On the typology of Lower Central American languages

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Abstract

A representative sample of languages of Lower Central America is typologized by a set of grammatical traits. Of these, the basic branching direction and head- vs. dependent-marking strategy turn out to correlate in this area and, thus, to constitute opposite polar types. The languages exhibiting right-branching serialization combined with head marking are mainly found in Upper Central America. The languages exhibiting left-branching serialization combined with dependent marking are mainly found in the southeastern end of Central America. Languages combining features of the polar types are in the area between the poles.

1   Introduction

The classification of the languages of a certain geographical region by properties of their system can lead to useful generalizations over these languages. A set of languages sharing a set of features may be a genealogical family, an area of linguistic contact or may simply be instantiating universal connections among linguistic features. In the following, the task of applying such a classification will be undertaken for a sample of languages spoken in Central America. With the exception of data on Cabecar, this investigation is based on secondary and tertiary sources. The tertiary sources dedicated to related questions include Constenla 1991, Quesada 2007 and Quesada & Skopeteas 2017. The last-mentioned work, in particular, although as yet unpublished, is dedicated to very similar questions as the present article, and the latter has profited much from the former.

## 2   Object of study

2.1   Delimitation of the area

The delimitation of Central America for purposes of linguistic typology is not a trivial matter. In common usage, Central America is a geopolitical rather than a cultural and linguistic notion. In the geopolitical perspective, it is simply the region between North America and South America, where North America is taken to include Mexico. The northwestern border of Central America therefore is the border between Mexico on one side and Belize and Guatemala on the other. Its southeastern border coincides with the political border between Panamá and Colombia.

However, Amerindian cultures and languages are not distributed in space according to political borders set in colonial times. Instead, two cultural and linguistic areas cross-cut the geographical space thus identified:

- **Mesoamerica** covers essentially the southeastern part of Mexico, Belize, Guatemala, El Salvador and some northern and western parts of Honduras and Nicaragua. In addition to several language families located in Mexico, Mesoamerica thus properly includes all of the Mayan area.
- The **Intermediate Area** (Constenla 1991) starts in the northwest where Mesoamerica ends. With considerable simplification, the border between the two areas takes southeast-wards course from the Guatemaltecan Caribbean through Honduras and Nicaragua down to the Pacific in the east of Nicoya (Carmack 1994:43). In the southeast, the Intermediate Area ends in the northwestern part of South America. It borders on the Andean area in the south and on the Amazonian area in the southeast.

This division between the two cultural areas is displayed in the following map (from Constenla 1991:4):

Diagram 1   Borders of Mesoamerica and the Intermediate Area
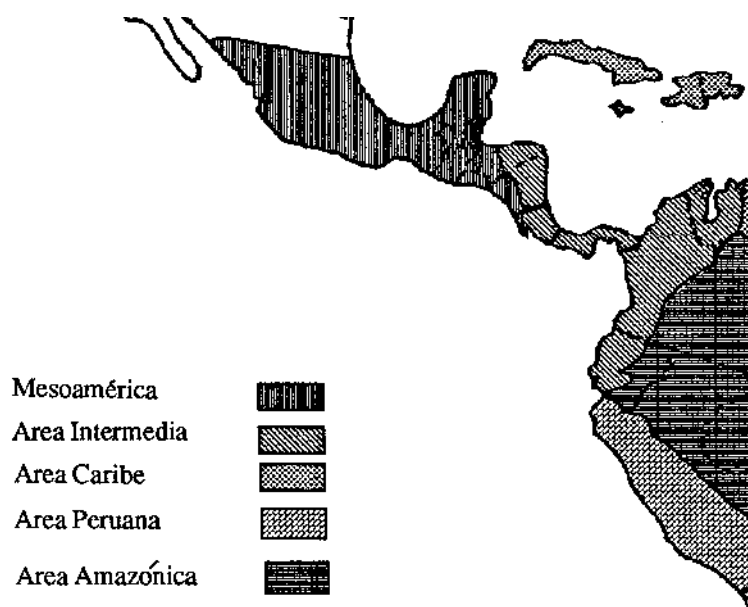
Given these incommensurable definitions, a decision has to be taken on the cultural and linguistic borders of Central America. For the southeastern delimitation, South America is excluded, but languages and cultures of the Intermediate Area spoken across the border, i.e. essentially languages of the Chocó family, are included. For the northwestern delimitation, an option is to exclude Mesoamerica. The part of Central America excluding Mesoamerica is then conventionally called Lower Central America. However, as indicated above, its north-western border is ill-defined. For present practical purposes, the area considered will essentially end in the northwest on the border between Guatemala on one side and Honduras and El Salvador, on the other. As one exception to this geopolitical delimitation, Xinca in southeast Guatemala will be included because it used to be spoken in El Salvador, too. The area covered here is, thus, essentially the one represented in the following map (from UNICEF 2009: 738, with Xinca added):

Diagram 2   Languages and language families of Lower Central America
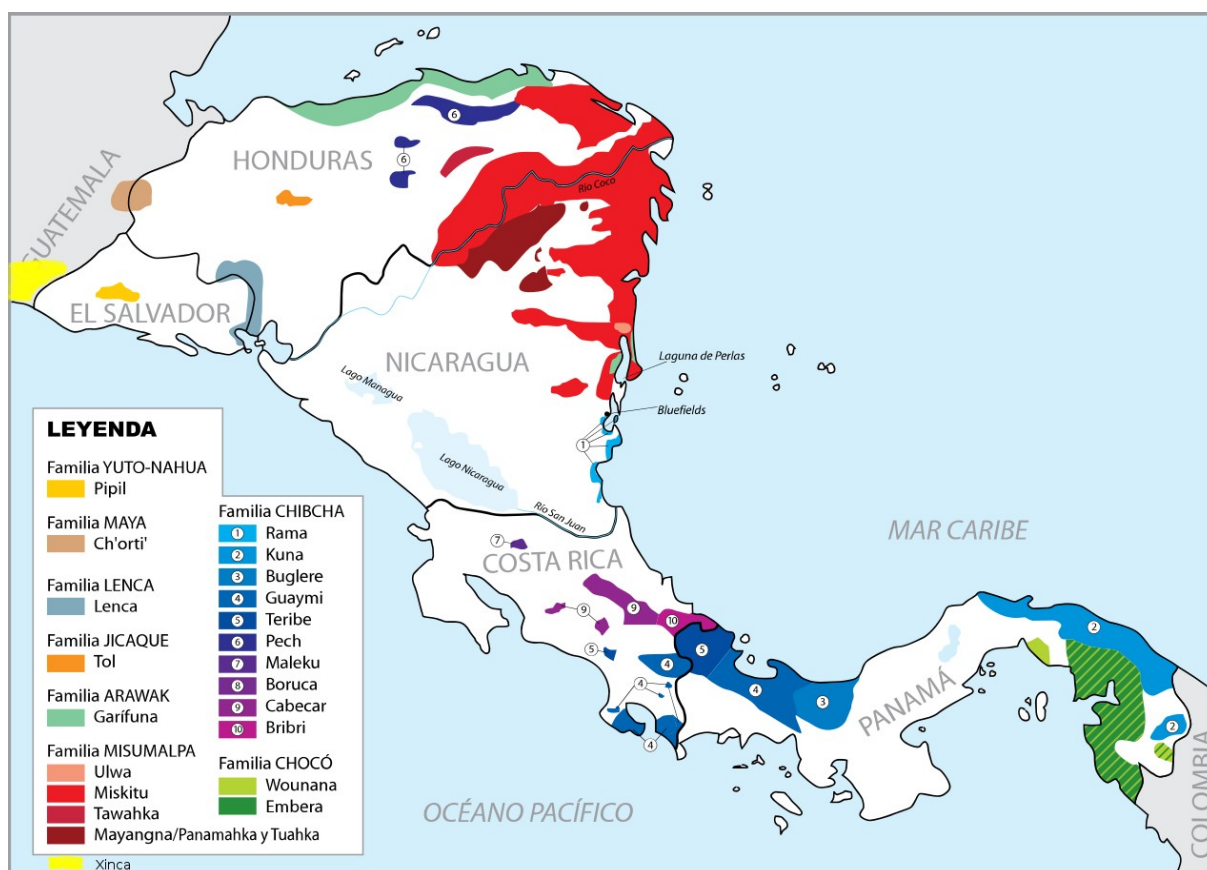
The decision to exclude Upper Central America amounts to the exclusion of two large lan-guage families: both the Mayan family and the Nahua branch of Uto-Aztecan are excluded, with the exception of their two members spoken in the area here considered, viz. Ch'orti' and Nawat, resp. In terms of linguistic typology, however, this exclusion has no dramatic effects, since both of these families are very homogeneous typologically and are sufficiently repre-sented by the individual members included here.

2.2   Languages and language families of Central America

For the typological comparison to be executed, a sample of Central American languages has been formed such that each of the genetic groups represented in the area would be represented in the sample. For those families which have only one sufficiently documented language in the area, no further choice had to be taken. For the well-represented and well-documented families, I have chosen one or a few languages, avoiding the overrepresentation of typologi-cally homogeneous families in the sample and lumping very similar varieties like the Creole languages together into one language. Also, the two Chocó languages spoken in the area will be taken together.

The following is a very brief survey of the languages included in the typology. Of those language families comprising members inside and outside Central America, only the former members will be considered.

Uto-Aztecan: Of this large family, one language of the Nahua branch, viz. Nawat (or Pipil) is relevant. It is spoken in eastern El Salvador (Campbell 1985). The speech community immigrated from Mesoamerica in pre-Colombian times.

Mayan: One member of the Ch'olan branch of this large family, viz. Ch'orti', is spoken on the border between Guatemala and Honduras.

Arawak: One member of this family, Garífuna, is spoken on the Caribbean coast of Honduras and in a small exclave in the east of Nicaragua. The speech community immigrated from the Lesser Antilles to the mainland in the late 18th century (Haurholm-Larsen 2016, Quesada 2017).

Xincan: The family is almost extinct. Its last member, Xinca, barely survives in southeast Guatemala (Sachse 1972).

Otomangue: Some members of the Tlapaneco-Manguean branch migrated from Mesoamerica southeastwards. These languages are extinct. One of them, Chorotega, was last spoken in Nicoya (Quirós Rodriguez 1999). Its documentation is too fragmentary to be sure of anything.

Creole languages: Speakers of the English-based Jamaican creole emigrated and settled along the Atlantic coast of Central America in several waves between the late seventeenth and the late nineteenth century, producing the five closely related dialects considered here (Zúñiga Argüello 2017).

Hokan: Speakers of languages of the Jicaquean branch (Oltrogge 1977) emigrated from Mesoamerica southeastwards in pre-Colombian times. One of these, Tol (sometimes called Jicaque, but ≠ Western Jicaque), is yet spoken in northern central Honduras (Holt 1997).

The **Lenmichi** (or Macro-Chibchan) phylum (Constenla Umaña 2002) consists of three families, viz. Lencan, Misumalpan and Chibchan, all of which are represented in the sample:

Lencan: The two languages known were spoken in southern Honduras (Herranz 1987) and eastern El Salvador (Campbell 1976). They are now extinct and insufficently documented.

Misumalpan: This family is autochthonous in Central America and yet spoken in the northeastern part of Nicaragua, the bordering region of Honduras and a small area on the border between Honduras and El Salvador. Of these, three languages are here considered, all spoken in the easternmost parts, including the Caribbean coast, of Honduras and Nicaragua: Miskito, constituting a subbranch of its own (Salamanca 2008); and of the Sumalpan branch, the Ulwa language (Green 1999) and Sumu proper, i.e. the Twahka and Panamahka varieties (Norwood 1997).

Chibchan: Of the 23 languages of the family, spoken over a vast area stretching from northern Honduras to northern Colombia (Quesada 2017), Cabecar, a language spoken in southeastern regions of Costa Rica (González & Lehmann 2017), is included.

Chocoan: Two languages of this family, viz. Waunana and Emberá, are spoken in southeastern Panama (and Colombia) (Murillo & Skopeteas 2017).

These languages are very unevenly documented, and not all typological features considered could be ascertained for all of them.

3 Grammatical features considered

Among the many features which are commonly used to typologize languages, the present emphasis is on grammatical features of a low and moderate degree of grammaticalization. This includes both syntactic constructions and functional (as opposed to fossilized) features of inflectional morphology. The choice regards the ancientry of the features in the current language: Highly grammaticalized features are often fossilized and may consequently play a limited role in the system, to the extent that a language otherwise typologically similar may lack them.

The set of features by which language systems will be typologized may be subdivided into the following categories of features:

(1) presence of a certain word class or grammatical (⊃ morphological) category: gender/class, alienability, relational marker, article, numeral classifiers, case, bound pronominal indices on different hosts, copula, positionals.

(2) presence of a certain grammatical (syntactic) construction: verb serialization, incorporation, accusative vs. ergative alignment.[1]

(3) word order in certain constructions: These include the government constructions listed in Table 1 and, in addition, the constructions of head – article, host – pronominal index and head – relative clause.

Table 1   Constructions of government

head	dependent
adposition	complement NP
subordinative conjunction	subordinate clause
verb	subject
verb	object
auxiliary	full verb
main predicate	non-finite clause
possessed nominal	nominal attribute

The features considered constitute the line entries of Table 2. In the columns, each of the sample languages is specified for the set of features to the extent that descriptive data were available.

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[1] In category 3, the existence of certain constructions is presupposed which could, theoretically, be missing but which are either present in all the languages concerned or are not reported to be missing.

Table 2 Feature classification of Central American languages

noun			Nawat	Ch'orti'	Garífuna	Xinca	Chorotega	Creole	Tol	Lenca	Ulwa	Sumu	Miskitu	Cabecar	Chocó
noun	gender/class		-	-	+	-		-	-		-	-	-	-	-
	possession	alienability	+	+	+	+	+	-	+	+	+	-	-	-	?
		rel. marker	NR	+	+	-	+	-	-		-	+/-	+	-	
		NG order	NG	NG	NG	NG	NG[1]	GN	GN		GN	GN	GN	GN	GN
article	definite		A N	A N	-	A N	-	A N	-	N-A	N A	N-A	N A	-	A N
	indefinite		A N	AN	A N	-	-	A N	N A	-	N A	-	N A	-	-
numeral	classifiers		-	+	-	-		-	-		-	-	-	+	-
adpositions	order		PN	PN	PN	PN	PN	PN	NP		NP	NP	NP	NP	NP
	case	acc./erg.	-	-	-	-		-	acc.		acc=dat	-	obl.clit.	clit.	erg.
		dat.	-	-	-	-		-	clit.		clit.	clit.	obl.clit.	clit.	+
		gen.	-	-	-	-		-	-		-	-	-	-	+
	sub. conjunction	order to S	cS	cS	cS	cS		cS	Sc		Sc	Sc	Sc	Sc	Sc
pron. indices (bound)	verb	subject	IV	IV	IV, IV	IV ~ VI		-	VI	IV	VI	V=I	VI	-	-
		object	IV	VI	VI	-		-	-		I=V	I=V	-	-	(VI)[2]
	adjective		IA	-	-	IA		-	-		-	A=I	-	-	-
	poss. noun		IN	IN	IN	IN ~ NI	NI	-	IN	IN	NI	NI	NI	-	-
	adposition		(IP)[3]	(IP)	IP	(PI)[4]		-	-		-	PI	PI	-	-
verb	verb subject	order	VS	VS	VS	VS	SV	SV	SV		SV	SV	SV	SV	SV
	verb object	order	VO	VO	VO	VO	VO	VO	OV	OV	OV	OV	OV	OV	OV
	auxiliary	order	AV	AV	VA>AV[5]	VA>AV[6]		AV	AV	VA	VA	VA	VA	VA	VA

[1] Quesada & Skopeteas 2017, §4.5 have GN here.

[2] Waunana has a suffixal object index on the verb (Murillo & Skopeteas 2017, §3.3.3), which however has anaphoric function rather than cross-referencing the object.

[3] Only secondary prepositions bear an index.

[4] All prepositions take indices. However, only secondary prepositions bear them in cross-referencing function.

	serialization		-	+	-	-		+	?		-	-	+	+	+
	copula		-	-	-	+/-		+	+		+	+	-	+	+
	incorporation		+	+	-	+		-	-		-	-	-	+	+
	positionals		-	+	-	-		-	-		-	+	+	+	?
alignment			acc.	split	acc.	acc.	erg.?	acc.	acc.		acc.	acc.	acc.	case: erg.	case: erg.
sub. clauses	non-finite	order	[7]	Cc	Cc	Cc		Cc	cC		cC	cC	cC	cC	
	rel. clause	order	NC	NC	NC	NC		NC	-?		NC	NC ~ circ.	CN ~ circ.	circ.	circ.

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[5] More grammaticalized auxiliaries follow, more lexical ones precede the full verb.

[6] More grammaticalized auxiliaries follow, more recent ones (based on 'go') precede the full verb.

[7] There are no non-finite verb forms.

4 Typological patterns in Central America

4.1 Word-order types

Word-order types will here be considered first, since correlations among word-order patterns are the most pervasive through different syntactic constructions of a language. The constructions encompassed by this criterion are, in principle, all those enumerated in §3. However, constructions of government will be considered foremost, since they form the hard core of dependency constructions and therefore tend to show the most uniformity. Focusing on these, the Central Americal languages fall into two opposite types of syntactic serialization, viz. right-branching serialization or head-dependent order and left-branching serialization or dependent-head order.

>   Right-branching:
>   Purely right-branching: Nawat, Ch'orti', Garífuna, Xinca
>   Right-branching with exceptions: Chorotega (SV), Creole (SV, GN)
>   Left-branching:
>   Purely left-branching: Lenca, Ulwa, Sumu, Miskitu, Cabécar, Chocó
>   Left-branching with exception: Tol (auxiliary – full verb).

E1 and E2 illustrate the purely right-branching type from Ch'orti'. E1 shows subject-final order. E2 shows the object following the verb. At the same time, the subject is in sentence-initial position here, a word-order change occurring frequently in VS languages under Spanish influence.

E1   War   u-takr-iy-et   yer e   mama' ch'o'k.
CH'ORTI'   PROG A.3-help-INCMPL-B.2.SG DIM DEF uncle   mouse
        'Uncle mouse is helping you.' (Vapnarsky et al. 2012:85)

E2   e   winik war   u-pak-i   e   nar
CH'ORTI'   DEF man   PROG A.3-bend-INCMPL(B.3) DEF corncob
        'the man is doubling over the cornstalks' (Quizar & Knowles-Berry 1988:90)

E3f illustrate the purely left-branching type from Cabecar. In E3, only an adjunct follows the verb. E4 illustrates a common variant with postverbal transitive actor. It is, thus, clear that to follow a serialization principle consistently does not mean that no variation is possible.

E3   ká   i   te   sá   ia̱   ká̱wö   m-é̱   ko̱nó̱ kt-ö-gölö
CABECAR   NEG   3 ERG   1.PL DAT   mandate give/put-IPFV [paca kill-INF-FIN]
        'he does not allow us to kill pacas' (yer_20.2)

E4   jé   kúegi̱   kéblö-wá ia̱   i sh-á   i te …
CABECAR   D.MED because.of ancestor-PL DAT 3 say-PFV   3 ERG
        'therefore he said to our forefathers: …' (her_22)

The languages of the two serialization patterns would form geographically coherent areas were it not for the migrations that occurred: The right-branching languages are spoken in the western and northern regions of Central America which are adjacent to or included in Mesoamerica. The left-branching languages are spoken in the southern and eastern part of Central America and are representative of the Intermediate Area.

The two inconsistent right-branching languages are both languages coming from areas which tend to be purely right-branching and immigrated into areas with left-branching syntax. During the centuries in the new environment, they had occasion to adjust word order at the higher syntactic levels, while the order of lower-level constructions has meanwhile remained

the inherited one. Moreover, it should be noted that the word order of the nominal attribute is less strictly determined by the serialization principle because this construction is not always one of government.

The slight inconsistency in the Tol serialization pattern has a similar explanation in terms of areal contact: The language was brought from a right-branching zone of Meso-America into a purely left-branching zone. It had sufficient time to adopt the entire left-branching pattern except at a very low level of grammar, viz. the order inside periphrastic verb forms.

4.2   Relative-clause construction

The relative-clause construction is here singled out because of its peculiar relation to the overall serialization pattern. The right-branching languages have postnominal relative clauses (although nothing is known about the Chorotega relative clause). E5 illustrates this construction type for Ch'orti'.

E5	e	winik	xe'	u-ahk'u		u-ixka'r
Cʜ'ᴏʀᴛɪ'	DEF	man	[RELR	A.3-hit-INCMPL(B.3.SG)	A.3-wife]

	lok'-oy	ahn-i	ta-u-'t	e	ah-k'ampa'r
	leave-CMPL(B.3.SG)	run-CMPL(B.3.SG)	LOC-A.3-front	DEF	M-servant

'the man who hit his wife ran away from the police' (Quizar & Knowles-Berry 1988:81)

On the one hand, this is in harmony with an extended serialization principle which comprises modifying constructions beside the governing constructions. On the other hand, the postnominal relative construction is overall the one least subject to typological conditions to the point that it may be considered the global default construction. It would therefore be a wonder if these right-branching languages possessed a different relative construction.

The situation in the left-branching languages is different. Given again the fact that the relative construction is not one of government, there is no typological principle which would predict a prenominal relative clause in a left-branching language. Moreover, the prenominal relative clause is recessive against the postnominal one because of the inversion of the normal phoric sequence 'first antecedent, then resumption' obtaining in this relative construction.

These are the framing conditions under which we find different types of relative construction in the left-branching languages:

- A postnominal relative clause is found in Ulwa. It is also a variant in Sumu.
- A prenominal relative clause is found as one variant in Miskitu.
- The other left-branching languages have a circumnominal relative clause. It is the only type in Cabecar and Chocó and a variant in Sumu and Miskitu.

E6 illustrates the prenominal relative construction from Miskitu.

E6	marin	ra	raka-n	waitn-ika	ba	pat	wa-n
Mɪsᴋɪᴛᴏ	[woman	OBL	heal-PRT.3]	man-SPEC	DEF	already	go-PRT.3

'the man that healed the woman has already gone' (Salamanca 2008:117)

E7 illustrates the circumnominal relative clause from Cabecar.

E7	Jäyí	te	kuá̱ tk-á	yikí	miné̱=ju̱
Cᴀʙᴇᴄᴀʀ	[man	ERG	corn sow-PFV	yesterday]	go:PFV=AM

'The man that planted corn yesterday went away.'

Associating, in this way, the relative construction with the serialization pattern, we get the continuum shown in Diagram 3.

Diagram 3   Serialization and relative construction

serialization	right-branching						left-branching
relative construction	postnominal					▓	▓
	▓	▓	▓	circumnominal			
	▓	▓	▓	▓	prenominal	▓	
languages	Nawat, Ch'orti', Garífuna, Xinca	Chorotega, Creole	Tol	Lenca, Ulwa	Sumu	Miskitu	Cabécar, Chocó

The circumnominal construction emerges here as a default for left-branching languages. It is the only option in two consistent left-branching families, viz. Chibchan and Chocoan. It is compatible with either a postnominal or a prenominal variant in what are otherwise consistently left-branching languages, viz. Sumu and Miskitu, resp.

4.3   Head marking vs. dependent marking

A head-marking system has pronominal indices on governing heads and predicates, which cross-reference the dependent nominal expression including the subject. A dependent-marking system has case morphemes on the dependent nominal expressions. A pronominal index on some host may or may not co-occur with a lexical NP in the same construction and then cross-reference it. If not, it is just a bound anaphoric pronoun. If the information source clearly identified the latter situation, the language has not been classified has head-marking for the function in question. One case in point is the object suffix in Waunana, which does not appear if a lexical object is present.

For case marking, the grammatical case functions have been singled out, viz. the cases marking the subject or absolute actant, the ergative actant, the direct object, the indirect object, the nominal ("possessive") attribute and the complement of an adposition. These are the same functions that can be cross-referenced by pronominal indices.

E1f already illustrate head marking in the verbal sphere. E8 - E10 complete the picture by illustrating head marking on possessed nouns and on adpositions.

E8	u	tumin	e	winik
Cʜ'ᴏʀᴛɪ'	A.3	money	DEF	man

'the man's money'

E9	nu-wan
Nᴀᴡᴀᴛ	OBL.1.SG-with

'with me'

E10	i-i:xpan	siwa:na:wa-l
Nᴀᴡᴀᴛ	OBL.3-before	Siguanaba-ABS

'in front of the Siguanaba' (Campbell 1985:131)

Dependent-marking on a variety of syntactic functions is already illustrated by E3f. The languages in question do not have dependent marking on adnominal nominal attributes or on adpositional complements.

A given language may mark a certain subset of these functions by pronominal indices, by cases or by both. The marking used by each language is shown in Table 3. A red cell indicates

that the language in question uses a pronominal index to cross-reference the clause component in question; a blue cell indicates that the language in question uses a case marker on the clause component in question. The following marking types can be read off the table:

- purely head-marking: Nawat, Ch'orti', Garífuna, Xinca
- purely dependent-marking: Cabécar, Chocó
- both head and dependent marking: Tol, Ulwa, Sumu, Miskitu
- neither marking strategy: Creole.

Among the languages representing a pure type, some carry their strategy further than others. Nawat, Garífuna and, to a lesser extent, Ch'orti' signal four of the possible five syntactic functions by pronominal indices and may therefore be considered head-marking languages *par excellence*. On the other hand, of five possible syntactic functions, Chocó signals three by a case marker and is thus the most clearly dependent-marking language group in the sample. Here it must be added that very few languages indeed would mark the absolutive actant by a case, and no language in the sample marks the adpositional complement by a case.

Only languages which use pronominal indices for the direct object or for the possessor may also use them for adpositional complements. This holds in the present sample and also as a global implicational generalization. Given its heavily conditioned status and its world-wide rarity, the ample representation of pronominal indices on adpositions in Central America is remarkable.

Table 3 Pronominal index and case

function	marking	Nawat	Ch'orti'	Garífuna	Xinca	Chorotega	Creole	Tol	Lenca	Ulwa	Sumu	Miskitu	Cabecar	Chocó
subject / absolutive	pron. index	red	red	red	red			red	red	red	red	red		
	case													
dir. object	pron. index	red	red	red						red	red			pink
	case							blue		blue		blue		
ergative	pron. index													
	case												blue	blue
indir. object	pron. index													
	case							blue		blue	blue	blue	blue	blue
poss. attribute	pron. index	red	red	red	red	red		red	red	red	red	red		
	case													blue
adpositional complement	pron. index	red	pink	red	red						red	red		
	case													

4.4 Serialization and marking strategy

In the sample, the marking strategy correlates as follows with the serialization type:

(1) If a language is exclusively head-marking, it is right-branching.
(2) If a language is (exclusively or additionally) dependent-marking, it is left-branching.

These two generalizations hold in the sample. They do not hold universally, though. The following distributions (all according to Dryer & Haspelmath (eds.) 2013) have to be appreciated on the background that left-branching languages are the world-wide majority over right-branching languages. They form the relative majority both among head-marking and among dependent marking languages. Consequently:

- The Central American head-marking languages with their right-branching serialization (as well as the Mesoamerican languages they belong with) represent a minority pattern.

- The Central American dependent-marking languages with their left-branching serialization represent a majority pattern.

The minority situation of the head-marking right-branching languages in Central America becomes even clearer if the composition of the present sample is recalled: Although languages of both the main types posited belong to larger families whose typological make-up they represent, these families are quite unevenly represented in Central America: the head-marking right-branching languages of the sample are the only representatives of their families and of their type in Central America, while the dependent-marking left-branching type is present by entire language families, thus by dozens of languages, in Central America.

Apparently, of the immigrated head-marking right-branching languages, some have stubbornly clung to their inherited syntactic type. It is, however, improbable that they offered an attractive model for other languages in the area to adjust to.

Finally, there is one language group in the sample that conforms to no pattern: The creole languages have no segmental marking of syntactic functions whatsoever. With this, they join a very small minority of languages world-wide. Their serialization is inconsistent, too, since on a principally right-branching background, they have a prenominal possessive attribute.

4.5 Distribution of other features

A feature that is usually considered in the typological characterization of a language is the alignment of fundamental relations. As far as is known, no language in the sample is rigidly ergative at the syntactic level by the behavioral criteria commonly applied. Some languages exhibit features of morphological ergativity. Ch'orti' has ergative alignment in part of its cross-reference system (viz. in the completive aspect and to a lesser extent than other Mayan languages). The Chibchan and Chocó languages are ergative in their case morphology and in a few syntactic processes. However, as far as may be seen, these properties are not systematically related to any other feature of the language systems in question.

Languages of Central America lack the category of gender or noun class, with the exception of Garífuna, which brought nominal classification from its Arawak ancestors into the area.

Numeral classifiers are common both in Mayan and in Chibchan languages, but otherwise appear to be rare in Central American language families of both major types.

The alienability distinction is coded in the grammar of all linguistic types. In the present sample, all the head-marking languages have this feature. Universally, the alienability distinction is more frequent in head-marking than in dependent-marking languages, where it is, in

fact, rare. The languages of Central America are entirely in line here with the global frequency distribution.

If a language of this sample has an article, then if the language is right-branching, the article is postnominal, and if it is left-branching, the article is prenominal with the exception of Chocó. This is an interesting observation which argues strongly against subsuming the determinative syntactic relation of the article under either government or modification.

A relational marker on a possessed head-dependent mediates the syntactic relation between this head and its nominal attribute in a way logically converse to the genitive (or English *of*): it converts its operand into a relational noun, converting, e.g., 'house' into 'house-of', and thus enables it to govern a nominal attribute. In the sample, only languages which have pronominal indices on the possessed noun cross-referencing the possessor may have such a relational marker. Such a relational marker is, of course, in entire consonance with a head-marking grammar.

Verb serialization appears to be more a feature of left-branching than of right-branching languages. Among the latter, it is found in Ch'orti'. However, before any more far-reaching hypotheses can be hazarded, the notion of verb serialization will have to be strictly defined.

There are copulas, positionals and noun incorporation among the Central American languages, but their distribution cannot so far be related to anything else.

5 Linguistic areas of Central America

A major subdivision of Central America on the basis of grammatical typology is produced by the features considered in §§4.1 - 4.4 above, viz. by the right- or left-branching serialization of the components of major syntactic constructions and by the head- or dependent marking of syntactic relations. This typological division corresponds, *cum grano salis*, to a division between geographical areas (cf. Quesada & Skopeteas 2017, diagram 5):

The head-marking right-branching languages are spoken in an interrupted sickle-shaped region running along the eastern border of Guatemala and the Caribbean coast of Central America to include Creole languages, but excluding the autochthonous language families spoken on the coast. This fails to include Chorotega, obviously a well-traveled speech community. On the other hand, given its state of documentation, it is not even clear that it must be included. The dependent-marking left-branching languages are spoken in the regions to the south of the sickle and in the regions interrupting its shape.

Again, to the extent that languages of Mesoamerica are typologically uniform, it may be said that the head-marking right-branching languages are Mesoamerican rather than Central American, or more precisely, belong to Upper rather than Lower Central America. This concerns in particular Nawat, Ch'orti', Xinca and Chorotega, while Garífuna has a different background.

The distribution of some of the features displayed in Diagram 3 and Table 3 points to a typological transition between the head-marking right-branching and the dependent-marking left-branching type, which is at least approximately reflected in a geographical transition from northwest to southeast. This transition may be analyzable in terms of a subdivision between a Northern, Central and Southern Zone (Quesada & Skopeteas 2017).

Although the creole languages can be assigned a position in the transition between right-branching and left-branching languages, it is also clear that they remain a foreign body in Central America by typological criteria: They are the only languages which are neither head-marking nor dependent-marking. There is little in their grammatical structure that would have to be traced to their Central American environment.

Overall, the typological features are more closely associated with genealogical families than with linguistic areas (Quesada & Skopeteas 2017, §5, #6). This gets particularly clear in the case of the immigrated languages, viz. Nawat, Garífuna, Chorotega and the Creole languages. These have conserved most of their grammatical system even in a partly different typological environment. The exception are the Jicaquean languages, which apparently had sufficient time and opportunity to adapt their higher-level syntax to their Central-American environment.

Abbreviations in glosses

A	tr. actor ∪ possessor	INF	infinitive
ABS	absolutive	IPFV	imperfective
AM	autonomous motion	LOC	locative
B	undergoer	M	masculine
CMPL	completive	NEG	negative
D.MED	demonstrative medial deixis	OBL	oblique (= non-nominative)
DAT	dative	PFV	perfective
DEF	definite	PL	plural
DIM	diminutive	PROG	progressive
ERG	ergative	RELR	relativizer
FIN	final (= purposive)	SG	singular
INCMPL	incompletive		

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