8. The expression of non-verbal predications

8.0. Introduction

In this chapter I will look at systems of non-verbal predication from the point of view of *predicable* non-verbal predication types. The central issue here is how these predication types are expressed in the languages of the sample. In 8.1 I first give a general inventory of the different formats that can be used for the expression of non-verbal predications. In 8.2 I look at how these expression formats are distributed across languages and across non-verbal predication types. In 8.3 I concentrate on the factors triggering the presence of a copula in those predication types in which a copula is present in certain circumstances, but absent in others.

In several languages there are specialized negative copulas, the conditions of use of which may differ from their positive counterparts. I will restrict myself here to the expression formats used in positive sentences. Furthermore, I will not go into the properties of specialized focalizing copulas.

8.1. Expression formats

8.1.0. Introduction

The expression formats of non-verbal predications can be subdivided into two main groups: those characterized by the absence of some formal element, i.e. a copula, and those characterized by the presence of such an element. Both groups can be further subdivided, as will be done in the following sections.

8.1.1. Expression formats lacking a copula

There are different ways in which a copula may be lacking, or, to be more precise, the absence of a copula may be a signal of two different expression formats. The differences in use between these expression formats show that they represent two basically different strategies.

In the first type, which is discussed in Stassen (1992), a non-verbal predicate shows the same morphosyntactic behaviour as an (intransitive) verbal predicate. i.e a non-verbal predicate allows the same kind of marking for tense, mood, aspect, and person as an intransitive verbal predicate. Among the languages employing this strategy is Abkhaz:

Abkhaz (Caucasian; Spruit 1986: 97)

Də-psá-w-p'.

3.SG.SBJ-dead-PRES-DECL

'He is dead.'

(2) $D\hat{\partial}$ - $c^{w}a$ -w-p'.

3.SG.SBJ-sleep-PRES-DECL

'He is sleeping.'

As (1) and (2) illustrate, in certain tenses adjectives and (stative) intransitive verbs show the same behaviour with respect to their inflectional possibilities. This does not mean that adjectives in Abkhaz should be classified as a subclass of verbs, since they can be distinguished from verbs by the fact that (i) they can be used attributively, and (ii) in certain tenses they are obligatorily accompanied by a copula in the position indicated in (1). I will refer to the expression format exemplified by Abkhaz as the zero-1 construction (ø1).

In the second expression format lacking a copula the non-verbal predicate does not show the same morphosyntactic behaviour as an (intransitive) verbal predicate. The argument term and the non-verbal predicate are merely juxtaposed, as is illustrated by the following examples from Hixkaryana:

Hixkaryana (Ge-Pano-Carib; Derbyshire 1979: 132, 136) mosoni.

(3) Romuru

1.SG.son DEM.PROX

'This is my son.'

(4) N-eryew-aha.

3.SG-have.pain-NPAST

'He has pain.'

The construction based on a non-verbal predicate in (3) lacks a copula but at the same time shows a morphosyntactic behaviour different from that of the construction based on a verbal predicate in (4). I will refer to this expression format as the zero-2 construction (ø2).

In some cases it may be difficult to distinguish the zero-1 from the zero-2 construction. Compare the following two sentences:

Imbabura Quechua (Andean; Cole 1982: 67)

(5) Juzi-ka

mayistru-mi.

José-TOP teacher-VAL

'José is a teacher'

Hungarian (Uralic-Yukaghir; de Groot 1989: 22) lány okos. ART girl clever 'The girl is clever.'

In both Hungarian and Imbabura Quechua in certain predication types a copula may remain absent in the third person singular, present tense. In similar circumstances a verbal main predicate is characterized in Imbabura Quechua by the suffix -n:

Imbabura Quechua (Andean; Cole 1982: 95)

Marya-ka atalpa-ta japi-n. Maria-TOP hen-ACC hold-3.PRES 'Maria has a hen.'

In Hungarian, on the other hand, verbal main predicates are characterized in similar circumstances by a zero-ending:

Hungarian (Uralic-Yukaghir; de Groot 1989: 125)

Péter indul-ø.

Peter leave-3.SG.PRES

'Peter leaves.'

The Imbabura Quechua example in (5) can be analyzed as a zero-2 construction, since the non-verbal predicate shows a morphosyntactic behaviour different from that typical of verbs. The Hungarian example (6), however, still allows both analyses, and additional morphological criteria have to be invoked. For instance, the negative counterpart of (6) contains the negative particle characteristic of verbal sentences, and thus shows the same morphosyntactic behaviour as verbs in this restricted context:

Hungarian (Uralic-Yukaghir; de Groot, personal communication)

lány nem okos. ART girl NEG clever 'The girl is not clever.'

On the basis of this, (6) may be analyzed as a zero-1 construction, and its morphemic analysis should be as in (10) rather than as in (6):

Hungarian (Uralic-Yukaghir; de Groot 1989; 22)

(10)lány okos-ø.

ART girl clever-3.SG.PRES

'The girl is clever.'

Thus, although constructions (5) and (6) look very similar, it is only in Hungarian that the treatment of verbal and non-verbal predicates is alike.

Even when no additional morphosyntactic criteria may be invoked, there is a way to differentiate between zero-1 and zero-2 constructions. In zero-1 constructions the presence of a copula is either ungrammatical or felt as overdone, whereas in zero-2 constructions the copula may be added, often with a focalizing effect. This difference will be further investigated in 8.3.1.2.

8.1.2. Copulas

8.1.2.0. Introduction. Copulas can be subdivided into the classes indicated in Figure 39.

Copula	Predicativizing	Verbal	Verb
			Verbalizer
		Non-verbal	
	Discriminating	Pronoun	
		Particle	

Figure 39. Copulas

These classes will be studied separately in the following sections.

8.1.2.1. Predicativizing copulas. Predicativizing copulas are morphemes that are members of or create members of the parts of speech that can be used predicatively within a given language. In the majority of cases the predicativizing copula is a verb, or, alternatively, a verbalizing affix. This is not surprising, since the verb is the part of speech which is most easily used predicatively. The two realizations of the verbal strategy are illustrated in the following examples from Krongo, which has both options:

Krongo (Kordofanian; Reh 1985: 148, 242)

- (11) N-áfi à a?àŋ kí-lá.
 1.SG-IMPF.COP 1.SG LOC-hut
 'I am in the hut.'
- (12) Àakù m-àa-nímyà.
 3.SG.F F-IMPF.COP-woman
 'She is a woman.'

In (11) the copula is a verb, in (12) it is a verbalizing affix. Both strategies make a verbal form available on which verbal categories such as tense and person can be marked.

There are also predicativizing copulas other than verbal. One of the copulas used in presentative constructions in Turkish is of a non-verbal nature. Consider the following examples:

Turkish (Altaic; Lewis 1967: 143)

- (13) Ev-in bahçe-si var-dı.
 house-GEN garden-POSS.3.SG COP.POS-PAST.3.SG
 "There was the house's garden."
 'The house had a garden.'
- (14) Ev-in bahçe-si yok-tu.
 house-GEN garden-POSS.3.SG COP.NEG-PAST.3.SG
 "There wasn't the house's garden."

 'The house didn't have a garden.'

The positive and negative presentative copulas *var* and *yok* are, according to Lewis (1967: 142), adjectives meaning 'existent' and 'non-existent', and indeed they show the same inflectional possibilities as adjectives. They should, however, be viewed as adjectival copulas rather than as lexical adjectival predicates, as can be derived from the following examples:

Turkish (Altaic; Lewis 1967: 143)

- (15) Ev-in bahçe-si ol-acak, house-GEN garden-POSS.3.SG COP-FUT "There will be the house's garden."

 'The house will have a garden.'
- (16) Ev-in bahçe-si ol-mı-yacak house-GEN garden-POSS.3.SG COP-NEG-FUT "There will not be the house's garden." 'The house will not have a garden.'

Like other adjectives, *var* and *yok* cannot be inflected for future tense. When this tense has to be expressed they are replaced by the verbal copula *ol*-, which can be negated regularly by means of the verbal suffix *-mi*. If *var* and *yok* had indeed been true adjectival predicates, they would not have been replaced by the verbal copula, but accompanied by it, as would have been the case with any other adjective.

The verbal and non-verbal predicativizing strategies have in common that a copula is introduced that is capable of carrying the distinctions characteristic of main predicates in the language involved. In this sense they are complementary with the zero-1 strategy, in which the non-verbal predicate itself is capable of carrying these distinctions.

8.1.2.2. Discriminating copulas. Discriminating copulas are morphemes that do not belong to or create a part of speech that can be used predicatively in a given language. They function as a sign of (non-verbal) predication rather than as an element creating the main predicate of the sentence in which they occur. Both (original) pronouns and particles may be used in this way.

With respect to the use of pronominal copulas consider the following example:

Hebrew (Semitic; Junger 1981: 117)

(17) Dan (hu) gadol Dan (COP) big "Dan he big." 'Dan is big.'

In Hebrew a pronominal copula, agreeing in number and gender with the argument term, is used optionally in the present tense in certain types of non-verbal predication. That this pronominal form is not a full pronoun may be derived from the fact that, although it does show agreement in number and gender, as illustrated in (18) and (19), it does not show agreement in person (20) (Junger 1981: 129-31):

Hebrew (Semitic; Junger 1981: 122, 130)
(18) Sara (hi) mora.
Sara COP teacher
"Sara she teacher."

"Sara she teacher."
'Sara is a teacher.'

(19) Yossi ve Dan (hem) xaverim.
Yossi and Dan (COP) friends
"Yossi and Dan they friends."
'Yossi and Dan are friends.'

(20) Ata (hu) hexasud.
you (COP) suspect
"You he the suspect."
'You are the suspect.'

The pronominal copula may not be used to carry the inflectional categories characteristic of main predicates. Hebrew has a verbal copula h.y.y for that purpose, which is used in all tenses but the present:

Hebrew (Semitic; Junger 1981: 120)
(21) Dan haya gadol.
Dan COP.PAST big
'Dan was big.'

Thus, the primary function of the optional pronominal copula in (17)-(20) is to signal the presence of a relation of non-verbal predication.

Some languages use particles rather than pronouns as copulas. Whereas pronominal copulas are often subject to some variation in form, particles are not. One language making use of this type of copula is Gude:

Gude (Chadic; Hoskison 1983: 81)
(22) Tə'i ma'inə a gərə.

COP water LOC river 'There is water at the river.'

The copula *tə'i* in (22) is used in presentative sentences only and does not allow marking for any of the categories characteristic of main predicates. If any of these have to be coded, a verbal copula is used, as in (23):

Gude (Chadic; Hoskison 1983: 81)

(23) Kə d'-ii ma'inə a gərə.

PF COP-PF water LOC river

'There is water at the river.'

Thus, discriminating copulas can be characterized negatively as those that do not turn the non-verbal predicate into a (complex) predicate capable of taking the categories characteristic of main predicates. Their main function is to enable the recognition of the non-verbal predication types involved, and as such they are best characterized as signs of (non-verbal) predication.

8.1.3. A classification of expression formats

In order to arrive at a combined classification of the expression formats lacking and making use of copulas two steps have to be taken. First, all strategies but the discriminating one can be related to one another in the way indicated in Figure 40.

Expression format	+Predicative (ø1)	
	-Predicative	+Predicativizing (P)
		-Predicativizing (ø2)

Figure 40. Expression formats—version 1

Application of the zero-1 strategy in fact boils down to not applying any particular strategy for the expression of non-verbal predications at all, since in this strategy non-verbal predicates are treated in the same way as verbal predicates. In those cases in which a language does not allow the zero-1 strategy, it is relevant to ask whether or not it allows a zero-2 strategy. In all other cases a predicativizing strategy will be used.

The discriminating strategy is different from those represented in Figure 40, in that it may cooccur in the same language with any of the strategies listed there. In the sample it cooccurs most frequently with a zero-2 strategy, as in the examples from Hebrew and Gude above. Discriminating copulas do, however, also occur in combination with the two other strategies. Each of these combinations is found only once in the sample.

In Lango discriminating copulas may be found in predicative constructions, as illustrated by the following examples:

Lango (Nilo-Saharan; Noonan 1981: 45).

(24) Mán 'gwôk.
DEM 3.SG.dog.HAB
'This is a/the dog.'

(25) Án én àdàktál. 1.SG COP 1.SG.doctor.HAB 'I am the doctor.' Example (24), in which the non-verbal predicate is inflected for aspect and person, illustrates the use of the zero-1 strategy in Lango. This sentence may have a classifying or identifying interpretation. In order to disambiguate between these two readings, constructions of this type may be optionally provided with a pronominal copula $\acute{e}n$, as in (25), which turns the construction into an unambiguously identifying one. This is a good example of the discriminating use of this type of copula, here within the context of a zero-1 strategy. Note that the copula is a third person pronoun, used here in combination with a first person subject.

In West Greenlandic discriminating copulas may be found in combination with a predicativizing strategy:

West Greenlandic (Eskimo-Aleut; Fortescue 1984: 70, 72, 73)

(26) Kalaali-u-vuq akutaq.
Greenlander-COP-3.SG.INDV of.mixed.blood
'He is a Greenlander of mixed blood.'

(27) Hansi tassa pisurtaq.
Hansi COP leader
"Hansi that the leader"
'Hansi is the leader.'

(28) Siissisuq tassa-a-vuq uumasur-suaq rhinoceros COP-COP-3.SG.INDV animal-big

Afrika-miu ataatsi-mik nassu-lik.

Africa-dweller one-INSTR horn-provided.with

'A rhinoceros is a big African animal with a single horn.'

In equative constructions in West Greenlandic generally either the verbalizing affix -u- or the demonstrative *tassa* is used. The former represents a predicativizing strategy, the latter a discriminating one. The two strategies may be combined, ".. especially in a more strictly defining sense" (Fortescue 1984: 73), as in (28). In 5.1.2.1.3 I argued that definitions are a subtype of specifying predication. The use of the particle *tassa* in (28) can thus be seen as a means to discriminate between the specifying and the non-specifying reading of the predicativizing construction.

Incorporation of the discriminating strategy into the classification of expression formats given in Figure 40 leads to the picture presented in Figure 41.

Expression format	+Predicative (ø1)		+Discriminating
			-Discriminating
	-Predicative	+Predicativizing (P)	+Discriminating
			-Discriminating
		-Predicativizing (ø2)	+Discriminating
			-Discriminating

Figure 41. Expression formats-version 2

8.2. The distribution of expression formats

8.2.0. Introduction

In this section I will study the distribution of expression formats from two different angles. In 8.2.1 I look at the way the different expression formats are distributed across the languages of the sample. In 8.2.2 I look at the distribution of the expression formats across non-verbal predication types.

A full overview of the data that will be used in the sections to follow is given in Table 38. A - in this table indicates that the predication type under consideration is non-predicable, 'irr' in the adjective column indicates that the language under consideration does not have a class of adjectives. Abbreviations for basic expression formats are P (predicativizing), ø1 (zero-1), and ø2 (zero-2). A + following any of the abbreviations indicates that optional or obligatory use is made of a discriminating copula within the basic expression format.

8.2.1. Expression formats across languages

Table 39 summarizes how the main types of expression recognized in 8.1 are distributed across the languages of the sample. In this table a + indicates that a language uses the expression format under consideration, ++ that it furthermore makes optional or obligatory use of a discriminating copula within that expression format.

Table 38. Expression formats used in the languages of the sample

Language	Ascrij Preser	otive ntative		Non-r	oresenta	tive		Equati	ive
	Exist	Loc	Poss	Loc	A	N	Poss	Indef	Def
!Xũ	P	P/ø2	-	P/ø2	-	_	_	P/ø2	P/ø2
Abkhaz	ø1/P	ø1/P	-	ø1/P	ø1/P	- ,	_	ø1/P	-
Arabic, Egyptian	P/ø1	P/ø1	-	P/ø1	P/ø1		-	P/ø1	P/ø1+
Babungo	P/ø2	P/ø2	-	P/ø2	P/-	_	-	P	P
Bambara	P	P	-	P	P	_	_	P	P
Basque	P	P	-	P ·	P	P	-	P	P
Burushaski	P	P	P/-	P	P		P		P
Chinese, Mandarin	P	P	-	P	-	-	-	ø2+	ø2+
Chukchee	P	P	-	P	ø2	ø2	ø2	ø2	ø2
Dutch	P/-	P/-	-	P/-	P	P	P	P	P
Gilyak		P	-	P	im		-	ø2/P	ø2/P
Guaraní	P	P	-	P	ø1		-		ø2
Hausa	-	-	-	ø2+	irr	-	-	ø2+	ø2+
Hixkaryana	P		-	P/ø2	irr		-	ø2	ø2
Hungarian	P	P	-	P	P/ø1	_	~	P/ø1	P/ø1
Jamaican Creole	P	P/ø2	-	P/ø2	øl	P	P	P	P
Ket	P	P	-	ø1	ø1-		øl øl	ø1	ø1
Krongo	P	P	-	P	irr			P	
Lango	P	P	-	P	ø1/P		-	ø1/P	P/ø1+
Mam	P	P	-	P	ø1			ø1	ø1
Miao	-	-	-	P	irr			P	P
Nahali	P		-	P	P		P	P	
Nasioi	P	P	-	P	ø1		-	ø1	ø1
Navaho	-/P	-/P	-	P	irr		-	P	P
Ngalakan	-	-	-	-/ø1	ø1/P	id.	id.	id./ø2	id.
Ngiyambaa		-/ø2/P	-	-/ø2/P	ø2/I	D	ø2/P	ø2/P	ø2/P
Pipil	P	P	-	P	ø1		-	ø1	ø1
Quechua, Imbabura	P	P	-	ø2/P	ø2/I	P	ø2/P	ø2/P	ø2/P
Sumerian	P	P	-	P	P		P	P	P
Tagálog	-	-	-	ø2	ø2-		ø2	ø2	ø2
Tamil	P	P	-	P/ø2	-	-	_	ø2	ø2
Thai	_	_	_	P	irr		_	ø2/P	ø2/P
Turkish	P	P	-	ø1/P	ø1/F)	ø1/P	ø1/P	ø1/P
Vietnamese	P	P/ø2	-	P/ø2	irr	-	-	ø2+	ø2+
West Greenlandic	-	-	-	P/ø2	irr	_	-	P+/ø2+	· id.
Yagaria	-	-	-	-	-	-	_	ø1	øl
Yessan-Mayo	-/P		-	P/ø2	id.	id.	-	ø2	ø2

Table 39. Expression formats across languages

Language	zero-1	predicativizing	zero-2
Abkhaz	+	+	
Arabic, Egyptian	++	+	
Hungarian	+	+	
Ket	+	+	
Lango	++	+	
Mam	+ .	+	
Nasioi	+	+	
Pipil	+	+	
Turkish	+	+	
Guaraní	+	+	+
Jamaican Creole	+	+	+
Ngalakan	. +	+	+
Bambara		+	
Basque		+	
Burushaski		+	
Dutch		+	
Krongo		+	
Miao		+	
Nahali		+	
Navaho		+	
Sumerian		+	
!Xũ		+	+
Babungo		+	+
Chinese, Mandarir	1	+	++
Chukchee		+	+
Gilyak		. +	+
Hixkaryana		+	+
Ngiyambaa		+	+
Quechua, Imbabur	a	+	+
Tamil		+	+
Thai		+	+
Vietnamese		+	++
West Greenlandic		++	++
Yessan-Mayo		+	+
Hausa			++
Tagálog			+
Yagaria			+

Before discussing the data presented in Table 39, it is important to note that only the expression formats used for predicable non-verbal predication types are listed here. Thus, although Yagaria uses positional verbs in non-predicable predication types, in the expression of predicable predication types it uses the zero-2 strategy only. Similarly, Hausa uses a pseudo-transitive verb in some non-predicable predication types, but only particles and pronouns are used in the expression of predicable predication types.

Two noteworthy facts emerge from Table 39. First, virtually all languages have the predicativizing strategy as one of their options, although this may be restricted to certain predication types or be subject to more specific conditions, as will be shown below. Second, the predicativizing strategy is very often in complementary distribution with a zero-strategy, which can be explained along the following lines.

If a language does not allow the zero-1 strategy in certain contexts, predicativization is required if there is a need to express grammatical distinctions characteristic of main predicates. Consider the following examples:

Lango (Nilo-Saharan; Noonan 1981: 45)

- (29)Mán 'gwôk. DEM 3.SG.dog.HAB 'This is a dog.'
- (30)Òkélò bínó bèdò rwôt. COP.INF king Okelo 3.SG.come.HAB 'Okelo will be king.'

Example (29) shows the use of the zero-1 strategy in Lango. This strategy is not available in tenses other than the present. In these the verbal copula bèdò is used, as illustrated in (30).

The predicativizing and zero-2 strategies are often in complementary distribution as well, as when a language requires predicativization for the expression of certain grammatical distinctions, but allows for zero-2 expression in the most unmarked situation, as in the following examples:

!Xũ (Khoisan; Köhler 1981: 599)

- Fiè 'ó: Gòbà. (31)DEM COP Mbukushu 'That is a Mbukushu.'
- (32)T]' \dot{u} : $z\dot{e}$: kè.fiè:. hut new DEM 'This is a new hut.'

In !Xû the verbal copula 'ó: is optional in predications containing a deictic element in the present tense, but obligatory in other circumstances. If it is left out, the result is a zero-2 construction, as in (32).

Guaraní uses the zero-1, the zero-2, and the predicativizing strategies, witness the following examples:

Guaraní (Equatorial-Tucanoan; Gregores-Suarez 1967: 188, 170, 183)

- (33) Še-misī givé še-momó la ekwéla pe. 1.SG-little since 1.SG-send ART school DIR 'They sent me to school when I was a little child.'
- (34) Šé katù po-henõi va.
 1.SG certainly 2.SG-call NR
 'Certainly I am the one who is calling you.'
- (35) ?óga pe hetá o-ī tatapiī. house LOC much 3.SG-COP charcoal 'There is a lot of charcoal at home.'

Sentence (33) is an example of a zero-1 construction: like verbal predicates, the adjectival predicate in this sentence has a person prefix. For this reason Gregores—Suárez (1967: 138) treat adjectives like *misi* 'little' in (33) as a subclass of verbs, while at the same time noting that they "may also occur uninflected as attributes to a noun". On the basis of the definition of adjectives given in 4.3, this latter feature shows that words like *misi* 'little' are true adjectives which may be used predicatively in a zero-1 construction.

Sentence (34) is an example of a zero-2 construction. Here the referential predicate *po-henõi va* 'the one who is calling you' does not carry a person prefix. A free pronoun is used instead. The absence of a copula on the one hand, and the morphosyntactic possibilities of the non-verbal predicate, which are different from those that obtain for verbal (and adjectival) predicates, on the other, make this example qualify as a zero-2 construction.

In (35), finally, a copula *i* accompanies the locative predicate *?óga pe* 'at home'. This copula carries the person prefix, which shows that it is of a predicativizing nature.

8.2.2. Expression formats across predication types

8.2.2.0. Introduction. In this section I will look at the extent to which the different expression formats that are available within the languages of the sample are used in different types of non-verbal predication. I will approach this problem in three different phases, which correspond with the different branches of Figure 41. In

8.2.2.1 I study the use of the zero-1 strategy, in 8.2.2.2 the use of the zero-2 strategy, and in 8.2.2.3 the use of the discriminating strategy.

8.2.2.1. The zero-1 strategy. Table 40 gives an overview of the extent to which those languages which make use of the zero-1 strategy apply this strategy in the expression of different types of non-verbal predication, in so far as these are predicable. A + indicates that a language makes use of the zero-1 strategy for the expression of a particular set of predications, a - that it does not, while 'nprd' indicates that none of the predication types belonging to the set under investigation is predicable in a particular language.

Table 40. The use of the zero-1 strategy

Language	Bare	Referential	Relational -Presentative	+Presentative
Arabic, Egyptian	+	+	+	+
Abkhaz	+	+	+	+
Ket	+	+	+	-
Turkish	+	+	+	-
Ngalakan	+	+	+	nprd
Hungarian	+	+	-	-
Mam	+	+	-	-
Nasioi	+	+	-	- · -
Pipil	+	+	-	-
Lango	+	+	-	-
Guaraní	+	=	-	-

In chapter 5 I subdivided non-verbal predicates into three different types: bare, referential, and relational. Table 40 shows that these predicate types constitute the primary factor determining the extent to which the zero-1 strategy is applied. Secondarily the distinction between presentative and non-presentative predications is relevant. The data thus reflect a hierarchy that can be written down as in (36):

(36) PREDICATIVITY HIERARCHY Bare > Referential > Relational Non-presentative > Presentative

The relevance of the secondary part in (36), the presentativity hierarchy, was already shown with respect to predicability in 6.2.1. The reason for its occurrence

(37)

 $(f_i: pred_v(f_i))$

Bare non-verbal:

 $(f_i: pred_{AN}(f_i))$

Referential:

 $(f_j: (x_i: (f_i: pred_N (f_i)) (x_i)_{\emptyset}) (f_j))$ $(f_j: (x_i: (f_i: pred_N (f_i)) (x_i)_{\emptyset})_{Sem} (f_j))$

Relational:

The non-verbal predicate types in (37) show an increasing degree of underlying complexity, which does not necessarily correspond with an increasing degree of complexity in surface structure. Bare predicates have an underlying structure that is identical to that of verbal predicates. It is therefore not surprising to find that they are most easily subjected to a strategy that is used for verbs as well. Referential predicates have much in common with bare non-verbal predicates: (i) the latter play an important part in the construction of the former, and (ii) if a term just contains a nominal head, its surface structure is indistinguishable from that of a bare nominal predicate in many languages. Relational predicates, on the other hand, are quite different from both bare and referential predicates. They are most often expressed by (i) a term + case marker or adposition, in which case they have an easily distinguishable surface structure, or (ii) a (locative) adverb, which, unlike adjectives and nouns, could never be used in the construction of a term.

in the present context is that in general presentativity itself has to be marked by

some formal means, often a copula. The factors motivating the existence of the

primary part of the hierarchy in (36) can be discovered by looking at the underlying

The primary part of the hierarchy in (36) may be compared with the Verbalization Hierarchy proposed by Stassen (1992). Like the Predicativity Hierarchy, Stassen's Verbalization hierarchy is meant to represent the extent to which languages allow non-verbal predicates to be expressed by means of an expression format that is used for verbs as well. Consider the comparison in (38):

There are two differences: (i) Stassen does not distinguish between bare nominal predicates and referential predicates, so that the hierarchies in (38) do not exactly coincide, and (ii) Stassen restricts himself to locative adverbials, which is not surprising, since this is the most easily predicable type of predicate within the relational class.

A major difference between Stassen's approach and the one followed here has to do with the explanation of the position of locatives on the hierarchy. As has already been mentioned in 6.1.1.3, Stassen proposes a Revised Time Stability Scale to

explain the existence of the verbalization hierarchy. Locative adverbials would occupy the leftmost position on that scale, which is not what is actually found, as the verbalization hierarchy shows. Stassen therefore proposes a second explanation. the one word principle, which says that predicates are most easily expressed through the strategy that is also used for verbs if they consist of single phonological words. I have found no evidence supporting the one word principle in my sample.

The approach followed in this study is somewhat different. As I argued in 6.1.1.3, Stassen's Revised Time Stability Scale, including its position for locative adverbials, is fully operative if considered from the point of view of predicability. disregarding the actual expression format chosen for predicable non-verbal predication types. It is, however, irrelevant from the point of view of the expression of non-verbal predication types. The Predicativity Hierarchy can be explained satisfactorily in terms of predicate types, without any need to invoke further principles.

8.2.2.2. The zero-2 strategy. (Non-)predicativization could, in principle, be studied from two different angles, which may be expected to yield complementary results. One may study the extent to which languages allow a zero-2 strategy, i.e. do not require predicativization, on the one hand, and the extent to which they require the presence of a predicativizing copula, on the other.

There are good reasons for following the former approach. As has been argued in 8.2.1, the predicativizing strategy is found in complementary distribution with both the zero-1 and the zero-2 strategy. Since this overwhelming presence of the predicativizing strategy obscures the facts related to its application, I prefer to take the extent to which languages use a zero-2 strategy as my point of departure. The relevant data are given in Table 41.

On the basis of the data in Table 41 the hierarchy given in (39) may be posited:

(39)Predication hierarchy Equative > Ascriptive Non-presentative > Presentative Non-existential > Existential

In the present context this hierarchy should be read in the following way: if a predication type within this hierarchy does not require predicativization, all predication types preceding it in the hierarchy do not require predicativization either.

The predication hierarchy given in (39) is identical to that given earlier in 6.2. There it was meant to account for degrees of predicability as they relate to different predication types. That the same hierarchy is relevant with respect to degrees of predicativization may be interpreted as an indication that the more easily predicable a predication type is, the more likely it is to be expressed by means of a zero-2 strategy.

Table 41. The zero-2 strategy

Language	Equative	Ascriptive -Presentative	+Presentative	+Existential
			-Existennal	TEXISICILIA
!Xũ	+	+	+	-
Hixkaryana	+	+	+	-
Vietnamese	+	+	+	-
Ngiyambaa	+	+	+	nprd
Quechua, Imbabura	+	+	-	_
Turkish	+	+	-	-
Yessan-Mayo	+	+	-	-
Tamil	+	+	-	-
Chukchee	+	+	-	
Hausa	+	+	nprd	nprd
Tagálog	+	+	nprd	nprd
West Greenlandic	+	. +	nprd	nprd
Chinese, Mandarin	+	. =	-	-
Gilyak	+	-	-	-
Guaraní	+	-	-	-
Ngalakan	+	-	-	-
Thai	+	-	nprd	nprd
Yagaria	+	nprd	nprd	nprd
Jamaican Creole	-	+/-	+/-	-
Babungo		+	+	+

Table 41 not only shows a correlation between predicability and predicativization, it also lends further support to the validity of the position of existential predications on the predication hierarchy. Evidence for this position on the basis of the data concerning predicability appeared to be rather scarce in 6.2.2. The data presented here show, however, that existential predications require a predicativizing strategy more often than all other predication types, which may be interpreted as an indication of their lower degree of predicability.

There are two counterexamples to the claims presented here. In Babungo and Jamaican Creole the zero-2 strategy is not used in equative predications, whereas

it is used in other predication types. A closer inspection of these predication types reveals that the strategy is used optionally with localizing predicates only. With other types of predicate the copula is obligatory. In Babungo the zero-2 strategy is applied in the present tense in presentative and non-presentative predications based on a localizing predicate. In Jamaican Creole the use of this strategy is more restricted: it is used in locative predications only, and within this class there are even further restrictions. Consider the following examples:

Jamaican Creole (Creole, Bailey 1966: 82-83, Beck, personal communication)

- (40)Jan de huom. Jan COP home 'Jan is home.'
- (41)Jan ben de huom. PAST COP home 'Jan was home.'
- (42)Jan (de) ina dihouse. COP LOC DEF house 'Jan is in the house.'
- (43)ben deina house. PAST COP LOC DEF house 'Jan was in the house.'

The copula de is obligatory in predications in which the predicate is a locative adverb, as in (40) and (41). It is optional in the present tense if the predicate is a locative phrase introduced by ina, as in (42). In other tenses the copula is obligatory, as illustrated in (43).

The data from Babungo and Jamaican Creole suggest that within the set of ascriptive predications the most easily predicable predication type, as defined by the predicate hierarchy presented in 6.1 and repeated in (44), is at the same time the most likely to be expressed by means of a zero-2 strategy.

(44) Predicate hierarchy 1A: Ascriptive predications
$$(x_i)_{L\infty} > A > N > (x_j)_{Poss}$$

Thus, the use of the zero-2 strategy in Babungo and Jamaican Creole corresponds with a high degree of predicability of the predication types concerned, just as in the other cases presented in Table 41. Note that the combined predicate and predication hierarchy in Figure 33 (see 6.2.2) correctly predicts this possibility: equative predications come out as the most easily predicable ones on the basis of the predication hierarchy, localizing predications on the basis of the predicate hierarchy.

The cases of Babungo and Jamaican Creole at the same time illustrate an important difference between the conditions under which the zero-1 and zero-2 strategies are used. Whereas localizing predications, being based on relational predicates, are the least likely to be expressed by means of the zero-1 strategy, they are at the same time, being based on the most easily predicable predicate type, the most likely to be expressed by means of the zero-2 strategy within the set of ascriptive predications.

Chukchee partly seems to contradict what has been said here. In non-presentative ascriptive predications in Chukchee a zero-2 strategy is applied in predications based on adjectival, nominal, and possessive predicates, but a special predicativizing copula morpheme is used in localizing predications only. This is, again, an example of the exceptional behaviour of localizing predications, which will be further studied in chapter 10.

A comparison of the predicativity hierarchy (see 8.2.2.1), which governs the extent to which the zero-1 strategy is used, with the predication hierarchy, which governs the extent to which the zero-2 strategy is used, shows that this difference is due to the fact that the use of the zero-1 strategy is conditioned by morphosyntactic categories, whereas the zero-2 strategy is conditioned by semantic and pragmatic categories. According to the predicativity hierarchy, predications based on bare adjectival and nominal predicates are most likely to lack a copula in a zero-1 construction. According to the predication hierarchy, equative predications are most likely to lack a copula in a zero-2 construction. Both hierarchies coincide, however, in that they predict that presentative predications are most likely to contain a copula. Considering these similarities and differences, it is not surprising that in the typological study of Radics (1984: 164), in which the distinction between the two zero-strategies is not made, adjectival and equative predications appear as the most likely and presentative predications as the least likely to lack a copular verb.

8.2.2.3. The discriminating strategy. As stated in 8.1.3, the discriminating strategy may be combined with the zero-1, the predicativizing, and the zero-2 strategy. With the first it is combined twice in the languages of the sample, with the second only once. In all three cases the copula is applied in equative predications. Examples have been given in 8.1.3.

In the remaining three languages for which a discriminating strategy has been noted, Mandarin Chinese, Hausa, and Vietnamese, this strategy is used in combination with a zero-2 strategy. In all three languages it is used in the expression of equative predications. Only in Hausa is a discriminating copula, different from that used in equative predications, used in locative predications as well.

In the languages of the sample the discriminating strategy is thus used most frequently (i) in combination with the zero-2 strategy, (ii) in the expression of equative predications. This is because in this situation the equative construction might easily be interpreted as an apposition of two terms without some signal that the construction as a whole should be interpreted as a (non-verbal) predication. A

closer inspection of this phenomenon will be provided in 8.2.3, where the conditions triggering a copula will be studied.

A final but important point to be noted is that within the class of equative predications a discriminating strategy is used most often in the expression of identifying predications. In two of the six languages employing a discriminating strategy, Egyptian Arabic and Lango, this strategy is applied within identifying predications only. In both languages it combines with a zero-1 strategy. As in the case of existential predications, this higher frequency as regards the presence of a copula lends support to the lower position the identifying predication type occupies on the predicate hierarchy tentatively posited in 6.1.2.

8.3. Copula triggers

8.3.0. Introduction

In 8.2.1 I studied the distribution of expression formats across languages, in 8.2.2 I looked at the distribution of each of the individual expression formats across non-verbal predication types. It is now time to have a closer look at those situations in which two different formats are used for the expression of a single predication type, in particular those cases in which one of these expression formats contains a copula while the other does not.

I will study the presence versus absence of a copula in terms of the nature of the conditions triggering the presence of a copula. Three factors will be shown to be relevant: tense, mood, aspect, and person (8.3.3.1), deixis (8.3.3.2), and ambiguity (8.3.3.3).

8.3.1. Tense, mood, aspect, and person

8.3.1.0. Introduction. An important element of Dik's (1980) theory of copula support is the idea that a verbal copula may be interpreted as "a supportive device for expressing predicate operator distinctions in those cases where these cannot be expressed through the predicate itself" (Dik 1980: 94). The predominance of the predicativizing strategy noted in 8.3.2.2 shows the correctness of this approach, which might be extended to include person distinctions as well.

In most languages there are several predication types in which a predicativizing strategy is applied in all circumstances. In others the application of this strategy is subject to certain conditions. In this section I will concentrate on the nature of these conditions and therefore restrict myself to those cases in which a copula is not used in all circumstances.

8.3.1.1. Conditions. Three different situations have been found with respect to the conditions under which a copula may be absent, in so far as they relate to tense, mood, aspect, and person (henceforth TMAP).

First, there are some languages in which a predicativizing copula has to be used with one set of tenses, and has to be absent with another set. This is the case in Abkhaz and Turkish. Given that Abkhaz and Turkish are the only languages in the sample exhibiting this kind of system and are spoken in adjacent areas, it could be that the close resemblance in their treatment of non-verbal predicates is due to language contact.

In Abkhaz there is a set of suffixes that may be added to dynamic stems only. If one of these suffixes has to be applied to a non-verbal, i.e. non-dynamic, stem a predicativizing copula intervenes. The suffixes that can be added directly to a stative stem express Present tense, Past tense, and Imperative mood.

In Turkish the situation is slightly different. In this language there is a set of suffixes that may be added to verb stems only. If one of these suffixes has to be added to a non-verbal stem a copula is used. The suffixes that do not require a copula to be used express Present tense, Past tense/witnessed, Past tense/non-witnessed, Realis conditional mood, and Simultaneity.

Dynamic stems in Abkhaz and verbal stems in Turkish also have in common that, when combined with particular sets of suffixes, they behave like stative (Abkhaz) or non-verbal (Turkish) stems with respect to further suffixation, suggesting in the case of Turkish that the first set turns the verbal stem into a non-finite form that may then be used as a non-verbal predicate in an auxiliary construction (Lees 1972; van Schaaik 1983).

Second, in many languages a predicativizing copula may be absent in the present tense only. This is the case in Egyptian Arabic, Babungo, Hungarian, Jamaican Creole, Lango, Ngalakan, and Imbabura Quechua. Absence of a copula may be further restricted to the present tense, third person, which is the case in Imbabura Quechua and Hungarian. In the latter it is still further restricted to third person singular.

Third, there are some languages in which predicativizing copulas may be absent in those cases in which time reference does not have to be made explicit, e.g. when it is inferrable from the context or specified by lexical means. This is the case in Ngiyambaa, and seems to be the case in Gilyak and Yessan-Mayo. Since very often time reference does not have to be made explicit if the situation described is developing at the moment of speaking, the distinction between this situation and the one in which absence of a copula is restricted to the present tense is often somewhat difficult to make.¹

8.3.1.2. Optional and obligatory absence. Another way of looking at the data concerning the absence versus presence of copulas is to determine whether a copula is optionally or obligatorily absent under certain conditions. The behaviour of copulas in this respect is related to the nature of the zero-strategy employed by the languages concerned, and may furthermore be related to the conditions of absence of a copula. In Table 42 the relevant data are listed. In this table the different sets of conditions of use of copulas are numbered in the order in which they were discussed in the previous section: 1 indicates that a copula is absent in a well-delimited set of tenses, 2 that it is absent in the present tense only, and 3 that it is absent if time reference does not have to be made explicit.

Table 42. Absence of copula and zero-strategy

Language	Absence of copula	Conditions	Zero-strategy
Abkhaz	obligatory	1	ø1
Turkish	obligatory/unmarked	1	øl
Arabic, Egyptian	obligatory	2	ø1
Hungarian	obligatory/unmarked	2	øl
Lango	obligatory	2	ø1
Ngalakan	obligatory	2	ø1
Babungo	optional	2	. ø2
Jamaican Creole	optional	2	ø2
Quechua, Imbabura	optional	2	ø2
Gilyak	optional	3	ø2
Ngiyambaa	optional	3	ø2
Yessan-Mayo	optional	3	ø2

Table 42 shows that in general a copula is obligatorily absent in languages using a zero-1 strategy, whereas it is optionally absent in those using a zero-2 strategy. Partial counterexamples are Hungarian and Turkish. In Turkish absence of the copula is obligatory in the present tense, whereas in other tenses it is not, although in the latter case presence of a copula is restricted to formal speech and writing (Swift 1962: 152). In Hungarian the copula may be added, but the result is a rather marked construction type.

There is a straightforward explanation for the correlations shown in Table 42. In languages employing the zero-1 strategy the non-verbal predicate itself is capable of carrying some of the distinctions characteristic of main predicates. In such

^{1.} Conditions of type 2 and 3 are listed by Ferguson (1971: 142) among the most frequently encountered characteristics of equational clauses without a copula.

circumstances the presence of a predicativizing copula would be superfluous and is felt as overdone. For instance, in Turkish, one of the languages in which a copula is sometimes used in what might have been a zero-1 construction, the inflection is carried over from the non-verbal predicate to the (redundant) copula, resulting, as stated above, in a marked construction type that is not used in everyday conversation. Within zero-1 languages there may be a wide range of tenses allowing encoding by means of the zero-1 strategy (type 1), or absence of a copula may be restricted to the present tense (type 2), which in Hungarian and Ngalakan is characterized by the absence of any morphological material.

In languages employing the zero-2 strategy the situation is different. The non-verbal predicate itself is not capable of carrying any of the distinctions characteristic of main predicates. If any one of these has to be expressed, a predicativizing copula has to intervene. Within this type of language the absence of a copula is either possible in just one situation, i.e. the present tense (type 2), in which case a correct interpretation is arrived at by virtue of the opposition with those situations in which a copula is present, or the absence of a copula may be contextually determined (type 3), in which case a correct interpretation is arrived at through other elements of the sentence or through the wider context.

Conditions of type 2 may thus be found in both types of language, but there is a difference. In zero-1 languages the copula may be absent in the present tense, because this tense can be expressed on the non-verbal predicate itself, whereas in zero-2 languages the copula may be absent in the present tense, because this tense does not have to be expressed, neither on the non-verbal predicate nor on the predicativizing copula.

8.3.2. Deixis

There are several languages in which a copula may remain optionally absent in certain types of predication containing a deictic element. Consider the following examples:

!Xũ (Khoisan; Köhler 1981: 599-600)

- (45) Fiè 'ó: Gòbà.

 DEM COP Mbukushu
 'That is a Mbukushu.'
- (46) T∫'ù: zè: kè.fiè:. hut new DEM 'This is a new hut.'

West Greenlandic (Eskimo-Aleut; Fortescue 1984: 78, 77)

- (47) Ika-ni-ip-puq napparsimmavik.
 DEM-LOC-COP-3.SG.INDV hospital
 'Over there is the hospital.'
- (48) Samma tupir-paaluit.
 down.there tent-several
 'Down there there are several tents.'

The examples from !Xũ show the optional absence of a copula in equative predications, those from West Greenlandic in locative predications. In the examples from !Xũ the argument term is a deictic element, in those from West Greenlandic it is the predicate that is of a deictic nature.

The optionality of a copula in relation to deixis has been found in locative and equative predications only. It has been noted in !Xũ, Hixkaryana, Tamil, Thai, Vietnamese, and West Greenlandic. In all languages but Thai the locative predication type is reported to behave in the way illustrated here, whereas only in !Xũ and Thai the equative predication type is reported to show this behaviour. In Hixkaryana only questioned deictic locative adverbs allow absence of the copula.

For West Greenlandic, Tamil, and Thai there are explicit statements that the optionality of the copula is restricted to the present tense, while the same seems to hold for the other languages, since all examples are translated by means of a present tense. Thus, these languages could also have been listed as examples of type 1 languages in the previous section. They are treated here because there is the additional condition that there be a deictic element in the sentence.

It comes as no surprise that the expression format used in case of absence of a copula is a zero-2 construction. Spatial deixis is not a category usually associated with the main predicate. Dropping of a copula in deictic contexts leads to the loss of the categories expressed on that copula, if any, and the result can only be a zero-2 construction. If compared with the results of the previous section, this explains the additional restriction that reference is to the present rather than to other temporal reference points, and the optional rather than obligatory absence of the copula.

More surprising is that all six languages discussed here have one important property in common: they are all of the rigid type. More precisely, they either lack a class of adjectival predicates (!Xũ, Hixkaryana, Thai, Vietnamese, West Greenlandic), or have a closed class of basic adjectival predicates, the predicative use of which is disallowed (Tamil). An explanation for this correlation may be that in rigid languages of the type discussed here only the locative predication type is predicable within the set of ascriptive predications. It is furthermore a common property of these languages that they have a separate expression format for equative predications. The result is that there is a strict demarcation line between equative

and locative predications (see 9.2.1 for discussion of this phenomenon). This might constitute a favourable situation for a copula to be absent.

8.3.3. Tense and Deixis

In 8.2.2 I argued that the absence of a copula in zero-1 languages is conditioned by morphosyntactic factors, whereas in zero-2 languages it is conditioned by semantic and pragmatic factors. Since zero-2 languages are also the only languages in which both tense and deixis may condition the absence of a copula, it may be useful to have a somewhat closer look at the relation between tense and deixis in zero-2 languages.

Common to all zero-2 languages treated in 8.3.1, where the relation between absence of a copula and TMAP-categories was studied, is that they allow a copula to be absent when reference is to a period of time which overlaps with the time of the speech event. Common to all zero-2 languages treated in the previous section is that they allow a copula to be absent if reference is made to an object which is present at the place of the speech event. In the latter group of languages both conditions do in fact hold at the same time, for instance in Thai, where a copula is obligatory when the subject term "... refers to an object which is removed from the time and place of the utterance" (Kuno and Wongkhomthong 1981: 96).

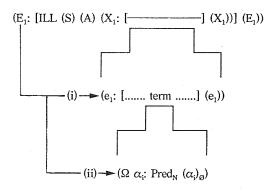


Figure 42. Deictic centre, tense, and deixis

In the hierarchical model of the utterance presented in chapter 1 the time and place of the utterance is embodied by the speech act variable E. This variable serves as a deictic centre (see Comrie 1985: 36; Dik 1989: 37; Hengeveld 1989: 130) on the basis of which the reference of absolute tenses, demonstratives, and other shifters (Jakobson 1971: 131-133) can be determined. Tense belongs to the domain of predication operators (π_2 , see 1.6), and deixis to the domain of term operators (Ω , see 1.6). Thus, the relations between deictic centre, tense, and deixis can be represented as in Figure 42. In terms of this figure one could say that a copula may be absent: (i) if e_i and e_i overlap in time, as represented by a π_2 operator Pres(ent); (ii) if α_i is located in the same area as e_i , as represented by a demonstrative eilent operator. Since, as indicated in 8.3.2, condition (ii) seems to occur only in conjunction with condition (i), the former may be seen as a more specific condition on the latter, as represented in Figure 42.

The semantic basis for the absence of a copula in zero-2 languages may thus be found in the relation between time and place of the narrated event (e_i) on the one hand, and time and place of the speech event (E₁), as expressed by the shifers *here* and *now*, on the other.

8.3.4. Ambiguity

At several points in the preceding discussion the disambiguating function of discriminating copulas has been noted. The examples that have been given all related to the disambiguation between two different non-verbal predication types, e.g. specifying and characterizing equative predications. Disambiguation may also be necessary within one and the same non-verbal predication type. This type of disambiguation can be illustrated by looking at some examples from Mandarin Chinese. This language has an optional copula *shi*, which is of pronominal origin.

That shi is not entirely optional can be derived from some of the conditions under which its presence is preferred. First consider the following examples:

Mandarin Chinese (Sino-Tibetan; Hashimoto 1969: 84)

- (49) Zhe shu.

 DEM book

 'this book' or 'This is a book.'
- (50) Yuehan xiaohair.

 John child

 'the child John' or 'John is a child.'

The examples given here are ambiguous between a term and a predication reading, or as Eid (1983: 203), in discussing similar examples from Egyptian Arabic, puts it, there is a "... potential ambiguity of a phrasal vs. a sentential interpretation ..." of the construction involved. To make the predication reading unambiguous, either

the pronominal copula *shi* or a pause should be inserted in between the two constituents, as in the following examples:

Mandarin Chinese (Sino-Tibetan; Li-Thompson 1977; 422)

- (51) Nêi-ge rén shi xuéshēng.
 DEM-CLFR man COP student
 'That man is a student.'
- (52) Nèi-ge rén, xuéshēng.

 DEM-CLFR man student
 'That man is a student.'

Insertion of a pause identifies the first constituent as a Theme (see 1.4). This being an extra-clausal constituent, the part of the sentence following the pause is interpreted as a predication. Insertion of a copula marks a predicative relation within the predication itself. In both cases the predication reading is imposed upon the construction.

A second condition under which shi is strongly preferred is illustrated by (53):

Mandarin Chinese (Sino-Tibetan; Li-Thompson 1977; 422)

(53)Chī píngguo de nèi-ge rén shì wŏ apple ATTR DEM-CLFR person COP 1.SG xihuan de péng.you. like ATTR friend 'The person who is eating an apple is the friend I like.'

If the subject term in equative predications is long and complex, as in (53), the insertion of a copula is preferred. Junger (1981: 127), discussing a similar construction involving a pronominal copula in Hebrew, notes that the function of the copula in sentences like these is to separate the subject term from the predicate so as to ease the processing of the sentence.

Virtually all pronominal copulas found in the languages of the sample are used in this disambiguating function in equative predications only. The question of why it is precisely in this context that pronominal copulas are found will be addressed in 10.4.