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Parts of speech and dependent clauses: A typological study

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DEPENDENT CLAUSES IN THE LANGUAGES OF THE SAMPLE

6

6.1 Introduction

This chapter presents a classification of the DC constructions attested in the languages of the sample, in terms of the typology developed in Chapter 3. First, in section 6.2, the DC constructions of each language are identified on the basis of their structural coding, i.e. the form of either the subordinating conjunction or the special marker on the dependent predicate. For every DC defined in this way I determine which propositional function(s) it can express. This yields a classification of DCs in terms of several rigid and flexible types. These attested types are compared with the DC types predicted in Chapter 3 (section 3.2.3). Second, in section 6.3, the DCs identified in section 6.2 are classified according to their internal morpho-syntactic properties, i.e. in terms of the (non-)expression of verbal and nominal features and argument encoding. On the basis of these data, every DC construction is assigned to one of the three structural DC types defined in Chapter 3 (section 3.4). Finally, in section 6.4, the data presented in 6.2 and 6.3 are integrated into a single typology. Section 6.5 rounds off with a brief summery.

6.2 DC constructions and propositional functions

6.2.1 Introduction

This section is organized as follows: in 6.2.2 I start out with a preliminary discussion, in order to demarcate the type of data that are (and are not)

included in the analysis. Following this discussion, all relevant DC types are presented, together with the propositional functions that they can express. Subsequently, Section 6.2.3 compares the attested DC types with those predicted in Chapter 3. Section 6.2.4 is a summary.

6.2.2 Rigid and Flexible DCs: Attested types

6.2.2.1 Preliminary considerations

Before presenting the DCs attested in the languages of the sample and their distributional patterns, a few remarks are required. They concern three issues:

- (i) The treatment of DCs that are normally used as heads or modifiers in referential phrases, but also occur within larger constructions that function in turn as predicate modifiers;
- (ii) The definition of adverbial manner clauses, as opposed to other types of adverbial clauses;
- (iii) The distinction between clausal and lexical derivation (see also Chapter 5, section 5.4.3.2).

I will discuss these issues in turn.

Nominal/adjectival DCs as predicate modifiers

In a number of languages, DCs that are normally used as heads and/or modifiers in referential phrases (i.e. as complement clauses, relative clauses, or nominal clauses) also appear within adverbial clauses, specifically in one of the following construction types:

- (i) Marked for oblique case;
- (ii) Dependent upon an adposition;
- (iii) As a modifier of a nominal head that means something like ‘manner’ or ‘way’.

Such cases are not regarded as instances of flexibility, since they involve DCs that still function as a referential heads or modifiers, only within larger constructions that function in turn as a predicate modifiers.

Consider for instance examples (1) and (2) from Tamil. In (1), the clausal nominalization *eṅka ammaa kaapi pooṭar-atu* ‘our mother making coffee’ functions as the head of a referential phrase within the postpositional phrase headed by *poola* ‘like’. This postpositional phrase has the function of a predicate modifier. In (2) the same type of nominalization construction *biicile maṅalviiṭu katar-atu* ‘building a sandhouse on the beach’ functions referentially within a case-marked locative phrase.

Tamil (Asher 1982: 48, 21)

- (1) [[*Eṅka ammaa kaappi pooṭar-atu*] *poola-vee*]
 our mother coffee put:PRS-NMLZ like-EMPH
en mandevi pooṭaraa
 my wife put-PRS-3SG.FEM
 ‘My wife makes coffee just as our mother makes it.’
- (2) *Kozanteṅka* [[*biic-ile maṅalviiṭu kattar-atu*]-*ile*]
 child-PL beach-LOC sand-house build.PRS-NMLZ-LOC
curucuruppaa iruntaaṅka
 busy be.PST.3PL
 ‘The children were busy building a sand-house on the beach.’

It is not always obvious how to distinguish between, on the one hand, a nominalization with an oblique case marker or an adposition, and, on the other hand, a dedicated adverbial clause construction⁸⁶. The same holds for the difference between relative clauses modifying a nominal head and dedicated adverbial clause constructions.

As regards the former case, in order to decide whether something is an oblique case marker or a (bound) adverbial marker, it should be determined whether or not the morpheme in question is part of a larger case marking paradigm. The locative marker in the Tamil example in (2) above, for instance, can be identified as a case marker because it is part of a paradigm of eight other case forms (Asher 1982: 103). For adpositional constructions, the relevant question is whether the marker is restricted to coding adverbial manner clauses, or whether it can also be used productively with other construction types, in particular with lexical nouns or NPs. The postposition

⁸⁶ Adpositional or oblique case-forms of nominalizations can become independent from their original paradigm. This diachronic development is a common scenario for the genesis of rigid converb constructions (Haspelmath 1995: 17).

poola in (1) above does occur with ‘regular’ NPs and is therefore not analyzed as (part of) a dedicated adverbial conjunction (Asher 1982: 104).

In cases involving DC constructions that look like relative clauses, it must be determined whether or not the extra coding element is a lexical (nominal) head. Consider for instance Abun. In this language, adverbial manner clauses are marked by *sa gato*, as illustrated in (3). The second part of this complex marker (*gato*) has the same form as the relativizer, as can be seen in example (4). However, the first part (*sa*) is a conjunction rather than a lexical noun (Berry & Berry 1999: 158). Therefore, *sa gato* is analyzed as a specialized complex marker of rigid adverbial manner clauses, rather than as an instance of a relative clause construction modifying a nominal head *sa*.

Abun (Berry & Berry 1999: 158, 146):

- (3) *An da ben mó sarewo an yo ben*
 3SG actual do exist however 3SG NEG do
kete bado yo teker [sa gato nyim
 too.much maybe NEG too.much ADV earlier
ne nde re].
 DET NEG PFV
 ‘Although she does [these things] she does not do [them] very
 much, I mean, not like [she did them] before.’

- (4) *Men mu gu ye [gato man siri su men*
 1PL go kill person REL do wrong with 1PL
bi nggon].
 POSS woman
 ‘We will go and kill the person who committed adultery with our
 (clans) woman.’

Basque displays a similar construction, but here the choice between a relative and an adverbial construction is somewhat less straightforward. Consider examples (5a-b); they show a DC construction marked with the subordinating conjunction *-(e)n*, which can be used as a complement clause (5a) and as a relative clause (5b). In example (6) the same DC appears within a larger construction, which involves the extra element *bezala* ‘like’ and functions as a predicate modifier:

Basque (Hualde & Ortiz de Urbina 2003: 646, 764, 722):

- (5) a. *Entzun dut [Amaia^{GEN} neba hil d-en]-a*
hear AUX Amaia.GEN brother die AUX-COMP-DET
'I heard that Amaia's brother died.'
- b. *[Pellok ekarri du-en] dirua galdu dut*
Peter.ERG bring AUX-REL money.DET lose AUX
'I lost the money that Peter brought.'
- (6) *[Zeuk esan didaz-en bezala] egin dut lana*
you.EMPH say AUX-ADV do AUX job
'I did my job the way you told me.'

Adverbial constructions of the type illustrated in (6) also occur with other forms than *bezala*, to express different meanings such as 'until' and 'though'. According to Hualde and Ortiz de Urbina (2003: 721), these other forms are either "true postpositions" or "lexicalized inflected nouns". These analyses would characterize the construction in (6) as either a complement clause depending on a postposition, or a relative clause modifying a nominal head *bezala*, but not as a specialized adverbial clause construction. However, it seems that *bezala* occurs exclusively with clausal complements. For comparative constructions with simple nouns different (although related) forms are used, such as *bezain*, as shown in (7):

Basque (Hualde & Ortiz de Urbina 2003: 830)

- (7) *Koldo bezain azkarra zara*
Koldo as.much.as fast.DET are
'You are as fast as Koldo.'

Moreover, when *bezala* does occur with a simple noun or pronoun, it must take additional structural coding in the form of the attributive suffix *ko*:

Basque (Hualde & Ortiz de Urbina 2003: 833)

- (8) *Zü bezala-ko polliterarik*
you like-ATTR beautiful.ABL
'from [someone] as beautiful as you'

These distributional facts argue in favour of analyzing the construction [clause + -en *bezala*] as a dedicated adverbial manner construction

Another Basque DC is marked by *-ela*, again a bound conjunction. This DC can be used as a complement clause, as in example (9), and without further measures as an adverbial manner clause, as illustrated in (10). Thus, this case, unlike the previous ones, is indeed an instance of flexibility. Note however, that there is a dialectal variant of (10), which involves the partitive case marker *-rik*, as shown in (11), and as such does *not* involve flexibility. Rather, it is a rigid complement clause construction, which takes oblique case when expressing an adjunct.

Basque (Hualde & Ortiz de Urbina 2003: 635, 712, 713)

- (9) *batzuek uste dute [hauk oro kazeten eta*
 some.ERG think AUX these all journals.GEN and
kazeta-egileen egitekoak dir-ela]
 journal-makers.GEN duties are-COMP
 ‘Some think that all these are duties of journals and journalists.’

- (10) [[*Zer egin ez neki-ela*] *geratu nintzen*
 what do not knew-ADV stay AUX
 ‘I stood there not knowing what to do.’

- (11) [[*Jaikitzen da, jauzi egiten du-ela*]-*rik*]
 rise.IPFV AUX, jump do.IPF AUX-COMP-PART
 ‘(S)he gets up, jumping.’

In short, there are languages that express adverbial clauses by means of a larger construction, in which a DC functions as a referential head or modifier. Since these cases are not analyzed as instances of flexibility, there is no reflection of the ‘adverbial use’ of these DCs in Table 6.1 below⁸⁷.

Finally, some languages express adverbial manner clauses through reduplication of an infinitival construction. In my sample this strategy is attested in Kharia and Imbabura Quechua. Example (12a) illustrates the use of the Kharia infinitival construction as a complement clause (without reduplication), and (12b) shows the same construction, with reduplication,

⁸⁷ Nevertheless, I have included this information in Appendix III, where I mention, for instance, that the Tamil *atu*-nominalization construction (see (1)-(2) above) can function adverbially in combination with a postposition or an oblique case marker.

used as an adverbial clause. A similar pair of examples from Imbabura Quechua appears in (13a-b). The reduplication is regarded as an iconically motivated formal reflection of the fact that the SoA denoted by the DCs stretches out temporally over the SoA denoted by the matrix clause, rather than as additional structural coding. This means that the examples in (12a-b) and (13a-b) are analyzed as instances of flexibility.

Kharia (Peterson 2006: 259, 249)

- (12) a. [*iɲ u ikuʔd sundar kontheʔd=ki=te*
 1SG this very beautiful bird=PL=OBL
satay=na] um=iɲ lam=te
 torment=INF NEG=1SG want-ACT.PRS
 ‘I don’t want to torment these beautiful birds.’

- b. ...*lekin [lam=na lamna] souʔb=te ikuʔ jugbay*
 but search=INF RDP all=OBL very much
qaʔ-piyas laʔ=ki.
 water-thirst EMOT=M.PST
 ‘But searching and searching, [they] all became very thirsty.’

Imbabura Quechua (Cole 1982: 40, 62)

- (13) a. *ñuka-ka [sbuj ali wagra-ta-mi randi-y]-ta muna-ni*
 I-TOP one good cow-ACC-VAL buy-INF-ACC want-1SG
 ‘I want to buy a good cow.’

- b. [*Kanda-y kaday] shamu-rka-ni*
 sing-INF RDP come-PST-1
 ‘I came singing.’

Delineating manner clauses

A number of the DCs that are listed in Table 6.1 as adverbial manner clauses also have ‘non-manner’ adverbial uses: They are used for instance as purpose clauses or as cause clauses. Since this study is restricted to adverbial manner clauses, such non-manner adverbial functions are not taken into account. For the same reason, rigid DCs that express non-manner adverbial functions only are not included in Table 6.1.

However, in many cases it is not straightforward to determine what constitutes a ‘true’ manner clause, as opposed to other adverbial clause types with related semantics. In a number of typological studies sets of adverbial meanings have been proposed, sometimes in the form of semantic maps. In such studies, the following types of adverbial meanings are typically mentioned in close relation to manner: simultaneity, instrumentality, accompanying circumstance, and comparison (König 1995, Kortmann 1998, Hengeveld 1998, Himmelmann & Schulze-Berndt 2005, Thompson et al. 2007)⁸⁸.

In the present study, I make an (admittedly fairly rough) distinction between two major types of adverbial clauses that are semantically close to manner clauses. I will call these *similative clauses* and *simultaneity clauses*, respectively. The former type has comparative meaning; it expresses similarity between the SoA of the dependent clause with some other action or psychological state expressed by the matrix clause. An example of a similative construction is given in (14):

Pipil (Campbell 1985: 131; 289)

- (14) *Ab, ni-pa:xa:lua [ke:n-aken taba ti-ki:s-tuk ti-pa:xa:lua]*
 Oh I-walk just.as you you-leave-IPFV you-walk
 ‘Oh, I’m taking a walk just like you have come out to take a walk.’

Simultaneity clauses are strictly speaking temporal clauses; they describe the two linked SoAs as temporally overlapping. As such, ‘simultaneity’ is meant here to include ‘accompanying circumstance’. In many languages, simultaneity clauses are used by semantic extension to express that the dependent SoA further specifies the manner in which the action expressed by the matrix clause is carried out. An example of a simultaneity clause in Babungo is given in (15)⁸⁹:

Babungo (Schaub 1985: 220)

- (15) *ηρωδ bweý [kì sbóη ηρωάα]*
 he sleep-IMPF SIM rest-IPFV body
 ‘He was asleep, resting his body.’

⁸⁸ This is not meant to be an exhaustive list. The terms largely speak for themselves; the exact definitions proposed for each of them differ from one author to the next, but they are not crucial for the present discussion.

⁸⁹ Instrumental clauses will be regarded as a sub-type of adverbial manner clauses.

Similitive and simultaneity clauses are included in the data whenever I could not find evidence for a DC construction with ‘true’ manner semantics, and whenever the boundary between manner clauses and manner-like clauses was not clear-cut⁹⁰.

Clausal versus lexical derivation

It can be problematic to decide whether a construction is truly an instance of clausal derivation, as opposed to lexical derivation. Consider for instance the Ket infinitive and the Basque perfective participle constructions, illustrated in (16) and (17), respectively. Since in these constructions no overt arguments are expressed, it is not clear whether they should be analyzed as relative clauses or rather as lexical adjectives derived from verbs.

Ket (Vajda 2004: 79)

- (16) *bλγ ságd̥i*
 find.INF boot
 ‘A boot that is found’

Basque (Hualde & Ortiz de Urbina 2003: 199)

- (17) *gizon ikas-i-a*
 man learn-PFV.PTC-DET
 ‘a learned man.’

In the cases of Ket infinitives and Basque perfective participles, the distinction between lexical versus clausal derivation is directly relevant to the question whether these DCs are flexible or rigid, since both constructions can also be used as complement clauses, in which function they do take overt argument(s). This is shown in examples (18) and (19)⁹¹:

Ket (Vajda 2004: 78):

- (18) [*śk-nà qús-bèt*] *bínùt*
 2PL-ANIM.PL.GEN tent-making.INF it.ended
 ‘We finished making the tent.’ (Lit: ‘Our tent-making ended.’)

⁹⁰ In Appendix III, a remark on semantics is added to similitive and simultaneity adverbial clauses.

Basque (Hualde & Ortiz de Urbina 2003: 668):

- (19) *Damu dut [zu irain-du]-a*
regret AUX you offend-PFV.NMLZ-DET
'I regret having offended you.'

Of course, it is quite possible that the same suffix is used for both a lexical and a clausal derivational process. This is even to be expected from a diachronic point of view. However, this does not solve the problem of determining the synchronic status of the relevant suffix. For the Basque case there is some evidence in favour of a lexical analysis for (17): In this language, relative clauses precede the head noun, while adjectives follow it (Hualde & Ortiz de Urbina 2003: 791). Since the 'participle' in (17) is postnominal, this can be taken as evidence that it is a derived adjective, rather than a relative clause. Consequently, the perfective nominalization in (19) is analyzed as a rigid DC, which can only be used in the function of head of a referential phrase. In Ket, however, there is no evidence against analyzing the construction in (16) as a relative clause. Therefore, the Ket infinitive construction is analyzed as a flexible DC.

6.2.2.2 Language data

Table 6.1 displays the set of relevant DC constructions in the language of the sample, and their possibilities to express each of the four propositional functions. The languages are listed in the leftmost column, in the same order as in Table 5.1 of the previous chapter. The DC constructions appear in separate rows in the second column and are identified by their structural coding⁹². The four remaining columns represent the four propositional functions of DCs: Head of a predicate phrase (*Pred Head*), head of a referential phrase (*Ref Head*), modifier in a referential phrase (*Ref Mod*), and modifier in a predicate phrase (*Pred Mod*). A plus sign in any of these four columns indicates that the relevant DC can express that particular propositional function. An empty cell indicates that the DC *cannot* express

⁹¹ The fact that in the Ket example both arguments have ALT coding still makes it difficult to decide whether this is a deranked DC or a regular derived NP. In Malchukov (2006: 989), the Ket infinitive construction is characterized as exemplifying the final stage of de-verbalization, since it not only loses the inflectional slots of polysynthetic independent verb forms, but cannot take derivational categories pertaining to valency and aspect (causative, resultative etc.) either.

⁹² In Appendix III, all DC constructions are listed and illustrated in the same order in which they appear in Table 6.1. In this Appendix, the DCs are also identifiable through their structural coding.

the propositional function in question. In a few cases the evidence was not conclusive, which is indicated with question marks in the relevant cells.

Table 6.1: DCs in the sample languages and their possibilities concerning the expression of propositional functions

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Tagalog	<i>pag-</i>	?	+	+	+
	<i>na/-ng</i>		+	+	+
Kharia	<i>RDP/∅</i>	+	+	+	+
	<i>-na</i>		+	+	+
	<i>-na-wala</i>			+	
	<i>-al</i>			+	
	<i>-ker</i> etc.				+
	<i>-ga + RDP</i>				+
	<i>-ta + RDP</i>				+
	<i>no</i>		+		
	<i>gam-kon</i>		+		
	<i>je</i> etc.			+	
	<i>a/i</i> etc.			+	
	<i>∅</i>			+	
Kambera	<i>pa-</i>		+	+	
	<i>ma-</i>			+	
	<i>∅</i> (NMLZ)		+		
	<i>wà</i>		+		
Samoan	<i>=ga</i>		+		
	<i>∅</i> (NMLZ)		+		
	<i>ona/ina</i>		+		
	<i>-e</i>			+	
	<i>∅</i>		+	+	
Guaraní	<i>há(gwe)/∅</i>		+		
	<i>va</i>			+	
	<i>vo</i>				+
Santali	<i>∅</i> (no INDIC)		+	+	
	<i>-kate</i>				+
	CORREL			+	
	<i>mente</i>		+		

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Warao	<i>-kitane</i>		+		
	<i>kotai</i>			+	
Turkish	<i>-DIK/-(y)AcAK</i>		+	+	
	<i>-mAK</i>		+		
	<i>-mA</i>		+		
	<i>-An</i>			+	
	<i>-(y)ArAk</i>				+
	<i>-(y)A...-(y)A</i>				+
	<i>ki</i>		+	+	
	<i>diye</i>		+		
	\emptyset		+		
Kayardild	<i>-n-</i>		+	+	+
	<i>-Thirri-n</i>			+	
	<i>-n-garrba</i>			+	
	<i>-ntha</i>		+	+	
	\emptyset			+	
Paiwan	<i>tu(a)/tjai</i>		+		
	<i>a</i>		+	+	
	<i>a parhu</i>				+
	<i>(-)in- -an + a</i>			+	
I. Quechua	<i>-j/-shka/-na</i>		+	+	
	<i>-ngapaj</i>		+		
	<i>-chun</i>		+		
	<i>-y</i>		+		+
	<i>-shpa</i>				+
Ma'di	<i>-lĕ</i>		+	+	
	<i>-dʒo</i>		+	+	
	<i>-ka</i>		+		
	<i>-rĕ /-bá</i>			+	
	\emptyset		+		
	<i>-zʃ + sĭ</i>				+

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Gooniyandi	<i>-woo</i>		+		
	<i>-wadda</i>				+
	<i>-mawoo</i>				+
	<i>-bari</i>				+
	<i>-ya/ -gowaaya</i>				+
	\emptyset (+RSP)		+	+	+
Hungarian	<i>-ni</i>		+		
	<i>-ás/-és</i>		+		
	<i>-ó</i>			+	
	<i>-ótt</i>			+	
	<i>-andó/-endó</i>			+	
	<i>-vã/-vé</i>				+
	<i>-vén</i>				+
	<i>(azt) hogy (etc.)</i>		+		
	<i>úgy (a-)hogy</i>				+
	REL.PRON			+	
Japanese	<i>no/mono</i> etc.		+		
	\emptyset (RSP)			+	
	<i>-te/-de/-ite</i>				+
	<i>-i/-\emptyset</i>				+
Hmong Njua	<i>qhov</i>		+		
	<i>kuam/(has)tas</i>		+		
	\emptyset		+		
	<i>kws</i>			+	
Lango	<i>-(kk)ɔ̃</i>		+		
	<i>nî</i>		+		
	<i>à-mè</i>			+	
Ket	\emptyset (bare INF)		+	+	
	\emptyset		+	+	
	<i>eta qor'a</i>				+
	<i>ásqà</i>				+
	-PROSEC				+
	REL.PRON			+	
	<i>-s/-bes</i>			+	

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Itelmen	INF (various forms)		+		
	∅		+		
	<i>min</i>			+	
	<i>quatz</i>				+
Kosati	NMLZ (various forms)		+		
	<i>-:sáya</i>		+		
	<i>-:yólli</i>		+		
	<i>-.ka</i>		+		
	<i>-.kitta</i>		+		
	<i>-laho:li:sáya</i>		+		
	<i>-n</i>				+
	<i>-k</i>				+
Thai	∅		+	+	
	<i>thiī</i>		+	+	
	<i>wâa</i>		+		
Basque	<i>-t(z)e</i>		+		
	<i>-tu/-du/-i/-∅</i>		+		
	<i>-en</i>		+	+	
	<i>-en bezala</i>				+
	<i>-(e)la</i>		+		(+)
	<i>bait</i>		+	+	
Abun	<i>do/∅</i>		+		
	<i>gato</i>			+	
	<i>sa gato</i>				+
Bambara	<i>ka</i>		+		
	<i>-le/-ne</i>			+	
	<i>-min(u)/ -mun(u)</i>			+	
	<i>-tò</i>				+

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Georgian	<i>-a</i>		+		
	<i>m- (-a-)(-el/-al)</i>			+	
	<i>-ul/-il/m- -ar/-al</i>			+	
	<i>sa- (-el/-al/r)</i>			+	
	<i>rom</i>		+	+	
	REL.PRON			+	
	<i>ra</i>				+
	<i>rogorc</i>				+
Bukiyip	∅		+		
	<i>(ú)li</i>			+	
	<i>bwidouk -(u)mu</i>				+
Abkhaz	<i>-ra</i>		+		
	-NFIN		+		
	REL.PRON			+	
	-NFIN				
	<i>-š- + -NFIN</i>				+
Polish	<i>-nie</i>		+		
	INF (various forms)		+		
	<i>-c</i>			+	
	<i>-any</i> etc.			+	
	(PST.PASS) PTC (various forms)			+	
	PRS.PL- <i>c-</i>				+
	<i>że</i>		+		
	REL.PRON			+	
	<i>jak (gdy)by</i>				+
Burushaski	<i>-(á)as</i>		+	+	
	<i>-im/-um/-am</i>			+	
	<i>n-STEM-(a)n</i>				+
	<i>ke/ki</i>		+	+	+
	<i>sén-/ét-</i>		+		

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Lavukaleve	<i>-e/-i</i>		+		
	PERSON.SUFF			+	
Alamblak	<i>-nef</i>		+		
	<i>-(kfë)t</i>		+		
	<i>ind</i>			+	
Pipil	<i>ka(h)</i>		+	+	
	<i>ne</i>			+	
	<i>ke</i>			+	
	<i>ke:n-aken</i>				+
	ADV				+
Wambon	<i>-e</i>		+		
	<i>-a + o</i>			+	
	∅				+
	<i>-mo/-o</i>				+
	<i>ka</i>				+
Dhaasanac	DET(+DEM)		+	+	
	<i>-ɲ/-an</i>		+		
Berbice Dutch	<i>fu/fi/∅</i>		+		
	<i>bifī/dati/∅</i>		+		
	<i>Wh/∅</i>			+	
Babungo	<i>lāa</i>		+		
	<i>fáŋ/yúu</i>			+	+
	<i>kì(i)/∅</i>				+
Nama	<i>!xáís-à</i> (no INDIC)		+		
	∅ (no INDIC) (RSP)			+	
	<i>-se/!ʼaa/tsii/</i> ∅ (no INDIC)				+
Hdi	<i>ká</i>		+		
	<i>tá</i>		+	+	
	<i>tà</i>			+	
	<i>tà + NMLZ</i>			+	
	<i>-a</i>			+	

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Mandarin	∅		+	+	+
	<i>de</i>			+	+
	<i>-zhe</i>				+
Tamil	<i>-atu</i>		+		
	<i>-(kk)a</i>		+		
	<i>-a</i>			+	
Kisi	<i>(m)àà/∅</i>		+		
	∅		+		
	CL			+	
Nung	∅		+	+	+
	<i>(tj-və)</i> (+DEM) (+FOC)			+	
	<i>bət</i>				+
Garo	<i>in-e</i>		+		
	<i>-a</i>		+		
	<i>-a-ni</i>		+		
	<i>-na</i>		+		
	<i>-kan/-kan-a</i>		+		
	<i>-gip-a</i>			+	
	<i>-e/-e-min/-e-r</i>				+
Krongo	<i>àní tíŋ</i>		+		
	<i>-(t)</i>		+		
	<i>m-/n-</i>			+	+
Hixkaryana	<i>ní/-thí/-</i> <i>-hító + rí</i>		+		
Slave	<i>nj/∅</i>		+	+	
	<i>gha/gú</i>		+		
	<i>i/sjǐ/lii</i>			+	
	<i>gháré</i>				+
Nivkh	<i>-vut/-vur</i>		+		
	∅		+		
	NFIN			+	
	<i>r/-t-ř// -n</i>				+

Language	Structural Coding	Propositional Functions			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Greenlandic	<i>-niq</i>		+		
	<i>-ta/-sa</i>			+	
	PTC mood		+	+	
	CONT mood		+		+

6.2.3 Discussion

6.2.3.1 Attested and predicted types

The data in Table 6.1 show that most of the attested DCs represent predicted types. First, as far as rigid DCs are concerned, there are complement clauses, relative clauses, and adverbial manner clauses. The functional distribution of these DC types is represented in (19), (20), and (21), respectively (cf. (9), (10) and (11) in Chapter 3):

(19)

	Head	Modifier
Predication		
Reference	Complement clause	

(20)

	Head	Modifier
Predication		
Reference		Relative clause

(21)

	Head	Modifier
Predication		Manner adverbial clause
Reference		

I will illustrate each of these rigid DC types with examples from the sample languages. Example (22) is a rigid complement clause from Kisi; this construction can be used in the function of head of a referential phrase only.

Kisi (Childs 1995: 280)

- (22) *ò cà kó b'éé [màà tè ò cǎŋ pé ò fùlá lèniŋ]*
he see only indeed COMP if he cry if he go.out inside
'He really thinks that if he cries he will be free.'

Note that the behavioural potential of DCs does not play a role in the typology yet. Thus, rigid deranked nominalization constructions, such as in (23) from Turkish, also count as complement clauses.

Turkish (Göksel & Kerslake 2005: 420)

- (23) [*Kerkes-in birier kikaye anlat-ma-sı*]
everyone-GEN one.each story tell-NMLZ-3SG.POSS
iste-n-iyor-muş
want-PASS-IPFV-EV.COP
'It seems they want everyone to tell a story.'

Example (24) is a rigid relative clause construction from Hmong Njua:

Hmong Njua (Harriehausen 1990: 141)

- (24) *Tug txiv neej [kws kuv saib] sab*
CL man REL 1SG see big
'The man that I saw was tall.'

Relative clauses may also involve deranked participle constructions, as in example (25) from Hungarian:

Hungarian (Kenesei et al. 1998: 45)

- (25) [*A könyv-et a fiú-nak gyorsan olvas-ó*]
the book-ACC the boy-DAT fast read-ACT.PRS.PTC
lány itt van
girl here is
'Here is the girl who reads the book to the boy fast.'

A rigid adverbial manner clause construction appears in (26), from Guaraní.

Guaraní (Gregores & Suárez 1967: 180)

- (26) *H-asẽ [o-sẽ vo]*
she-cry she-go.out ADV
'She goes out crying.'

Rigid adverbial manner clauses may also be deranked converb constructions, such as the one in (27) from Polish:

Polish (Bielec 1998: 71)

(27) [*Słuchając muzyki,*] *ubrałem się.*
 listen-CONV music dress.I (my)self
 ‘Listening to music, I got dressed.’

Turning to flexible DC types, the following predicted types are attested: multi-functional clauses, modifier clauses, nominal clauses, and flexible clauses of type C (which can be used as complement clauses and adverbial manner clauses). The functional distributions of these DC types are represented in (28), (29), (30), and (31), respectively (cf. (13), (14), (15) and (20) in Chapter 3):

(28)

	Head	Modifier
Predication		
Reference	Multi-functional clause	

(29)

	Head	Modifier
Predication		Modifier clause
Reference		

(30)

	Head	Modifier
Predication		
Reference	Nominal clause	

(31)

	Head	Modifier
Predication		Flex clause C
Reference	Flex clause C	

Below I will again illustrate each of these DC types with examples from the sample languages. Multifunctional clauses are attested in the isolating languages Mandarin Chinese and Nung. In both cases the DC is zero-marked. Examples (32a-c) are from Mandarin, and show that the DC can be used in the functions of head of a referential phrase (32a), modifier in a referential phrase (32b), and modifier in a predicate phrase (32c)⁹³.

Mandarin Chinese (Li & Thompson 1981: 599, 611, 597)

- (32) a. *Wǒ pànwàng [nǐ kuài yìdiǎn bìyè]*
 I hope you soon a.little graduate
 'I hope you'll graduate a bit sooner.'
- b. *tā yǒu yì-ge mèimei [běn xǐhuān kàn diànyǐng]*
 3SG exist one-CL younger.sister very like see movie
 'S/he has a younger sister who like to see movies.'
- c. *Tāmen [yòng shǒu] chī-fàn*
 they use hand eat-food
 'They eat food using their hands.'

Deranked multi-functional clauses are attested in Kayardild. So-called 'nominalizations' in this language can be used as the head and modifier of a referential phrase, and as a modifier in a predicate phrase, as is illustrated in (33a-c) below. Note that the structural coding of the multi-functional clause,

⁹³ Burushaski appears to have an overtly marked, balanced multi-functional DC, borrowed from Persian: This *ke/ki* construction is claimed to be usable as a complement, relative and adverbial clause, but my sources provide no clear examples (see Tikkanen 1995: 498).

the *-n-* marker, is glossed according to the function of the DC in the relevant example. Thus, in (33a) *-n-* is glossed as a nominalizer, in (33b) as a participle, and in (33c) as a converb. A similar procedure is followed for the glossing of structural coding in other types of flexible clauses, including balanced clauses. In the latter, the subordinating conjunction will be glossed as a complementizer (COMP), a relativizer (REL), or an adverbial subordinator (ADV), according to the function performed by the DC in the sentence (cf. for instance examples (9) and (10) above). This is to avoid tedious terminology such as ‘dependent predicate marker of a multi-functional balanced clause construction’, and opaque corresponding glosses. Note however, that the disadvantage of this procedure is that the gloss of an isolated example does not reveal whether the DC is a rigid or a flexible construction.

Kayardild (Evans 1995: 476, 474,

- (33) a. *Ngada kurri-ja [niwan-ji budii-n-marri]*
 1SG.NOM see-ACT 3SG.POSS-MLOC run-NMLZ-PRIV
 ‘I saw that he was not running.’
- b. *Nga-ku-l-da [wirr-n-ku] dangka-wu kurri-ju*
 1-INC-PL-NOM dance-PTC-MPROP man-MPROP see-POT
 ‘We will watch the dancing man.’
- c. *[Bilaangka-nurru kari-i-n-da] ngada warra-j*
 blanket-ASSOC cover-M-CONV-NOM 1SG.NOM go-ACT
 ‘I went along, covering myself in a blanket.’

Flexible modifier clauses are attested in Babungo, Mandarin Chinese, and Krongo. The balanced modifier construction in Babungo is illustrated below. In (34a) the DC functions as a modifier in a referential phrase, and in (34b) as a modifier in a predicate phrase.

Babungo (Schaub: 1985: 32, 39)

- (34) a. *mə̀ yè wə́ ntíə [fáŋ (ŋwə́) shàw ngú yé]*
 I see.PFV person that REL he steal.PFV fowl your
 ‘I have seen that man who has stolen your fowl.’

- b. *ɲwɔ sɔ s̄ay [fãɲ nsbú wí nàysɔ tɛ ɲwɔ]*
 she plant.PFV corn ADV mother her tell.PFV to her
 ‘She has planted the corn like her mother told her.’

The Krongo modifier clause construction is illustrated in (35a-b). This is a deranked construction to the extent that it does not express agreement and takes a possessive subject. Tense, aspect, and valency/voice marking are retained, however.

Krongo (Reh 1985: 256, 333)

- (35) a. *n-úllà à?àɲ kí-nt-àndiɲ*
 1/2-IPFV:love I LOC-SG-clothes
 [*n-úufɔ-ɲ kò-nìimò kàti*]
 PTC:NEUT-IPFV:sew-TR POSS-mother my
 ‘I love the dress that my mother is sewing.’
- b. *n-áa t-ánkwà-àni*
 CONN-NEUT-COP INK-go.round-DTR
 [*n-úrùná-ɲ úuní kànáàɲ*]
 CONV:NEUT-IPFV:pay.attention.to footprints POSS:3.PL
 ‘She goes round, paying attention to their footprints.’

Nominal clauses, i.e. DCs that can be used as the head and the modifier in a referential phrase, occur quite frequently. An example of a balanced nominal clause construction in Basque appears in (36a-b):

Basque (Hualde & Ortiz de Urbina 2003: 646, 764)

- (36) a. *Banekien [Mikel berandu etoriko z-en]-a*
 ba-knew Mikel late arrive.FUT AUX-COMP-DET
 ‘I knew that Mikel would arrive late.’
- b. [*Pellok ekarri du-en*] *dírua galdu dut*
 Peter.ERG bring AUX-REL money.DET lose AUX
 ‘I lost the money that Peter brought.’

Deranked nominal clauses are attested for instance in Turkish, as shown in example (37a-b). Note that the difference in form of the special marker on the predicate in the two clauses is due to vowel harmony.

Turkish (Göksel & Kerslake 2005: 423, 442)

- (37) a. [*Orhan-m bir şey yap-ma-yacağ-ı*]
Orhan-GEN anything do-NEG-NMLZ-3SG.POSS
belliydi.
it.was.obvious
'It was obvious that Orhan wouldn't do/wasn't going to do
anything.'
- b. [*Fatma-'nın yarın gör-eceğ-i*] *film*
Fatma-GEN tomorrow see-PTC-3SG.POSS film
'the film that Fatma is going to/will be seeing tomorrow'

Finally, a few cases are attested of flexible DC clauses of type C, which can be used as complement clauses and as adverbial manner clauses (see (32) above). One case is the Basque *-ela* construction, which was already illustrated in (9) and (10) above. Recall that this flexible construction has a dialectal variant in which the adverbial use is accompanied by an extra case-marker *-rik* (see (11) above)⁹⁴.

Another case of a flexible clause of type C is attested in West Greenlandic. It is called the contemporative or conjunctive mood construction and it is formed with the mood-marker *-lu/-llu*, followed by a person marker. This is illustrated in (38a-b).

West Greenlandic (Fortescue 1984: 40; 55)

- (38) a. *isumaqatigiip-pugut* [*maani ata-ssa-lluta*]
agree-1PL.IND here stay.ON-FUT-1PL.CONT
'We agreed to stay on here.'
- b. [*Irnir-lunga*] *isir-punga*
do.hurriedly-1SG.CONT go.in-1SG.IND
'I entered quickly/in a hurry.'

Even though flexible DC constructions that can be used as complement clauses and as adverbial manner clauses were predicted in Chapter 3, their particular distributional pattern seems unexpected. The reason for this is

⁹⁴ In addition, Hualde & Ortiz de Urbina (2003: 712) quote sources claiming that the marker *-ela* used for adverbial manner clauses is not exactly homophonous with the complementizer *-ela*, since they have a different accentual pattern.

that this DC type is flexible between the head function of one domain (reference) with the modifier function of the other domain (predication). As such, it merges two functions that are maximally different in terms of both the predication-reference parameter and the head-modifier parameter⁹⁵. This marked situation is apparently reflected by the infrequent attestation of the relevant DC type.

On the other hand, a possible connection between complement clauses and adverbial clauses lies in the fact that they function as arguments and adjuncts, respectively. Complementizers often develop out of adpositions or case markers, which may already have been used for the marking of both direct object arguments and (certain types of) adjuncts (Cristofaro 1998). This flexibility may carry over to the coding of clausal constructions expressing these two functions, i.e. to complement clauses and (some types of) adverbial clauses.

In this subsection I presented all DC types attested in the sample, according to their functional distribution. These attested types do not cover all the types predicted in Chapter 3, section 3.2.3. In the next sub-section I discuss the predicted but unattested DC types.

6.2.3.2 Predicted but not attested DC-types: The problem of predicate clauses

The following predicted DC types were not attested in any of the sample languages: predicate clauses, contentive clauses, predicative clauses, head clauses, and flexible clauses of types A, B, and D⁹⁶. These DC types are presented in (39)-(45) below (cf. (8), (12), (16), (17), (18), (19), and (21) in Chapter 3):

(39)

	Head	Modifier
Predication	Predicate clause	
Reference		

⁹⁵ cf. Chapter 5, section 4.3.4, on the non-attestation of PoS classes with this distributional pattern.

(40)

	Head	Modifier
Predication	Contentive clause	
Reference		

(41)

	Head	Modifier
Predication	Predicative clause	
Reference		

(42)

	Head	Modifier
Predication	Head clause	
Reference		

(43)

	Head	Modifier
Predication	Flex clause A	-
Reference		

(44)

	Head	Modifier
Predication	Flex clause B	
Reference		-

(45)

	Head	Modifier
Predication	Flex clause D	
Reference		Flex clause D

⁹⁶ In fact, there appears to be one instance of a contentive clause construction, attested in Kharia, which I will discuss shortly.

Notably, all these DC-types involve the functional slot for head of a predicate phrase. As explained in Chapter 2 (section 2.3.1) and Chapter 5 (section 5.5), this function has a special status in Hengeveld's theory of PoS classification. In particular, the function of head of a predicate phrase is the *only* function of verbs, while it is a possible additional function of lexeme classes that are not verbs. Such a non-verbal lexeme class is regarded as having an additional predicative function only when its members display the same behavioural potential as verbal predicates (i.e. when a zero-1 strategy is employed).

In order to preserve the parallel between PoS classes and DC constructions, the latter are subjected to the same criterion as the former: DC constructions (which are normally used in one or more of the functions of head and modifier in a referential phrase and modifier in a predicate phrase) are regarded as having an additional predicative function only when they employ a zero-1 strategy in that function.

Hypothetically, to use a zero-1 strategy with a DC in predicative function would mean that verbal features take scope over the clausal construction as a whole. In the case of a balanced, finite DC (with verbal morphology already present on the dependent predicate), this would involve double expression of verbal categories, i.e. a kind of 'stacking' of verbal inflection. In the case of a deranked clause it would mean that constructions with typically non-finite predicates would express verbal features. In both cases one could imagine that verbal features somehow appear at the periphery of the DC construction. However, none of these scenarios is actually attested in the sample languages. Rather, the use of a DC construction in predicative function triggers either a copula strategy or a zero-2 strategy. Consider for example the English infinitival construction in (46), which in predicative function needs a copula:

(46) My plan is [to take you on a trip to the beach]

In short, DC constructions with non-predicative defining uses do not employ the zero-1 strategy when used predicatively. One reason for this may be the structural problems involved in inflecting a DC in the same way as a lexical verb. This may explain why flexible DC constructions involving the function of head of a predicate phrase (as represented in (40)-(45) above) are not attested. It may also explain the non-occurrence of DCs that are specialized for the function of head of a predicate phrase, i.e. rigid predicate clause constructions (cf. (39) above).

In addition to this formal restriction, DCs (in particular deranked ones) appear to be conceptually marked with respect to the function of predicative head: It has been claimed that the SoAs expressed by DCs lack an autonomous cognitive profile, and this arguably makes them unlikely candidates for the expression of independent predications (Langacker 1987; Cristofaro 2003, cf. Chapter 3).

In view of this last point, it is interesting to consider in more detail the contentive clause type (represented in (40) above). As noted above, this clause type, although predicted in Chapter 3, is practically non-existent in the sample languages. However, there is in fact one DC construction that comes close to this type, since it can be used in all four functions, *and* apparently employs a zero-1 strategy in predicative function. This is the Kharia DC construction with so-called *freestanding forms*. These are bare, non-finite dependent predicate forms, sometimes with stem reduplication⁹⁷. When a freestanding form construction is used in predicative function, it takes clitics for voice/tense and person, just like any lexical predicate. As such, this DC construction seems to meet the criterion for a zero-1 strategy. However, the use of voice marking on freestanding form constructions is restricted, compared to lexical predicates: Freestanding form clauses can only take the middle voice, and they always have a habitual interpretation. Compare the example in (47a), showing a freestanding form construction in the function of predicative head, with the example in (47b), its counterpart with a lexical predicate.

Kharia (Peterson 2006: 74)

- (47) a. *ip qa? bi?q-bi?q=ki=n*
 1SG water pour.out-RDP=M.PST=1SG
 'I used to pour water out.' (i.e. that was my job)
- b. *ip qa? bi|h=o?j*
 1SG water pour.out:ACT=PST.1SG
 'I poured water out.'

It seems that the special behaviour of freestanding form clauses in this respect is motivated in cognitive-semantic terms. As Peterson puts it:

⁹⁷ They are called *masdars* in Peterson (forthcoming).

“I would argue that the habitual interpretation of such forms in Kharia results from the fact that [they are] intimately connected to a depiction of the event without explicit reference to its internal temporal structure. If such a form is nevertheless marked as a finite predicate, what results is a habitual situation, not an activity or event in the usual sense [...]” (Peterson 2006: 74)

The case of Kharia freestanding forms may be compared to so-called gerund constructions in Tagalog. Like Kharia, Tagalog has a class of lexical contentives. Unlike Kharia, however, it has no phrasal clitics. The Tagalog gerund construction is a deranked DC that can be flexibly used in all propositional functions. However, in the function of predicative head it does not employ a zero-1 strategy: Lexical predicates in Tagalog appear in sentence-initial position and are marked for voice (Himmelman 2007). A predicatively used gerund construction also stands in first position, but it is not marked for voice, as can be seen in example (48).

Tagalog (Himmelman 2005: 372)

(48) [*pag-lu-luto?* *ng pagkain*] *ang trabaho niya*
 GER-RDP-cook GEN food SPEC work 3SG.POSS
 ‘His/her job is cooking food.’

Thus, the Tagalog gerund construction should be analyzed as employing a zero-2 strategy in predicative function. However, it seems that there is a functional reason for the lack of voice-marking on gerund constructions. In particular, Tagalog voice-markers orient the action denoted by the predicate towards one of the participants of that action. Gerunds, in contrast, “refer to actions or states without orienting them towards one of the participants” (Himmelman 2005: 372). In other words, gerund marking and voice-marking are mutually exclusive in functional terms. In fact, there is a systematic co-variation between the allomorphs of voice markers and the allomorphs of the gerund marker. For instance a form taking *-um-* as the active voice marker, takes *pag-* as a gerund marker, whereas a form taking *mag-* as the active voice marker, takes *pag-* plus reduplication for gerund formation (see Schachter & Otones 1972: 160-161 for the full paradigms).

In general, it seems that there are both structural and cognitive-semantic factors that inhibit the use of DCs as predicative heads. This explains the non-attestation of the predicted flexible DC types that involve the function

of predicative head, as well as the non-attestation of rigid predicate clauses. In addition, it means that the function of head of a predicate phrase is in practice largely irrelevant to the purpose of the present study, namely the comparison of the distributional patterns of PoS and DCs with respect to propositional functions. Whereas the function of head of a predicate phrase appears to be the most central function in terms of PoS classification, it is the most marginal one for DCs.

6.2.4 Summary

To summarize, in this section I have shown that all DC types predicted in Chapter 3 are attested in the languages of the sample, except those involving the functional slot for head of a predicate phrase. This latter finding was explained in terms of the structural incompatibility of DC constructions with the zero-1 strategy, and their cognitive-semantic markedness with respect to the function of independent predication.

6.3 DC constructions and behavioural potential

6.3.1 Introduction

This section describes the second step towards the DC typology as developed in Chapter 3, namely the categorization of every DC construction (as listed in Table 6.1 of the previous section) in terms of its internal morpho-syntactic properties. I start out with a brief discussion of the formal parameters that are taken into account. In section 6.3.2 I then present the basic data as regards the (non-)expression of verbal categories and nominal categories in the DCs, and the realization of their arguments. Subsequently, in section 6.3.3, these data are used to assign every DC to one of the three structural DC types defined in Chapter 3 (section 3.4). In section 6.3.4 the two datasets of 6.3.2 and 6.3.3 are combined: The internal formal properties of all DCs are presented in the form of three separate tables corresponding to the three structural DC types.

6.3.2 Basic Data

6.3.2.1 Formal parameters

Verbal and nominal categories

Data on the (non)expression of following verbal categories are included in Table 6.2:

- voice and valency marking
- tense marking
- aspect marking
- mood marking
- person marking (including agreement⁹⁸ and cross-reference)
- illocutionary force (indicative or declarative marking)

The nominal categories included in Table 6.2 are:

- determiner expression
- case/adposition marking

Number and gender/class marking are not systematically taken into account, because these categories are very infrequently attested in the DCs of the sample languages⁹⁹.

For each DC it is determined which verbal and nominal categories are expressed (indicated with a ‘+’ in Table 6.2) or not expressed (indicated with a ‘-’ in Table 2). An empty cell means either that the category is not relevant in the language in question, or that my sources provided no information about the (non-)expression of the category. The appearance of ‘+/-’ indicates one of the following situations:

- (i) The expression of the relevant category is possible but not obligatory;

⁹⁸ Recall from Chapter 3 that agreement refers to subject agreement, whereas object agreement is documented in the column for voice-valency marking.

⁹⁹ In Appendix III I do include information about these categories, whenever relevant and available. This holds also for number/gender/class agreement on relative clause constructions.

- (ii) Some distinctions of the relevant category are retained while others are lost (as compared with the range of distinctions available in independent clauses);
- (iii) The category is expressed in some but not all of the propositional function(s) and/or specific subordination relations that can be expressed by the DC in question.

Below I will provide examples of each of these three situations. The first one is applicable to complement clauses in Guaraní. Examples (49a-b) show that this DC construction may appear either with or without a definite article.

Guaraní (Gregores & Suárez 1967:158)

(49) a. *Rey-anú [šé še-ras̃ há]*
 you-hear I I-be.sick COMP
 ‘You heard that I was sick.’

b. *ai-kwaá la [n o-ù mo?ã i há]*
 I-know ART NEG he-go MOD NEG COMP
 ‘I know that he does not intend to go.’

The second situation occurs in Hixkaryana. Nominalization constructions in this language retain three out of the seven tense distinctions that can be expressed in independent clauses (Derbyshire 1979: 25).

A clear example of the situation mentioned under (iii) above is found in Santali. In this language DCs without the indicative marker *-a* exhibit variation in the expression of TAM and person, depending on the propositional function in which they are used, as well as the particular semantic and syntactic subordination relation that they express. When the construction functions as a complement clause in subject function, it shows no subject marking, while middle voice markers and TAM can be expressed. In the function of object complement clauses, it lacks subject and tense marking, but object marking is retained. Only complements of perception predicates can express subject marking as well as all TAM distinctions. Finally, when the DC functions as a relative clause, subject marking is lost, while all TAM distinctions may be expressed.

Note further that in some cells of Table 6.2 a plus sign appears between brackets: ‘(+)’. When referring to a verbal feature, this indicates that the relevant category is expressed by means of special dependent forms, either

because the structural coding of the construction fuses with the expression of a TAM value, or because there is a special dependent/subjunctive paradigm for the expression of TAM and/or person marking. In Chapter 3 I gave some examples of these situations, as attested in Imbabura Quechua, Georgian, and Abkhaz (see examples (6), (7), and (47) of Chapter 3).

As regards nominal categories, a ‘(+)’ appears only in the column for case. This occurs when a DC is marked for oblique case when it functions as an adjunct, while in core argument function (i.e. as a subject or object complement) and/or in the function of referential modifier (i.e. as a relative clause), the case-marker is a zero-morpheme. Of course, the presence of a zero-morpheme is assumed only when it fits into a larger paradigm of overt case markers.

The coding of the arguments

As explained in Chapter 3, the parameter of argument coding has three possible values:

- (i) An argument is expressed as it would be in an independent clause (*SENT*);
- (ii) An argument is expressed in a different way than it would be in an independent clause (*ALT*);
- (iii) An argument is not expressed (\emptyset)¹⁰⁰.

A number of DC constructions display some variation in the realization of their argument(s). Despite this variation, such DCs are viewed as single constructions, as long as their structural coding remains unchanged. The selection of an argument coding strategy may depend on the propositional function in which the relevant DC appears (when it is a flexible construction) and/or on the specific semantic/syntactic characteristics of the subordination relation that it expresses. In section 6.3.3 I will discuss the repercussions of variable argument coding for the classification of DC constructions in terms of structural types.

¹⁰⁰ For examples of each of the parameter values, see Chapter 3, section 3.4.

6.3.2.2 Language data

Keeping the remarks of the previous subsection in mind, consider the data in Table 6.2 below. As in Table 6.1 above, the languages are listed in the leftmost column. The DCs appear in the second column and are named after their structural coding. The other columns display the behavioural potential of every DC in terms of the three formal parameters:

- (i) (non-)expression of verbal categories;
- (ii) (non-)expression of nominal categories;
- (iii) coding of the argument(s).

Verbal categories are abbreviated as follows: *VV* for voice and valency markers; *T*, *A*, and *M* for tense, aspect and mood marking, respectively; *P* for person marking, and *IF* for illocutionary force. Nominal categories are abbreviated as *DET* for determiners and *CASE* for case markers and adpositions. Arguments are simply labelled 1 and 2 for first and second argument.

Table 6.2: Basic data on behavioural potential of all DC constructions

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Tagalog	<i>pag-</i>	-	-	+							ALT	SENT
	<i>na/-ng</i>	+	+	+							SENT	SENT

Language	Structural coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Kharria	RDP/∅	+/-	-			-			(+)	ALT	SENT /ALT
	-na	-	-			-			(+)	ALT/∅	SENT
	-na-wala	-	-			-				∅	SENT
	-al	-	-			-				ALT	SENT
	-ker etc.	-	-			-				∅	ALT
	-ga	-	-			-				∅	SENT
	-ta + RDP	-	-			-				∅	SENT
	no	+	+			+			-	SENT	SENT
	gam-kon	+	+			+			-	SENT	SENT
	je etc.	+	+			+				SENT	SENT
	a/i etc.	+	+			+				SENT	SENT
∅	+	+			+/-				∅/SENT	∅/SENT	
Kambara	pa-	+		-	-			+/-		ALT/∅	∅/SENT
	ma-			-	-	-		+		∅	SENT
	∅ (NMLZ)			+/-	+/-			+		ALT	SENT
	wà			+	+	+				SENT	SENT
Samoaan	=ga		-	-	-			+	+	ALT	SENT /ALT
	DET (NMLZ)		-	-	-			+	+	ALT	SENT
	ona/ina		-	-	-			-	-	SENT	SENT
	-e		+	+	+			+		∅/SENT	∅/SENT
	∅		+	+	+					SENT	SENT
Guaraní	há(gwe) /∅		+			+		+/-		SENT	SENT
	va		+			+				∅/SENT	∅/SENT
	vo		+			+				SENT	SENT
Santali	∅ (no INDIC)	+/-	+/-	+/-	+/-	+/-	-		(+)	∅/SENT	∅/SENT
	-kate	+	-		-	-	-			∅	SENT
	CORREL	+	+	+	+	+/-	+/-			SENT	SENT
	mente	+	+	+	+	+	+			SENT	SENT

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Warao	<i>-kitane</i>		-			-					∅	SENT
	<i>kotai</i>		+			?					∅/SENT	∅/SENT
Quechua	<i>-j/-shka/-na</i>		(+)	+		-				+/-	∅/SENT	∅/SENT
	<i>-ngapaj</i>		-	+		-				-	∅	SENT
	<i>-chun</i>		-	+		-				-	SENT	SENT
	<i>-y</i>		-	-		-				+/-	∅	SENT
	<i>-shpa</i>		-	-		-				-	∅	SENT
	Turkish	<i>-DIK/-(y)AcAK</i>		(+)	-	-	-				+/-	ALT
<i>-mAK</i>			-	-	-	-				+/-	∅	SENT
<i>-mA</i>			-	-	-	-				+	ALT	SENT
<i>-An</i>			-	-	-	-				-	∅	SENT
<i>-(y)ArAk</i>			-	-	-	-				-	∅	SENT
<i>-(y)A...-(y)A</i>			-	-	-	-				-	∅	SENT
<i>ki</i>			+	+	+	+				-	∅/SENT	SENT
<i>diye</i>			+	+	+	+				-	SENT	SENT
<i>∅</i>			+	+	+	+				-	SENT	SENT
Kayardild		<i>-n-</i>		-	-	-						ALT/∅
	<i>-Thirri-n</i>		-	-	-						ALT	SENT
	<i>-n-garrba</i>		-	-	-						∅/SENT	∅/SENT
	<i>-ntha</i>		+	+	+						SENT	SENT
	<i>∅</i>		+	+	+						∅/SENT	SENT
Paiwan	<i>tu(a)/tjai</i>		+	+							SENT	SENT
	<i>a</i>		+	+							∅/SENT	∅/SENT
	<i>a parhu</i>		+	+							SENT	SENT
	<i>(-)in- [...] -an + a</i>		-	(+)							∅	∅

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Ma'di	-lē										ALT/∅	∅/SENT
	-dʒo										ALT/∅	SENT
	-ka										ALT/∅	SENT
	-rē/-bá										∅	SENT
	∅										SENT	SENT
	-zī+ sī		-								∅	SENT
Gooni-yandi	-woo		-	+	-	-				+	∅	SENT
	-wadda		-	+	-	-				-	∅	SENT
	-mawoo		-	+	-	-				-	∅	SENT
	-bari		-	+	-	-				-	∅	SENT
	-ya/ -gowaaya		-	+	-	-				-	∅	SENT
	∅ (+RSP)		+	+	+	+				-	∅/SENT	∅/SENT
Hungarian	-ni	+	-	+	-	+/-				-	ALT/∅	SENT
	-ás/-és		-	-	-	-				+	ALT	ALT
	-ó		(+)	(+)	-	-					∅	SENT
	-ótt		(+)	(+)	-	-					ALT/ ∅	∅
	-andó/ -endó		-	(+)	-	-					∅/SENT	∅/SENT
	-vá/-vé		-	(+)	-	-					∅	SENT
	-vén		-	(+)	-	-					∅	SENT
	hogy (etc.)		+	+	+	+				+/-	SENT	SENT
	úgy (a-) hogy		+	+	+	+				+	SENT	SENT
RELPRON		+	+	+	+				+	SENT	SENT	
Japanese	no/mono etc.		+							+	ALT/ SENT	SENT
	∅ (RSP)		+								ALT/ SENT/∅	∅/SENT
	-te/-de/ -ite		-								∅	SENT
	-i/-∅		-								∅	SENT

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Hmong Njua	<i>qhov</i>										SENT	SENT
	<i>kuam/ (has)tas</i>										SENT	SENT
	\emptyset										SENT	SENT
	<i>kws</i>										\emptyset /SENT	\emptyset /SENT
Lango	<i>-(kk)ò</i>	+		-		-					ALT/ \emptyset	SENT
	<i>nî</i>	+		+		+					SENT	SENT
	<i>à-mê</i>			+		+					\emptyset /SENT	\emptyset /SENT
Ket	\emptyset (bare INF)		-		-	-			+/-		ALT/ \emptyset	ALT
	\emptyset		+		+	+					SENT	SENT
	<i>eta qor'a</i>		+		+	+					SENT	SENT
	<i>ásqà</i>		+		+	+					SENT	SENT
	<i>-PROSEC</i>		+		+	+					SENT	SENT
	<i>REL.PRON</i>		+		+	+					\emptyset /SENT	\emptyset /SENT
	<i>-s/-bes</i>		+		+	+					SENT	SENT
Itelmen	INF (various forms)	-	-	-	-	-					\emptyset	SENT
	\emptyset	+	+	+	+	+					SENT	SENT
	<i>min</i>	+	+	+	+	+					\emptyset /SENT	\emptyset /SENT
	<i>quatz</i>	+	+	+	+	+					SENT	SENT
Koasati	NMLZ (various forms)	+	-	-	-	-	-		-		\emptyset	SENT
	<i>-.sáya</i>		(+)	-	-	(+)	-		+		\emptyset /SENT	\emptyset /SENT
	<i>-.yólli</i>		-	(+)	-	(+)	-		+		\emptyset /SENT	\emptyset /SENT
	<i>-.ka</i>		(+)	-	-	(+)	-		+		\emptyset /SENT	\emptyset /SENT
	<i>-.kitta</i>		-	(+)	-	(+)	-		+		\emptyset /SENT	\emptyset /SENT
	<i>-laho: li:sáya</i>		(+)	-	-	(+)	-		+		\emptyset /SENT	\emptyset /SENT
	<i>-n</i>		-	-	-	-	-		-		SENT	SENT
	<i>-k</i>		-	-	-	-	-		-		\emptyset	SENT
<i>-t</i>		-	-	-	-	-		-		\emptyset	SENT	

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Thai	∅										∅/SENT	∅/SENT
	<i>thīi</i>										∅/SENT	∅/SENT
	<i>wāa</i>										SENT	SENT
Basque	<i>-t(z)e</i>	-		-	-			+			SENT/∅	SENT/∅
	<i>-tu/-du/ -i/-∅</i>	-		-	-			+/-	(+)		SENT/∅	SENT/∅
	<i>-en</i>	+		+	+			+/-			SENT/∅	SENT/∅
	<i>-en bezala</i>	+		+	+			-	-		SENT	SENT
	<i>-(e)la</i>	+		+	+			-	(+)		SENT/∅	SENT
	<i>bait</i>	+		+	+			-			∅/SENT	∅/SENT
Abun	<i>do/∅</i>										∅/SENT	SENT
	<i>gato</i>										∅/SENT	∅/SENT
	<i>sa gato</i>										SENT	SENT
Bambara	<i>ka</i>										SENT	SENT
	<i>-le/-ne</i>	-		-	-						∅	∅
	<i>-min(u)/ -mun(u)</i>										∅/SENT	∅/SENT
	<i>-tò</i>	-		-	-						SENT	SENT
Georgian	<i>-a</i>	-		+	-	-				+	ALT	ALT
	<i>m- (-a- -el/-al))</i>	-			-	-				+	∅	ALT
	<i>-ul/-il/m- -ar/-al</i>	-			-	-				+	ALT/∅	∅
	<i>sa- (-el/ -al/r)</i>									+	∅	∅
	<i>rom</i>	+		+	+	+				-	∅/SENT	∅/SENT
	REL.PRON	+		+	+	+				+	SENT	SENT
	<i>ra</i>	+		+	+	+				-	∅/SENT	SENT
	<i>rogorc</i>	+		+	+	+				-	SENT	SENT
Bukiyip	∅				+	+					∅/SENT	SENT
	<i>(ù)li</i>				+	+					SENT	SENT
	<i>bwidouk -(u)mu</i>				+	+					SENT	SENT

Language	Structural coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Abkhaz	<i>-ra</i>	-	-	-	-	-					ALT	ALT
	-NFIN	(+)	(+)	(+)	(+)	(+)					SENT	SENT
	REL.PRON + -NFIN	(+)	(+)	(+)	(+)	(+)					Ø/SENT	Ø/SENT
	-š-+ -NFIN	(+)	(+)	(+)	(+)	(+)					SENT	SENT
Polish	<i>-nie</i>		-	-	-	-			+		ALT/Ø	ALT/ SENT
	INF (various forms)		-	-	-	-			-		Ø	SENT
	<i>-c</i>	(+)	(+)	-		-			+		Ø	SENT
	<i>-any etc.</i>	(+)	(+)	-		-			-		Ø	Ø
	(PST. PASS) PTC (various forms)	(+)	(+)	-		-			-		Ø	Ø
	PRS.PL- <i>c-</i>		-	-		-			-		Ø	SENT
	<i>że</i>		+	+		+			-		SENT	SENT
	REL.PRON <i>jak (gdy)</i> <i>by</i>		+	+		+			+		Ø/SENT	Ø/SENT
Buru- shaski	<i>-(á)as</i>	+	-	+	-	-			+/-		Ø/SENT	SENT
	<i>-im/-um/ -am</i>	+	-	+	-	-			(+)		SENT	SENT
	<i>n-STEM -(a)n</i>	+	-	+	-	-					Ø	SENT
	<i>ke/ki</i>	+	+	+	+	+					SENT	SENT
	<i>sén-/ét-</i>	+	+	+	+	+					SENT	SENT
Lavu- kaleve	<i>-e/-i</i>		-	-	-	+/-		+/-	+/-		Ø/SENT	SENT
	PERSON. SUFF		+	+	+	+			+		SENT	SENT
Alamblak	<i>-nef</i>		-			-					ALT/ SENT	ALT/ SENT
	<i>-(kfe)t</i>		-			-					ALT	ALT
	<i>ind/Ø</i>			+	+	-					Ø/SENT	Ø/SENT

Language	Structural coding	Behavioural potential										
		Verbal categories					Nominal categories		Argument expression			
		W	T	A	M	P	IF	DET	CASE	1	2	
Pipil	<i>ka(h)</i>		+			+					SENT	SENT
	<i>ne</i>		+			+					SENT	SENT
	<i>ke</i>		+			+					SENT	SENT
	<i>ke:n-aken</i>		+			+					SENT	SENT
	ADV		+			+					SENT	SENT
Wambon	<i>-e</i>	+	+		+	+					Ø/SENT	SENT
	<i>-a (+o)</i>	+	+		+	+					Ø/SENT	Ø/SENT
	Ø		-		-	-					Ø	SENT
	<i>-mo/-o</i>	+	-		-	-					Ø	SENT
	<i>ka</i>		+		+	+					SENT	SENT
Dhaa-sanac	DET (+DEM)		+	+				+			Ø/SENT	Ø/SENT
	<i>-ŋ/-an</i>		-	-				+			ALT/Ø	ALT
Berbice Dutch	<i>fu/fi/Ø</i>		-	-	-						Ø	SENT
	<i>bifi/dati/Ø</i>		+	+	+						SENT	SENT
	<i>Wh/Ø</i>		+	+	+						Ø/SENT	Ø/SENT
Babungo	<i>lāa</i>			+							SENT	SENT
	<i>fāŋ/yúu</i>			+							Ø/SENT	Ø/SENT
	<i>kí(i)/Ø</i>			-							Ø	SENT
Nama	<i>!xáís-a</i> (no INDIC)		+/-	+				-			SENT	SENT
	Ø (no INDIC)		+	+				-			Ø/SENT	Ø/SENT
	<i>-se/!ʼaa/ tsii/Ø</i> (no INDIC)		?	-				-			Ø	SENT
Hdi	<i>ká</i>					(+)					SENT	SENT
	<i>tá</i>					-					ALT	SENT
	<i>tâ</i>			(+)		+					SENT	Ø
	<i>tâ + NMLZ</i>			(+)		-					Ø	SENT
	<i>-a</i>			(+)		+					Ø	SENT

Language	Structural coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Mandarin	∅									∅/SENT	SENT
	<i>de</i>									∅	SENT
	<i>-zhe</i>									∅	SENT
Tamil	<i>-atu</i>		+	+/-	+/-	-			+	SENT	SENT
	<i>-(kk)a</i>		+			-			-	∅	SENT
	<i>-a</i>		+	+	+	-				∅/SENT	∅/SENT
Kisi	<i>(m)àà/∅</i>		+	+	+					SENT	SENT
	∅		-	-	-					∅	SENT
	<i>CL</i>		+	+	+					∅/SENT	∅/SENT
Nung	∅									∅/SENT	SENT
	<i>(tj-və)</i> (+DEM) (+FOC)									∅/SENT	∅/SENT
	<i>bət</i>									SENT	SENT
Garo	<i>in-e</i>		+	+						SENT	SENT
	<i>-a</i>		-	-					+	ALT	SENT
	<i>-a-ni</i>		-	-					+	∅	∅
	<i>-na</i>		-	-					-	∅	SENT
	<i>-kan/</i> <i>-kan-a</i>		-	-					-	∅	SENT
	<i>-gip-a</i>		-	-						ALT/∅	SENT/ ∅
	<i>-e/-e-</i> <i>min/-e-r</i>		-	-					-	∅	SENT
Krongo	<i>àní tíŋ</i>	+	+	+	+	+			-	SENT	SENT
	<i>-(t)</i>	+	+	+	-	-			+/-	ALT/∅	SENT
	<i>m-/n-</i>	+	+	+/-	-	-				ALT/∅	SENT
Hixkar- yana	<i>ni/-thi/</i> <i>-hito + ri</i>		+/-	-		-				ALT	ALT
Slave	<i>nj/∅</i>	+	+	+	+	+		-	-	SENT	SENT
	<i>gha/gú</i>	+	+	+	+	+		-	-	SENT	SENT
	<i>i/sj̃/lii</i>	+	+	+	+	+		-	-	∅/SENT	∅/SENT
	<i>gharé</i>	+	+	+	+	+		-	-	SENT	SENT

Language	Structural coding	Behavioural potential										
		Verbal categories					Nominal categories		Argument expression			
		W	T	A	M	P	IF	DET	CASE	1	2	
Nivkh	-vut/-vur		+	+	+	+	-				SENT	SENT
	∅		+	+	+		+				∅/SENT	SENT
	NFIN		+	+	+		-				∅/SENT	∅/SENT
	r/-t-ř//n		-	+	+	+/-	-				∅	SENT
Greenlandic	-niq		+		-	-			+		ALT	ALT/∅
	-ta/-sa	(+)	-		-	-			+		ALT	∅/SENT
	PTC mood		(+)	(+)	(+)	(+)			(+)		∅/SENT	∅/SENT
	CONT mood	+	(+)	(+)	(+)	(+)					∅	SENT

6.3.3 A three-way typology of DCs according to behavioural potential

6.3.3.1 Introduction

Based on the behavioural potential of all DCs presented in Table 6.2 above, these constructions can now be assigned to one of the three structural types defined in Chapter 3. The properties of the three types are briefly repeated below:

- *Type 1: Balanced constructions* (abbreviated as B)
 - All TAM distinctions and Person are expressed as in independent clauses;
 - All overt arguments are coded as in independent clauses (SENT-SENT);
 - Determiners (DET) and/or case markers/adpositions (CASE) can but need not be expressed.

- *Type 2: Deranked DCs with SENT arguments* (Abbreviated as D-SENT)
 - (Partial) non-expression of TAM distinctions and/or Person marking;
 - All overt arguments are expressed as in independent clauses (SENT-SENT);
 - DET/CASE can but need not be expressed.

- *Type 3: Deranked DCs with at least one alternatively coded argument* (Abbreviated as D-ALT)
- (Partial) non-expression of TAM distinctions and/or Person marking;
- One argument is expressed with an ALT strategy; the other one, if available/overt, is either SENT or ALT as well.
- DET/CASE are expressed (if the language has these categories).

Table 6.3 summarizes the formal characteristics of the three DC types (this table is the same as Table 3.1 and Table 4.2):

DC type		Argument expression		TAM/Person	DET/CASE
number	label	1	2		
Type 1	B	SENT/ \emptyset	SENT/ \emptyset	+	+/-
Type 2	D-SENT	SENT/ \emptyset	SENT/ \emptyset	-	+/-
Type 3	D-ALT	ALT	SENT/ALT/ \emptyset	-	+

Table 6.3: DC types and their internal formal properties

Before presenting the classification of the DCs in the sample languages (see Table 6.5, in section 6.3.3.3) some preliminary considerations are required.

6.3.3.2 Preliminary considerations

Variable argument coding

As mentioned in the previous section, and as can be seen in Table 6.2, many DC constructions display some variation in the coding of their arguments, depending on their propositional function and/or on the specific semantic/syntactic subordination relation that they express. Such cases of variable argument coding come in several types.

First, there are complement constructions that can take the form of either an infinitive or a nominalization. That is to say, the first argument of such DCs is either unexpressed under co-referentiality or, when overt, it is expressed with an ALT strategy. The second argument (if present) remains SENT in both cases. This means that, in terms of the typology in Table 6.3 above, such a DC would classify sometimes as a type 2 construction (when the first argument is \emptyset) and sometimes as a type 3 construction (when the first argument is ALT). However, since the first argument is ALT whenever

it is overtly expressed, these DCs will be assigned to the group of type 3 (D-ALT) constructions. The examples in (50) illustrate this for the *-ka* construction in Ma'di, which has an un-expressed first argument in (50a); a possessive first argument in (50b); and an object argument that is expressed as in an independent clause in (50c):

Ma'di (Blackings & Fabb 2003: 22, 21, 213)

- (50) a. *má* *ɸi* [*mū-kā*] *kōrù*
 1SG try (N)-GO-NMLZ NEG(PST)
 'I have not tried/did not try to go/going.'
- b. *Má ndrē* [*àríáŋgwá rì* *?à* *ē-dě-kā*] *rá*
 1SG see bird DEF POSS (N)-VE-fall-NMLZ AFF
 'I saw the bird's falling/fall.'
- c. *ɸ-lè* [*túbà* *sē-kā*] *dǐ?ā* *kō*
 IND-want **cigarette** (N)-smoke-NMLZ here NEG
 'Smoking is not permitted here.'

Note that this type of DC stands in contrast to constructions that are invariably infinitival. In the latter construction type the first argument *always* remains unexpressed, and therefore it is classified as type 2 (D-SENT).

A second type of DC with variable argument coding involves deranked relative clause constructions with a gap strategy: When the first argument of such a DC is gapped, the second argument (if present) remains SENT. However, when the second argument is gapped, the first argument is expressed with an ALT strategy. As in the previous case, since the first argument gets ALT coding whenever it is expressed overtly, this type of DCs is classified as type 3 (D-ALT). An example from Garo is given in (51), which shows the alternation of ALT expression (51a) and zero-expression (gapping) of the subject argument (51b):

Garo (Burling 2004: 301, 299)

- (51) a. [*mē'chik-ni* *skang-o* *den'-gip-a*] *a'-bol*
 women-GEN previously-LOC cut-PTC firewood
 'firewood that the women chopped previously'

- b. [*nok-o pi'-sa-ko nik-gip-a*] *me-tra*
 house-LOC child-ACC see-PTC woman
 'the woman who saw the child at the house'

Note that there are also deranked relative clauses with gapping that do not have the possibility of ALT coding of the first argument. Rather, whenever an argument is overt (i.e. not gapped) in such DCs, it gets SENT expression. In addition, when the relativized item is another argument than the subject or object, both core arguments are sententially expressed. Therefore, these DCs are classified as type 2: D-SENT¹⁰¹. This construction type is attested in Burushaski and Tamil. Examples from Tamil appear in (52), which show a relative clause with a gapped subject (52a), a gapped object (52b), and a gapped instrumental adjunct (52c):

Tamil (Asher 1982: 28)

- (52) a. [*vanṇaane aticc-a*] *taccan*
 carpenter-ACC beat.PST-PTC washerman
 'the washerman who beat the carpenter'
- b. [*taccan aticc-a*] *vanṇaan*
 carpenter beat.PST-PTC washerman
 'the washerman whom the carpenter beat'
- c. [*akkaa taṅkaccikki caata poott-a*] *karanṇi*
 elder.sister younger.sister-DAT rice put.PST-PTC spoon
 'The spoon with which elder sister gave rice to younger sister'

A third case of variable argument coding is found with certain types of nominal clauses, i.e. DCs that can be used as complement clauses and relative clauses. In the former function, the first argument of the DC must remain unexpressed (because of co-referentiality with the matrix clause subject), while the second argument is SENT. In the latter function, however, this type of construction expresses object relative clauses and employs a gap strategy. The first argument then gets ALT coding and the second remains unexpressed. Thus, there are two possible argument realizations depending

¹⁰¹ Of course, the same classification applies to relative clause construction in which the subject is obligatorily the relativized and gapped argument (and in which the second argument is SENT).

on the propositional function in which the DC is used: Ø-SENT in referential function and ALT-Ø in modifier function. Since the zero-coding of the subject argument is obligatory in referential function, this construction type receives a double classification in terms of behavioural potential: type 2 (D-SENT)/type 3 (D-ALT). There are only three such cases attested, namely the *pa*-construction in Kambera, which is illustrated in (53a-b), and the *lɛ*- and *dʒɔ*-constructions in Ma'di, illustrated in (54a-b) and (55a-b), respectively. In all pairs of examples the first one illustrates the complement clause function and the second the relative clause function of the DC. Note that these DC constructions, even though they receive a double classification in terms of behavioural potential, are nonetheless regarded as flexible constructions, since their structural coding is the same in both functions.

Kambera (Klamer 1998: 338, 326)

- (53) a. *Ta-pakiring* [*pa-tinu-nya* *na lau*]
 1PL.NOM-start COMP-weave-3SG.DAT ART sarong
haromu
 tomorrow
 'We will start to weave the sarong tomorrow.'

- b. *na kalembi na* [*pa-kei wà-nggu-nya*]
 ART shirt ART REL-buy use-1SG.GEN-3SG.DAT
 'the shirt that I bought'

Ma'di (Blackings & Fabb 2003: 202, 22, 207, 206)

- (54) a. *Má lɛ-ā* [*èbɪ̀ `nā-lɛ́*] *rá*
 1SG (N)want-OBJ fish N-eat-NMLZ AFF
 'I certainly want to eat fish.'

- b. *àràbià* [*ɔpɪ̀ ʔà dʒɪ̀-lɛ́*] *rɪ̀ pá nā ādɪ̀ rá.*
 car Opi POSS (N)-take-PTC DEF leg AFR deflate AFF
 'The car which Opi took certainly has a flat tyre.'

- (55) a. *ɔpɪ̀ ɛ́dɔ́* [*ʒɪ̀-dʒɔ́*] *rá*
 Opi start N-build-NMLZ AFF
 'Opi has certainly started to build it.'

- b. àdʒú [má-à ðĩ-ʒʒ] rì ʔĩ ēgwè dī
 spear 1SG-POSS N-build-PTC DEF FOC lose COM
 ‘The spear with which I killed it is lost.’

There is one more flexible DC construction, in Krongo, with a double classification Type 2/3, but it is a flexible modifier clause construction, rather than a nominal clause construction. It has already been illustrated in (35a-b) above. These examples show that the construction has an ALT-coded subject when it is used as a relative clause (35a), while in adverbial function (35b) the subject always remains unexpressed, because it must be co-referential with the subject of the matrix clause.

An isolated case of double classification concerns Japanese nominalizations. These constructions are balanced to the extent that they retain tense marking, but deranked in the sense that they can, albeit optionally, take a possessive subject argument, as is shown in (56). Because of this contradictory evidence, the construction is classified as type 1/3 (B/D-ALT).

Japanese (Lombardi Vallauri 1997: 497; Alpatov & Podlesskaya 1995: 468)

- (56) [Ano hito ga/no hon o kai-ta koto]
 that person NOM/GEN book ACC write-PAST NMLZ
 ga yoku sira-re-te iru
 NOM well know-PASS-GER be
 ‘It is well known that that person wrote a book.’

Finally, consider the so-called ‘participial mood’ construction in West Greenlandic. As Fortescue (1984: 49) notes, this construction is “fully inflectible” when used as a complement clause, while it lacks person marking when used as a relative clause, as is illustrated in (57a) and (57b), respectively. Although this DC is thus not fully finite in both functions, it is nevertheless classified as a type 1 construction.

West-Greenlandic (Fortescue 1984: 36, 49)

- (57) a. *Ilisima-vaa* [urni-ssa-giga]
 know-3SG.3SG.IND come.to-FUT-1SG.3SG.PTC
 ‘He₁ knew I would come to him₂.’

- b. *Niviarsiaq* [*kalaallisut ilinnia-lir-sug*]
 girl Greenlandic learn-begin-INTR.PTC
 ‘the/a girl who has begun learning Greenlandic.’

The balancing/deranking distinction in languages with little or no verbal inflection.

Not surprisingly, there are some cases in which the decision to classify a specific DC as a balanced or a deranked construction is empirically rather vacuous, as a result of the (near) absence of verbal inflectional categories in certain languages. This holds most obviously for isolating languages. For instance in Thai, the construction in (58) is classified as balanced by default; since there are no verbal inflectional categories that can be lost (and since no nominal categories are acquired), there is no empirical basis on which to classify the construction as deranked.

Thai (Iwasaki & Ingkaphirom 2005: 243)

- (58) *Khon* [*thii duulee*] *ni pen pen acaan la*
 person REL take.care PRT COP COP teacher INTERR
 ‘Is the person who takes care [of the students] a teacher?’

A similar situation obtains in other languages with little verbal morphology. Consider for instance Ma'di: As regards inflectional morphology, verbs in this language can only take a low-tone prefix, which in independent clauses expresses non-past tense. Dependent predicates, which are marked with one of the subordinating suffixes *kā*, *lé*, *rē*, *ba*, or *dʒɔ*, take a homophonous prefix. However, according to Blackings and Fabb (2003: 192) it is not really clear whether this is the same prefix as in independent clauses. An argument against identity of the two forms is that in dependent clauses the prefix is compatible with any tense interpretation. Moreover, when the subject in DCs with the subordinating suffixes *lé*, *dʒɔ*, and *kā* is overt, then it is coded as a possessor. On the basis of this evidence I classify these Ma'di constructions as deranked.

6.3.3.3 Language data

Keeping the above considerations in mind, the three-way DC classification on the basis of behavioural potential is represented in Table 6.4:

Table 6.4: Three-way classification of DCs

Language	Structural coding	DC type	
Tagalog	<i>pag-</i>	3	D-ALT
	<i>na/-ng</i>	1	B
Kharia	<i>RDP/∅</i>	3	D-ALT
	<i>-na</i>	3	D-ALT
	<i>-na-wala</i>	2	D-SENT
	<i>-al</i>	3	D-ALT
	<i>-ker etc.</i>	3	∅-ALT
	<i>-ga</i>	2	D-SENT
	<i>-ta + RDP</i>	2	D-SENT
	<i>no</i>	1	B
	<i>gam-kon</i>	1	B
	<i>je etc.</i>	1	B
	<i>a/i etc.</i>	1	B
	<i>∅</i>	1	B
Kambera	<i>pa-</i>	2/3	D-SENT/D-ALT
	<i>ma-</i>	2	D-SENT
	<i>∅ (NMLZ)</i>	3	D-ALT
	<i>wā</i>	1	B
Samoan	<i>=ga</i>	3	D-ALT
	<i>∅ (NMLZ)</i>	3	D-ALT
	<i>ona/ina</i>	2	D-SENT
	<i>-e</i>	1	B
	<i>∅</i>	1	B
Guarani	<i>há(gwe)/∅</i>	1	B
	<i>va</i>	1	B
	<i>vo</i>	1	B
Santali	<i>∅ (no INDIC)</i>	2	D-SENT
	<i>-kate</i>	2	D-SENT
	CORREL	1	B
	<i>mente</i>	1	B
Warao	<i>-kitane</i>	2	D-SENT
	<i>kotai</i>	1	B

Language	Structural coding	DC type	
Imbabura Quechua	<i>-j/-shka/-na</i>	2	D-SENT
	<i>-ngapaj</i>	2	D-SENT
	<i>-chun</i>	2	D-SENT
	<i>-y</i>	2	D-SENT
	<i>-shpa</i>	2	D-SENT
Turkish	<i>-DIK/-(y)AcAK</i>	3	D-ALT
	<i>-mAK</i>	2	D-SENT
	<i>-mA</i>	3	D-ALT
	<i>-An</i>	2	D-SENT
	<i>-(y)ArAk</i>	2	D-SENT
	<i>-(y)A...-(y)A</i>	2	D-SENT
	<i>ki</i>	1	B
	<i>diye</i>	1	B
	\emptyset	1	B
Kayardild	<i>-n-</i>	3	D-ALT
	<i>-Thirri-n</i>	3	D-ALT
	<i>-n-garrba</i>	2	D-SENT
	<i>-ntha</i>	1	B
	\emptyset	1	B
Paiwan	<i>tu(a)/tjai</i>	1	B
	<i>a</i>	1	B
	<i>a parhu</i>	1	B
	<i>(-)in- -an + a</i>	2	D-SENT
Ma'di	<i>-lɛ</i>	2/3	D-SENT/D-ALT
	<i>-dʒo</i>	2/3	D-SENT/D-ALT
	<i>-ka</i>	3	D-ALT
	<i>-rɛ/-bá</i>	2	D-SENT
	\emptyset	1	B
	<i>-zɸ + sɪ</i>	2	D-SENT
Gooniyandi	<i>-woo</i>	2	D-SENT
	<i>-wadda</i>	2	D-SENT
	<i>-mawoo</i>	2	D-SENT
	<i>-bari</i>	2	D-SENT
	<i>-ya/-gowaaya</i>	2	D-SENT
	\emptyset (+RSP)	1	B

Language	Structural coding	DC type	
Hungarian	<i>-ni</i>	3	D-ALT
	<i>-ás/-és</i>	3	D-ALT
	<i>-ó</i>	2	D-SENT
	<i>-ótt</i>	3	D-ALT
	<i>-andó/-endó</i>	2	D-SENT
	<i>-vá/-vé</i>	2	D-SENT
	<i>-vén</i>	2	D-SENT
	<i>(azt) hogy (etc.)</i>	1	B
	<i>ugy (a-)hogy</i>	1	B
	REL.PRON	1	B
Japanese	<i>no/mono etc.</i>	1/3	B/D-ALT
	\emptyset (RSP)	1	B/D-ALT
	<i>-te/-de/-ite</i>	2	D-SENT
	<i>-i/-\emptyset</i>	2	D-SENT
Hmong Njua	<i>qhov</i>	1	B
	<i>kuam/(has)tas</i>	1	B
	\emptyset	1	B
	<i>kws</i>	1	B
Lango	<i>-(kk)ò</i>	3	D-ALT
	<i>nî</i>	1	B
	<i>à-mè</i>	1	B
Ket	\emptyset (bare INF)	3	D-ALT
	\emptyset	1	B
	<i>eta qor'a</i>	1	B
	<i>ásqà</i>	1	B
	-PROSEC	1	B
	REL.PRON	1	B
	<i>-s/-bes</i>	1	B
Itelmen	INF (various forms)	2	D-SENT
	\emptyset	1	B
	<i>min</i>	1	B
	<i>quatz</i>	1	B

Language	Structural coding	DC type	
Koasati	NMLZ (various forms)	2	D-SENT
	<i>-:sáya</i>	2	D-SENT
	<i>-:yólli</i>	2	D-SENT
	<i>-:ka</i>	2	D-SENT
	<i>-:kitta</i>	2	D-SENT
	<i>-laho:li:sáya</i>	2	D-SENT
	<i>-n</i>	2	D-SENT
	<i>-k</i>	2	D-SENT
	<i>-t</i>	2	D-SENT
Thai	∅	1	B
	<i>thiī</i>	1	B
	<i>wâa</i>	1	B
Basque	<i>-t(z)e</i>	2	D-SENT
	<i>-tu/-du/-i/-∅</i>	2	D SENT
	<i>-en</i>	1	B
	<i>-en bezala</i>	1	B
	<i>-(e)la</i>	1	B
	<i>bait</i>	1	B
Abun	<i>do/∅</i>	1	B
	<i>gato</i>	1	B
	<i>sa gato</i>	1	B
Bambara	<i>ka</i>	1	B
	<i>-le/-ne</i>	2	D-SENT
	<i>-min(u)/-mun(u)</i>	1	B
	<i>-tò</i>	2	D-SENT
Georgian	<i>-a</i>	3	D-ALT
	<i>m- (-a-)(-el/-al))</i>	3	D-ALT
	<i>-ul/-il/m- -ar/-al</i>	3	D-ALT
	<i>sa- (-el/-al/r)</i>	2	D-SENT
	<i>rom</i>	1	B
	REL.PRON	1	B
	<i>ra</i>	1	B
	<i>rogorc</i>	1	B
Bukiyip	∅	1	B
	<i>(ú)li</i>	1	B
	<i>bwidouk -(u)mu</i>	1	B

Language	Structural coding	DC type	
Abkhaz	<i>-ra</i>	3	D-ALT
	-NFIN	1	B
	REL.PRON + -NFIN	1	B
	-š- + -NFIN	1	B
Polish	<i>-nie</i>	3	D-ALT
	INF (various forms)	2	D-SENT
	<i>-c</i>	2	D-SENT
	<i>-any</i> etc.	2	D-SENT
	(PST.PASS) PTC (various forms)	2	D-SENT
	PRS.PL- <i>c-</i>	2	D-SENT
	<i>ze</i>	1	B
	REL.PRON	1	B
<i>jak (gdy)by</i>	1	B	
Burushaski	<i>-(á)as</i>	2	D-SENT
	<i>-im/-um/-am</i>	2	D-SENT
	<i>n-STEM-(a)n</i>	2	D-SENT
	<i>ke/ki</i>	1	B
	<i>sén-/ét-</i>	1	B
Lavukaleve	<i>-e/-i</i>	2	D-SENT
	PERSON.SUFF	1	B
Alamblak	<i>-nef</i>	3	D-ALT
	<i>-(kfë)t</i>	3	D-ALT
	<i>ind/∅</i>	2	D-SENT
Pipil	<i>ka(h)</i>	1	B
	<i>ne</i>	1	B
	<i>ke</i>	1	B
	<i>ke:n-aken</i>	1	B
	ADV	1	B
Wambon	<i>-e</i>	1	B
	<i>-a (+ o)</i>	1	B
	∅	2	D-SENT
	<i>-mo/-o</i>	2	D-SENT
	<i>ka</i>	1	B
Dhaasanac	DET(+DEM)	1	B
	<i>-ŋ/-an</i>	3	D-ALT

Language	Structural coding	DC type	
Berbice Dutch Creole	<i>fu/fi/∅</i>	2	D-SENT
	<i>bifi/dati/∅</i>	1	B
	<i>Wh/∅</i>	1	B
Babungo	<i>lāa</i>	1	B
	<i>fán/yúu</i>	1	B
	<i>kì(i)/∅</i>	2	D-SENT
Nama	<i>!xáís-à</i> (no INDIC)	1	B
	<i>∅</i> (no INDIC)	1	B
	<i>-se/!’aa/tsii</i> (no INDIC)	2	D-SENT
Hdi	<i>ká</i>	1	B
	<i>tá</i>	3	D-ALT
	<i>tà</i>	1	B
	<i>tà + NMLZ</i>	2	D-SENT
	<i>-a</i>	1	B
Mandarin Chinese	<i>∅</i>	1	B
	<i>de</i>	1	B
	<i>-zhe</i>	2	D-SENT
Tamil	<i>-atu</i>	2	D-SENT
	<i>-(kk)a</i>	2	D-SENT
	<i>-a</i>	2	D-SENT
Kisi	<i>(m)àà/∅</i>	1	B
	<i>∅</i>	2	D-SENT
	<i>CL</i>	1	B
Nung	<i>∅</i>	1	B
	<i>(tj-və) (+DEM) (+FOC)</i>	1	B
	<i>bət</i>	1	B
Garó	<i>in-e</i>	1	B
	<i>-a</i>	3	D-ALT
	<i>-a-ni</i>	2	D-SENT
	<i>-na</i>	2	D-SENT
	<i>-kan/-kan-a</i>	2	D-SENT
	<i>-gip-a</i>	3	D-ALT
	<i>-e/-e-min/-e-r</i>	2	D-SENT
Krongó	<i>àní tǐj</i>	1	B
	<i>-(t)</i>	3	D-ALT
	<i>m-/n-</i>	2/3	D-SENT/D-ALT

Language	Structural coding	DC type	
Hixkaryana	<i>ni/-thi/-hito + ri</i>	3	D-ALT
Slave	<i>ni/∅</i>	1	B
	<i>gha/gú</i>	1	B
	<i>i/sji/lii</i>	1	B
	<i>gháré</i>	1	B
Nivkh	<i>-vut/-vur</i>	1	B
	<i>∅</i>	1	B
	NFIN	1	B
	<i>r/-t-ř// -n</i>	2	D-SENT
West Greenlandic	<i>-niq</i>	3	D-ALT
	<i>-ta/-sa</i>	3	D-ALT
	PTC mood	1	B
	CONT mood	1	B

6.3.4 Behavioural potential of different structural DC types

In this section, the data in Table 6.2 on the behavioural potential of the DCs in the sample languages are re-ordered in the form of three separate tables, each of which corresponds to one of the three structural DC types. In particular, Table 6.5 presents the behavioural potential of all type 1 balanced DCs; Table 6.6 presents the behavioural potential of all type 2 D-SENT DCs; and Table 6.7 presents the behavioural potential of all type 3 D-ALT DCs. Note that those DCs that received double classifications in Table 6.4 above, appear in two of the three tables below.

Table 6.5: Behavioural potential of Type 1 balanced DCs

Language	Structural Coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Tagalog	<i>na/-ng</i>	+		+							SENT	SENT
Kharia	<i>no</i>	+	+			+			-		SENT	SENT
	<i>gam-kon</i>	+	+			+			-		SENT	SENT
	<i>je</i> etc.	+	+			+					SENT	SENT
	<i>a/i</i> etc.	+	+			+					SENT	SENT
	<i>∅</i>	+	+				+/-				∅/SENT	∅/SENT
Kambara	<i>wà</i>			+	+	+					SENT	SENT

Language	Structural Coding	Behavioural potential										
		Verbal categories					Nominal categories		Argument expression			
		W	T	A	M	P	IF	DET	CASE	1	2	
Samoan	<i>-e</i>		+	+	+			+			Ø/SENT	Ø/SENT
	Ø		+	+	+						SENT	SENT
Guarani	<i>há(gwe)/</i> Ø		+			+		+/-			SENT	SENT
	<i>va</i>		+			+					Ø/SENT	Ø/SENT
	<i>vo</i>		+			+					SENT	SENT
Santali	CORREL	+	+	+	+	+/-	+/-				SENT	SENT
	<i>mente</i>	+	+	+	+	+	+				SENT	SENT
Warao	<i>kotai</i>		+			?					Ø/SENT	Ø/SENT
Turkish	<i>ki</i>		+	+	+	+			-		Ø/SENT	SENT
	<i>diye</i>		+	+	+	+			-		SENT	SENT
	Ø		+	+	+	+			-		SENT	SENT
Kayardild	<i>-ntha</i>		+	+	+						SENT	SENT
	Ø		+	+	+						Ø/SENT	SENT
Paiwan	<i>tu(a)/tjai</i>		+	+							SENT	SENT
	<i>a</i>		+	+							Ø/SENT	Ø/SENT
	<i>a parhu</i>		+	+							SENT	SENT
Ma'di	Ø										SENT	SENT
Goon-iyandi	Ø (+RSP)		+	+	+	+			-		Ø/SENT	Ø/SENT
Hungarian	<i>hogy</i> (etc.)		+	+	+	+			+/-		SENT	SENT
	RELPRON		+	+	+	+			+		SENT	SENT
	<i>ugy (a-)</i> <i>hogy</i>										SENT	SENT
Japanese	<i>no/mono</i> etc.		+						+		ALT/ SENT	SENT
	Ø (RSP)		+								SENT/Ø	SENT/Ø
Hmong Njua	<i>qhov</i>										SENT	SENT
	<i>kuam/</i> <i>(has)tas</i>										SENT	SENT
	Ø										SENT	SENT
	<i>kws</i>										Ø/SENT	Ø/SENT
Lango	<i>nî</i>	+		+		+					SENT	SENT
	<i>â-mê</i>			+		+					Ø/SENT	Ø/SENT

Language	Structural Coding	Behavioural potential									
		Verbal categories					Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2
Ket	∅		+		+	+				SENT	SENT
	<i>eta qor'a</i>		+		+	+				SENT	SENT
	<i>ásqà</i>		+		+	+				SENT	SENT
	-PROSEC		+		+	+				SENT	SENT
	REL.PRON		+		+	+				∅/SENT	∅/SENT
	<i>-s/-bes</i>		+		+	+				SENT	SENT
Itelmen	∅	+	+	+	+	+				SENT	SENT
	<i>min</i>	+	+	+	+	+				∅/SENT	∅/SENT
	<i>quatz</i>	+	+	+	+	+				SENT	SENT
Thai	∅									∅/SENT	∅/SENT
	<i>thiī</i>									∅/SENT	∅/SENT
	<i>wâa</i>									SENT	SENT
Basque	<i>-en</i>		+		+	+		+/-		∅/SENT	∅/SENT
	<i>-en bezala</i>		+		+	+				SENT	SENT
	<i>-(e)la</i>		+		+	+		- (+)		∅/SENT	SENT
	<i>bait</i>		+		+	+		-		∅/SENT	∅/SENT
Abun	<i>do/∅</i>									∅/SENT	SENT
	<i>gato</i>									∅/SENT	∅/SENT
	<i>sa gato</i>									SENT	SENT
Bambara	<i>ka</i>									SENT	SENT
	<i>-min(u)/ -mun(u)</i>									∅/SENT	∅/SENT
Georgian	<i>rom</i>		+	+	+	+			-	∅/SENT	∅/SENT
	REL.PRON		+	+	+	+			+	SENT	SENT
	<i>ra</i>		+	+	+	+			-	∅/SENT	SENT
	<i>rogorc</i>		+	+	+	+			-	SENT	SENT
Bukiyip	∅				+	+				∅/SENT	SENT
	<i>(ú)li</i>				+	+				SENT	SENT
	<i>bwidouk -(u)mu</i>				+	+				SENT	SENT
Abkhaz	-NFIN	+	+	+	+	+				SENT	SENT
	REL.PRON + -NFIN	+	+	+	+	+				∅/SENT	∅/SENT
	<i>-š- + NFIN</i>	+	+	+	+	+				SENT	SENT

Language	Structural Coding	Behavioural potential									
		Verbal categories					Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2
Polish	<i>że</i>		+	+		+			-	SENT	SENT
	REL.PRON		+	+		+			+	Ø/SENT	Ø/SENT
	<i>jak (gdy) by</i>		+	+		+				SENT	SENT
Burus-haski	<i>ke/ki</i>	+	+	+	+	+				SENT	SENT
	<i>sén-/ét-</i>	+	+	+	+	+				SENT	SENT
Lavu-kaleve	PERSON. SUFF		+	+	+	+			+	SENT	SENT
Pipil	<i>ka(h)</i>		+			+				SENT	SENT
	<i>ne</i>		+			+				SENT	SENT
	<i>ke</i>		+			+				SENT	SENT
	<i>ke:n-aken</i>		+			+				SENT	SENT
	ADV		+			+				SENT	SENT
Wambon	<i>-e</i>	+	+		+	+				Ø/SENT	SENT
	<i>-a (+o)</i>	+	+		+	+				Ø/SENT	Ø/SENT
	<i>ka</i>		+		+	+				SENT	SENT
Dhaa-sanac	DET (+DEM)		+	+				+		Ø/SENT	Ø/SENT
Berbice Dutch	<i>bifi/dati/Ø</i>		+	+	+					SENT	SENT
	<i>Wh/Ø</i>		+	+	+					Ø/SENT	Ø/SENT
Babungo	<i>lāa</i>			+						SENT	SENT
	<i>fāŋ/yúu</i>			+						Ø/SENT	Ø/SENT
Nama	<i>lxáís-à</i> (no INDIC)		+	+				-		SENT	SENT
	<i>Ø</i> (no INDIC)		+	+				-		Ø/SENT	Ø/SENT
Hdi	<i>ká</i>					(+)				SENT	SENT
	<i>tà</i>			(+)		+				SENT	Ø
	<i>-a</i>			(+)		+				Ø	SENT
Mandarin Chinese	<i>Ø</i>									Ø/SENT	SENT
	<i>de</i>									Ø	SENT
Kisi	<i>(m)àà/Ø</i>		+	+	+					SENT	SENT
	CL		+	+	+					Ø/SENT	Ø/SENT

Language	Structural Coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Nung	∅									∅/SENT	SENT
	(<i>tj-və</i>) (+DEM) (+FOC)									∅/SENT	∅/SENT
	<i>bət</i>									SENT	SENT
Garó	<i>in-e</i>		+	+						SENT	SENT
Krongo	<i>àní tíŋ</i>	+	+	+	+	+			-	SENT	SENT
Slave	<i>nj/∅</i>	+	+	+	+	+		-	-	SENT	SENT
	<i>gha/gú</i>	+	+	+	+	+		-	-	SENT	SENT
	<i>i/sj̄/lii</i>	+	+	+	+	+		-	-	SENT/∅	SENT/∅
	<i>gháré</i>	+	+	+	+	+		-	-	SENT	SENT
Nivkh	<i>-vut/-vur</i>		+	+	+	+	-			SENT	SENT
	∅		+	+	+		+			∅/SENT	SENT
	NFIN		+	+	+		-			∅/SENT	∅/SENT
West Greenlandic	PTC mood		(+)	(+)	(+)	(+)			(+)	SENT/∅	SENT/∅
	CONT mood	+	(+)	(+)	(+)	(+)				∅	SENT

Table 6.6: Behavioural potential of type 2 D-SENT DCs

Language	Structural Coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Kharia	<i>-na-wala</i>	-	-				-			∅	SENT
	<i>-ga</i>	-	-				-			∅	SENT
	<i>-ta + RDP</i>	-	-				-			∅	SENT
Kambera	<i>pa-</i>	+		-	-				+/-	∅/ALT	SENT/∅
	<i>ma-</i>			-	-	-			+	∅	SENT
Samoan	<i>ona/ina</i>		-	-	-			-	-	SENT	SENT
Santali	∅ (no INDIC)	+/-	+/-	+/-	+/-	+/-	-		(+)	∅/SENT	∅/SENT
	<i>-kate</i>	+	-		-	-	-			∅	SENT
Warao	<i>-kitane</i>		-			-				∅	SENT

Language	Structural Coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Quechua	<i>-j/-shka/-na</i>		(+)	+		-			+/-	Ø/SENT	Ø/SENT
	<i>-chun</i>		-	+		-			-	SENT	SENT
	<i>-ngapaj</i>		-	+		-			-	Ø	SENT
	<i>-y</i>		-	-		-			+/-	Ø	SENT
	<i>-shpa</i>		-	-		-			-	Ø	SENT
Kayardild	<i>-n-garrba</i>		-	-	-					SENT	SENT
Paiwan	<i>(-)in- -an</i>		-	(+)						Ø	Ø
	<i>+ a</i>										
Turkish	<i>-mAK</i>		-	-	-	-			+/-	Ø	SENT
	<i>-An</i>		-	-	-	-			-	Ø	SENT
	<i>-(y)ArAk</i>		-	-	-	-			-	Ø	SENT
	<i>-(y)A... -(y)A</i>		-	-	-	-			-	Ø	SENT
Ma'di	<i>-lɛ</i>									Ø/ALT	Ø/SENT
	<i>-dʒo</i>									Ø/ALT	SENT
	<i>-rɛ/-bá</i>									Ø	SENT
	<i>-zɪ + sɪ</i>		-							Ø	SENT
Gooni-yandi	<i>-woo</i>		-	+	-	-			+	Ø	SENT
	<i>-wadda</i>		-	+	-	-			-	Ø	SENT
	<i>-mawoo</i>		-	+	-	-			-	Ø	SENT
	<i>-bari</i>		-	+	-	-			-	Ø	SENT
	<i>-ya/ -gowaaya</i>		-	+	-	-			-	Ø	SENT
Hungarian	<i>-ó</i>		(+)	(+)	-	-				Ø	SENT
	<i>-andó/ -endó</i>		-	(+)	-	-				Ø/SENT	Ø/SENT
	<i>-vá/-vé</i>		-	(+)	-	-				Ø	SENT
	<i>-vén</i>		-	(+)	-	-				Ø	SENT
Japanese	<i>-te/-de/ -ite</i>		-							Ø	SENT
	<i>-i/-Ø</i>		-							Ø	SENT
Itelmen	INF (various forms)	-	-	-	-	-				Ø	SENT

Language	Structural Coding	Behavioural potential									
		Verbal categories						Nominal categories		Argument expression	
		W	T	A	M	P	IF	DET	CASE	1	2
Koasati	NMLZ (various forms)	+	-	-	-	-	-		-	∅	SENT
	-:sáya		(+)	-	-	(+)	-		+	∅/SENT	∅/SENT
	-:yólli		-	(+)	-	(+)	-		+	∅/SENT	∅/SENT
	-:ka		(+)	-	-	(+)	-		+	∅/SENT	∅/SENT
	-:kítta		-	(+)	-	(+)	-		+	∅/SENT	∅/SENT
	-laho:li: sáya		(+)	-	-	(+)	-		+	∅/SENT	∅/SENT
	-n		-	-	-	-	-		-	SENT	SENT
	-k		-	-	-	-	-		-	∅	SENT
-t		-	-	-	-	-		-	∅	SENT	
Basque	-t(z)e		-		-	-		+		SENT	SENT
	-tu/-du/ -i/-∅		-		-	-		+/-	(+)	∅/SENT	∅/SENT
Bambara	-le/-ne		-	-	-					∅/SENT	
	-tò		-	-	-					SENT	SENT
Georgian	sa- (-el/ -al/r)							+		∅	∅
Polish	INF (various forms)		-	-	-	-			-	∅	SENT
	-c	(+)	(+)	-		-			+	∅	SENT
	-any etc.	(+)	(+)	-		-			-	∅	∅
	(PST. PASS) PTC (various forms)	(+)	(+)	-		-			-	∅	∅
	PRS.PL-c-		-	-		-			-	∅	SENT
Buru-shaski	-(á)as	+	-	+	-	-			+/-	∅/SENT	SENT
	-im/-um/ -am	+	-	+	-	-			(+)	SENT	SENT
	n-STEM -(a)n	+	-	+	-	-				∅	SENT
Lavu-kaleve	-e/-i		-	-	-	-		+/-	+/-	∅/SENT	SENT

Language	Structural Coding	Behavioural potential										
		Verbal categories						Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2	
Alamblak	<i>ind/∅</i>			+	+	-					∅/SENT	∅/SENT
Wambon	<i>∅</i>		-		-	-					∅	SENT
	<i>-mo/-o</i>	+	-		-	-					∅	SENT
Berbice Dutch	<i>fu/fi/∅</i>		-	-	-						∅	SENT
Babungo	<i>kɨ(i)/∅</i>			-							∅	SENT
Nama	<i>-se/'aa/tsii/</i>		+/-	+/-			-				∅	SENT
Hdi	<i>tâ + NMLZ</i>			(+)		-					∅	SENT
Mandarin C.	<i>-zhe</i>										∅	SENT
Tamil	<i>-atu</i>		+	+/-	+/-	-			+		SENT	SENT
	<i>-(kk)a</i>		+			-			-		∅	SENT
	<i>-a</i>		+	+	+	-					∅/SENT	∅/SENT
Kisi	<i>∅</i>		-	-	-						∅	SENT
Garo	<i>-a-ni</i>		-	-					+		∅	∅
	<i>-na</i>		-	-					-		∅	SENT
	<i>-kan/ -kan-a</i>		-	-					-		∅	SENT
	<i>-e/-e-min /-e-r</i>		-	-					-		∅	SENT
Krongo	<i>m-/n-</i>	+	+	+/-	-	-					∅/ALT	SENT
Nivkh	<i>r/-t-ř// -n</i>		-	+	+	+/-	-				∅	SENT

Table 6.7: Behavioural potential of type 3 D-ALT DCs

Language	Structural Coding	Behavioural potential										
		Verbal categories					Nominal categories		Argument expression			
		W	T	A	M	P	IF	DET	CASE	1	2	
Tagalog	<i>pag-</i>	-	-	+							ALT	SENT
Kharia	<i>RDP/∅</i>	+/-	-			-			+		ALT	SENT /ALT
	<i>-na</i>	-	-			-			+		ALT	SENT
	<i>-al</i>	-	-			-					ALT	SENT
	<i>-ker etc.</i>	-	-			-					∅	ALT
Kambera	<i>pa-</i>	+		-	-			+/-	(+)		∅/ALT	SENT/∅
	<i>∅ (NMLZ)</i>			+/-	+/-			+			ALT	SENT
Samoan	<i>=ga</i>		-	-	-			+	+		ALT	SENT/ALT
	<i>∅ (NMLZ)</i>		-	-	-			+	+		ALT	SENT
Turkish	<i>-DIK/-(y)AcAK</i>		(+)	-	-	-			+/-		ALT	SENT
	<i>-mA</i>		-	-	-	-			+		ALT	SENT
Kayardild	<i>-n-</i>		-	-	-						ALT	ALT
	<i>-Thirri-n</i>		-	-	-						ALT	SENT
Ma'di	<i>-lɛ</i>										∅/ALT	SENT/∅ (OBL)
	<i>-dʒo</i>										∅/ALT	SENT
	<i>-ka</i>										ALT	SENT
Hungarian	<i>-ás/-és</i>		-	-	-	-			+		ALT	ALT
	<i>-ni</i>	+	-	+	-	+/-			-		∅/ALT	SENT
	<i>-ótt</i>		(+)	(+)	-	-					ALT	∅
Japanese	<i>no/mono etc.</i>		+						+		ALT/SENT	SENT
	<i>∅ (RSP)</i>		+								ALT/SENT/∅	SENT/∅
Lango	<i>-(kk)ɔ̃</i>	+		-	-						∅/ALT	SENT
Ket	<i>∅ (bare INF)</i>		-		-	-			+/-		∅/ALT	ALT

Language	Structural Coding	Behavioural potential									
		Verbal categories					Nominal categories		Argument expression		
		W	T	A	M	P	IF	DET	CASE	1	2
Georgian	<i>-a</i>		-	+	-	-			+	ALT	ALT
	<i>m- (-a-)</i> <i>(-el/-al)</i>		-		-	-			+	∅	ALT
	<i>-ul/-il/m-</i> <i>-ar/-al</i>		-		-	-			+	ALT/∅	∅/ALT
Abkhaz	<i>-ra</i>	-	-	-	-	-				ALT	ALT
Polish	<i>-nie</i>		-	-	-	-			+	∅/ALT	ALT/SENT
Alamblak	<i>-nef</i>		-			-				ALT/SENT	ALT/SENT
	<i>-(kfë)t</i>		-			-				ALT	ALT
Dhaasanac	<i>-n/-an</i>		-	-				+		∅/ALT	ALT
Hdi	<i>tá</i>					-				ALT	SENT
Garo	<i>-a</i>		-	-					+	ALT	SENT
	<i>-gip-a</i>		-	-						ALT/∅	SENT/∅
Krongo	<i>-(t)</i>	+	+	+	-	-			(+)	ALT/∅	SENT
	<i>m/-n-</i>	+	+	+/-	-	-				ALT/∅	SENT
Hixkaryana	<i>ni/-thi/-</i> <i>-hito + ri</i>		+/-	-		-				ALT	ALT
W. Greenlandic	<i>-niq</i>		+		-	-			+	ALT	ALT
	<i>-ta/-sa</i>	(+)	-		-	-			+	∅/ALT	∅/SENT

6.4 An integrated DC typology: Functional possibilities of three structural DC types

In this section, the typologies developed in sections 6.2 and 6.3 are integrated. Below, the functional possibilities of the DCs in the sample languages are presented in three separate tables, one for each of the structural DC types. The functional distribution of type 1 balanced clauses is presented in Table 6.8; the functional distribution of type 2 D-SENT DCs in Table 6.9; and the functional distribution of type 3 D-ALT DCs in Table 6.10.

Table 6.8: Functional possibilities of type 1 balanced DCs

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Tagalog	<i>na/-ng</i>		+	+	+
Kharia	<i>no</i>		+		
	<i>gam-kon</i>		+		
	<i>je</i> etc.			+	
	<i>a/i</i> etc.			+	
	∅			+	
Kambera	<i>wà</i>		+		
Samoan	<i>-e</i>			+	
	∅		+	+	
Guarani	<i>há(geu)/∅</i>		+		
	<i>va</i>			+	
	<i>vo</i>				+
Santali	CORREL			+	
	<i>mente</i>		+		
Warao	<i>kotai</i>			+	
Turkish	<i>ki</i>		+	+	
	<i>diye</i>		+		
	∅		+		
Kayardild	<i>-ntha</i>		+	+	
	∅			+	
Paiwan	<i>tu(a)/tjai</i>		+		
	<i>a</i>		+	+	
	<i>a parhu</i>				+
Ma'di	∅		+		
Gooniyandi	∅ (+RSP)		+	+	+
Hungarian	<i>hogy</i> (etc.)		+		
	REL.PRON			+	
	<i>úgy (-a-hogy)</i>				+
Japanese	<i>no/mono</i> etc.		+		
	∅ (RSP)			+	
Hmong Njua	<i>qhov</i>		+		
	<i>kuam/(has)tas</i>		+		
	∅		+		
	<i>kws</i>			+	

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Lango	<i>nî</i>		+		
	<i>à-mè</i>			+	
Ket	∅		+	+	
	<i>eta qor'a</i>				+
	<i>ásqâ</i>				+
	-PROSEC				
	REL.PRON			+	
	<i>-s/-bes</i>			+	
Itelmen	∅		+		
	<i>min</i>			+	
	<i>quatz</i>				+
Thai	∅		+	+	
	<i>thiî</i>		+	+	
	<i>wâa</i>		+		
Basque	<i>-en</i>		+	+	
	<i>-en bezala</i>				+
	<i>-(e)la</i>		+		(+)
	<i>bait</i>		+	+	
Abun	<i>do/∅</i>		+		
	<i>gato</i>			+	
	<i>sa gato</i>				+
Bambara	<i>ka</i>		+		
	<i>-min(u)/-mun(u)</i>			+	
Georgian	<i>rom</i>		+	+	
	REL.PRON			+	
	<i>ra</i>				+
	<i>rogorc</i>				+
Bukiyip	∅		+		
	<i>(ú)li</i>			+	
	<i>bwidouk -(u)mu</i>				+
Polish	<i>że</i>		+		
	REL.PRON			+	
	<i>jak (gdy)by</i>				+

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Abkhaz	-NFIN		+		
	REL.PRON + -NFIN			+	
	-š- + -NFIN				+
Burushaski	<i>ke/ki</i>		+	+	+
	<i>sén-/ét-</i>		+		
Lavukaleve	PERSON.SUFF			+	
Pipil	<i>ka(h)</i>		+	+	
	<i>ne</i>			+	
	<i>ke</i>			+	
	<i>ke:n-aken</i>				+
	ADV				+
Wambon	<i>-e</i>		+		
	<i>-a (+ o)</i>			+	
	<i>ka</i>				+
Dhaasanac	DET(+DEM)		+	+	
Berbice Dutch	<i>bifí/dati/∅</i>		+		
	<i>Wh/∅</i>			+	
Babungo	<i>lāa</i>		+		
	<i>fāŋ/yúu</i>			+	+
Nama	<i>!xáís-à</i> (no INDIC)		+		
	<i>∅</i> (no INDIC) (RSP)			+	
Mandarin Chinese	<i>∅</i>		+	+	+
	<i>de</i>			+	+
Kisi	<i>(m)àà/∅</i>		+		
	<i>CL</i>			+	
Nung	<i>∅</i>		+	+	+
	<i>(tj-və)</i> (+DEM) (+FOC)			+	
	<i>bət</i>				+
Garó	<i>in-e</i>		+		
Krongo	<i>àní tíŋ</i>		+		
Slave	<i>ŋi/∅</i>		+	+	
	<i>gha/gú</i>		+		
	<i>i/sjī/lii</i>			+	
	<i>gháré</i>				+

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Nivkh	<i>-vut/-vur</i>		+		
	∅		+		
	NFIN			+	
West Greenlandic	PTC mood		+	+	
	CONT mood		+		+

Table 6.9: Functional possibilities of type 2 D-SENTDCs

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Kharia	<i>-na-wala</i>			+	
	<i>-ga</i>				+
	<i>-ta + RDP</i>				+
Kambera	<i>pa-</i>		+	+	
	<i>ma-</i>			+	
Samoan	<i>ona/ina</i>		+		
Santali	∅ (no INDIC)		+	+	
	<i>-kate</i>				+
Warao	<i>-kitane</i>		+		
Quechua	<i>-j/-shka/-na</i>		+	+	
	<i>-chun</i>		+		
	<i>-ngapaj</i>		+		
	<i>-y</i>		+		RDP
	<i>-shpa</i>				+
Kayardild	<i>-n-garrba</i>			+	
Paiwan	<i>(-)in- -an + a</i>			+	
Turkish	<i>-mAK</i>		+		
	<i>-An</i>			+	
	<i>-(y)ArAk</i>				+
	<i>-(y)A...-(y)A</i>				+
Ma'di	<i>-lĕ</i>		+	+	
	<i>-dʒo</i>		+	+	
	<i>-reĕ/-bá</i>			+	
	<i>-zĕ + sĭ</i>				+

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Gooniyandi	<i>-woo</i>		+		
	<i>-wadda</i>				+
	<i>-mawoo</i>				+
	<i>-bari</i>				+
	<i>-ya/-gowaaya</i>				+
Hungarian	<i>-ó</i>			+	
	<i>-andó/-endó</i>			+	
	<i>-vá/-vé</i>				+
	<i>-vén</i>				+
Japanese	<i>-te/-de/-ite</i>				+
	<i>-i/-∅</i>				+
Itelmen	INF (various forms)		+		
Koasati	NMLZ (various forms)		+		
	<i>:-sáya</i>			+	
	<i>:-yólli</i>			+	
	<i>:-ka</i>			+	
	<i>:-kitta</i>			+	
	<i>-laho:li:sáya</i>			+	
	<i>-n</i>				+
	<i>-k</i>				+
Basque	<i>-t(z)e</i>		+		
	<i>-tu/-du/-i/-∅</i>		+		
Bambara	<i>-le/-ne</i>			+	
	<i>-tò</i>				+
Georgian	<i>sa- (-el/-al/r)</i>			+	
Polish	INF (various forms)		+		
	<i>-c</i>			+	
	<i>-any</i> etc.			+	
	(PST.PASS) PTC (various forms)			+	
	PRS.PL- <i>c-</i>				+
Burushaski	<i>-á(as)</i>		+	+	
	<i>-im/-um/-am</i>			+	
	<i>n-STEM-(a)n</i>				+

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Lavukaleve	<i>-e/-i</i>		+		
Alamblak	<i>ind/∅</i>			+	
Wambon	<i>∅</i>				+
	<i>-mo/-o</i>				+
Berbice Dutch	<i>fu/fi/∅</i>		+		
Babungo	<i>kɨ(i)/∅</i>				+
Nama	<i>-se/'aa/tsii</i> no INDIC				+
Hdi	<i>tâ + NMLZ</i>			+	
Mandarin C.	<i>-zhe</i>				+
Tamil	<i>-atu</i>		+		
	<i>-(kk)a</i>		+		
	<i>-a</i>			+	
Kisi	<i>∅</i>		+		
Garo	<i>-a-ni</i>		+		
	<i>-na</i>		+		
	<i>-kan/-kan-a</i>		+		
	<i>-e/-e-min/-e-r</i>				+
Krongo	<i>-(t)</i>		+		
	<i>m-/n-</i>			+	+
Nivkh	<i>r/-t-ř// -n</i>				+

Table 6.ro: Functional possibilities of type 3 D-ALT DCs

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Tagalog	<i>pag-</i>	?	+	+	+
Kharia	<i>RDP/∅</i>	+	+	+	+
	<i>-na</i>		+	+	+
	<i>-al</i>			+	
	<i>-ker etc.</i>			+	
Kambera	<i>pa-</i>		+	+	
	<i>∅ (NMLZ)</i>		+		
Samoan	<i>=ga</i>		+		
	<i>∅ (NMLZ)</i>		+		

Language	Structural Coding	Functional possibilities			
		Pred Head	Ref Head	Ref Mod	Pred Mod
Turkish	<i>-DIK/-(y)AcAK</i>		+	+	
	<i>-mA</i>		+		
Kayardild	<i>-Thirri-n</i>			+	
	<i>-n-</i>		+	+	+
Ma'di	<i>-lĕ</i>		+	+	
	<i>-dʒo</i>		+	+	
	<i>-ka</i>		+		
Hungarian	<i>-ás/-és</i>		+		
	<i>-ni</i>		+		
	<i>-ótt</i>			+	
Japanese	<i>no/mono etc.</i>		+		
	\emptyset (RSP)			+	
Lango	<i>-(kk)ò</i>		+		
Ket	\emptyset (bare INF)		+	+	
Georgian	<i>-a</i>		+		
	<i>m- (-a-)(-el/-al)</i>			+	
	<i>-ul/-il/m- -ar/-al</i>			+	
Abkhaz	<i>-ra</i>		+		
Polish	<i>-nie</i>		+		
Alamblak	<i>-nef</i>		+		
	<i>-(kfĕ)t</i>		+		
Dhaasanac	<i>-ŋ/-an</i>		+		
Hdi	<i>tá</i>		+	+	
Garo	<i>-a</i>		+		
	<i>-gip-a</i>			+	
Krongo	<i>-(t)</i>		+		
	<i>m-/n-</i>			+	+
West Greenlandic	<i>-niq</i>		+		
	<i>-ta/-sa</i>			+	

6.5 Summary, outlook

In this chapter, the dependent clause constructions of the sample languages were identified on the basis of their structural coding and classified in two ways: according to their functional possibilities (section 6.2) and according to their behavioural potential (section 6.3). These two typologies were then presented in an integrated fashion in section 6.4.

In Chapter 7, the DC typology presented in the present chapter and the PoS typology presented in Chapter 5 are combined in order to investigate dependency relations between the functional possibilities of PoS classes and of different structural types of DC constructions in the sample languages.