

Some chapters document the interaction of non-verbal predication with notions such as focus, topic and givenness. Focus marking interacts with non-verbal predication in **Paleosiberian** languages: in Ket, the predicative inflection of Subtype IIIa may not be used if the subject is in focus. The predicate nominal in Nivkh may display a focus clitic. Yukaghir has verbal morphemes to mark the subject or object in focus; in existential, locational and possessive predication, the copula *ʎe-* 'be' can display a subject-focus suffix, while the subject takes a dedicated case marker. Some types of non-verbal predication in **Maltese** may express topicalization or focusing in inclusion predication through a change in the constituent order, which expresses topicalization with juxtaposition and focusing with the copula construction. The negative copula is often used as a negative focus marker.

The subject of inclusion predication in Udihe (**Tungusic**) can be topicalized through repetition; in possessive predication, the topicalized possessor is not marked on the possessee. In **Western Apache**, non-verbal predication tends to have a topic-comment information structure, with the topic flagged by an enclitic. In **Tupian**, where the typical constituent order is subject-predicate, topicalized subject pronouns often follow the predicate in identity predication; however, in Amazonian Tupi-Guarani languages, this order often indicates inclusion. Most characteristically, Tupian inclusion, possessive and quantificational predication involve constructions similar to those used for existential predication, with a topicalized NP that corresponds to the subject in a non-literal English translation. Existential constructions often have a presentational function, introducing a new referent, but this is not necessarily the case in such Tupian clauses. The nominal predicate usually follows the subject in **Old Zamuco**, but it can be topicalized in clause-initial position.

Caijia and **Waxiang** have an assertive construction in which the new information is placed between the copula and a clause-final modal particle. **Inuktitut** and **Unangan** constructions corresponding to nominal predication involve demonstratives (or their ostensive forms) as subjects to refer to a given information.

Some **Mande** languages show the rarely attested "argument-predicate reversal", whereby argument and predicate exchange their position and coding characteristics in the clause. However, argument and predicate maintain their semantic roles, and the predicate can still be identified owing to an obligatory focus marker. This phenomenon is very rare and is related to the information structure, since the standard argument-first order corresponds to a topic-comment package and the predicate-first order to a comment-afterthought structure (Creissels 2022).

The parameter of information structure does not show any particular interaction with non-verbal predication in **Siyuewu Khroskyabs**, **Turkic**, **Arawak**, **Cuwabo**, **Nilotic**, **Ju** and **Oceanic**. For the remaining languages in our corpus, further research is needed.

5. Further lexical or phrasal categories in predicative function

In Section 2, we assessed the situation of nouns and adjectives, and in particular the capricious presence (and manifestation) of the latter lexical class. Section 5.1 addresses the availability of the remaining lexical classes as predicative heads. The following sections examine the selection of word classes and phrasal categories in adverbial (§5.2) and quantification predication (§5.3).

5.1. Lexical-class restrictions on non-verbal predicates

This section discusses the usage of word classes others than nouns and adjectives in predicative function:

- we first mention languages that impose no word-class restrictions, although this freedom may be tempered by the absence (or rarity) of a specific class, most typically adverbs;
- we then point out languages that constrain the predicative use of pronouns, demonstratives, numerals or quantifiers.

A disclaimer, however, is in order about the predicative role of pronouns: since we did not explicitly draw the attention of our contributors to the treatment of sentences such as, e.g., Italian *Mio figlio è lui* (lit. 'My son is he'), we do not have the relevant data for all languages analyzed in this collection. Besides, some of our contributors, as in the case of **Paleosiberian**, **Tungusic** and **Uto-Aztecan**, cautiously note that more empirical data would be needed concerning the behavior of the less prominent lexical classes. Whatever the case, determiners and interjections are presumably excluded from the predicative role in all languages. Demonstratives can be used in the predicative position only in their pronominal function. Adpositions may instead function as the predicate core in predicative adpositional phrases (as *for* in *This is for you*). As for clitics, although rarely, they may be predicate heads, as the **Zamucoan** existential predicator *=*us* (Ciucci 2016: 629). Even ideophones may act as predicates: they are excluded in **Old Zamuco**, but in the extant Zamucoan languages (Ayoreo and Chamacoco) they can head a non-verbal predicate (Ciucci 2024: 1075–1076). In the just mentioned languages, possessive classifiers have a nominal behavior and thus can be predicate heads.

Based on our sample, the languages/families for which no special word-class restrictions were pointed out are **Lushootseed**, **Arawak**, **Chicham**, **Maltese**, **Nilotic**,[10] **Mande**, **Cuwabo** and **Ju** (however, issues related to the notion of locational predication arise in Ju, see Section 5.2.1). The same holds for **Cushitic** languages, taking for granted the general absence of adverbs.

The exclusion of adverbs or their restriction has been reported for **Turkic**, **Tupian**, **Siyuewu Khroskyabs**, the Papuan language **Teiwa**, most **Formosan** languages (except Amis and Paiwan that allow locative predication, plus four other lects that may have pronouns in genitival and locative predication) and **Zaparoan**, where the restriction on adverbial predicates may be overcome derivationally by adjectivization. Likewise, in **Caijia,** the rarity of adverbial predicates is obviated by the use of nominalization strategies, which may involve dependent clauses with deverbal nouns, prepositional phrases and relative clauses. In **Oceanic** languages, the only class excluded from the predicative role is that of "lexical postverbs", a kind of adverbs specialized as predicate modifiers. In **Pano**, only locative adverbs, some temporal ones and very few adverbials have been attested in predicative position.

In **Caijia** and **Waxiang**, the restriction extends to demonstratives and, in Algonquian, to particles. Another critical class is that of numerals and quantifiers. They are generally excluded as predicates in **Uralic** languages, which favor other types of predicative quantification. In **Tungusic**, clauses predicating quantification align with adjectival predication. In some **Formosan** languages, numerals and quantifiers are shaped as stative verbs. Similarly, in the Papuan languages **Teiwa**, **Tidore** and **Mian**, numerals in predicative function must combine with a verb to form a complex intransitive predicate. **Guaycuruan** and **Mataguayan** languages, which lack adverbs altogether, do not use temporal adverbials, demonstratives and quantifiers as predicates. In **Western Apache**, in addition to numerals and quantifiers, the restriction concerns ideophones. As for **Ngumpin-Yapa** languages, coverbs and non-finite verb forms are mostly excluded as main predicates.

5.2. Adverbial predication

5.2.1. Adverbial predication as a non-universal notion

Logically, nothing ensures that all languages have constructions meeting the definition of adverbial predication as a type of predicative construction in which the expression in predicative

[10] In **Turkana** (Eastern Nilotic) some adjectives and nouns can be verbalized by adding the habitual marker.

role is an adverb, a case-marked NP or an adpositional phrase also found in oblique role in clauses whose predicative nucleus is a verb. Interestingly, two chapters of this book (the one on **Ju** and the one on **Guaycuruan** and **Mataguayan)** describe the situation of languages for which the notion of adverbial predication is problematic.

In both cases, what is crucial is the systematic use of locational predications of the type, marginal in English, illustrated by the transitive verb *inhabit* in *Several species of birds inhabit this island*. Such locational clauses, in which even phrases that cannot be viewed as inherently locative express the semantic role of Ground without locative marking in the form of case marks or adpositions, are uncontroversial instances of verbal predication in which a bivalent verb is solely responsible for the assignment of the role of Ground.

In **Guaycuruan** and **Mataguayan** languages, the verbs projecting such locational clauses (glossed 'be at') typically consist of a root that does not seem to exist independently and an element specifying a kind of spatial configuration (in, on, under, etc.). In other words, in such languages, verbal marking assumes the role commonly taken on by the flagging of the Ground phrase in the locational clauses that are instances of (non-verbal) adverbial predication.

The situation in **Ju** is less clear-cut, due in particular to the extension of a copula initially used in inclusion and identity clauses to the domain of locational predication, which is remarkably advanced in some !Xun dialects. However, a feature relevant to this discussion is that Ju has a strictly monovalent existential verb *gè* that must take a valency-increasing suffix to be able to combine with a phrase expressing the Ground in a Figure-Ground relationship. This derived form of the existential verb is commonly used as the nucleus of locational clauses whose participant structure does not depend on the flagging of the Ground phrase but on verbal marking.

5.2.2. Adverbial predication and functional types of predication

In adverbial predication, the predicate is typically a locative expression that assigns the role of Figure to its argument although, in principle, nothing prevents languages from using adverbial predication with adpositional phrases or case-marked NPs other than locative. In practice, there seems to be important cross-linguistic variation in the productivity of the non-locational uses of adverbial predication.

In this book, a relative productivity of non-locational uses of adverbial predication is explicitly mentioned in **Uralic** languages, **Mandinka**, **Ngumpin-Yapa** and **Tungusic** languages.

An interesting extension of the use of adverbial predication is mentioned in **Lushootseed**, where 'He comes at night' can be expressed lit. as 'His coming [is] at night', i.e. as an adverbial predication construction in which the argument of the adverbial predicate is the nominalized event.

Similarly, in **Old Zamuco,** 'When will you be good?' is rendered as 'Your goodness will be when?'. Such formulations are consistent with the view that, in the logical structure of clauses, adjuncts are monovalent predicates taking the event as their argument.

5.2.3. Functional overlaps between adverbial predication and nominal / adjectival predication

Two of the chapters in this book mention a tendency to avoid the use of adpositional phrases in predicative function and to use nominal or adjectival predication to express meanings commonly expressed via adverbial predication cross-linguistically.

In **Caijia** and **Waxiang**, many of the meanings commonly expressed cross-linguistically via adverbial predication are expressed as nominal predication. For example, 'This item of clothes is for you' cannot be rendered literally, but only as 'This item of clothes is what [I] made for you', with a free relative in the role of nominal predicate.

Similarly, in **Zaparoan** languages, most adverbs and postpositional phrases cannot be used predicatively as such but only in adjectivized form.

5.3. Quantificational predication

The alignment of quantificational predication with nominal or adjectival predication is by far the commonest situation in the languages represented in this book.

Exceptions to this tendency are, however, mentioned in some chapters. In **Uralic** languages, assimilation of quantificational predication to adverbial predication is common, and it is also possible to express the meaning typically conveyed through quantificational predication within the frame of existential predication, with for example 'We are three' expressed lit. as 'There are three of us'. **Algonquian** languages typically employ specific existential verbal constructions in order to express quantification. In **Old Zamuco**, number words higher than one have roots undistinguishable from those of the corresponding verbs. Similarly, in Araki (**Oceanic**), numerals are best analyzed as a subclass of verbs.

Conversely, several chapters mention a preference for quantificational predication in the expression of meanings that could equally be expressed through formulations with the quantifier in adnominal modifier function. In the chapter on **Old Zamuco**, there is an example in which 'You have one trip to do' is expressed lit. as 'Your missing trip is one'. Similar examples are quoted in other chapters: in **Western Apache**, 'There is a lot of snow on the mountain' is expressed lit. as 'On the mountain snow is lots'; in Mwotlap (**Oceanic**), 'It has four legs' is expressed lit. as 'Its legs (are) four'; in **Cuwabo**, 'I have few friends' is expressed lit. as 'My friends are few'; in (**Zaparoan**), 'There are two (types of) ghosts' is expressed lit. as 'Two are the ghosts'. Analogous examples are quoted for **Pano**, **Maltese** and the Papuan languages **Teiwa** and **Tidore**.

6. Functional domains

This section deals with the main semantic types of predication commonly encoded as adverbial predication, namely locational (§6.1) and possessive (§6.2), discussing their possible interaction relative to the typological framework outlined in Chapter 1. We also mention non-verbal constructions expressing similative predication (§6.3).

6.1. Locational predication

We summarize here some notable features concerning locational predication that were observed in the volume. They involve the possible use of verbal predicates for locational predication (§6.1.1), the difference between plain- and inverse-locational predication (§6.1.2), the distinction between locational and existential predication (§6.1.3), the role of locational constructions in possessive predication (§6.1.4) and the formal similarity between inverse-locational and identity predication (§6.1.5).

6.1.1. Locational predication between verbal and non-verbal predication

Locational predication constructions consisting of the mere juxtaposition of the Figure and the Ground are uncontroversial instances of non-verbal predication (Type II), and the same can be said of locational predication constructions marked by the same copulae (Type I) or predicative inflection as nominal predication constructions (Type III). Such constructions are widely illustrated in this book, as in **Tungusic** or **Turkic** languages. However, the chapters in this book also provide

many examples of uncontroversial instances of verbal strategies in locational predication and also of locational predication constructions whose analysis as instances of verbal or non-verbal predication is problematic due to an ongoing process of semantic bleaching converting what was initially a verb with a lexical meaning into a verb-like copula.

As already mentioned in Section 5.2.1, locational predication may involve verbs with which the Ground phrase shows no locative marking, even if it cannot be considered inherently locative. Such constructions are unproblematic instances of verbal predication in which the assignment of the semantic roles of Figure and Ground is not determined by the inherent semantics or the flagging of the Ground phrase but by the valency properties of a bivalent verb (see the example of *inhabit* in §5.2.1). In English, this is a relatively marginal type of locational predication, but there is no difficulty in imagining languages in which this would constitute the usual way of expressing locational predication. As already mentioned, among the languages represented in this book, **Ju**, **Guaycuruan** and **Mataguayan** languages are cases in point.

In **Yupik-Inuktitut** languages, location is also predicated with derived verbs based on a nominal root or a larger nominal base naming the location, followed by a verbalizing suffix, as for example *iquk-qsig* ‘be far in the direction of the end’ from *iquk* ‘end’. Such verbs are not formally transitive but can combine with genitive-marked NPs identifying the Ground.

There are also languages in which the expression of locational predication implies the use of a verb that specifies the posture of the Figure, even if this specification is not communicatively relevant. As far as the lexical meaning of the postural verb conditions its use in locational clauses, such an expression of locational predication cannot be analyzed as an instance of non-verbal predication. However, as discussed in Chapter 2, postural verbs routinely used in situations where their lexical meaning is not communicatively relevant may undergo a process of semantic bleaching although it may be difficult to decide whether a postural verb frequently found in contexts in which it does not really contribute to the interpretation of the clause should be considered a true copula. The same process of semantic bleaching resulting in the emergence of verb-like copulae may affect other verbs whose lexical meaning implies a Figure-Ground relationship, and this possibility is widely attested among the languages analyzed in this book.

Copular uses of ‘sit’ are mentioned in North Khanty (**Uralic**). Several Amazonian **Tupi-Guarani** languages attest such uses for the postural verbs ‘stand’, ‘sit’ and ‘lie’, also mentioned as a common strategy in locational predication in **Pano** languages. In **Chicham** languages, plain-locational predication is expressed with lexical verbs, most typically a verb meaning ‘live, dwell’. Yaqui, Northern Tepehuan and Pima Bajo (**Uto-Aztecan**) usually encode both plain-locational and inverse-locational predication employing full lexical motion, existential or positional verbs. In some cases, one might surmise that these verbs are turning into locative copulae. The grammaticalization of a participle of the verb ‘stay, sit, reside’ as a copula in locational predication is attested in **Maltese** (cf. §9.3). A locational copula derived from the verb ‘dwell’ is mentioned for **Caijia**. (Quasi-)copula uses of ‘be found’ are mentioned in Finnish and Saami (**Uralic**) and Mandinka (**Mande**). **Siyuewu Khroskyabs** has eight “locational verbs”, some of which are analyzable as verb-like copulae. Iquito (**Zaparoan**) has a verb *iíki*^{L} that can function as a lexical verb meaning ‘live in a place’ or ‘live in a certain manner’ or as a copula in locational predication as well as in a restricted set of other adverbial predication constructions. Moreover, there are contexts in which speakers strongly prefer semantically richer positional verbs.

6.1.2. Plain-locational predication and inverse-locational predication

All possible treatments of the expression of perspectivization in locational predication, as defined and commented in Chapter 1 (Section 4.4), are represented in the languages analyzed in this

book. By perspectivization, we mean the respective prominence of Figure or Ground, namely from Figure to Ground (plain-locational), as in *The cat is in the tree*, vs. from Ground to Figure (inverse-locational), as in *There is a cat in the tree*.

Mande languages illustrate the possibility of systems in which variation in the perspectivization of locational predication is apparent neither in the morphological marking of the construction nor in constituent order and manifests itself only indirectly through mechanisms such as definiteness marking or focalization. This is an areal feature of the Sudanic belt (see Creissels 2019). A similar situation is found in the **Nilotic** language Turkana and in **Ju**.

Uralic languages commonly have systems where the two possible perspectivizations of locational predication are not distinguished morphologically but via variation in constituent order (as in Finnic). The same situation is found in **Cuwabo** and Iquito (**Zaparoan**).

Inverse-locational clauses involving morphological material not found in the plain-locational clauses of the same language are widely attested in the languages analyzed in this book. They are found among others in North Samoyedic languages (**Uralic**), **Lushootseed**, **Caijia** and **Waxiang**, etc.

6.1.3. Locational predication and existential predication

In contrast to the current practice, we distinguish inverse-locational and existential predication: *There are pygmy elephants in Borneo* (inverse-locational) vs. *There are pygmy elephants* (existential). The former clauses, expressing Figure-Ground relationships with the perspectivization "from Ground to Figure", contrast with the latter ones, in which the referent of a nominal expression is merely characterized as an element of some situation, while the situation itself is often left implicit and its boundaries may be vaguely defined (e.g., when the speaker refers to the whole world). By contrast, the Ground in inverse-locational clauses is always clearly identifiable and, if omitted, recoverable from the context. Following this distinction, existential predicators can be defined as words (or expressions) that can act as monovalent predicates assigning to their argument the semantic role of element of a situation whose specification is left unexpressed.[11] Morphologically, existential predicators may show characteristics identifying them as verbs or adjectives but may also be uninflected particles.

The languages analyzed in this book confirm that, whatever their morphological characteristics, the words that meet the above definition of existential predicators also commonly combine with locative expressions, giving thus rise to inverse-locational clauses, as in **Lushootseed** and **Turkic** languages, among others. It may also happen that words meeting the given definition are also found in locational clauses that do not distinguish between plain- and inverse-locational predication.

Existential clauses superficially similar to locational clauses 'X is there', in which the adverb 'there' is interpreted as an expletive devoid of any reference, occur in several **Mande** languages.

A particular, cross-linguistically exceptional type of relationship between locational and existential clauses is found in **Ju**, where irrespective of the perspectivization of the Figure-Ground relationship, the nucleus of locational clauses may be a bivalent verb derived from a strictly monovalent existential verb via the addition of a valency-increasing suffix.

6.1.4. Locational predication and predicative possession

[11] This definition is formulated so as not to exclude a possible use of the same words or expressions in (inverse-)locational clauses in which they combine with locative expressions.

The languages analyzed in this book confirm that possessive clauses sharing morphological material with inverse-locational clauses, or syntactically aligned with them, are cross-linguistically common.

The plain-possessive clauses analyzable as instances of adverbial predication are variously related to the constructions used in the same language for locational predication; see §6.2.5 below.

Verbs used transitively in possessive clauses, but also used intransitively or impersonally in existential and inverse-locational clauses (a configuration widespread in the languages of Central and Southern Europe and the Atlantic languages of West Africa), are found in **Caijia** and **Waxiang**, in the **Oceanic** language Nafsan and in the **Turkic** languages of Iran.

A similar configuration is found in the **Pano** language Marubo, with the difference that it involves a verb of possession with an exceptional coding frame departing from the canonical transitive construction. Among **Algonquian** languages, whose verbal systems involve a systematic morphological distinction between transitive and intransitive verb forms, one can find transitive verbs of possession morphologically related to intransitive verbs acting as existential verbs and locational copulae.

In some **Ju** varieties, the derived form of an existential verb used as the nucleus of locational clauses, irrespective of the perspectivization of the Figure-Ground relationship, can also act as a 'have' verb projecting transitive possessive clauses.

Among the languages that have possessive clauses projected by (intransitive) proprietive verbs derived from nouns, an impersonal use of the same verbs in existential and inverse-locational clauses is attested in **Yupik-Inuktitut** languages and in the **Paleosiberian** language Yukaghir.

6.1.5. Inverse-locational predication and inclusion predication

Tahitian and a few other **Oceanic** languages have inverse-locational clauses formally similar to clauses expressing inclusion. For example, 'There is water further inland' is expressed in Tahitian as lit. 'That which is inland is water'. This cross-linguistically rare type of inverse-locational predication (also found in Icelandic, cf. Chapter 1, §4.4.2, ex. 48) is mentioned in no other chapter of this book.

6.2. Possessive predication

All the types of predicative possession reported in the literature are represented among the languages analyzed in this book, where several chapters add interesting data about some rare types. They also confirm that the strategies involved in inverse-possessive predication (such as *The book is mine*, see §6.2.8) are much less diverse than those involved in plain-possessive predication (such as *I have the book*). Furthermore, they provide an abundant illustration of the possibility that two or more types of predicative possession, whose use may be variously conditioned, coexist in the same language although, due to length limitations, this question is not addressed in detail in the chapters of this book.

In accordance with the topic of this book, the discussion of plain-possessive predication in this section is organized according to the distinction between verbal (§6.2.1–6.2.2) and non-verbal strategies (§6.2.3–6.2.7). Section 6.2.8 deals with inverse-locational predication. Finally, Section §6.2.9 discusses the novel classification of the types of possessive predication introduced in this volume, explaining how it differs from previous accounts.

6.2.1. Verbal strategies in plain-possessive predication: transitive 'have' verbs and other bivalent verbs of possession

A transitive 'have' verb is documented in 43.34% of the 1,510 languages in the Grambank (Skirgård et al. 2023a,b) for which enough information is available. The languages analyzed in this book confirm that transitive 'have' verbs have a wide distribution. In particular, they can be found even in language families in which they do not constitute the preferred strategy for possessive predication, as for example: **Uralic**, where 'have' verbs are found in South Saami, Ob-Ugric languages and Nganasan; **Mande**, where 'have' verbs are found in Mandinka, Bisa and Boko (**Mande**); **Oceanic**, where a 'have' verb *pitlak* (< *pi atlak* 'be owner') is found in Nafsan; or **Nilotic**, where a 'have' verb is attested in Nandi. Among the large language families to which a chapter of this book is devoted, 'have' verbs are particularly prominent in **Cushitic**.

In addition to the possible origins of 'have' verbs already identified in the literature, 'have' verbs that stem from the so-called locative voice of an existential verb, i.e. a construction whose literal meaning is something like 'Possessor is the place where Possessee exists', are found in the **Formosan** languages Bunun and Seediq. Semantically, this expression of predicative possession is comparable to the cross-linguistically common non-verbal type "At Possessor (is) Possessee", but morphosyntactically, the possessor and the possessee are encoded as the A and P terms of a transitive construction. The use of 'see' as a 'have' verb is worth mentioning in the **Mataguayan** language Wichi.

Maltese illustrates the case of a possessive verb whose coding frame departs in some respects from that of typical transitive verbs. The historical explanation is that this 'have' verb results from the reanalysis of a preposition in a construction that originally belonged to the type "At Possessor is Possessee". Verbs of possession taking the possessor as their subject but assigning to the possessee a coding different from that of the object of typical transitive verbs can be found in some **Algonquian** languages. The **Pano** language Matses has a possessive verb whose syntactic analysis is problematic since its coding frame, with two unflagged nominal terms, is not a regular one for Matses verbs.

Bivalent verbs of possession whose valency properties depart more radically from those of 'have' verbs are attested in **Chicham** languages and in the **Mataguayan** languages Maka and Nivaĉle. Like 'have' verbs, they are transitive, but contrary to 'have' verbs, they assign the role of A to the possessee and the role of P to the possessor. In both cases, the explanation is that the possessive verbs in question are the benefactive-applicative form of intransitive existential verbs. Such applicative forms quite regularly project transitive clauses that are lit. 'X exists for Y', for which a possessive interpretation with X as the possessee and Y as the possessor is quite natural.

6.2.2. Verbal strategies in plain-possessive predication: possessive clauses projected by proprietive verbs

The use of proprietive verbs derived from nouns (i.e., intransitive denominal verbs glossable as 'have N') is mentioned in **Lushootseed**, **Uto-Aztecan** languages, **Eskimo-Aleut** languages, **Paleosiberian** languages and also in **Algonquian** languages, where two variants of the proprietive-verb strategy can be distinguished.

However, in Northwestern Mexico **Uto-Aztecan** languages, the expression of predicative possession via proprietive derivation is common, but it is unclear whether it involves proprietive verbs or proprietive adjectives or nouns (see §6.2.3). Similarly, in the **Paleosiberian** language Yukaghir, proprietive forms have both verb- and noun-like properties.

6.2.3. Non-verbal strategies in plain-possessive predication: proprietive nouns or adjectives in predicative role

This type of predicative possession, schematizable as "Possessor (is) Possessee-owner", is particularly common in **Arawak** languages. It is also found in some **Uralic** languages, **Old Zamuco**, **Zaparoan**, **Tungusic** and in Siberian **Turkic** languages.

Unsurprisingly, given the well-known difficulty in characterizing some nominal affixes as case markers or derivational morphemes, this strategy is not always easy to distinguish from that dealt with in Section 6.2.4. Among the languages analyzed in this book, this problem occurs in **Pano** and **Ngumpin-Yapa** languages.

6.2.4. Non-verbal strategies in plain-possessive predication: case-marked NPs or adpositional phrases referring to the possessee in predicative role

In predicative possession constructions meeting this definition, schematizable as "Possessor (is) with Possessee", the coding of the predicate phrase is identical to that of comitative adjuncts in verbal predication. Cross-linguistically, the "comitative-possessee" type (Chapter 1, §4.6.1.2) is found in 18.2% of the 1,362 languages with enough data in the Grambank (Skirgård et al. 2023a,b).

Among the languages analyzed in this book, this type of predicative possession is found in two **Mande** languages, Bisa and Bobo, in some Tupian languages, in the **Nilotic** Bari group, in the **Oceanic** language Hiw and in the **Papuan** languages Tidore and Mian.

Although this type is particularly prominent in the **Bantu** language family, it is not attested in Cuwabo, one of the Bantu languages that have created a 'have' verb via coalescence and reanalysis of the sequence "verb-like copula + comitative preposition" in a construction that was initially "Possessor is with Possessee" (see Creissels, 2024).

6.2.5. Non-verbal strategies in plain-possessive predication: case-marked NPs or adpositional phrases referring to the possessor in predicative role

This type can be schematized as "Possessee (is) in the sphere of Possessor". However, contrary to the type dealt with in Section 6.2.4, in which the case-marked NP or adpositional phrase in predicative role is always comitative-marked, the type in which the case-marked NP or adpositional phrase in predicative role refers to the possessor shows a wide variety in its flagging, since, from one language to another, it involves case markers or adpositions whose uses in other constructions may variously be characterized as locative, benefactive, dative, genitive, comitative, etc. In Mandinka and other **Mande** languages, this strategy involves a postposition that grammaticalized from the noun 'hand', glossable as 'under the responsibility of' or 'in the sphere of'. The Grambank (Skirgård et al. 2023a,b) addresses this strategy for possessees with locative and dative flagging. Excluding languages with insufficient data, locative flagging is found in 18.39% out of 1,354 languages and dative flagging in 12.6% out of 1,349 languages.

Among the languages analyzed in this book, this type of predicative possession construction is particularly prominent in the **Uralic** and **Mande** families. It is also mentioned in some **Arawak** languages, in **Old Zamuco**, in the **Nilotic** language Anywa, in the **Oceanic** language Teanu, in **Siyuewu Khroskyabs**, in **Zaparoan** languages, in the **Paleosiberian** languages Ket and Yukaghir, in **Tungusic** languages and some **Cushitic** languages.

In several languages in which it competes with the modified-possessee strategy (§6.2.6), this strategy typically expresses contingent possession, whereas permanent possession tends to be expressed via the modified-possessee strategy. Such a contrast is mentioned in **Hungarian**, **Turkic** languages and some **Tungusic** languages.

6.2.6. The modified-possessee type of plain-possessive predication

The possessive clauses of this type are existential clauses with the possessee as the argument of an existential predicator, and their possessive interpretation relies on modification of the

possessee. Consequently, this strategy is an instance of verbal predication if the existential predicator is morphologically identifiable as a verb, but of non-verbal predication if this is not the case. As already mentioned in §6.2.5, in many languages that have this type of plain-possessive predication, in particular among the languages analyzed in this book, it tends to be reserved for the expression of permanent possession.

Three variants of the modified-possessee type of plain-possessive predication can be distinguished. They can be schematized as "Possessor, his/her Possessee exists", "For Possessor his/her Possessee exists" and "Possessor's Possessee exists".

The "Possessor, his/her Possessee exists" variant, in which the unflagged possessor is cross-referenced on the possessee by means of indexes identical to those found in the adnominal possession construction, is by far the commonest one. In fact, one of the most obvious conclusions of our survey of functional types of predication commonly expressed via non-verbal strategies is that the importance of this type of predicative possession has been greatly overlooked in the existing literature on the typology of predicative possession since its existence is mentioned in 18 chapters of this book out of 29. It constitutes the commonest pattern among **Oceanic** languages. It is also found in the **Uralic** language Enets, in **Lushootseed**, in **Zamucoan** languages, in **Western Apache**, in the Papuan language **Teiwa**, in **Zaparoan** languages, in **Chicham** languages, in the **Paleosiberian** language Yukaghir, in **Tungusic** languages, in the Papuan language **Nungon**, in the **Pano** language Matses, in Southern **Guaycuruan** languages, in **Mataguayan** languages and in several **Formosan** languages. Although our sample of languages is not balanced, this suggests that the modified-possessee type is rather common, as confirmed by the Grambank (Skirgård et al. 2023a,b), where the modified-possessee strategy appears in 38.6% of the 1,409 languages with sufficient data.

Judging from the languages analyzed in this book, the "For Possessor his/her Possessee exists" variant of the modified-possessee strategy, in which the possessor is at the same time overtly flagged and cross-referenced on the possessee, is cross-linguistically less common than the variant with zero-flagging of the possessor. It is found in the **Arawak** language Kurripako with benefactive flagging of the possessor; in Hungarian with dative flagging of the possessor; in several other **Uralic** languages (Permic, Mordvin, Mari, Kamas and South Saami) with genitive flagging of the possessor; in the **Tungusic** language Negidal with dative/essive flagging of the possessor; in **Turkic** languages with genitive flagging of the possessor.

In our language sample, the "Possessor's Possessee exists" variant of the modified-possessee strategy, in which the possessor is not cross-referenced on the possessee but forms with it a phrase whose internal structure is that of the adnominal possession construction, is found in some South and East **Mande** languages.

We leave open the question of whether the "Possessor, his/her Possessee exists" variant (in which indexation of the possessor on the possessee allows for mobility of the possessor phrase) and the "Possessor's Possessee exists" variant (in which the possessor and the possessee form a phrase) may coexist in the same language, in particular among the languages in which nouns divide into two classes according to the possibility of indexing a possessor. This is a question that would require further investigation.

6.2.7. Possessive interpretation of a topic adjoined to an existential clause

Chappell and Creissels (2019) argued that Stassen's (2009) account of the typology of predicative possession largely overestimated the strategy consisting in adjoining a topic NP, interpreted as the possessor, to an existential clause, schematizable as "As for Possessor, Possessee exists". In particular, due to the limitations inherent to topic-comment constructions (for example, the fact that the topic does not lend itself to questioning), this type of possessive clauses necessarily coexists with other types not bound by such limitations.

In our language sample, the possibility of this type of possessive clauses is mentioned for **Arawak**, **Uto-Aztecan**, **Oceanic** and **Tidore**, but never as a particularly prominent strategy.

6.2.8. Inverse-possessive predication

The strategies involved in inverse-possessive predication are much less diverse than those involved in plain-possessive predication. A verbal strategy involving verbs such as English *belong* is possible, but as regards non-verbal strategies, judging from the languages analyzed in this book, it is almost universally possible to express inverse-possessive predication via a nominal predication in which the predicative role is fulfilled by a full adnominal possession construction, lit. 'this X (is) Y's X' or an expression variously analyzable as the reduced form of an adnominal possession construction, such as English *This book is John's* or *This book is mine*. Formulations involving a pro-form glossable as 'that of' are particularly common.

Among the languages analyzed in this book, the only one mentioned as an exception to this generalization is the **Mande** language Gban, whose inverse-possessive predication construction is an instance of adverbial predication in which the possessor is flagged by a benefactive postposition, whereas, in plain-possessive predication, the possessor is flagged by a postposition cognate with the noun 'hand'.

6.2.9. Comparison with previous accounts of the typology of predicative possession

The typology of predicative possession according to which the data we collected have been summarized above is substantially different from those proposed by Heine (1997) and Stassen (2009, 2013b), which are the reference works on this topic. Crucially, our purely synchronic typology consistently classifies possessive clauses according to their intrinsic morphosyntactic properties and the place occupied in their morphosyntactic structure by the element that can be analyzed as responsible for the possessive interpretation of the clause. By contrast, both Heine and Stassen distinguish the types of predicative possession based on similarities with other semantic types of constructions and/or their possible etymology, as evidenced by the use of labels such as "Location Schema" (Heine) or "Locational Possessive" (Stassen).

Heine (1996, 1997) proposes to classify possessive constructions in general and possessive clauses in particular according to the "Source Schemas" accounting for their genesis. Table 1 reproduces the characterization of the six source schemas relevant for predicative constructions expressing possession with the perspectivization "from possessor to possessee" (i.e., plain-possessive) as it is formulated by Heine (1996: 83–108). X and Y stand for the source of possessor and possessee respectively.

Table 1. Types of predicative possession as per Heine (1996).

Action Schema	X takes Y	The predicative nucleus involves verbs like 'take', 'catch', 'hold', 'get', etc.
Location Schema	Y is located at X	The possessor is presented as a location.
Companion Schema	Y is with X	The Companion Schema is based on a cognitive structure where the possessee appears as a comitative participant.
Genitive Schema	X's Y exists	The possessor appears as a genitive modifier.
Goal Schema	Y exists for/to X	The possessor appears as a dative/ benefactive participant.
Topic Schema	As for X, Y exists	In the Topic Schema, the possessor is

		likely to be encoded twice: first as a theme and second as a pronominal modifier.

Stassen (2009, 2013b) distinguishes four types of predicative possession, the type labeled "Oblique Possessive" being subdivided into two subtypes. Table 2 reproduces each type's definition as they are formulated by Stassen (2013b).

Table 2. Types of predicative possession as per Stassen (2013b).

Have-Possessive	This strategy encodes the possessive relationship between possessor and possessed item in the form of a transitive construction. The possessor NP and the possessed NP function, respectively, as the subject and the direct object of a 'have'-verb.
Oblique Possessive	The possessed NP functions as the grammatical subject of the 'exist'-predicate, while the possessor NP is constructed in some oblique form.
Locational Possessive	The possessor NP is marked by some item meaning 'at', 'on' or 'in', or by a marker 'to' or 'for'.
Genitive Possessive	The possessor NP is marked by an item which typically does not have a locational interpretation; moreover, the possessor NP is commonly (though not necessarily) constructed as an adnominal modifier to the possessed NP.
Topic Possessive	The possessor NP is construed as the topic of the sentence. As such, the possessor NP indicates the "setting" or "background" of the sentence, that is, the discourse frame which restricts the truth value of the sentence that follows it.
Conjunctional Possessive ('With-Possessive' in Stassen 2009)	The possessor NP is encoded as the grammatical subject. The possessed NP is accompanied by, and usually in construction with, a marker that can be analyzed neither as a locational item nor as an indicator of topic. Closer inspection reveals that this marker in all cases originates from an item that is, or at least has been, employed as a means of indicating simultaneity between clauses. A prominent option within the Conjunctional Possessive is the use of the comitative marker 'with' on the possessed NP.

Heine's and Stassen's approach unavoidably leads to difficulties with the classification of possessive clauses that are not unambiguously aligned with another well-established semantic types of clauses. This explains in particular why neither Heine nor Stassen discusses the existence of possessive clauses projected by bivalent possessive verbs that are not transitive verbs assigning A-flagging to the possessor and P-flagging to the Possessee, cf. §6.2.1. This is also why they do not give their proper place to the types characterized above as the "proprietive type" (§6.2.3) and the "modified-possessee type" (§6.2.6).

The basic idea of Heine's typology is that the alignment relationships between predicative possession and other semantic types of constructions retain traces of the genesis of predicative possession constructions and, consequently, of their original cognitive motivation. However, as legitimate as such a diachronic approach may be, it cannot replace a systematic synchronic typology. The former analysis must rather be reconciled with the latter since the etymological information

necessary to identify a source schema with certainty is far from being always available, and, when it is available, it sometimes obliges to abandon the idea of a straightforward correspondence between the structure of predicative possession constructions and their original cognitive motivation. In fact, a given type of predicative possession construction may have more than one possible cognitive motivation, and predicative possession constructions may undergo structural changes that blur the relationship with their sources.

For example, verbs such as 'take', 'catch', 'hold' or 'get' are well-attested as the historical source of transitive 'have' verbs, but many languages have transitive 'have' verbs whose etymology is not known, and some of those whose etymology can be established with certainty can hardly be analyzed as instances of Heine's "Action Schema". In particular, Cuwabo and other Bantu languages have transitive 'have' verbs resulting from the univerbation and reanalysis of the sequence 'be with' in possessive clauses whose literal meaning was originally 'X is with Y', which means that their source schema is not the Action Schema but the "Companion Schema" (in Heine's terminology).

Diyari is another case in point, with a transitive 'have' verb that is etymologically the applicative form of the verb 'sit'. Originally, this was presumably a comitative applicative (X sits-with Y), which means that, in cognitive terms, the source schema of this transitive 'have' verb should also be analyzed as the Companion Schema.

Such examples could be multiplied. In fact, the relationship between the cognitive patterns and the predicative constructions that may reflect them is much more complex than assumed by Heine. Although his classification of possessive clauses in terms of "source schemas" offers interesting insights into some aspects of the diachronic typology of predicative possession, it does not qualify as a typology of the constructions expressing predicative possession since the same cognitive pattern may be the source of possessive clauses having very different structures. Conversely, possessive clauses that are structurally similar may originate from very different cognitive patterns.

Stassen (2009, 2013b) distinguishes the four types of predicative possession whose definition is reproduced in Table 2 above. However, if taken at face value, the definitions of these four types merely exclude several types of possessive clauses identified above, such as those projected by bivalent possessive verbs that are not transitive verbs assigning A-coding to the possessor and P-coding to the possessee, and also those classified above as instances of the proprietive derivation strategy.

A typology of possessive clauses based on Stassen's definitions cannot be at the same time exhaustive and consistent in the application of his definitions, and, in fact, Stassen classifies the possessive clauses that do not correspond to any of his four types BASED ON ETYMOLOGICAL SPECULATIONS as "non-standard variants" of one of the four types, or as "hybrid" types. For example, possessive clauses instantiating the proprietive derivation strategy, as we have defined it, do not meet the definition of any of the four types and are analyzed by Stassen as a "copular variant of the predicativized With-Possessive" if they involve a proprietive noun or adjective and as "flexional variant of the predicativized With-Possessive" if they involve a proprietive verb (Stassen 2009: 139–140).

A crucial aspect of Stassen's typology of predicative possession is that he explicitly discards the possible presence of possessive indexes attached to the possessee as a criterion in the classification of possessive clauses, hence the problematic status of his "Topic Possessive" type. The problem is that the way this type is defined seems to refer to the kind of topic known in the literature as a dangling topic, i.e., a topic devoid of any syntactic link to the comment clause. However, most of the languages mentioned by Stassen as illustrating this type of predicative possession have possessive clauses for which this is clearly not the case. Moreover, he analyzes as dangling topics

possessor NPs that in fact occupy an argument position in the clause, cf. Chappell and Creissels (2019) for a discussion.

In Stassen's typology of predicative possession, the Conjunctional Possessive is also problematic, in the first place because its definition is not really a definition, and also because there is no justification for stating that the comitative adpositions that mark the possessee phrase in most of the instances of this type originate from an item which is, or has been, employed as a means of indicating simultaneity between clauses (see the discussion in Stassen 2009: 70-106, 137-207). For example, to the best of our knowledge, this possibility has never been evoked for the comitative preposition *na* involved in the With-Possessive construction that constitutes the most common way of expressing predicative possession across Bantu.

Finally, although the classification of possessive structures we propose in this chapter has proved adequate for the assessment of the construction types documented in our corpus, we do not dare to assume that it is exhaustive. Further (sub)types might be uncovered, possibly even in the languages described here: either by detecting new constructions or by deepening the analysis of those analyzed here.

6.3. Similative predication

Although similative predication (such as *This fabric is like silk*) was not one of the semantic types we had asked authors to investigate, some of them highlighted it. Similative predication may involve bivalent verbs glossable as 'be similar to': this possibility is mentioned for **Ju** and the **Oceanic** language Nêlêmwa. However, as confirmed by several chapters of this book, a non-verbal strategy with an adpositional phrase glossable as 'like N' in predicative role is cross-linguistically common.

7. Ostensive predication

Ostensive predication (such as *Here is my house*) is a little studied topic, and ostensive predicators have been elusive elements in many grammatical traditions (see Gaeta 2013 for Latin *ecce* and Italian *ecco*). Although ostensive predicators are involved in a specific kind of illocution, they deserve to be treated separately, rather than being addressed in Section 8.4 below, because they are a peculiar class of predicative elements rather than some sort of syntactic/pragmatic function.

The majority of languages in our survey lack a dedicated ostensive predicator and employ constructions typically involving a demonstrative. Some languages have, however, dedicated ostensive markers, which are often diachronically connected to demonstratives or verbs of seeing, and frequently alternate with other constructions. Our volume shows that dedicated ostensive predicative constructions are not unusual, although more cross-linguistic research is needed. Indeed, our contributors pointed out a lack of information in the available sources concerning the **Paleosiberian** family, most **Tungusic** languages, Arabela and Sápara (**Zaparoan**), **Nilotic**, the **Formosan** languages, **Tidore** and **Mian**.

A fair number of languages have no dedicated ostensive morpheme, so they need to deploy other strategies to encode ostension, the most common of which is the use of a demonstrative in identity predication, as in **Caijia** and **Waxiang**, Negidal (**Tungusic**), Northwestern Mexico **Uto-**

Aztecan languages, **Nungon**, **Teiwa** and **Maltese**.[12] The last language may also use locational predication with a topicalized locative adverb. Similarly, in **Lushootseed** ostension is conveyed by a focalizing adverb, and in **Western Apache** the locative adverb 'here' functions as an ostensive predicator in sentence-initial position. **Cuwabo** employs class-inflected copulae with no overt argument. In **Arawak** languages, a proximal demonstrative is generally the non-verbal ostensive predicate, while some languages of this family (including Warekena of Xié) display special predicates with ostensive meaning. In **Pano** languages, ostension is encoded via nominal or locational predication, but in Shipibo-Konibo this often includes the imperative of 'see'.

Cross-linguistically, the connection between ostensive clauses and verbs of seeing is well documented. Indeed, the latter are a common lexical source of grammaticalization into ostensive markers (Creissels 2017; Kuteva et al. 2019: 390–392), as shown in some of the volume's languages (see right below). Other, unsurprising, sources of ostensive predicators that emerge in the volume are demonstratives. This sort of grammaticalization is not addressed in Kuteva et al. (2019) and deserves further studies.

A dedicated ostensive marker is present in many **Oceanic** languages, such as Mwotlap, Hiw and Tahitian. Mwotlap distinguishes a standard ostensive particle from a "kinetic ostensive" one, which indicates a moving referent. The former stems from the verb 'see' + a deictic element. Hiw and Tahitian have ostensive markers encoding proximity to the speaker or the addressee, while Tahitian also adds another one, which is independent of SAPs. The three ostensive markers of Tahitian are clearly linked to the paradigm of demonstratives. The connection between ostensive and verbs of seeing is evident in **Mande** languages: in Mandinka, the imperative of 'look at' is at the origin of the ostensive marker, which is grammaticalizing into a copula. These two stages of grammaticalization (verb of seeing > ostensive > copula) are common in Mande and documented elsewhere (Creissels 2017; Kuteva et al. 2019: 308–309), but they are not found in other chapters of the volume.

Yupik-Inuktitut-Unangan languages have a large inventory of ostensives formed from demonstrative adverbs fused with an ostensive affix. **Old Zamuco** has an ostensive predicator whose formation is not completely clear: its complex paradigm is based on the masculine singular proximal demonstrative pronoun combined with morphemes that underwent phonological erosion, possibly other demonstrative locative adverbs or pronouns. **Ju** lacks proper demonstratives but rather uses proximal and distal "demonstrative verbs". It also has no dedicated ostensive, but "presentational" or "identificational" particles also covering ostension; with some similarities to the grammaticalization pathways observed above, one of them developed from a deictic and turned into a verb-like copula.

In other families, ostensive markers alternate with different constructions. In some **Uralic** languages, such as Hungarian, there is a dedicated ostensive marker; in others, ostension is expressed by inverse-locational predication with a demonstrative subject. Some **Algonquian** languages exhibit ostensive elements, which are based on demonstratives (Plains Cree and Menominee) or are of uncertain origin (Arapaho), otherwise resort to juxtaposition constructions with demonstratives (e.g. Innu). Iquito (**Zaparoan**) has an ostensive particle but can also use copula constructions with a demonstrative as predicate. Ostensive clauses show remarkable family-internal variation in **Turkic** languages; some have ostensive predicators presumably related to demonstratives; Turkish has an ostensive marker of uncertain origin, possibly stemming from an expression meaning 'like that'; other languages express ostension with a demonstrative, a locative adverb or the imperative of 'see'.

[12] For some languages (**Siyuewu Khroskyabs**, **Hän Athabaskan**, **Chicham**, **Tupian** and **Cushitic** languages), no strategy to compensate for the lack of a dedicated morpheme was indicated, but it must be noted that there was no explicit requirement to this effect.

A demonstrative plus another morpheme, possibly the merging of an additive and an exclamation particle, are found in Azerbaijani ostensive constructions.

8. Syntactic issues

Having addressed the functional types of predication, we now summarize some syntactic issues that emerge in the contributions, such as the differences between the negation in verbal and non-verbal predication (§8.1), the presence of syntactic markers (§8.2) and the use of non-verbal predication in dependent clauses (§8.3). The illocutionary force of non-verbal predication pertains to pragmatics but also affects the syntax of the clauses in which it is expressed, i.e. ostensive, interrogative and imperative clauses (§8.4).

8.1. Negation

As observed in Kahrel (1996), Stassen (1997: 45–50) and Eriksen (2011), verbal and non-verbal predication frequently employ distinct negation strategies. In the Grambank (Skirgård et al. 2023a,b), about half of the languages for which there is enough information (794 out of 1590) exhibit a dedicated negator for nominal, locational or existential predication. In addition to the divide verbal vs. non-verbal, the negation strategy may differ, within non-verbal predication, as a function of the type of predicate (nominal, adjectival, adverbial) or of the semantic/functional type of predication (inclusion, possession, etc.); furthermore, the contrast may consist or be accompanied by a change in the type of predicative construction. In this section, we highlight the following sets:

- languages that distinguish verbal vs. non-verbal negation, either through different negators or different copulae;
- languages that exhibit distinctions between positive and negative clauses within non-verbal predication, either by using dedicated negators or negative copulae or by contrasting different construction types. Such contrasts may interact with the semantic/functional type of the predication. The difference may also be a function of the predicate's lexical class.
- We also point out the special role of negative existentials in some languages.

When verbal and non-verbal predication have different negation strategies, this may be due to the presence of negative copulae (or copula forms), as in **Siyuewu Khroskyabs**, some Finnic and Saami languages (**Uralic**), **Turkic**, Innu (**Algonquian**), Mandinka and **Mande** languages in general (except for Dzuun, Jalkunan, Jeli, Soso and Jalonke), **Maltese** and some **Cushitic** languages. Other languages have a specific negator for non-verbal predication, such as Shipibo-Konibo and Amawaka (**Pano**) and **Nilotic** (excluding Southern Nilotic languages). **Cuwabo** has two such negators, with one of them restricted to locational-existential predication. In **Caijia** and **Waxiang**, not all adverbial negators can occur with the copula. In Caijia, non-verbal predication expressing a measure (age, height, time and weight) is encoded by a juxtaposition construction that cannot be directly negated (a verb has to be added). In Pareci-Haliti (**Arawak**), non-verbal predicates may add an optional particle to the generally used negator. In some **Formosan** languages, the distinction between verbal and non-verbal negation is more nuanced: under certain conditions, the nominal negator can also occur with verbs (Seediq, Atayal, Kaxabu); in Kanakanavu, a negator for dynamic verbs contrasts with one for stative verbs and nominal predicates. Similarly, in **Nungon** there are two negators whose functions are partly related to the distinction between verbal and non-verbal predication: one element negates verbs and deverbal nouns or adjectives, the other negates all remaining parts of speech. The latter negator can also be a negative existential.

The negation strategy in non-verbal predication can differ from verbal negation depending on the predication's semantic/functional type. In Siberian **Tungusic** lects, identity and inclusion predication are negated in the same way as verbal predication, while locational, existential and possessive predication have specific noun-like negators. Similarly, in Ket (**Paleosiberian**), only the negation of identity and inclusion predicates patterns with verbal negation. By contrast, in Manchu (**Tungusic**), the negation of existential and possessive predication aligns with that of verbal predicates. Guarijío and Tarahumara (**Uto-Aztecan**) have a dedicated copula for negative locational predication. In Arabela (**Zaparoan**), the standard negation cannot occur with the proprietive type of possessive predication, so negation requires a privative suffix. A privative element (specifically a prefix) also negates predicative possession in **Arawak** languages.

Within non-verbal predication, the negator's type may interact with the lexical class of the non-verbal predicate. In Chukchi (**Paleosiberian**), adjectival predicates involve a copula whose negation resembles that of a verb. In Matses (**Pano**), adjectival predication requires different copulae in positive and negative clauses. **Chicham** has a dedicated nominal negator. Likewise, some **Oceanic** (Lo-Toga, Tahitian) and **Formosan** languages (Kavalan, Puyuma, Saisiyat) exhibit a special negative copula for nominal predication. In **Mian**, only one of the two negation clitics can occur in non-verbal predication, and a special suffix is required in negative clauses when the predicative head is a pronoun.

Negation can also change the type of non-verbal predicative construction. In **Cushitic**, juxtaposition in positive predicative clauses may contrast with a copula construction in negative clauses. In **Turkic**, negation requires negative copulae instead of the predicative inflection of Subtype IIIa or the juxtaposition construction. In Kaxabu (**Formosan**), by contrast, the negator cannot co-occur with the copula, thus requiring juxtaposition. In the sister language Puyuma, identity predication employs a copula, but the negator *ameli* replaces the copula and the result is a juxtaposition construction, which is typical of inclusion predication; identity and inclusion remain nevertheless formally distinct, because *ameli* has a different position in the clause.

Some of the above examples highlight a difference of standard verbal negation vs. the negation of existential and/or locational predication. Veselinova (2013) found this contrast in 65 out of 95 languages surveyed, and it usually involves the presence of negative existentials. Such elements are featured in a fair number of languages addressed in this volume: many **Uralic** languages, **Tungusic**, **Turkic**, Tariana (**Arawak**), **Guaycuruan**, **Mataguayan** and **Chicham** languages, several **Pano** languages, Iquito (**Zaparoan**), **Ju** and **Oceanic** languages. **Lushootseed** and **Nungon** have a negator that also functions as negative existential predicator. Pareci-Haliti (**Arawak**) has an existential that only occurs in negative clauses but has to combine with a negation marker since it has no negative value per se. Negative existentials may often occur in locational predication (**Uralic**, **Tungusic**, **Turkic**, **Lushootseed**, **Guaycuruan, Mataguayan** and **Oceanic**).

Negated non-verbal predication may also have other uses: **Ngumpin-Yapa** languages resort to it for negative commands.

8.2. Syntactic markers within the clause

The following subsections (§8.2.1–8.2.3) address markers that per se do not convey any predicative value but may nevertheless be associated with predicative constructions.

8.2.1 Overt flagging on the nominal predicate

In addressing the flagging on the nominal predicate, we exclude those copula-like morphemes that form the predicative inflection constructions (Type III) dealt with in §3.2. We circumscribe the

discussion to the languages in which particles, adpositions or case markers flag a predicative NP in a copula or juxtaposition construction. These morphemes may be linked to the predicate's semantics, may be identical to markers for functive adjuncts or may indicate a temporary state or a transformation.

In Polynesian languages (**Oceanic**), such as Tahitian and Māori, inclusion predicates are preceded by the indefinite quantifier *(h)e*, which is absent if the predicate is marked for time, aspect, mood or polarity. Identity predication in Tahitian displays the optional "identification particle" *ʻo* (not restricted to non-verbal predication) preceding the predicative NP. The morphemes *ʻo* and *he* are also present in Hawaiian, where their status is debated since they have been considered copula-like elements. In most other (non-Polynesian) Oceanic languages, nominal predicates show no flagging.

In some **Formosan** languages (Amis, Paiwan, Kavalan and Puyuma), the nominal predicate is flagged by a preceding marker. Such noun markers can distinguish common vs. proper nouns, as in Amis, or only flag proper nouns, as in Paiwan and Kavalan. In Puyuma, a so-called indefinite case marker is used, but this does not necessarily imply that the predicate's referent is non-specific since this marker also occurs in identity predication.

As mentioned in Chapter 1 (§2.2), nominal predicates in Slavic languages are sometimes in the instrumental case, like functive complements or adjuncts.[13] Karaim (**Turkic**) had intense contact with Russian, and nominal predicates take the instrumental case in past-referring situations. The dative in Mari and the lative in Khanty, two **Uralic** languages of Russia, flag both functive adjuncts and nominal predicates. This may also be a pattern borrowing from Russian.

The relationship between functive marking and non-verbal predication, addressed by Creissels (2014), emerges in several languages of this volume. In many **Uralic** languages, the essive or translative case on the nominal predicate indicates a temporary or contingent state in addition to flagging functive adjuncts in verbal predication (Creissels 2014: 624). The essive case in Finnish and the translative in Mordvin (indicating change of state) are cases in point. In **Mande** languages, if the argument is expressed, the nominal predicate is often flagged by a polyfunctional adposition that usually has functive or comitative function; a locative adposition on the nominal predicate is also attested. In Mandinka, the adposition flagging the predicative NP is *ti*, which in verbal predication can encode a functive or transformative role (analogous to the Uralic translative case).

In some Tupi-Guarani languages (**Tupian**), such as Kamayurá, in addition to the predicative inflection construction of Subtype IIIb (see §3.2), the nominal predicate can also occur in the "attributive" case to indicate a temporary state (Seki 2000: 163). This case, also called "translative", has different functions depending on the language (see Rose 2003: 335–341); in Kamayurá, it can also mark a functive phrase or a change of state (Seki 2000: 110–112). Creissels (2014) noted a functive-transformative syncretism in some languages treated in this volume: Mandinka (**Mande**), Mordvin (**Uralic**) and Tupi-Guarani (**Tupian**). This also emerges in Kolyma Yukaghir (**Paleosiberian**), where the functive adjunct is encoded by the transformative case, also occurring on the predicative head with the (semi-)copula 'become'. In Chukchi, when identity or inclusion is conveyed by the copula construction, the noun predicate is in the equative case, which also flags functive adjuncts.

8.2.2 The marking of the subject in non-verbal predication

The subject of a non-verbal predicate can be marked like the subject of intransitive verbs, like the object of transitive verbs or with oblique marking.

[13] A functive adjunct is a noun or an adpositional phrase directly dependent on the verbal head that indicates the role of one of the arguments, as *your friend* in *I am talking to you as your friend* (Creissels 2014: 606).

In almost all languages addressed in the volume, the argument of a non-verbal predication is coded like the argument of semantically monovalent verbs. This also applies to **Arawak** languages, which display split intransitivity: the subject of non-verbal predication is indexed like that of stative verbs and like the object of transitive verbs by means of pronominal suffixes or enclitics; by contrast, pronominal prefixes mark the subject of transitive and dynamic intransitive verbs. The marking of the subject may also depend on constituent order: in **Nilotic** languages where the subject follows the non-verbal predicate, the subject is assigned nominative case; however, in those lects where the subject precedes the non-verbal predicate, it is assigned absolutive case.

In a few languages, the subject of the non-verbal predicate can align with the object of the transitive verb. In the **Finnic** branch of Uralic, the subject of inverse-locational and quantificational predication takes object-like features. This also applies to pronominal subjects of non-verbal possessive predicates in Finnish, which are in the accusative. Likewise, in Sápara (**Zaparoan**), the pronominal subjects of non-verbal predicates have the same form as the objects of transitive verbs.[14] In the Papuan language **Teiwa**, the choice of subject pronouns distinguishes inclusion from identity predication; the former involves the regular subject pronouns, also found with verbal predicates, while an object pronoun expresses the argument of identity predicates. In addition, Teiwa adjectival predication involves a double expression of the subject (a noun + a short pronoun) when the adjective's degree is modified.

8.2.3 Discourse markers in nominal predication

As pointed out in Chapter 1 (§2.2), the use of discourse markers is more often associated with nominal predication than verbal predication or other varieties of non-verbal predication. Focus, emphasis, topic or declarative markers occur with nominal predication in several languages discussed in the volume.

Sino-Tibetan languages, such as **Caijia** and **Waxiang**, have an assertive construction such that the predicate head is in focus when placed between the copula and a clause-final modal particle. The nominal predicate in Nivkh (**Uralic**) takes focus clitics, but it is not clear whether they are obligatory. Focus markers and assertion markers can occur in **Turkic** nominal predication. In Udihe (**Tungusic**), a focus particle often attaches to clause-final adjectival predicates in juxtaposition constructions (see Nikolaeva and Tolskaya 2001: 622–623). Focus markers are common after nominal predicates in **Western Apache** and **Hän Athabaskan**. In Ojibwe (**Algonquian**), an emphatic particle often occurs in juxtaposition constructions. Baniwa of Içana-Kurripako and Piapoco (**Arawak**) display the declarative suffix *-ka* in non-verbal predication. This discourse marker is obligatory in Kurripako. Nominal predicative constructions in Mandinka (**Mande**) involve the focus marker *lè*, which may be obligatory under certain conditions, usually in independent positive clauses. Other Mande languages (Maninka, Kakabe, Soso, Jalonke, Soninke and Gban) are similar in this respect. In the nominal inclusion predication of Somali (**Cushitic**), the predicate is preceded by *waa*, whose interpretation is debated: it may be a focus or a declarative marker. Mwotlap (**Oceanic**) has a focus construction in nominal identity predication. Nominal predication in **Ngumpin-Yapa** involves a discourse topic marker *ma*, which can be an enclitic or an independent phonological word. In **Chicham** languages, the subject of a non-verbal predicate hosts the topic enclitic *=ka* in juxtaposition constructions.

In some languages, focus markers and the copula can be identical, which is conceivably related to the pathway of grammaticalization from copula to focus marker (Kuteva et al. 2019: 125–126). In several **Nilotic** languages, the copula *a* also behaves as a focus marker, and family-internal comparison suggests that this morpheme had both functions in the earliest stages of Nilotic. The same copula/focus marker is also a perfective marker in Anywa (Western Nilotic) and turned into a tense marker in Eastern Nilotic Teso-Turkana languages. The copulae may coincide with focus

[14] The coincidence of object-marking with pronominal subjects in unrelated languages calls for a dedicated investigation.

markers in **Mande** languages (cf. §9.3). Another example of the convergence of non-verbal predication and focus marking is in **Cuwabo**, where High Tone Deletion is found on nominal and adjectival predicates, yielding a predicative inflection construction of Subtype IIIb (see §3.2); interestingly, however, this is also a focus marking strategy in verbal predication.

8.3. Non-verbal predication in dependent clauses

The use of non-verbal predication in dependent clauses is an understudied topic. For some of the languages treated in this volume (**Caijia** and **Waxiang**, **Old Zamuco**), the respective chapters offer examples of a whole clause as subject or predicate in non-verbal predication. However, for various others the respective authors pointed out a lack of data on complex constructions in the available documentation. Based on the available evidence, it appears that in most languages of our sample non-verbal predication can occur in dependent clauses without any change in predicative marking; in some, however, restrictions emerge, or else the selection of the morphosyntactic construction or the type of copula is affected.

Some languages prohibit non-verbal predicates in complex constructions. In the **Arawak** family, the insertion is not possible in some or, depending on the language, all types of serial verb constructions or dependent clauses. In **Nungon**, dependent clauses or medial clauses in clause chains only allow for verbal predicates (with few exceptions).

The occurrence of non-verbal predication in a complex construction may entail structural changes. In some languages, the use of a copula is obligatory in dependent clauses: in **Turkic** languages, for instance, non-verbal predication in a complex construction usually requires a verb-like copula, while juxtaposition and the predicative inflection construction of Subtype IIIa are available elsewhere. In Somali (**Cushitic**) nominal predication, the declarative marker *waa* of juxtaposition constructions is replaced by an inflected copula in dependent clauses. In Udihe, Even and Negidal (**Tungusic**), a copula construction tends to replace juxtaposition in subordinate clauses; if the adjectival predicate occurs without a copula, it takes the accusative case and a possessive suffix to index its subject, thus giving rise to a predicative inflection of Subtype IIIa. In Even, this is also documented with proprietive-marked nouns in subordination.

In other languages, the insertion of the non-verbal predicate in a complex construction conditions the choice of the copula. In **Iquito** (**Zaparoan**), the standard copula has three allomorphs, and one of them is selected in dependent clauses or with a third-person focused argument. **Cuwabo** non-verbal predication exhibits different morphosyntactic types, but the verb-like copula *li* is needed in relative clauses and the verb-like semi-copula *kála* in all other subordinated clauses. **Mandinka** has verb-like and non-verb-like copulae; some complex constructions may require dependent verb forms, so verb-like copulae are used instead of non-verbal ones.

8.4. Illocutionary force and non-verbal predication

Illocutionary force in non-verbal predication is a topic that deserves further studies. Indeed, some questionnaires (concerning **Paleosiberian**, **Tungusic**, **Uralic** and **Old Zamuco**) pointed out that there are insufficient data. In some languages, e.g.**Mian**, both verbal and non-verbal predicates are followed by illocutionary clitics.

Ostension, with the possible presence of ostensive predicators or dedicated ostensive constructions (§7), is a manifestation of the interplay between illocutionary force and non-verbal predication. Other relevant domains are:

- interrogative clauses, which may require a specific type of construction or a special marker,
- imperative clauses, which may exclude non-verbal predicates.

Interrogative clauses may interact with the type of non-verbal predication or with the selection of the copula. This occurs in some **Algonquian** languages: Arapaho displays a copula for identity predication in declarative clauses but juxtaposition in the corresponding interrogative clauses; Blackfoot has two different identity copulae for declarative and interrogative clauses. In the latter language, the question word 'what' appears in both copula and juxtaposition constructions, while 'who' only in the latter. In Menominee, content question words display instead a predicative inflection construction of Subtype IIIa. In **Old Zamuco**, 'what' questions are the only clauses where the nominal predicate can be flagged by the "indeterminate form", which normally marks a non-specific referent of an NP in argument function.

In Aguaruna (**Chicham**), polar questions are marked by an interrogative clitic; while in verbal clauses it attaches to an argument or fills the last verbal slot, in non-verbal predication it is hosted by the nominal predicate and does not occupy the final slot since it precedes the copula enclitic and the subject marker. In Chakobo (**Pano**), the subject and the predicate of identity and inclusion predication are often connected by particles that also distinguish declarative from interrogative clauses. Shipibo-Konibo (**Pano**) has an interrogative particle for verbless questions (which involve juxtaposition) and another one that co-occurs with verbs (including the verb-like copula). Questions with non-verbal predication exhibit a special interrogative copula in Sápara (**Zaparoan**) and lack the interrogative marker that occurs in verbal predication. Some **Cushitic** languages, such as Alagwa and Arbore, have interrogative copulae or a dedicated interrogative marker, as in Khamtanga. In Somali, questions with nominal predication require a final focus marker. Content questions in 'Afar display a final clitic that stems from a copula, while polar questions have a dedicated copula, also used to answer those questions. The use of copulae to answer polar questions is also found in **Caijia** and **Waxiang**. In **Nungon**, the polar question marker *ha* occurs with verbal predication but not in juxtaposition constructions.

Jussive expressions may have constraints related to non-verbal predication. In **Nungon**, commands are usually not encoded by verbless clauses. Similarly, in **Western Apache** and **Hän Athabaskan**, orders or suggestions must be expressed by verbal predication rather than by the copula. In most **Arawak** languages, non-verbal predication cannot occur in commands. By contrast, a verb-like copula is required for imperative non-verbal clauses in **Turkic**. **Ngumpin-Yapa** languages go a step further, because non-verbal predication is used for negative commands. Similarly, in some **Chicham** languages, deontic constructions are based on the nominalization of a verbal predicate in a copula construction.

9. Types of copula and their origin

This section focuses on copula constructions, discussing the different types of copula that may be present in a given language and the criteria for their selection (§9.1), the possible use of copulae as auxiliaries (§9.2) and, finally, the sources of copula grammaticalization documented in the volume (§9.3).

9.1. Different types of copula

While the majority of languages in this survey display copula constructions, their frequency of use and the different types of copulae a language may have (e.g. true copulae vs. semi-copulae; verb-like vs. non-verb-like (semi-)copulae), as well as their number, show considerable cross-linguistic variation. The choice of the copula construction and the type of copula may depend on various parameters, among which:

- the semantic/functional types of non-verbal predication: a relatively common split is, for instance, between a copula for identity and inclusion and one for locational predication, and several languages also display (semi-)copulae for existential or dynamic-transformative meanings;
- the subject's person and the word class of the non-verbal predicate: dedicated SAP copulae emerged in some languages of our sample and need further typological studies;
- the semantics of the subject or predicate;
- the permanent vs. temporary qualification of the referent (cf. Section 4.2);

TAM features (cf. Section 3.3) and polarity (cf. Section 8.1) should also be considered in this connection.

The thorny issue of the lexemes confined in the no man's land of so-called "semi-copulae" complicates the assessment of the different types of copula. The notion of "semi-copula" is descriptively useful but theoretically vague, being merely definable in negative terms: not a true copula, not a true verb. Here, we cautiously adopt the solution tentatively proposed by the individual contributors, who shared the same difficulty. The critical semantic area most typically involved is the locational domain – especially inverse-locational – which in many languages is tightly connected with the domain of possession. Unless a locative meaning is clearly conveyed ('inside', 'above', 'behind', etc.), it is often hard to ascertain whether no thematic role is assigned and, thus, whether the given element is semantically empty, i.e. is a true copula. It should be noted that, in the treatment of some of our contributors, inverse-locational predication also includes existential predication although the two notions should be kept apart, as clarified in Section 6.2 and in Chapter 1 (§4.4). Other critical areas are those of similative ('be like') and dynamic-transformative predication ('become').

In this section, with no further qualification added, the word "copula" refers to lexical elements used for both inclusion and identity predication. Explicit mention is made of any copula expressly dedicated to identity predication, or of any (semi-)copula specialized for plain-/inverse-locational, dynamic-transformative or similative meanings. As the following presentation shows, the situation in the various languages is quite diverse, with different restrictions on the range of usage of the available copula elements, also relating to their verb-like or non-verb-like nature. The only group that stands out as absolutely homogeneous is, needless to say, that of the languages with no copula elements whatsoever: this is the case for **Lushootseed**, the Papuan languages **Teiwa**, **Tidore**, **Mian** and **Nungon** (excepting, in the last language, the light verb constructions that might be understood as the incipient phase of a copula creation process).

In several languages, the copula construction is a relatively usual strategy, if not the dominant one, as detailed in Section 3.1. **Caijia** and **Waxiang** present a single main copula, also used in locational constructions in the latter language. **Siyuewu Khroskyabs** uses a copula (and its negative counterpart) with nouns, pronouns and nominalized clauses, but also locative semi-copulae. **Paleosiberian** languages have distinct copulae for: inverse-locational/possessive vs. past-referring clauses (Ket), inclusion/identity with SAPs vs. inverse-locational/possessive vs. dynamic predication (Yukaghir), inclusion/identity vs. locational vs. dynamic predication (Chukchi). **Tungusic** languages also have a widely used copula, plus one for the dynamic-transformative meaning; in addition, Nanai has one copula restricted to SAPs. **Turkic** languages display three main variants: verb-like copulae, (pro)nominal copulae showing subject person-number agreement and an existential predicator with its negative counterpart; in addition, there is a verb-like semi-copula for the dynamic-transformative reading that behaves as a suppletive copula, especially in future-referring situations. In **Uralic**, alongside the copula **woli*, one finds **le(wi)*, which often displays a dynamic-transformative ('become') or else some kind of irrealis meaning, with the former reading often (co-)expressed by case inflection (translative or elative case). Furthermore, there may be "existential" copulae, mostly uninflected or with restricted TAM inflection, which calls for integration by the 'be'-copula.

Among Northwestern Mexico **Uto-Aztecan** languages, Guarijío and Tarahumara have two different copulae for present vs. non-present contexts, while in Yaqui the copulative suffix is only found in non-present situations; additionally, Guarijío has a copula restricted to adjectival predication, and the same language, like Tarahumara, has two polarity-sensitive (affirmative vs. negative) locational copulae. Within **Pano** languages, Marubo has a possessive/existential verb-like copula; Matses features two verb-like copulae that distinguish permanent vs. temporary property and also positive vs. negative polarity with adjectival predicates; negative polarity also governs the choice of the copula in plain- and inverse-locational predication; moreover, there is a postural verb that may work as a pure copula with plural subjects. Among **Zaparoan** languages, Iquito has three copulae, one of which is used in irrealis/future contexts or to convey a dynamic-transformative meaning, and another one is reserved for locative predication; Arabela requires a copula when TAM morphology is added. In **Chicham** languages, the verb-like copula is in complementary distribution with the predicative inflection construction, itself consisting of enclitic copulae; Aguaruna distinguishes a past and a present-invisible enclitic copula. In addition, Chicham lects have semi-copulae to convey locational and dynamic meanings.

In **Maltese**, the copula of pronominal origin is gaining over juxtaposition, but the 'be'-copula is required to specify TAM qualifications and is preferred for plain-locational predication; the locative *fi*-copula is limited to inanimate subjects, while no such limitation exists for the adverbial copulae; another locative copula, *qiegħed*, can be used to encode temporary state. **Mande** languages have both verb-like and non-verb-like copulae, differently distributed in the various lects. The most common situation (among other possible configurations) is the existence of two distinct positive non-verb-like copulae for nominal vs. adverbial predication and a negative non-verb-like copula for both nominal and adverbial predication. **Cuwabo** has two verb-like copulae, one of which is restricted to present and past situations, and a non-verb-like copula (formally identical to a demonstrative) used in general-present contexts with nouns, pronouns, wh-elements and headless relatives; in addition, there are non-verb-like, class-inflected copulae (originating from demonstrative pronouns) used in specific syntactic configurations, such as cleft-clauses. One of the verb-like copulae also serves to express locative-existential predication. In **Nilotic**, there is usually just one (either verb-like or non-verb-like) copula, but in some languages, like Western Nilotic Anywa, more than one copula is attested. **Ju** languages exhibit two copulae, one of which also occurs in locational predication, where, however, another verbal element may be employed.

In some languages in our sample, the copula strategy plays a marginal role compared to juxtaposition or, where relevant, the predicative inflection construction. The three kinds of copulae found in **Turkic** languages have already been mentioned. **Western Apache** has three verb-like copulae: two of them are used with human predicates only and express identity with, respectively, familiar vs. unfamiliar referents, while the third one is used for inclusion. In the **Arawak** family, Alto Perené and Tariana exhibit different copulae, which in the latter language can also express existence, location and transformation. While copulae are rare in Tupi-Guarani languages, they are widely present in the rest of the Tupian family. **Old Zamuco** has a dedicated SAP-copula, plus a locational copula and an existential predicator. Ayoreo, another member of this small family, has an invariable copula of pronominal origin that was already, albeit sporadically, documented in Old Zamuco. **Guaycuruan** and **Mataguayan** languages mostly have an existential predicator (analyzed as a copula by Vidal and Nercesian), which in Wichi (Mataguayan) is split into a form for present- and another one for past-referring contexts (as for the future, a dedicated TAM marker is added to the present-predicator). In southern Guaycuruan languages, the existential predicator inflects for number but not for person. In addition, Guaycuruan and Mataguayan languages (other than Mocovi and Kadiweu, for which no data are available) have two different forms for positive and negative predication in existential/possessive clauses. Most **Cushitic** languages do not employ copulae, but in a few lects one or more such elements are used with different subtypes of nouns or in locational/possessive predication.

Very few **Oceanic** languages have a copula. Nafsan and Lelepa are among the exceptions, as well as Lo-Toga, which has a copula for TAM-marked predicates, plus its negative counterpart; a negative copula is also present in Tahitian; Wayan Fijian has one copula for inclusion and one for identity predication. A locational copula is present in various Oceanic lects. The Papuan language **Nungon** may optionally use a semi-copula for locational, possessive and quantificational predication; in addition, two special verbs may have a quasi-copula function with a subset of adjectives. The only four **Formosan** languages that exhibit a copula (Paiwan, Kaxabu, Tsou and Puyuma) have a single one. **Ngumpin-Yapa** languages, instead, typically have between one and three lexical verbs that may be used as copulae, in addition to having (depending on the language) stance/postural, presence/habitation or dynamic-transformative meaning. They are, however, disfavored in some functions, e.g. identity predication.

Although **Algonquian** languages mostly use verbal strategies, some of them have verb-like (Blackfoot, Arapaho, Ojibwe) or non-verb-like copulae (Cree-Montagnais-Naskapi, Passamaquoddy). Likewise, Unangan is the only language in the **Eskimo-Aleut** family with a dedicated verb-like copula.

9.2. Copula and auxiliary function

In some languages, copula items may also fulfill the auxiliary function in complex (syntagmatic) verbal forms. Auxiliaries convey TAM values but no lexical meaning. This is the case for some of the languages in our sample, such as **Tungusic**, **Paleosiberian** (except Ket) and **Turkic** languages. **Uralic** languages present a negative auxiliary; besides, in Finnic and Saami, the copula 'be' works as an auxiliary in compound tenses. **Western Apache** has a few particles that could be interpreted as auxiliaries, two of which are homophonous with verb-like copulae and convey a prohibition and a non-immediate/tentative future meaning. In **Chicham** languages (notably in Shiwiar, Shuar and Aguaruna), the verb-like and the enclitic copula (Subtype IIIa) may function as auxiliary verbs to express TAM combinations; the lexical verb may be the unmarked root or may be nominalized. In **Maltese**, the 'be' copula may be viewed as a TAM-auxiliary, while the locative copula is also used as a progressive auxiliary; in addition, the transpossessive pseudo-verbs may function as modal auxiliaries.[15] In **Nilotic**, the verb-like copulae bear connection with the auxiliaries class. In **Mande**, the use of copulae as auxiliaries in combination with dependent verb forms (sometimes also with bare verb stems) is pervasive, most typically to express progressive, incompletive or future. **Cuwabo** has a semi-copula that is also used as an auxiliary to express duration/persistence. In **Ju**, the existential-locational verb *GE(A)* may appear as the first component in a construction that conveys "durative" or even "inceptive" value. Some **Ngumpin-Yapa** languages (e.g. Mudburra) have copulae with quasi-auxiliary functions.

In the remaining languages of our sample, by contrast, no one of the copula elements is used as an auxiliary. This also applies to Tsou, whose auxiliaries are systematically used in every VP, but are in complementary distribution with the copula. In some languages, however, auxiliaries appear to be in the process of being developed. Among the **Uto-Aztecan** languages of Northwestern Mexico, this has been pointed out for Tarahumara. In a few **Cushitic** languages, such as Somali and Oromo, a 'be' copula, used in nominal or adjectival predication in non-present and non-positive contexts, also features in syntagmatic verbal forms.

9.3. On the origin of copula elements

The chapters in this volume provide a considerable amount of data on the origin of the copulae, along with some insights into their subsequent development. While they mostly involve instances of grammaticalization identified by Stassen (1997) and Kuteva et al. (2019), a few new

[15] In descriptions of Arabic dialects, "pseudo-verb" refers to words of non-verbal origin that have acquired some verb-like properties and can be analyzed as projecting clauses in the same way as verbs.

pathways also emerge that could invite further studies in diachronic typology. Copulae have been shown to emerge from:

- verbs, especially postural ones;
- demonstrative and free pronouns, proximal/distal adverbs;
- less frequently, focus/topic markers or locational adpositions.

Chapter 2 (§2.2.1) describes the reinterpretation of demonstratives into copulae, which is the most frequently observed process in the volume (see also Stassen 1997: 77–91; Kuteva et al. 2019: 136–137). Another type of determiner that can turn into a copula, as mentioned in Chapter 2 (§2.2.3), is the indefinite article, but this does not emerge in this volume. Non-verb-like copulae are former demonstratives in Cree-Montagnais-Naskapi, Passamaquoddy and Innu (**Algonquian**). The same applies to the Pima Bajo (**Uto-Aztecan**) copula *i̵gi*, the **Cuwabo** class-inflected copulae and the copulae *sʔ*^{33} in **Caijia** and *ts*^{h}*ɤ*^{25} in **Waxiang**, cognates of the Mandarin Chinese copula *shì* 是 [ʂʅ^{51}]. The copula *e* in the !Xun varieties of **Ju** stems from a proximal demonstrative. The emerging **Old Zamuco** copula *u* originated from the Proto-Zamucoan demonstrative **u* and is found as a fully developed copula in present-day Ayoreo, another Zamucoan language. In **Cushitic**, the origin of the copula deserves further studies, but the copulae found in some Highland East Cushitic languages possibly derive from gender markers or demonstratives.

Maltese has one copula that was initially the independent third-person subject pronoun, as also documented in other Semitic languages (Kuteva et al. 2019: 323–324; on this change, see also Stassen 1997: 77–91). This grammaticalization is typologically close to that of demonstratives into copulae since demonstratives are often the source of third-person pronouns (Kuteva et al. 2019 142–144). The adverbs ‘here’ and ‘there’ are another common source pointed out in this volume (cf. Stassen 1997: 88). This grammaticalization path, not mentioned in Kuteva et al. (2019), is indirectly connected with the one just mentioned, since ‘here’ and ‘there’ may give rise to demonstratives (Kuteva et al. 2019: 229–232, 430–431). This is, for instance, the case of the **Maltese** inverse-locational copulae *hemm* and *hawn*. The Emerillon (Tupi-Guarani, **Tupian**) existential predicator (also used as an inverse-locational copula) *kob* comes from a locational expression meaning ‘in this place, over there’, which includes a proximal demonstrative (Rose 2003: 267–268). ‘There’ is the source of a copula in Eastern Dan (**Mande**) (Vydrin 2020: 102), of a copula for adverbial predication in Soso and Jalonke (**Mande**) and of the existential predicator (also used as a copula) in Mwotlap and other **Oceanic** languages of north Vanuatu.

The change from a verb expressing existence into a copula is also a well-known grammaticalization process (Stassen 1997: 88–89; Kuteva et al. 2019: 163–164; Chapter 2, §2.1.1). ‘Exist’ is the source of several copulae in **Uto-Aztecan** languages such as Tarahumara, Guarijío and Pima Bajo. In **Chicham**, the verb-like copula coincides with the existential verb *a-*, which indicates a possible shared origin; these languages also feature a negative existential verb *a͡tsu-* that diachronically combines the existential verb *a-* and the negative suffix *-t͡su*. The Emerillon (Tupi-Guarani, **Tupian**) negative existential predicator *dati* results from a negative expression possibly based on a root meaning ‘exist’.

Some chapters feature the grammaticalization of ‘live’ into a (locational) copula, a process addressed in Kuteva et al. (2019: 261) as well as in Chapter 2 (§2.1.1). Among the **Tungusic** non-verb-like copulae derived from verb-like ones, one finds *bi-* ‘be’, which is also the verb ‘live’ (although it is hard to tell which came first). Similarly, the **Old Zamuco** locational copula *si* stems from the verb ‘live’ and still maintains this function. The locational copula of all **Zaparoan** languages originated from a verb meaning ‘reside, live in a certain way’, and the **Caijia** plain-locational copula derives from the verb ‘dwell’ (cf. §6.1.1)

‘Live’ is often colexified with ‘sit’ or other postural verbs, another copula source. As seen in §6.1.1, postural verbs often have a copula use in locational predication, which is a step towards their grammaticalization into copulae (Stassen 1997: 91–99; Kuteva et al. 2019: 404–405, 409; Chapter

2, §2.1.4). The **Maltese** locative copula *qiegħed* was originally the active participle of the verb 'sit, stay, inhabit'. **Turkic** has two main verb-like copulae: one is a reflex of Proto-Turkic **är-* 'be', the other comes from the postural verb **tur-* 'stand up, stand'. The Matses (**Pano**) copula *ne* might be connected to the verb *nid* '(be) stand(ing)'. The **Cuwabo** semi-copula *kála* means 'be, live, stay' and comes from Proto-Bantu **gad* 'remain'. This change may be explained by the fact that 'live' is the most frequent colexification of 'remain' (Rzymski et al. 2020).

The specialized literature points out the bleaching of lexical verbs as the most common copula-yielding process. In this volume, some other verbs are mentioned, beyond the postural ones. The grammaticalization from 'become' is known for Turkish and Proto-Indo-European (Stassen 1997: 92–93, 98; Kuteva et al. 2019: 85–86; Chapter 2, §2.1.2). Several **Arawak** languages have copulae stemming from a verb meaning 'become, go back, appear'. Sakha (**Turkic**) developed a negative copula out of a negative form of 'become'. The Proto-Uralic copula **le(wi)-* is a grammaticalization of the verb 'be born'. In some **Uralic** languages, it acquired the meaning of 'become, come into being'; in others, it turned into the verb 'be alive, dwell'. Thus, Uralic languages show the opposite direction of the two just mentioned grammaticalizations ('become' > copula and 'live' > copula). This sort of reversal cannot be excluded for the **Ngumpin Yapa** languages: the origin of the copulae is unknown, but they also function as verbs meaning 'sit, stand', 'stay, remain, live', or 'become'.

Less common grammaticalization paths emerge from the languages treated in this collection. The large variety of possible sources in such a small sample is good evidence of the multiple manifestations of the copula-building process.

Several Mande languages have copulae stemming from an ostensive marker, which, as described in §7, originated from a verb of seeing (on this grammaticalization, see also Stassen 1997: 91–92, Creissels 2017 and Chapter 2, §2.1.5).

Pima Bajo and Tohono 'O'odham (**Uto-Aztecan**) have a copulative suffix *-k(a)* derived from a stative suffix, which might stem from a stative/locative copula 'be at' or from the verb 'seem'. In another Uto-Aztecan language, Guarijío, the copulative suffix *-ga* is considered related to the verb 'seem', the same origin of the **Old Zamuco** copula that is only used for SAP.

Eastern Dan (**Mande**) has the verb 'go' as the source (Vydrin 2020: 102). The grammaticalization of copulae from verbs of movement is not discussed in Kuteva et al. (2019), but mentioned by Stassen (1997: 92–93; see also Chapter 2, §2.1.3).

Within **Oceanic**, the Lo-Toga copula *da* and the Nafsan copula *pi* stem from the verb 'do, make'. This grammaticalization is not found in Kuteva et al. (2019) but is again addressed by Stassen (1997: 92–93; see also Chapter 2, §2.1.7). The verb 'do' is also a source of pro-verbs (Kuteva et al. 2019: 150–151), which are in turn at the origin of the verb-like copula of most **Pano** languages. Nafsan has a 'have' verb *pitlak*, also used in have-inverse-locational constructions (cf. Chapter 1, §4.4.2), which originated from the expression *pi* (COP) *atlak* 'be owner'.

'Bind' is the source of the verb-like copula in Cantonese and Hakka (see Chappell and Lü, present volume). The **Siyuewu Khroskyabs** copula *ŋóz* stems from a verb meaning 'be true, be the case' (see Chapter 2, §2.1.8).

Chapter 2 (§2.1.6) shows some copulae from the verb 'have'. This change is not described in other chapters of the present volume; Kuteva et al. (2019: 129–130) address instead the reverse development of the locational copula into 'have', which occurred with *GE(A)* in **Ju**.

Maltese has an inverse-locational copula from the locative preposition *fi* 'in, at' (cf. a similar case in Stassen 1997: 96). The Kaxabu (**Formosan**) copula *ka* was originally a topic marker, a function that its cognates still maintain in other Formosan languages, such as Tona Rukai. In **Mande** languages, the focus marker in verbal clauses may coincide with the copula. In addition, in Maninka and Kakabe, the copula is optionally omitted if a focus marker is present, which suggests the possible reanalysis of the latter as a copula. The development of information structure markers into copulae is addressed in Stassen (1997: 76–91), and Kuteva et al. (2019: 125–126) report the grammaticalization of the copula into a focus marker. This is found in some **Nilotic** languages,

where the Proto-Nilotic copula **a* turned into a tense-aspect or focus marker. The change from copula to TAM marker has occurred in some **Uralic** lects.

Some chapters mention the further development of copulae, already hinted at in the mirror-image processes mentioned above. The verbalizing suffix of **Yupik-Inuktitut-Unangan** derives from the copula root 'be'; this grammaticalization resulted in the virtual lack of non-verbal predication in these languages. Section 9.2 pointed out the cross-linguistically frequent auxiliary function of the copulae, and this also emerges in some languages treated in this volume. In **Maltese**, the locative copula grammaticalized into a progressive auxiliary; likewise, in Tarahumara (**Uto-Aztecan**), possibly owing to the influence of Spanish, the copula *atí* developed the meaning of an auxiliary.

Some copulae have been very stable over time and can be reconstructed for the respective proto-languages although we ignore their sources. This is the case for **Western Apache**, for the **Cuwabo** verb-like copula *li*, and for the **Old Zamuco** existential predicator *=uz*. Among the families addressed in this book, the copula's historical origin is unknown for **Paleosiberian**, **Guaycuruan** and **Mataguayan** languages.

10. Prospects for further investigation

By way of conclusion, we would like to pinpoint some prospects opened by this volume, namely issues that have emerged throughout our editorial work but would require further investigation.

The limited number and the sparseness of the languages described in this collection prevent us from formulating any meaningful areal observation or drawing any statistical conclusion regarding the distribution of the construction types. Nevertheless, in this chapter, we have pointed out some notable patterns in non-verbal predication:

- The alignment of quantification predication with nominal or adjectival predication (§5.3).
- The presence of existential predicators and their combination with locative expressions to form inverse-locational clauses (§6.1.3).
- The use of inverse-locational constructions for possessive predication in types such as "At Possessor (is) Possessee" (§6.1.4, §6.2.1).
- The use of existential constructions to express possessive predication (§6.2.6), in particular, the type "Possessor, his/her Possessee exists".
- The almost universal possibility of expressing inverse-possessive predication through nominal predications such as *This book is John's book*, *This book is John's* or *This book is mine* (§6.2.8).
- The expression of similative predication through an adpositional phrase glossable as 'like N' in predicative role (§6.3).
- The use of a demonstrative to encode ostension, which is a possible strategy even in languages that have dedicated ostensive predicators (§7).
- The possible use of distinct negation strategies for verbal and non-verbal predication (§8.1).
- The existence of negative existentials and their use in locational predication (§8.1).
- The possible split between a dedicated copula for identity and another for inclusion predication (§9.1), while the lack of formal expression between identity and inclusion (which involves not only the copula construction) is also common (§4.1).
- The possible use of the copulae as auxiliaries (§9.2).

From the diachronic perspective, demonstratives and verbs of seeing are common sources of grammaticalization for ostensive predicators (§7). The origin of the copula is often to be found in

demonstratives, in the adverbs ‘here’ and ‘there’ and in the bleaching of a lexical verb (§9.3). The copula, in turn, is often the source for the affixes that characterize Subtype IIIa of the predicative inflection construction (§3.3).

This chapter also mentioned some rare features:

- The presence of Subtype IIIb and Type IV of the predicative inflection construction (§3).
- The phenomenon of “argument-predicate reversal” observed in some **Mande** languages (§4.3).
- The use of clitics or ideophones as predicate heads, as observed in **Zamucoan** (§5.1).
- Inverse-locational clauses that are formally similar to those expressing inclusion, as seen in some **Oceanic** languages (§6.1.5)
- Bivalent verbs of possession that assign the role of A to the possessee and the role of P to the possessor, as in **Chicham** and the **Mataguayan** languages Maka and Nivaĉle (§6.2.1).

Some features are shared by languages spoken in distant geographical locations, while, by contrast, one can find remarkable variation among languages belonging to the same family. This is, nevertheless, a significant datum: it shows that non-verbal predication is based on a consistent set of alternatively arranged grammatical parameters that can find autonomous motivation over and above language contact and genealogy. Besides, such arrangements are not diachronically stable; for instance, copula elements may arise in languages where they did not previously exist. This may also account for the co-presence of different strategies in a single language, not necessarily in a complementary distribution steered by grammatical or pragmatic parameters. Although the creation of alternatives is the effect of diachronic development, such “transitional” phases can persist during extended periods.

Interesting though it may be, the discussion of possible correlations between the typology of non-verbal predication and other aspects of morphosyntactic typology can hardly be developed in this concluding chapter. Considering the limited dimension of our sample and its typologically unbalanced structure, we cannot offer implicational hierarchies about the overall morphosyntax of languages relative to non-verbal predicates, or about specific properties of non-verbal predicates implying other properties of these constructions.[16]

For instance, a conceivable testbed to build a non-verbal predicativity scale could be the morphological shape of adjectives and nouns in the attributive/argument vs. predicative role. However, Section 2.2 offers contradictory data. In some languages, predicative adjectives have no (or almost no) plural inflection (e.g. **Uralic**), but in other languages plural markers are retained (**Tungusic**, **Old Zamuco**). Similarly, gender marking is lost in the predicative nouns of Teiwa, Tidore and Mian (**Papuan**), but retained in **Old Zamuco**. In the light of this, it would not make sense to claim, e.g., that German predicative adjectives, having no inflection, rank higher on a supposed predicativity scale as compared with their Romance languages cognates. Note that in most **Mande** and **Oceanic** languages the reverse situation is observed: adjectives have no inflection in the attributive position while retaining the relevant morphological features in the predicative position. Similar remarks can be made about determiners. In some languages, they cannot accompany a predicative noun (e.g. the **Papuan** language Teiwa), but in many languages they do. Likewise, the constituent order, discussed in Section 4.3, is an irrelevant parameter since the various languages may or may not exploit it to mark, e.g., the contrast between inclusion and identity predication. This extends to

[16] In particular, we cannot suggest implicational generalizations in the style of the Generalized Scale Model proposed by Malchukov (2023), which concerns the bidirectional transcategorial relation of nouns and verbs, itemizing an ordered set of grammatical features that are acquired/lost along such transfer. This implies a transition from one lexical category to another, which is not what happens in at least the most frequent cases of non-verbal predication. Indeed, the lexical elements involved in non-verbal predication mostly retain their distinctive features, apart from their recruitment in the predicative function. The only possible exception can be found in Subtype IIIa and only limited to the case of non-verbal elements acquiring the same kind of TAM markers exhibited by verbs in the given language.

the diverging treatment of non-verbal predication in dependent clauses (Section 8.3). Rather than obeying a supposedly universal predicativity drift, the different languages ostensibly follow diverging inclinations governed by a purely internal logic. It will be the task of future investigations to confirm or amend the implications reported in Chapter 1 at the end of Section 3.2. If our readers miss the comfort zone of summarizing tables with the usual marks (+ –), they should consider that it would be impossible to build them, not only because some of the chapters address single languages while others address large families, but also because most of these language families are internally differentiated.

One thing we can confidently state, at any rate, is the general contrast between nominal and adverbial predication. They both may use the same copulae and, in general, the same type(s) of construction – which justifies treating them as two manifestations of the more general concept of non-verbal predication – but the tendencies in the selection of the possible strategies are clearly not identical. The contrast between nominal and verbal predication tends to be more marked than between adverbial and verbal predication. Most crucially, the verbal strategy occurs only marginally in the functional domains typically associated with nominal predication, whereas the competition between verbal and non-verbal predication is pervasive in the functional domains typically associated with adverbial predication, especially locational and possessive predication. This raises theoretical questions that are certainly worth further explorations.

The existence of important cross-linguistic variation in the functions of adverbial predication (as defined in Chapter 1, §2.1) other than the expression of locational predication is, at any rate, one of our main observations (see §5.2), and this issue deserves a systematic typological study. Moreover, the very notion of adverbial predication is not relevant to the description of languages that do not have obliques and make a systematic use of object NPs in either applicative constructions or serial verb constructions to express what most languages express through oblique NPs. This issue would deserve more attention than it has received so far: a first step in this direction is the recent volume on applicatives edited by Zúñiga and Creissels (2024).

We have underlined the distinction between inverse-locational and existential clauses: the latter include a single core NP, whose referent is merely characterized as an element of some situation, while the situation itself is not overtly specified within the limits of the clause. By contrast, the Ground of inverse-locational predication is either expressed or can be deduced from the context. Due to the frequent confusion of these two types of clauses and the not infrequent merge of their expression in the languages, the typology of existentials is a domain that largely remains to be explored.

Given the difficulty in agreeing on cross-linguistically valid criteria for identifying adjective classes consistently across languages, the search for generalizations about adjectival predication is particularly problematic, and our sole aim in this domain was to give an idea of the complexity of the problem. The predicative treatment of all non-primary lexical classes, including pronouns (§ 5.1), is equally open to future investigation.

Subtype IIIb of the predicative inflection strategy raises interesting questions regarding in particular its historical origin(s). Given the relatively small number of languages in which this strategy has been identified so far, this remains an open question despite the hypotheses that have been proposed for some languages. Similar considerations apply to Type IV, i.e. the combination of the copula with the predicative inflection strategy, whose identification is one of the outcomes of this volume.

In our discussion of non-verbal predication, we have refrained from using the notion of omnipredicativity because of the lack of a common understanding of this term and the important variation across the authors that use it. However, it could be interesting to resume the discussion about the notion of omnipredicativity based on precise data about non-verbal predication, for instance relative to its correlation with Type III.

The specific behavior of non-verbal predication (especially nominal predication) for the expression of information structure is documented in several chapters of this volume, but data on a

larger variety of languages would be necessary before trying to put forward generalizations worthy of the name.

Ostensive predication is a little-studied topic. The data provided by our contributors suggest some directions, but a more systematic cross-linguistic study would be in order. Similar considerations apply to the cross-linguistic distribution of the constructions expressing quantificational predication.

While previous attempts to systematize the typology of possessive predication largely relied on etymological considerations, this volume proposes a new classification according to the synchronic morphosyntactic properties of the constructions employed (Chapter 1, Section 4.6). While there are data on the worldwide occurrence of some possessive constructions worldwide (Section 6), others still need a systematic survey.

The spread of non-verbal predicative constructions in situations of language contact is another topic that requires further investigation, once we have a better understanding of their global distributional patterns.

To sum up our feelings at the end of this enterprise: we hope to have achieved, with the much appreciated help of our competent contributors, the goal of providing new input for future investigations into this fascinating topic.

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Abbreviations

COP = copula
SAP = speech act participant

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[17] The names of all collaborators to Grambank can be found here https://github.com/grambank/grambank/wiki/Citing-grambank.