Case markers as subordinators in South American indigenous languages

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(suggested running head: Case markers as subordinators in South America)

Abstract

Nominalization (in different forms and guises) is one of the most common subordination strategies in South American indigenous languages. A frequently used strategy with these nominalizations is to use case markers to indicate the semantic or structural relationship of the nominalized clause to the proposition expressed in the main clause. This paper aims to establish the extent to which these extensions of case markers to subordinate clauses are non-random, and to separate the role of language contact, genealogical retention, and universal preferences in explaining the distribution of case markers as subordinators in South American indigenous languages.

1. Introduction

South American Indigenous languages show recurrent patterns in their subordination strategies (Van Gijn et al. 2011). Recurring constructions, found across language families, are for instance the use of bound subordinators, internally headed relative clauses, multi-verb constructions, clause chaining, switch reference, and nominalization. Van Gijn (2014) showed that nominalization as a subordination strategy is found significantly more often in South American languages than would be expected on the basis of global patterns. One of the particularly common constructions identified in Van Gijn (2014) is the formation of adverbial clauses by using case markers (defined as functional elements that indicate the relationship a noun or NP bears to its head) to indicate the semantic relation of the adverbial clause to the proposition expressed in the main clause.

The present contribution is intended as a follow-up study to Van Gijn (2014), aimed at achieving a more detailed perspective on case-

[1] I thank Roberto Zariquiey for very useful comments on an earlier draft of this paper. Remaining errors are mine.

marked adverbial clauses in South American languages. More specifically, it aims to establish the extent to which the observed patterns are non-random, and can be accounted for in terms of language contact, genealogical retention, or perhaps more general explanatory principles relating to human cognitive or communicative preferences.

The paper is organized as follows: in Section 2 I introduce some more background to the issue of case marking in subordinate clauses, outline the leading questions of the paper, and introduce the language sample used for this paper. Section 3 is dedicated to a comparison of the case systems of the sample languages. Section 4 describes the patterns found of case markers used in adverbial clauses, which are discussed in terms of different possible accounts in Section 5. In Section 6, finally, the general conclusions for the paper are drawn.

2. Preliminaries

It is a widely observed phenomenon that case markers, generally associated with the noun phrase, are often also found in (functional equivalents of) subordinate clauses. This is found in unconnected geographical areas and across many different language families (e.g. Blake 2001, Heine 2008). This raises the question of what the driving forces behind this connection between NP case marking and subordinate clause case marking are. Three types of answers seem to be likely candidates:

1. Genealogical retention

The functional extension of case markers to mark subordinate clauses is a common grammaticalization path and can be stated in terms of general grammaticalization principles (see e.g. Heine & Kuteva 2007, Heine 2008), but the specifics of this grammaticalization path may of course differ from one situation to another. One of the potentially determining factors for the distribution of case markers in different types of subordinate clause is genealogical retention. Although case systems seem to suffer rather different fates in different situations (see Kulikov 2006, 2008), some case systems seem to be particularly time-stable. We also know that some aspects of case marking, like patterns of syncretism (see Baerman & Brown 2005) have a substantial

genealogical component. It is, therefore, conceivable that specific extensions of case markers to subordinators were established before the languages of a family started to diverge, and that they simply retained this extension.

2. Contact-induced diffusion

It has long been recognized (see e.g. Weinreich 1953, Thomason & Kaufman 1988) that grammatical (especially morphologically bound) material is less easily borrowed than lexical material. It is less clear, however, how easily more abstract structural dimensions of systems may spread through contact (see e.g. Matras & Sakel 2007, Johanson 2008). It has furthermore been observed that some aspects of case marking, including the presence of case and the number of cases per language, but also some formal parameters like fusion, seem to have (macro-)areal tendencies (Bickel & Nichols 2008). It may therefore also be the case that language contact is the main factor responsible for the occurrence of case markers in subordinate clauses.

3. Functional pressures

The fact that case markers are often found on subordinate clauses may in itself be regarded as resulting from functional pressures. One of the explanatory principles invoked in Cristofaro (2003) to explain patterns of subordination is the likelihood for a subordinate event to be construed as a thing (versus a process). Following Langacker (1987a, b), Cristofaro argues that entities are processed differently than e.g. actions or properties. The distinguishing cognitive feature of nouns is "that they designate sets of entities that are scanned summarily as a unitary whole (things)" (Cristofaro 2003: 159), whereas actions are prototypically processed in phases that occur sequentially in time. In subordination constructions, in Cristofaro's approach, the main event imposes its processing profile over the entire construction, leaving the dependent events to be scanned without such a sequential profile, which makes them cognitively more like things. Moreover, subordinate clauses typically perform discourse and syntactic functions associated with nouns (argument of a verb, reference, etc.) which also makes them more like nouns, and therefore more likely to acquire nominal characteristics like case marking (see Croft 1991, Malchukov 2006).

The three answers, in their pure form, predict different distributional patterns: the genealogical factor predicts similar extensions of case markers to subordinate clauses within but not across families, whereas the areal factor predicts the opposite pattern. The functional factor would predict overall, continent-wide preferences. Of course, the three answers are not mutually exclusive, and different factors may have conspired to produce the actual patterns.

The goal of this paper is to establish a) the bandwidth of case marking in South America in terms of presence of case and the types of cases that are present, b) the extent to which the case functions that are present in South American languages have been extended to marking subordinate verbs, and c) which factors might have played a role in shaping the distributions that we find. In order to achieve these goals I have looked at a sample of 60 South American languages, representing 26 families and 10 isolate languages. The approximate location of the sample languages is given in Map 1, the designations of the numbers can be found in Table 1.

Table 1: The sample languages, their iso-codes, affiliations and main sources

#	*Name*	*iso*	*affiliation*	*Main source(s)*
1	Ika	ARH	CHIBCHAN	Frank 1985
2	Warao	WBA	ISOLATE	Romero-Figueroa 1997
3	N Embera	EMP	CHOCOAN	Mortensen 1999
4	Panare	PBH	CARIBAN	Payne & Payne 2013
5	Yanam	SHB	YANOMAMAN	Goodwin-Gómez 1990
6	Puinave	PUI	ISOLATE	Girón 2008
7	Emérillon	EME	TUPI-GUARANI	Rose 2011
8	Páez	PBB	ISOLATE	Jung 2008
9	Trio/Tiriyó	TRI	CARIBAN	Meira 1999
10	Cubeo	CUB	TUCANOAN	Morse & Maxwell 1999
11	Awa Pit	KWI	BARBACOAN	Curnow 1997
12	Hup	JUP	MAKUAN	Epps 2008
13	Desano	DES	TUCANOAN	Miller 1999
14	Tariana	TAE	ARAWAKAN	Aikhenvald 2003
15	Imbabura Qu	QVI	QUECHUAN	Cole 1982
16	Dâw	KWA	MAKUAN	Andrade-Martins 2004
17	Hixkaryana	HIX	CARIBAN	Derbyshire 1985

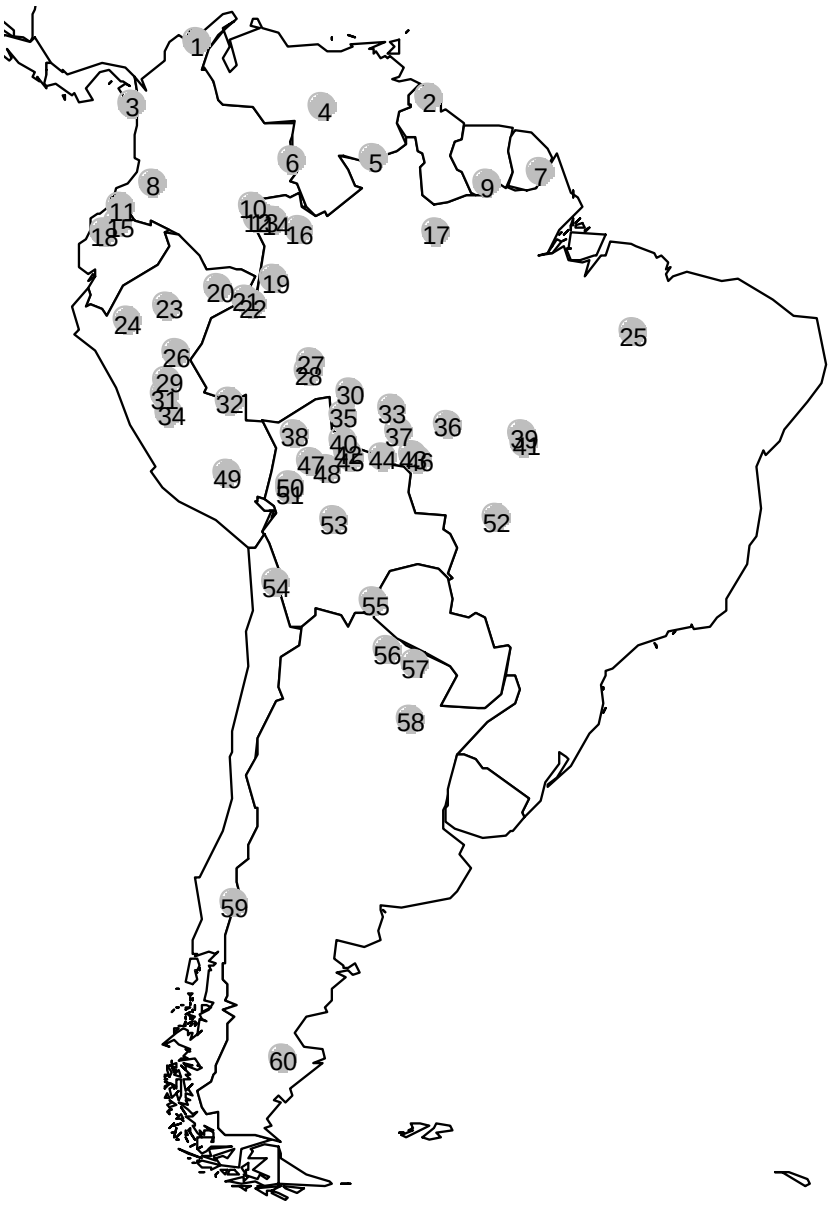
18	Tsafiki	COF	BARBACOAN	Dickinson 2002
19	Miraña	BOA	BORAN	Seifart 2005, Thiesen & Weber 2012
20	Yagua	YAD	PEBA-YAGUAN	Payne 1985
21	Kokama	COD	TUPI-GUARANI	Vallejos 2010
22	Matses	MPQ	PANOAN	Fleck 2003
23	Urarina	URA	ISOLATE	Olawsky 2006
24	Aguaruna	AGR	JIVAROAN	Overall 2007
25	Timbira	XRI	MACRO-GE	Popjes & Popjes 1986, Alves 2004
26	Shipibo-K	SHP	PANOAN	Valenzuela 2003
27	Jarawara	JAA	ARAWAN	Dixon 2004
28	Apurinã	APU	ARAWAKAN	Facundes 2000
29	Kakataibo	CBR	PANOAN	Zariquiey 2011
30	Karitiana	KTN	TUPIAN	Storto 1999, 2011, Everett 2006
31	Huallaga Qu.	QUB	QUECHUAN	Weber 1989
32	Yaminahua	YAA	PANOAN	Faust & Loos 2002
33	Karo	ARR	TUPIAN	Gabas Jr. 1999
34	Yanesha’	AME	ARAWAKAN	Duff-Trip 1997
35	Wari’	PAV	CHAPACURAN	Everett & Kern 1997
36	Rikbaktsa	RKB	MACRO-GE	Silva 2011
37	Kwazá	XWA	ISOLATE	Van der Voort 2004
38	Ese Ejja	ESE	TACANAN	Vuillermet 2012
39	Trumai	TPY	ISOLATE	Guirardello 1999
40	Kanoê	KXO	ISOLATE	Bacelar 2004
41	Kamaiurá	KAY	TUPI-GUARANI	Seki 2000
42	Itonama	ITO	ISOLATE	Crevels 2012
43	Sabanê	SAE	NAMBIKWARAN	Antunes 2004
44	Mekens	SKF	TUPIAN	Galucio 2001
45	Baure	BRG	ARAWAKAN	Danielsen 2007
46	Mamaindê	WMD	NAMBIKWARAN	Eberhard 2009
47	Cavineña	CAV	TACANAN	Guillaume 2008
48	Movima	MZP	ISOLATE	Haude 2006
49	Cuzco Qu.	QUZ	QUECHUAN	Lefebvre & Muysken 1988, Muysken p.c.
50	Mosetén	CAS	MOSETENAN	Sakel 2004
51	Leko	LEC	ISOLATE	Van de Kerke 2009

52	Bororo	BOR	MACRO-GE	Crowell 1979, Nonato 2008
53	Yurakaré	YUZ	ISOLATE	Van Gijn 2006
54	Aymara	AYR	AYMARAN	Hardman 2001
55	Tapiete	TPJ	TUPI-GUARANI	González 2005
56	Wichí	WLV	MATACOAN	Terraza 2009
57	Pilagá	PLG	GUAYCURUAN	Vidal 2001
58	Mocoví	MOC	GUAYCURUAN	Grondona 1998
59	Mapudungun	ARN	ISOLATE	Smeets 2008
60	Tehuelche	TEH	CHONAN	Fernandez Garay 1998, 2004

In terms of genealogy, the sample is built up as indicated in Table 2:

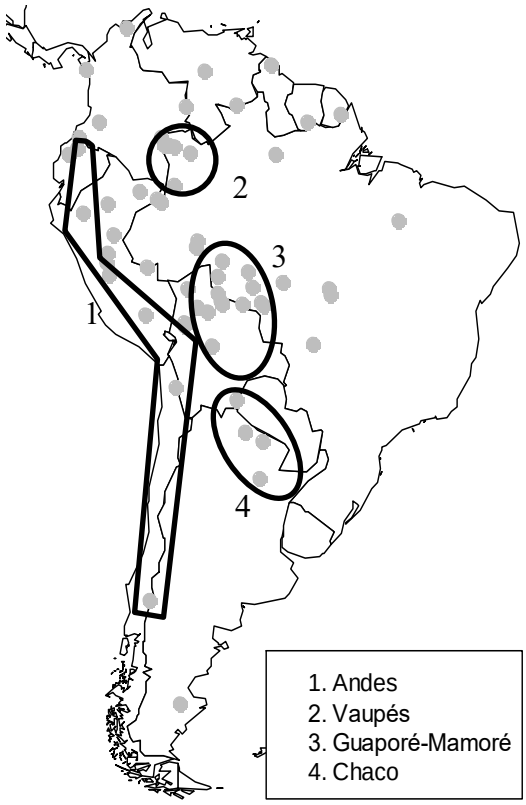
Table 2: Genealogical units in the sample

Isolates	12	Arawan	1
Tupian	6	Aymaran	1
Arawakan	4	Boran	1
Panoan	4	Chapacuran	1
Cariban	3	Chibchan	1
Macro-Ge	3	Chocoan	1
Quechuan	3	Chonan	1
Barbacoan	2	Jivaroan	1
Guaycuruan	2	Matacoan	1
Makuan	2	Mosetenan	1
Nambikwaran	2	Peba-Yaguan	1
Tacanan	2	Yanomaman	1
Tucanoan	2		



Map 1: The sample

Proposed linguistic areas (Sprachbünde) are indicated in Map 2: the Andes (Torero 2002), the Vaupés (Aikhenvald 2002), the Guaporé-Mamoré (Crevels & van der Voort 2008), and the Chaco (Comrie et al. 2010).



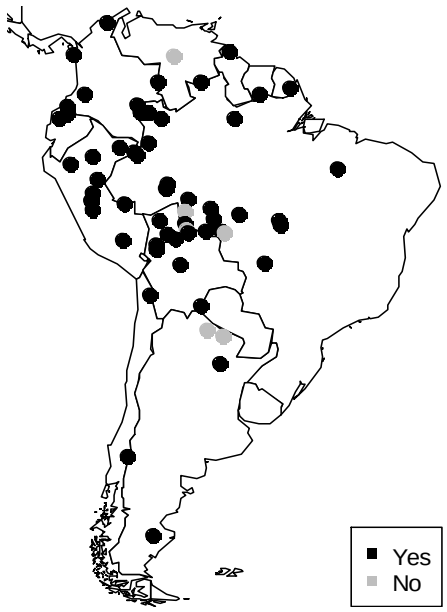
Map 2: Linguistic areas

3. Case systems in South American languages and their extensions to subordinate clauses

In this section I will first review case marking in general and then zoom in on the use of case markers as markers of interclausal relations in complex clauses. In order to structure the discussion, I have made a number of subdistinctions within possible case systems. First I distinguish between core, or structural, case on the one hand (ergative, accusative, genitive), and peripheral, or semantic, case on the other. This distinction is not without its problems, and we will see that South American languages often have polysemous case markers with both core and peripheral functions. For the sake of exposition, I have treated these multi-functional markers as instances of homonymy. By doing so, I do not intend to make a synchronic statement about these markers, but rather to try to group the behavior of the different core functions versus peripheral functions of case markers since they are quite different and may also be expected to lead to different types of grammaticalizations in subordinate clauses. I will mention where relevant when core verbal case markers or genitive case markers have peripheral functions as well.

Peripheral functions are subdivided into dative/benefactive[2] (section 3.3), instrument/comitative[3] (section 3.4), and spatial cases (section 3.5). Two further categories are 'oblique' (Section 3.6), for those markers that have more than one of the peripheral functions just mentioned, and 'other' (Section 3.7) for those markers to which none of the above categories apply. First, however, I will assess the extent to which the languages in the sample have case at all (Section 3.1).

3.1. Presence of case



SAMPLE LANGUAGES WITH CASE
Tariana, Apurinã, Yanesha', Baure, Jarawara, Aymara, Awa Pit, Tsafiki, Miraña, Trio/Tiriyó, Hixkaryana, Ika, Embera, Northern, Tehuelche, Mocoví, Aguaruna, Timbira, Rikbaktsa, Bororo, Hup, Dâw, Mapudungun, Mosetén, Sabanê, Nasa Yuwe, Matses, Shipibo-Konibo, Kakataibo, Yaminahua, Yagua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Ese Ejja, Cavineña, Cubeo, Desano, Karitiana, Karo, Mekens, Emérillon, Kokama, Kamaiurá, Tapiete, Warao, Puinave, Urarina, Kwaza, Trumai, Kanoê, Movima, Leko, Yurakaré, Yanam
SAMPLE LANGUAGES WITHOUT CASE
Panare, Wari', Pilagá, Wichí, Mamaindê, Itonama

Map 3: Presence of case

[2] Here I have glossed over the fact that in some languages dative behaves as a core case. Instead I gave preference to the semantic connections between dative and benefactive markers.

[3] This grouping is based on their frequent formal/functional connection cross-linguistically (Stolz et al. 2005, 2006: 23-25).

Case markers in this paper are defined as functional elements that indicate the relationship a noun or NP bears to its head. I take a broad view on case markers, where I disregard fusion as a criterion, but rather look at grammatical wordhood, following Bickel & Nichols (2007). Excluded are those markers that either take obligatory agreement or govern case, since they form grammatical words of their own. Map 3 shows the languages with case markers (black) and the languages without case markers (grey).[4] As can be seen, case as a category is very widespread in South American languages, and is found in Andean as well as Amazonian languages. The languages that do not have case use one (or both) of two strategies: verbal strategies and/or adpositional strategies. Both these strategies are in fact widespread, but most languages use them in addition to case marking.

An example of a language that resorts to verbal strategies seemingly exclusively is Itonama, an isolate language spoken in northeast Bolivia (reference number 42). Crevels (2012:248) mentions that the language has no case markers or adpositions. What it does have, is person marking, applicatives, incorporation, and spatial and directional markers on the verb, which can perform the functions normally associated with case. The pattern of "verbal case marking" is exemplified in example (1).

(1) Wichi [MATACOAN], Terraza 2009: 220
n-p'u-**hu** wahat n-k^{y}oti
1-roast-**APPL** fish 1POSS-grandfather
'I roast fish for my grandfather.'

Other sample languages that behave like Wichi are neighboring Guaykuruan language Pilagá (Vidal 2001), Nambikwaran Mamaindê (Eberhard 2009) and the Bolivian Isolate Itonama (Crevels 2012).

The other type of alternative strategy is exemplified by the Chapacuran language Wari', which has a single preposition, which cannot be counted as a case marker because it shows agreement. This preposition is also used to mark certain subordinate clauses.

(2) Wari' [CHAPACURAN], Everett & Kern 1997: 22
param 'ina-em **pain** [ca
desire 1SG:REA.NONFUT-2SG **PREP:3NEUT** IRR.NONFUT

mao wa]$_{NMLZ}$

[4] Languages without case markers in the sample are Panare, Wari', Pilagá, Wichi, Mamaindê, and Itonama.

go INF
'I want you to go.'

Inflected adpositions are a common feature in Tupian (Rodrigues & Cabral (2012) and Cariban languages (Derbyshire 1999), though not necessarily to the exclusion of case markers. Verbal relation marking through e.g. applicatives, motion and position markers is also a very common strategy, which seems to have more areal characteristics (see e.g. Wise 2002, Guillaume & Rose 2010, Van Gijn 2015). In the remainder of this paper, only the languages with case markers that fall within the definition given above will be considered.

3.2. Core case

An issue that has come up in the discussion about Andean versus Amazonian profiles is the presence of core case and, related to that, the alignment pattern of the language. Andean languages are reputed to have rather clear accusative alignment patterns in main clauses, marked by case. Alignment patterns in Amazonian languages tend to be either ergative-based, or to exhibit split marking in one of the roles. Moreover, case markers to indicate structural relations (both in the clausal and in the noun phrase context) are said to be rare in Amazonian languages (see e.g. Dixon & Aikhenvald 1999: 8). In this paper I define core case in a shallow way as case markers that encode ergative, accusative, or genitive (nominative and absolutive marking is too uncommon to yield any useful patterns).[5]

[5] I stay on the conservative side and do not include zero markers, since their empirical status is often problematic.

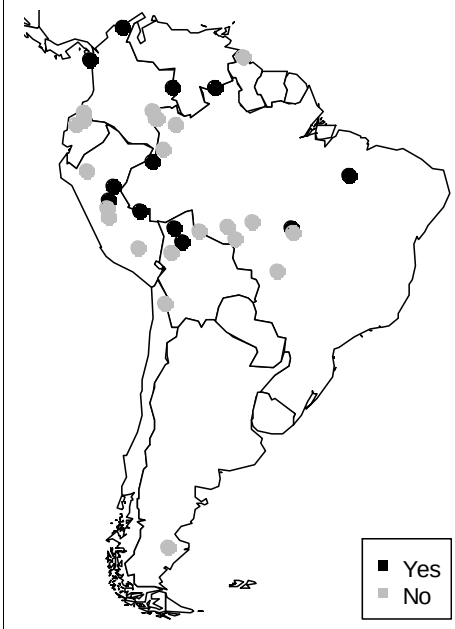
LANGUAGES WITHOUT CORE CASE
Tariana, Apurinã, Baure, Jarawara, Panare, Trio, Hixkaryana, Wari', Pilagá, Mocoví, Mapudungun, Wichí (Mataco), Mamaindê, Nasa Yuwe, Yagua, Karitiana, Karo, Mekens, Emérillon, Kokama, Tapiete, Urarina, Itonama, Movima, Leko, Yurakaré
LANGUAGES WITH CORE CASE
Yanesha', Aymara, Awa Pit, Tsafiki, Miraña, Ika, Embera, Northern, Tehuelche, Aguaruna, Timbira, Rikbaktsa, Bororo, Hup, Dâw, Mosetén, Sabanê, Matses, Shipibo-Konibo, Kakataibo, Yaminahua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Ese Ejja, Cavineña, Cubeo, Desano, Kamaiurá, Warao, Puinave, Kwaza, Trumai, Kanoê, Yanam

Map 4: Presence of core case

Map 4 shows the presence in the sample languages of one or more of these three cases. As can be seen in Map 4, structural case is certainly not uncommon in Amazonian languages, but it does seem to be more present across the board in Andean languages.

For the subset of languages with core case, Maps 5 and 6 show languages with ergative and accusative case markers, respectively. The distribution of both types of case markers suggests that areal factors may play a role.

The languages with ergative case markers are Ika, Northern Embera, Yanam, Puinave, Timbira, Shipibo-Konibo, Kakataibo, Yaminahua, Ese Ejja, Trumai, and Cavineña. Ergative alignment is considered to be a recessive feature of languages (Nichols 2003), i.e. it tends not to be time-stable, either within families or within areas. Nevertheless, ergative case marking is stable in the Panoan (e.g. Loos 1999: 240) and Tacanan (Guillaume & Rose 2011: 464) language families.



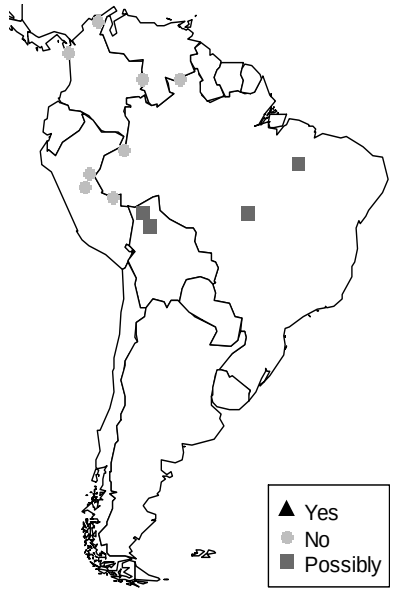
LANGUAGES WITH ERGATIVE CASE	LANGUAGES WITH ACCUSATIVE CASE
Ika, Embera, Northern, Timbira, Matses, Shipibo-Konibo, Kakataibo, Yaminahua, Ese Ejja, Cavineña, Puinave, Trumai, Yanam	Awa Pit, Tsafiki, Miraña, Aguaruna, Rikbaktsa, Bororo, Hup, Dâw, Sabanê, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Cubeo, Desano, Kwaza

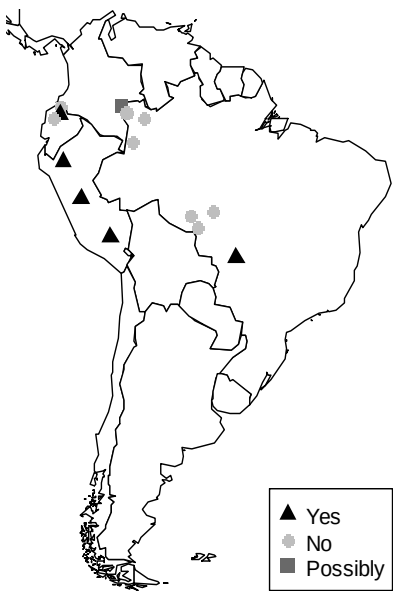
Map 5: presence of ergative case

Map 6: Presence of accusative case

Most of the ergative markers in the sample have several possible functions, which is consistent with the observation that ergative case markers most commonly develop from other case markers (McGregor 2009: 499). In Panoan languages, the ergative marker is generally homophonous with other case markers, e.g. in Matses, Shipibo and Kakataibo, the ergative marker *-n* is also used to mark instrumental, temporal, and genitival functions, as well as locative in Shipibo. In Yaminahua, the ergative markers seems to be less extended, marking ergative and vocative. The Ika ergative case marker *-se* additionally marks locative, Yanam *-n* also marks instrumental. Northern Embera *-(p)a* additionally marks ablative, Puinave *-at* indicates ablative, and a more general oblique, and in Timbira, ergative *tɛ* also marks genitive.

The connection between ergative case markers and other case functions is frequent cross-linguistically (Heine & Kuteva 2002: 180, Heine 2008: 467) and may suggest that the ergative in these languages may have arisen through reinterpretation of other case roles in e.g. nominalized or passive constructions (but note the unusual situation in some Panoan languages where the ergative also marks both instrumental and genitive).[6]





LANGUAGES WITH ERGATIVE CASE IN SUBORDINATE CLAUSES	LANGUAGES WITH ACCUSATIVE CASE IN SUBORDINATE CLAUSES
Timbira, Ese Ejja, Cavineña, Trumai	Aguaruna, Bororo, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Cubeo (potential)

Map 7: Ergative case in subordinate clauses

Map 8: Accusative case in subordinate clauses

Languages in the sample with an accusative marker are Cubeo, Awa Pit, Hup, Desano, Imbabura Quechua, Dâw, Tsafiki, Miraña, Aguaruna, Huallaga Quechua, Rikbaktsa, Kwaza, Sabanê, Cuzco Quechua, and Bororo. A number of these languages have a conditionally appearing accusative marker, for instance in the Tucanoan languages of the sample, an object marker is used only for animate objects (Cubeo) or specific

[6] I thank Roberto Zariquiey for bringing this to my attention.

objects (Desano). Similar or stronger constraints exist in Kwazá, Hup, Awa Pit, Miraña, Aguaruna, Rikbaktsa,[7] and Sabanê.[8] This means that accusative case markers that conform to the inflectional prototype of appearing automatically, without conditioning (Corbett 2006) are almost exclusively found in the Andes.

Maps 7 and 8 show the extension of the ergative and accusative case markers (respectively) to subordinate clauses. Disregarded here are headless relative clauses that fulfill a referential function and receive the appropriate case marker according to the role the relativized argument plays in the main clause, exemplified in (3), since they do not constitute cases where the functionality of the case marker is carried over to event-denoting bases.

(3) Yaminahua [PANOAN], Faust & Loos 2002: 147
[mani pei-pefe-a]$_{NMLZ}$ **-tõ** mexteteke
banana leaf-carry.on.shoulders-PTC-**ERG** twigs
pi-i
eat-PROG
'The lizard with wings (lit.: he who carries banana leaves on his shoulder) eats twigs.'

Instances of NPs containing a relative clause, which are marked by a phrase-final clitic are not taken into account either. This situation type is examplified in (4) from Trumai.

(4) Trumai [ISOLATE], Guirardello 1999: 412
[di nïchïts ka'chï pata-t' ke]$_{NMLZ}$ =**k** mi'ïrau
woman now walk arrive-NLZ REL =**ERG** necklace
kïţï hai-tl
give 1SG-DAT
'The woman who just arrived gave me a necklace.'

As can be seen in Map 7, most ergative cases do not function as subordinators. There are a few potential cases of extensions, to be discussed below. That ergative case markers do not extend to mark subordinate clauses is not unexpected given the cross-linguistic dispreference for clausal transitive subjects in transitive clauses (Hopper

[7] The conditioning of the accusative case marker *-ti:* in Rikbaktsa is constructionally conditioned, as it appears only in so-called "periphrastic structures" which contains an auxiliary that can only be marked for subject (Silva 2011: 112).
[8] The exact function of the "object marker" *-k(a)* in Sabanê is unclear, further research may show that the marker should not be analyzed as an accusative marker.

& Thompson 1980). The fact that the use of the accusative case to mark subordinate clauses is predominantly found in the Andes is not unexpected either, given the conditional appearance of the accusative marker in many Amazonian languages, where conditions are often related to animacy.

The potential extensions of the ergative marker are found in the Tacanan languages Cavineña and Ese Ejja, in the isolate language Trumai, and in Timbira [MACRO-GÊ]. Cavineña presents the clearest case: the ergative marker *=ra* is also found on purpose of motion and (though a minor pattern) reason clauses (5).

(5) Cavineña [TACANAN], Guillaume 2008: 715, 719

a. tudya i-ke kwinana-wa wira=**ra**
then 1SG-FM emerge-PERF urinate=**PRP.MOT**
'I went outside to urinate.'

b. e-tsaka uje-da ju-ya aje-**ra**
NPREF-legs painful-ASUF be-IMPFV walk=**REAS**
'My legs hurt from walking.'

In Trumai, reason clauses are marked with the marker *-ak*, which is close to the ergative marker *-(a)k/-ek.* The reason marker *-ak* and the ergative marker *-Vk* seem to be historically related, especially considering conspicuous though somewhat opaque patterns of allomorphy: the ergative marker has allomorph *-ts* used for the first person, the reason clause marker has allomorph *iets'*. The marker *-ka* is used in combination with a third person absolutive clitic on the verb. Although the diachronic specifics of the relation between the ergative marker and the reason marker (including the pattern of allomorphy) remain somewhat enigmatic, Guirardello (1999: 406) hypothesizes that the use of the reason marker may have been an extension of the function of the ergative marker to encode the causer in a causative construction (although synchronically the markers have to be regarded as different). Trumai purpose clauses are marked with *(a)hak*, possibly also related to the ergative marker (though with less confidence). In Timbira there is a possible extension of the ergative/genitive marker to reason clauses, discussed below in this section.

In Ese Ejja the ergative case marker possibly forms part of a number of subordinators. Vuillermet (2012: 599-600) argues that some of the switch-reference markers of the language have been partially formed on the basis of an absolutive (*ø*) versus ergative (*=a*) opposition where the latter marks coreference between the intransitive subject of the dependent clause and the transitive subject of the main clause, and the

former between the absolutive argument of the dependent clause and the intransitive subject of the main clause (Table 3).[9] These absolutive-ergative oppositions are suggested to derive from attributively used participial constructions displaying case agreement with their head noun (ibid.).

Table 3: Correspondences of absolutive and ergative cases in Ese Ejja subordinators (Vuillermet 2012)

	$S/P_{DEP} = P_{MAIN}$	$S_{DEP} = A_{MAIN}$
before	-ximawa=ø	-ximawa=a
condition	=ø=xemo	=a=xemo
reason	=ø=xejojo	=a=xejojo

Similar patterns may be found in the Panoan languages, where the /n/-like form of the ergative may appear in parts of the switch-reference paradigm (see Valenzuela 2003), but the distribution is less clearly governed by the role of the pivotal participant in either of the connected clauses.

Summarizing, there is little unequivocal evidence for grammaticalization paths from ergative to subordinator in the sample, but for the languages that potentially show such a grammaticalization there seems to be at least a connection between ergative and reason clauses, and possibly purpose clauses. There are too few data points to be able to say anything definite about whether these grammaticalizations are driven by genealogical, areal, or general pressures, but it is probably not a coincidence that Tacanan and Panoan languages show evidence of this path, and it is likely that the switch-reference systems and their interaction with transitivity in these languages have played a major role in the extensions of the ergative markers.

Moving on to the accusative markers, Quechuan languages show a straightforward connection of the accusative case to marking nominalized clausal complements:

(6) Cuzco Quechua [QUECHUAN], Lefebvre & Muysken 1988: 18
[papa mikhu-y]$_{NMLZ}$-**ta** muna-n
potato eat-INF-**ACC** want-3
'He wants to eat potatoes.'

A similar construction exists in Aguaruna.

[9] The zero marking is of course problematic (and therefore not considered in the database) but the functional correspondence does seem to speak for the ergative case marker as part of the S=A markers.

(7) Aguaruna [JIVAROAN], Overall 2007: 428
naŋkama-a-u-ai [anɨntaĩ tsupi-hu-ta]$_{NMLZ}$-**na**
begin-HIAF-REL-COP:3:DECL heart cut-APPL-ACT.NLZ-**ACC**
'He began to cut (the boa's) heart.'

In addition, there are relativized complements:

(8) Aguaruna [JIVAROAN], Overall 2007: 534
dɨka-a-ma-ha-i [amɨ
know-IMPFV-REFL-1SG-DECL [2SG
wai-tu-ka-mau]$_{NMLZ}$-**na**-ka
see-1SG.OBJ-INTS-NONA/S:REL]-**ACC**-FOC
'I know you (who) saw me.'

Bororo can also mark its complements with the object marker *-ji*:

(9) Bororo [BOROROAN], Nonato 2008: 147
a-jorödü-re [boe e-wogu-re dü]$_{NMLZ}$-**ji**
2SG-see-ASSERT Bororo 3PL-fish-ASSERT COMP-**ACC**
'You saw that the Bororos fished.'

The constructions in these languages are comparable: they show an extension of the accusative marker to marking clausal complements. In all of the cases this extension is facilitated by the presence of some kind of subordinator or nominalizer, which makes these uses of the accusative marker comparable to the nominalized relative clauses mentioned above, which were not taken into consideration. The marker *-re* in Cubeo [TUCANOAN] is possibly found as an element in a number of different-subject forms of the switch-reference system, e.g. for 'when' clauses (*-e-re*), simultaneous (*-e-reka*), where the initial *-e* is a nominalizer (Morse & Maxwell 1999: 161-9). However, given that the case marker *-re* has functional extensions into the spatial realm (locative, ablative) it is unclear which functional connection is responsible for the extension to adverbial clauses. Kamaiurá [TUPÍ] deserves a special mention because, in the analysis of Seki (2000), the language exhibits a 'nuclear case marker' *-a,* which does not distinguish between different types of core case, but instead marks an argument as belonging to the core. This marker can also be used to mark clausal complements:

(10) Kamaiura [TUPÍ], Seki 2000: 171.
1-potar=ete i-jo-taw-**a**

1SG-want=really 3-go-NLZ-**NUC**
'I want him to go.'

Summarizing, in a number of languages the accusative markers extend to marking clausal complements, though in combination with some type of subordinator or nominalizer.

The third structural case marker considered here is the genitive. Maps 9 and 10 show the presence of the genitive case marker and its distribution as a subordinator, respectively.

As can be seen on Map 9, the genitive is particularly widespread in western South America, though by no means exclusively in the Andes. The genitive is a feature of several families, like e.g. Quechuan, Aymaran, Panoan, Tacanan, Barabacoan. Map 10 shows that in only very few cases the genitive extends to mark subordinate clauses, and as we will see, most of these cases are somewhat problematic.

<table>
<tr>
<td> 
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<td> 
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<tr>
<td>LANGUAGES WITH GENITIVE CASE</td>
<td>LANGUAGES WITH GENITIVE CASE IN SUBORDINATE CLAUSES (POTENTIAL)</td>
</tr>
<tr>
<td>Yanesha', Aymara, Awa Pit, Tsafiki, Ika, Tehuelche, Timbira, Dâw, Mosetén, Matses, Shipibo-Konibo, Kakataibo, Imbabura</td>
<td>Awa Pit, Timbira, Mosetén, Imbabura Quechua</td>
</tr>
</table>

Quechua, Huallaga Quechua, Cuzco Quechua, Ese Ejja, Cavineña, Warao, Trumai, Kanoê	

Map 9: Presence of genitive case

Map 10: Genitive case in subordinate clauses

In Mosetén [MOSETENAN], possessive constructions mark the possessor with one of the so-called linker suffixes (*-tyi'* 'masculine' or *-si'* 'feminine') depending on the gender of the head noun. These markers can also be used to form relative clauses and simultaneity clauses (in the form of converbs). However, in its nominal use, the linker suffixes have a broader extension: they function as relation markers within the noun phrase, also for instance between adjectives and nouns.

(11) Mosetén [MOSETENAN], Sakel 2004: 106
jaem'-**tyi'** mintyi'
good-**LK.M** man
'a good man'

In Imbabura Quechua, the benefactive marker *-paj* codes genitives as well. This marker is found as a constitutive element of the same-subject purposive marker *-ngapaj* (*-nga* is third person future). Since other Quechuan languages have extended the cognate benefactive *-paj* (this marker is different from the genitive marker in most Quechuan languages) to purpose clauses, it seems likely that, in Imbabura Quechua, it was the benefactive function that allowed for the extension as well.

In Awa Pit, genitive is marked by *-pa*, which has an allomorph *-wa* after a vowel. Sequential clauses are marked with *-tpa* (after V-final stems) or *-tawa* (after C-final stems). This marker seems to contain the postposition that is used for genitive (Curnow 1997: 271). However, Awa Pit has a homophonous locative/allative postpostion *-pa*/*-wa* which is probably a more likely source for the extension to sequential clauses (see section 3.5).

In Timbira, finally, the marker *-te*[10] marks reason clauses. In Alves (2004), this marker also encodes ergative and genitive in NPs. However, in Popjes & Popjes' (1986) analysis, this marker encodes experiencers of habitual states, and subjects of transitive clauses in paste-tense clauses.

[10] I follow the spelling in Popjes & Popjes (1986) here. In Alves (2004) this marker is spelled *-tɛ*.

(12) Timbira [MACRO-GÊ], Popjes & Popjes 1986: 165.

jaco	me	capi	te	pĩ	here	jakep	ame	to
Jaco	and	Capi	ERG/PAST	wood	twig	cut	3PL	INST
[ajpẽn	cahhyr	pram]$_{NMLZ}$	**te**					
REC	beat	want	**REAS**					

'Jaco and Capi cut twigs because they wanted to beat each other with them.'

In summary, there seems to be no uncontroversial evidence for an extension of genitive markers to marking subordinate clauses in the languages of the sample.

3.3. Dative cases

The category of dative case is broadly conceived of here as those case markers that encode beneficiaries, recipients, maleficiaries, etc. unless they also mark locative, instrumental, or spatial relations, in which case they have been classified as 'obliques' (see below). Maps 11 and 12 show the distributions of dative cases in general (Map 11) and as subordinators (Map 12).

The extension of a dative marker seems to be common in the Andean languages. It is a pattern found throughout the Quechuan family, where the benefactive marker *-paq* (or regional variants thereof) can also be used to mark purpose clauses. The extension of the dative/genitive marker in Imbabura Quechua to purpose clauses was mentioned above. Other Quechuan varieties generally distinguish between the genitive and benefactive, with only the latter expanding to purpose clauses, strengthening the argument for a grammaticalization path benefactive → purposive for Imbabura Quechua as well. Example (13) shows the use of the marker *-paq*, in combination with the irrealis nominalizer *-na*:

(13) Huallaga Quechua [QUECHUAN], Weber 1989: 206

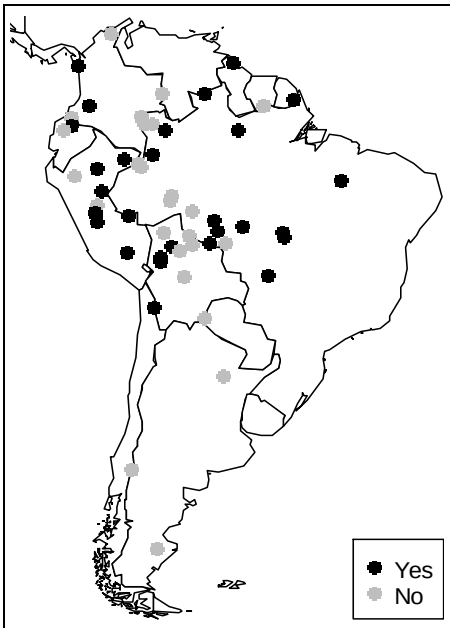
wañu-chi-ma:-na-n-**paq**	parla-ku-sha
die-CAUS-1OBJ-NLZ-3POSS-**BEN**	converse-REFL-3PERF

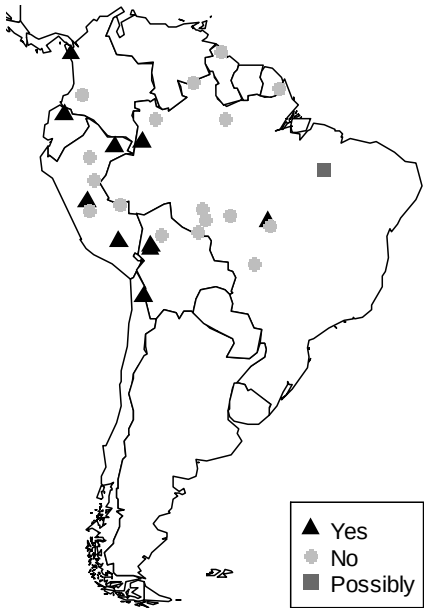
'They agreed to kill me.'

This construction is possibly related to the Central Aymaran construction. As is well known, Quechuan and Aymaran languages have had a long history of contact and structural convergence (see e.g. Adelaar & Muysken 2004).

(14) Central Aymara [AYMARAN], Hardman 2001: 213

ch'uq pall-ja-fiani [p"iry apa]$_{NMLZ}$ **-ñataki**
potato sort-PART-4>3FUT fair carry-**OBLG.PRP**
'We'll sort potatoes to take to market.'





LANGUAGES WITH DATIVE CASE	LANGUAGES WITH DATIVE CASE IN SUBORDINATE CLAUSES
Yanesha', Aymara, Miraña, Hixkaryana, Embera, Northern, Timbira, Rikbaktsa, Bororo, Dâw, Mosetén, Nasa Yuwe, Shipibo-Konibo, Yaminahua, Yagua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Cavineña, Karo, Mekens, Emérillon, Kamaiurá, Warao, Urarina, Kwaza, Trumai, Leko, Yanam	Timbira (possibly), Aymara, Miraña, Embera, Northern, Mosetén, Yagua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Trumai, Leko

Map 11: Presence of dative case

Map 12: Dative case in subordinate clauses

Further potential areal extensions are found in the foothill languages Mosetén (15) and Leko (16):

(15) Mosetén [Mosetenan], Sakel 2004: 438
khäkï katyi‘-in jäe’mä dyam~dyam jedye‘-in
because HSAY-PL filler little~RED thing[F]-PL
jäe’mä saeks-i-**dye**-si‘
FILLER eat-VSM-**BEN**-LK.F
‘Because there are only a few things to eat.‘

(16) Leko [ISOLATE], Van de Kerke 2009: 324
dira hoyno-tha hal-ate uywas-ich-**moki**
four pig-DIM buy-PAST.1 raise-INF-**BEN**
‘I bought four pigs to raise.’

Further north, Northern Embera likewise marks purpose clauses with a marker that can also be used to encode beneficiaries.

(17) Northern Embera [CHOCOAN], Mortensen 1999: 121
k^{h}uriwa ete-de wã-tua mu̱ wárra-rã mu̱-a
Guatín get-LOC go-IMPFV 1SG offspring-PL 1SG-ABL
[hu tawa-i]$_{NMLZ}$ k^{h}ãrẽã
breast give.drink-IRR BEN
‘Guatín, go get my children so that I may nurse them!’

The path beneficiary to purpose is clearly the most common for dative-like markers, and particularly associated with the Andes and adjacent areas. Nevertheless, a few alternative grammaticalization paths are shown by other languages. The beneficiary marker *-llii* in Miraña can mark reason clauses, and the dative marker *-(i)va* in Yagua can additionally mark ‘until’-clauses. Trumai dative markers extend to certain complement relations (complements of verba dicendi, verbs of liking and perception verbs), and there is a possible diachronic connection between dative and temporal conditional clauses (Guirardello 1999: 192-3). In Timbira, the dative/benefactive marker *-mã* is homonymous with the topic marker *mã* (except that the latter is not bound), which in turn seems to have developed into a third-person different-subject marker in semantically versatile complex sentences (Alves 2004: 146). Although the grammaticalization chain beneficiary > topic > different subject marker is speculative, it is an imaginable development, perhaps via a cleft construction.

Table 4 summarizes the uses of dative/benefactive case markers in subordinate clauses in the languages of the sample.

Table 4: Extensions of dative-like case markers to subordinate clauses

Language	Case marker	Extension
Timbira (P)	*mã* BEN/DAT	Perception complements (DS)
Embera, Northern	*k^{h}ãrẽã* BEN	Purpose
Imbabura Quechua	*-paj* BEN	Purpose (*-ngapaj*)
Miraña	*-llii* BEN	Reason
Yagua	*(i)va* DAT	Until
Huallaga Quechua	*-paq* BEN	Purpose
Trumai	*-ki* DAT *-(a)s/(i)s* DAT	Complementation (perception, fear, liking, communication) Temporal/conditional
Cuzco Quechua	*-paq* BEN	Purpose, conditional
Mosetén	*-dye* BEN	Purpose
Leko	*-moki* BEN	Purpose
Aymara	*-taki* DAT	Purpose

3.4. Comitatives and instruments

As shown in Map 13, comitative and instrumental case markers are extremely common in South American languages. Quite often, there is a single marker for both functions, confirming the functional connection between the semantics of these case roles. It is not very common, however, for an instrumental or comitative marker to grammaticalize into a subordinator (Map 14). Only a handful of examples in the sample languages show this connection, without there being any obvious genealogical or areal pattern. In terms of recurring grammaticalization paths, the most common pattern is for the comitative or instrumental case marker to encode simultaneity/manner or overlap (when) clauses. This link is found in Bororo, Desano,[11] Kwazá, Mosetén, Trumai, and possibly in Kakataibo, Yaminahua and Kokama.[12] The use of the

[11] The use of the comitative marker *bẽrã* to mark temporal clauses is constructionally rather restricted, as it is used only for constructions with a time word and a nominalized form of the verb *wa* 'to go' (Miller 1999: 151).

[12] Some of the subordinate markers in these languages show elements that may be linked to the comitative marker, like instrument marker *=pu(pe)* in Kokama which is possibly present in the subordinators *-npu* (sequential, *-n* is a nominalizer) and *=puka*

comitative marker in Bororo simultaneous clauses (possibly with a causal reading) and the instrument marker in Kwazá ‘when’ clauses are given in (18) and (19), respectively.

(18) Bororo [BORORoAN], Nonato 2008: 79
e-jagare-re [tu-okwage-i ji-dü]$_{NMLZ}$ **apo**
3PL-be.happy-ASSERT 3A-eat-INF THM-COMP **COM**
‘They were happy eating it [the corn].’

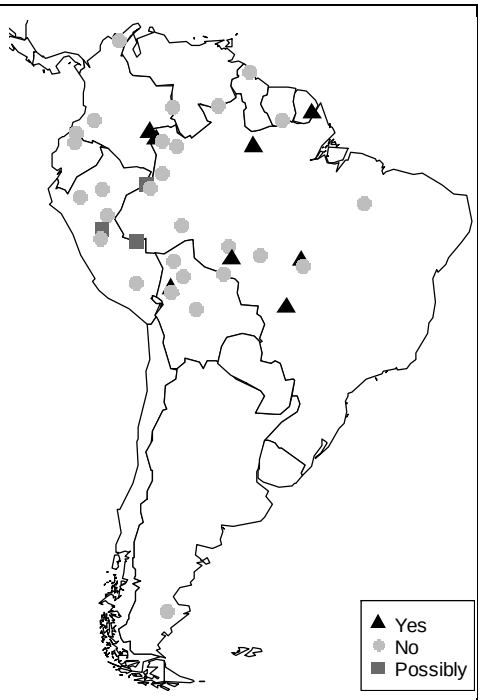
(19) Kwazá [ISOLATE], Van der Voort 2004: 508
[hako'ri duky-'tõi ũi-e-'nã-tsy-wy]$_{NMLZ}$ **-ko**
moon other-CL:eye lie-again-FUT-GER-time-**INST**
‘in the next month when it will be new moon’

Another connection, observed in Emerillon and Hixkaryana, is between instrument and reason.

(20) Emerillon [Tupí-Guaraní], Rose 2011: 335)
[aman-a-r-aʔɨr-a-te o-ʔar-a-r]$_{NMLZ}$**-ehe** eaŋ
rain-REF-REL-son-REF-FOC 3C-fall-REF-RELN-**REAS** quickly
o-kakuwa.
3C-grow
‘Because it is the son of the rain who is born, he grows very quickly.’

(‘when’, =*ka* is a locative), see Vallejos (2010). In Yaminahua one of the comitative markers, *-ya*, as well as the instrument marker *-ña* may be part of the subordinator *yanã* ‘when’. Kakataibo has a subordinator *-këbëtan* (different subject simultaneous) which probably contains the A participant comitative *-bëtan*.

Map 13: Presence of comitative/instrument case



Map 14: Comitative/instrument case in subordinate clauses

LANGUAGES WITH COM/INS CASE	LANGUAGES WITH COM/INS CASE IN SUBORDINATE CLAUSES
Tariana, Apurinã, Awa Pit, Miraña, Trio/Tiriyó, Hixkaryana, Ika, Tehuelche, Aguaruna, Timbira, Rikbaktsa, Bororo, Dâw, Mosetén, Nasa Yuwe, Matses, Shipibo-Konibo, Kakataibo, Yaminahua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Ese Ejja, Cavineña, Cubeo, Desano, Karo, Mekens, Emérillon, Kokama, Kamaiurá, Warao, Puinave, Urarina, Kwaza, Trumai, Leko, Yurakaré, Yanam	Emerillon, Hixkaryana, Desano, Trumai, Mosetén, Bororo, Kakataibo (possibly), Kokama (possibly), Yaminahua (possibly), Kwazá

Table 6 summarizes the different extensions of the comitative and/or instrumental markers in the sample languages.

Table 6: Extensions of comitative and instrumental case markers to interclausal relation markers

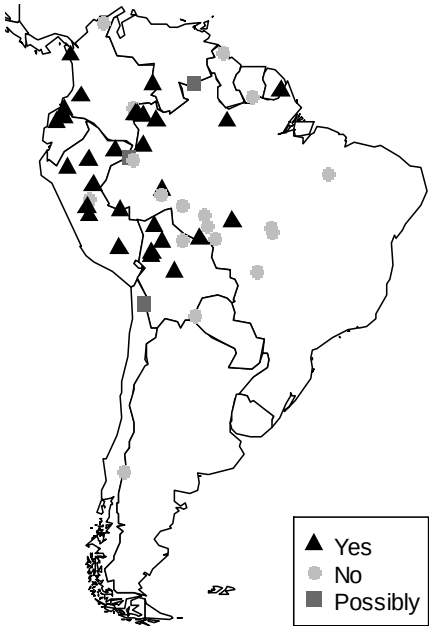
Language	Case marker(s)	Extensions	Comments
Emerillon	*-ehe* (comitative)	reason	
Hixkaryana	*ke* (instrument)	reason	
Desano	*bẽrã* (comitative)	when	Constructionally limited.
Trumai	*tam* (comitative)	simultaneity	
Mosetén	*tom* (comitative)	simultaneity	
Bororo	*apo* (comitative)	simultaneity	Possibly extensions to reason.
Kokama (Potential)	*=pu(pe)* (instrument)	when, succession	Extensions are not entirely certain.
Yaminahua (Potential)	*-ya* (comitative), *-ña* instrument	when	Extensions are not entirely certain. Status of *-ya* as a comitative case marker is moreover doubtful (R. Zariquiey, p.c.).
Kakataibo (Potential)	*-bëtan* (comitative A)	-kebëtan	
Kwazá	*-ko* (instrument)	when	

3.5 Spatial cases

Spatial case markers are clearly the most common type of case markers in South American languages. Moreover, they are the case markers that most frequently extend to mark subordinate verbs and clauses for their relation to some superordinate clause. Both facts are visualized in Maps 15 and 16, respectively.

I have not counted location clauses because they do not genuinely present semantic extensions, although they may be indicative of a rather flexible distinction between nouns and verbs, especially if no nominalization is required before the case marker can be applied, as in (21).

(21) Baure [ARAWAK], Danielsen 2007: 407.
bueno tiow [noiy ver
bueno CLEFT there PERF
eto-pi-a-po]$_{NMLZ}$ -yi=ro
finish-words-LK-PFV.REFL-LOC=3SGM
'Well, this is where already the words were finished.'

	
LANGUAGES WITH SPATIAL CASE	LANGUAGES WITH SPATIAL CASE IN SUBORDINATE CLAUSES
Tariana, Apurinã, Yanesha', Baure, Jarawara, Aymara, Awa Pit, Tsafiki, Miraña, Trio/Tiriyó, Hixkaryana, Ika, Embera, Northern, Aguaruna, Timbira, Rikbaktsa, Bororo, Hup, Dâw, Mapudungun, Mosetén, Sabanê, Nasa Yuwe, Matses, Shipibo-Konibo, Kakataibo, Yaminahua, Yagua, Imbabura Quechua, Huallaga Quechua, Cuzco Quechua, Ese Ejja, Cavineña, Cubeo, Desano, Karitiana, Karo, Mekens, Emérillon, Kokama,	Embera, Yanam (potentially), Puinave, Emerillon, Paez, Awa Pit, Hup, Desano, Tariana, Imbabura Quechua, Dâw, Hixkaryana, Tsafiki, Miraña, Yagua, Kokama (potentially), Urarina, Aguaruna, Shipibo (potentially), Huallaga, Yaminahua, Yanesha', Jarawara, Rikbaktsa, Ese Ejja, Mekens, Cavineña, Cuzco Q, Moseten, Leko, Yurakaré, Aymara (potentially)

Kamaiurá, Tapiete, Warao, Puinave, Urarina, Kwaza, Trumai, Leko, Yurakaré, Yanam	

Map 15: Presence of spatial case

Map 16: Spatial case in subordinate clauses

Table 7 sketches the different extensions of the spatial case markers to contexts of clause combinations.

Table 7: Extensions of spatial case markers to interclausal relation markers

Language	Case marker(s)	Extensions	Comments
Embera	*-de* LOC	simultaneity, when ; comparison (purpose of motion)	
Yanam (potential)	*-ha* various spatial	temporal (*-pɪha*)	
Puinave	*-a* DIR, and *-ʻu* ADH	temporal, conditional, reason, complements	
Emerillon	*-upi* PERL	comparative (simultaneity)	
	koti DIR	cognition	
Paez	*-te* LOC	temporal (DS) > concessive	
	-xĩ ABL	succession	
	-na DIR	comparative	
Awa Pit	*-kima* LIM	until (temp)	
	-pa/-wa LOC/DIR/GEN	succession	
Hup	*-an* various spatial	simultaneity	Many relator-like spatial elements can have temporal interpretations.
Desano	*kore* before	precedence	
	pɨ?rɨ after	succession	Unclear if the postposition has a

			spatial meaning as well.
Tariana	*-se* various spatial	sequence simultaneity	
Imbabura Quechua	*-manda* ABL	reason	
	-kaman LIM	until	*-ngakaman* is used.
Dâw	*xáx* 'among'	simultaneity	
Hixkaryana	*hona* DIR way 'to, by'	purpose manner	
Tsafiki	*=bi* LOC/DIR	Purpose of motion ; temporal	SR clauses can take locative postpositions without a clear interpretational difference. Perhaps further locatives are possible in these constructions.
	=le LOC	temporal	
Miraña	*-tu* ABL	succession, comparative	
Yagua	*-jụ̀* DIR	purpose	
Kokama (potential)	*=ka* LOC/DIR	when (=puka)	
	=kuara INESS	reason (=ikua)	
Urarina	*hana* INESS *ahinia* before	when before (temp)	
Aguaruna	*-nĩ* LOC	simultaneity, condition, concession	DS clauses for second person are marked with a morpheme that is cognate with the locative case marker.
Shipibo (potential)	*-ain* DIR	simultaneity	The case marker seems to form part of one of the DS markers, but alternative connections to the ergative *-n* are also possible (R. Zariquiey, p.c.).

Huallaga	*-kama/-yaq* LIM	until	
	-pita ABL	reason, succession, comparative, neg. purpose,	
	-chaw LOC	simultaneity	
Yaminahua	*-ax* ABL	succession	
Yanesha‘	*-ot* LOC	reason	Possibly wider functionality.
	-o’mar LOC	reason	
Jarawara	*kaa* PERL	reason	Status as case marker not entirely certain.
Rikbaktsa	*-ere(ka)* INESS	temporal, conditional	
Ese Ejja	*=jo* LOC	reason, condition, precedence, when	Both are part of the SR paradigm.
	=xe PERL	reason, condition, precedence, when	
Mekens	*(e)se* LOC	temporal, conditional	
Cavineña	*=ju* LOC	temporal	The marker *=ju* is also DS marker.
Cuzco Q	*-manta* ABL	reason	
	-kama LIM	until	
Moseten	*-ya’* ADESS	when, conditional	
Leko	*-ra* LOC	temporal, conditional, reason	
Yurakaré	*=jsha* ABL	concession, succession	
Aymara (potential)	*-ta* ABL	temporal	

By far the most common extension is from spatial to temporal, which is not surprising given the close connectedness between space and time in

human languages (see e.g. Haspelmath 1997). Stative locatives tend to extend towards simultaneity or when clauses (22), whereas ablative markers naturally extend to succession clauses (23).

(22) Embera [CHOCOAN], Mortensen 1999: 114
[mãwã b-~~u~~]$_{NMLZ}$ **-de** s'e-s^{h}i-a ũmãk^{h}ĩrã
like.this be-PRES-**LOC** come-PAST-DECL man
s'a b-~~u~~-ta
here be-PRES-ABS.FOC
'(…) while this was happening, there came a man who looked just like him.'

(23) Páez [ISOLATE], Jung 2008: 171
[lu:ts^{j}-k wewe?we-n^{j}i]$_{NMLZ}$ **-xũ** jat-te
child-DIM speak-PERF.PTC-**ABL** house-LOC
ka:-pija-?x-ja? tak^{h}-e-?-t^{j}
CAUS-learn-TR-INF begin-IPFV-HAB-ASSERT.3PL
'When the child knows how to speak, they start to teach it in the house.'

Since for many languages temporal and conditional clauses are marked in similar ways, the case markers that encode temporal relations can also code conditional relations in those languages.

(24) Leko [ISOLATE], Van de Kerke 2009: 316
[iya kelecha he-ir-a]$_{NMLZ}$ **-ra** lamkas-tan
you money have-NEG-PFV-**LOC** work-OBLG
'If you don't have money, you should work.'

Another common type of extension of spatial markers is towards reason clauses.

(25) Huallaga [Quechuan], Weber 1989: 195
[qella ka-y]$_{NMLZ}$ **-pita** [osyoosu ka-y]$_{NMLZ}$ **-pita**
lazy be-INF-**ABL** lazy be-INF-**ABL**
chay-lla-ta miku-n
that-just-ACC eat-3
'Because they are lazy, they just eat that.'

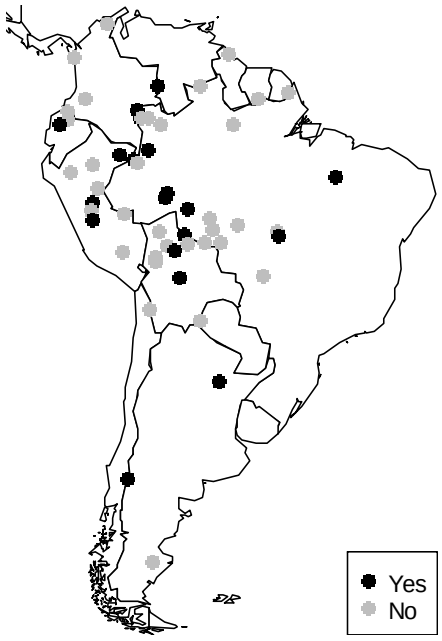
And those languages with a limitative marker usually extend it to mark temporal relations as well.

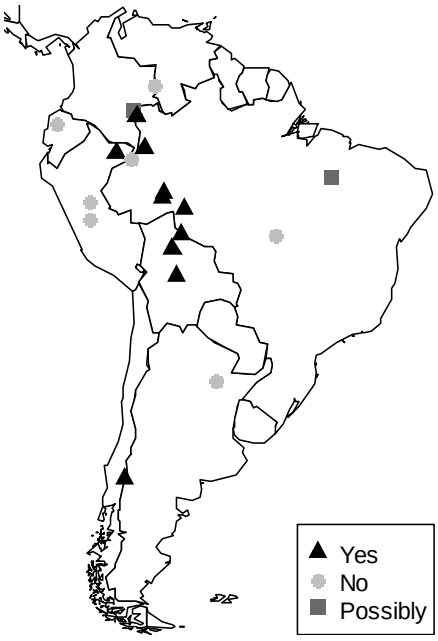
(26) Awa Pit [BARBACOAN], Curnow 1997: 263
[Demetrio kayl-na]$_{NMLZ}$ =**kima** kal ki-ni-s
Demetrio return-INF=**until** work(1) work(2)-FUT-LOCUT
'I will work until Demetrio returns.'

Summarizing, there is a very strong connection between spatial case and temporal interclausal relation when it comes to the use of case markers. In some languages, the use of spatial case markers extends further, to conditionals. Other common extensions are reason and purpose.

3.6. Oblique cases

The oblique cases form a somewhat disparate group, and therefore the patterns yielded by this group of case markers is expected to show effects that are correspondingly diverse. Maps 16 and 17 show the distribution of oblique case markers and their extensions to subordinate clauses, respectively. Table 8 summarizes the information per language.





LANGUAGES WITH OBLIQUE CASE	LANGUAGES WITH OBLIQUE CASE IN SUBORDINATE CLAUSES
Apurinã, Yanesha', Jarawara, Tsafiki, Miraña, Mocoví, Timbira, Hup, Mapudungun, Kakataibo, Yagua, Cubeo, Karitiana, Kokama,	Cubeo (P), Hup, Miraña, Yagua, Timbira (P), Jarawara, Apurinã, Karitiana, Kanoe, Movima, Yurakare, Mapudungun

Kamaiurá, Puinave, Kanoê, Movima, Yurakaré	

Map 17: Presence of oblique case

Map 18: Oblique case in subordinate clauses

Table 8: Extensions of oblique case markers to interclausal relation markers

Name	Marker	Extension	Comments
Cubeo (potential)	*-re* DAT; LOC	temporal	Classification as case marker problematic.
Hup	*-Vt* LOC; INST; COM	simultaneity	
Miraña	*-ri* INST; LOC	succession; reason	
	-ma COM, INST, BEN	succession	
Yagua	*(i)ma* INST; LOC	simultaneity	
Timbira (potential)	*kãm* LOC; COM	general subordinator	
Jarawara	*jaa* OBL	temporal, conditional, reason, location	
Apurinã	*-ã* LOC; INST	conditional	
Karitiana	*-ty* OBL	desire, cognition, perception	
Kanoe	*-ni* OBL	temporal	Perhaps marginally.
Movima	*n-* OBL	temporal, purpose	
Yurakare	*=la* PERL, INST	reason, cognition	
Mapudungun	*-mew* OBL	reason, location	Glossed as an instrument marker, has a wide range of interpretations.

As can be seen in Table 8, most extensions of oblique markers are towards temporal clauses. This is further evidence of the close connection between location and time, since all oblique markers in the sample can have spatial interpretations.

In some cases, the multi-functionality of the oblique marker translates directly into multi-functionality as a subordinator. This is for instance the case in Jarawara (27) and Movima (28):

(27) Jarawara [ARAWAN], Dixon 2004: 489, 496

a. [awa ini tati jaa bahi ite]$_{NMLZ}$ **jaa** otaa
tree branch head OBL sun sit **OBL** 1EXC.S
ka-ma
in.motion-back
'When the sun sits on the topmost branches of the trees, we go back.'

b. [ee hijari]$_{NMLZ}$ **jaa** ee hijara na-ba
1INC.S talk.NLZ **OBL** 1INC.S talk AUX-FUT
ee-ke
1INC-DECL
'If we want to talk , we should talk now.'

c. [jobe wata-re]$_{NMLZ}$ **jaa** hinaka jobe-bona
house exist-NEG **OBL** 3SG.POSS house-INTN
otaa hiri ne
1EXC.A make AUX
'Since there wasn't a house (for Alan), we made a house for him.'

(28) Movima [ISOLATE], Haude 2006: 310

a. jayna **n**-os [ena' łani-wa]$_{NMLZ}$
DSC **OBL**-ART.NEUT.PAST DUR.STD bathe-NLZ
ń to'baycho
1INTR remember.MST
'Then, as I was bathing, I remembered.'

b. ji<wa:->wa--'ne **n**-os sa-al-wa='ne
come<MID->--F **OBL**-ART.NEUT.PAST DR-search-NLZ=F
us pa:pa='ne
ART.M father.of=F
'She came to look for her father.'

Perhaps somewhat counterintuitive, in some languages, oblique markers are used to mark complement clauses.

(29) Karitiana [TUPÍ-ARIKEM], Storto 2011: 229

a. y-py-sondyp-yn yn [Inacio ’ep opiĩ]$_{NMLZ}$ **-ty**
1-ASSERT-know-NONFUT I Inácio tree cut-**OBL**
‘I know that Inácio cut the tree´

b. y-py-so’oot-yn yn [Inacio ’ep opiĩ]$_{NMLZ}$ **-ty**
1-ASSERT-see-NONFUT I Inácio tree cut-**OBL**
‘I saw that Inácio cut the tree´

(30) Yurakaré [ISOLATE], Van Gijn 2006: 319

a. nij wëshë-të-y [chitta mala-y-ti=**la**
NEG notice-MID-1SG throw.SG go.SG-1SG=SUB=**OBL**
ti-petche]$_{NMLZ}$
1SG-fish
‘I did not remember that I left my fish.’

b. ka-yle-ø-ya na ta-ppë tiri
3SG-know-3-REP DEM 1PL-grandfather Tiri
[ama-shku-ta imbëtë-shta-ø-ti]$_{NMLZ}$ =**la**
WH-ADV-MID behave-FUT-3-SUB=**OBL**
‘Our grandfather Tiri knew how he would behave.’

In summary, the extensions of the oblique markers seem to follow the extensions mentioned above in this paper, in particular towards temporal and reason clauses depending on the range of their semantics. Perhaps surprisingly, some languages use oblique markers to mark clausal complements.

3.7. Other cases

A number of other cases, which do not fall into any of the above categories, are also found in subordinate clauses. The patterns are too diverse and small to make sense in a genealogical or areal way, so I will not show any maps. Instead, Table 9 summarizes the relevant information.

Table 9: Extensions of other case markers to interclausal relation markers

Language	Case marker	Subordinator use
Kokama (potential)	*=ra* ‘for the purpose of’	condition (-ra/-ri), purpose (-mira, -tara)
Warao	*ebe/kuare* ‘because of’	reason
Páez	*-pa?ka* ‘because of ‘	reason

Cubeo	*-pe* similative	comparative, purpose (P) *kijepe*
Hixkaryana	*horɨ* 'for the purpose of'	manner, purpose
Miraña	-d? similative	comparative
Urarina	*bana* 'at the time of' *baja* 'after' *netohweĩ* until	when sequential until
Shipibo-Konibo	*-tian* 'at the time of'	temporal (present in SR paradigms)
Jarawara	*tabijo* 'lack of'	reason
Apurinã	*-sawaku* 'at the time of' *-xika* 'because of'	when reason
Kakataibo	*=sa* similative	cognition
Huallaga Q	*-naw* similative *-rayku* cause	comparative, 'be about to' reason
Cuzco Q	*-rayku* 'because of'	reason
Leko	*-bacha* 'because of'	reason

Many of the markers in this group have semantics that can be readily used either with respect to referential expressions or event-expressions. In fact, it is not clear to what extent these are extensions at all, and if they are, what their direction of diachronic development is: from nominal to verbal use or vice versa.

One type of situation is a similative nominal marker that can also be used as a simulative verbal marker (the Quechuan languages, Cubeo, Miraña)

(31) Cubeo [TUCANOAN], Morse & Maxwell 1999: 101; 182

a. ʧiai-rɨ-**pe** ãrõxã=abẽ ɨ̃
cicada-CLS:3D-**SIM** be.similar=N/H.3SG.M 3SG.M
'He (i.e. the ant-eater) is similar to the cicada.'

b. pɨ̃õ-jɨ̃-re xẽ-xa-kɨ 'jo-pe xi
blow-CLS:funnel-OBJ grab-IMP-M.SG this-SIM 1SG.POSS
xẽ-ij-e-**pe**
grab-STV-INAN.PL.NLZ-**SIM**
'Hold the blowgun like I am holding it.'

Some languages have purposive case markers that can be used with nouns or verbs (Kokama, Hixkaryana).

(32) Hixkaryana [CARIBAN], Derbyshire 1985: 21; 39
a. tono omsamtxemo tuna **hori**
she.went young.girl water **PRP**
'The young girl has gone for water.'
b. kuraha wanɨmo ɨhoko
bow-wood I.picked.it.up occupied.with-it
ryesnɨrɨ **hori**
my.being **PRP**
'I picked up the bow-wood with a view to working on it.'

Similarly, temporal case markers that can be used either with nouns or verbs are found (Urarina, Shipibo, Apurinã). In Apurinã, the temporal marker *-sawaku* only attaches to nouns that express some kind of time concept (Facundes 2000: 388).

(33) Apurinã [ARAWAK], Facundes 2000: 388; 611
a. õtu-**sawaku** n-apo-pe
day-**TEMP** 1SG-arrive-PFV
'I arrived during the day'
b. a-makatxaka txa-ru komeru-pe
1PL-take AUX-3M.OBJ manioc-pulp
u-payaka-**sawaku**
3M-be.soft-**TEMP**
'When it is soft, we take the manioc pulp.'

Finally, reason case markers are sometimes also found on verbs to mark reason clauses (Warao, Leko, Cuzco and Huallaga Quechua, Páez)

(34) Cuzco Q. [QUECHUAN], Lefebvre & Muysken 1988: 19; 23
a. qan-ri ima-**rayku**-n mana saluda-wa-rqa-nki-chu
you-EMPH what-**REAS**-AFF not greet-1OBJ-PAST-2-NEG
'You, why (because of what) did you not greet me? '
b. [qaynunchaw pidru wiqchu-ku-sqa-n]$_{NMLZ}$ -**rayku**
yesterday pedro slip-REFL-NLZ.REA-3-**REAS**
nana-chi-ku-sha-n
hurt-CAUS-REFL-PROG-3
'Because Pedro slipped yesterday he feels pain.'

4. Discussion

At the start of this paper, I indicated three major forces that may determine the distribution of any linguistic feature, in this case the use of particular case markers as subordinators: genealogical retention, areal contact-induced diffusion, and general communicative-cognitive principles. Starting with the latter, it was mentioned above that nominalization of subordinate clauses can be argued to follow functional principles in that an event-denoting unit is used in a syntactically atypical way, namely as an argument, modifier, or adjunct. In grammaticalization theory, the development from noun phrase to subordinate clause (e.g. Heine & Kuteva 2007) is regarded as a functionally motivated, common path. Therefore in a broad sense, general functional motivations play account for the patterns found in e.g. Van Gijn (2014) where nominalized subordinate clauses in South America are found to be very common.

We can approach the issue of 'naturalness' also from a semantic angle. Figure 1 gives a schematic representation of the associations between case markers and subordinators in the sample languages (the languages where the associations are uncertain have been left out), where the thickness of the line correlates with the frequency of the connections.

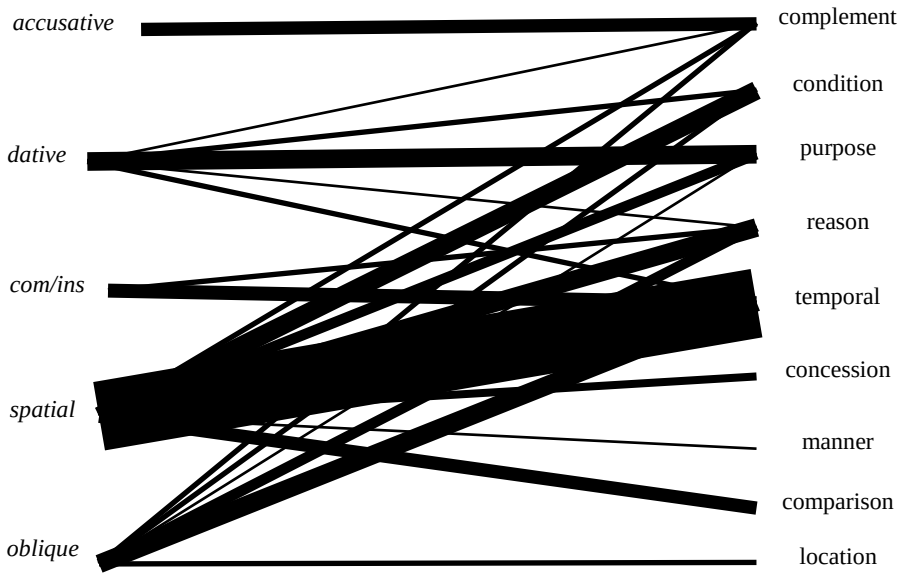


Figure 1: association map of case markers and subordinators

If we look at Figure 1 from the perspective of the case marker, the following connections are most common:

(35) Spatial → Temporal
Dative/Benefactive → Purpose
Oblique → Temporal
Accusative → Complementation
Comitative/Instrumental → Temporal

From the perspective of the subordinators, the following are the most frequent connections:

(36) Complementation ← Accusative
Condition ← Spatial
Purpose ← Dative/Benefactive
Reason ← Spatial
Temporal ← Spatial
Concession ← Spatial
Manner ← Spatial
Comparison ← Spatial
Location ← Oblique

Genetti (1986), discussing case-marker-based subordinators in the Bodic branch of the Tibeto-Burman family, develops a localist theory of grammaticalization of case markers into subordinators, based on work by Diehl (1975), who argues for four general spaces: LOCATION, which locates physical objects in space, SOCIAL, which is location with respect to (human) beings, TEMPORAL, which locates events in time, and LOGICAL, which concerns the relations between propositions. On the basis of this abstract schema, Genetti (1986: 394) establishes the natural connections between cases and subordinators indicated in Table 10.[13]

Table 10: Natural extensions of locative case markers (Genetti 1986)

	LOCATION	SOURCE	GOAL
LOCATION	locative	ablative	allative
SOCIAL	comitative	ergative/instrument	dative
TEMPORAL	when/while	since, after	until
LOGICAL	if	because	purpose

In a general sense, the centrality of spatial cases in the grammaticalization path towards subordinators in South American languages is corroborated by the fact that, of all the cases, as can be seen

[13] The terminology is slightly altered to better fit the set-up of this paper. Comitative is termed 'associative' in Genetti (1986) and ergative and instrument are taken together.

in Figure 1, they are the prime source of subordinators across areas and language families, and have several different extensions, as shown in (36). Location → Subordinator is a path also observed more generally, especially towards temporal and reason clauses (e.g. Heine & Kuteva 2002: 205-6). In fact, as Heine & Kuteva (2002: 206) say: "It is hard to find languages where some expressions for locative concepts are not extended to also refer to temporal concepts."

In a more detailed way, the connections are more diffuse, but some naturalness effects can still be discerned. Table 11 shows a more refined classification of the data, giving the frequencies (in number of languages) of the occurrence of extensions of the case markers indicated in the top row to the subordinators indicates in the first column, following Genetti's proposal. The gray cells are the 'natural' connections.[14]

Table 11: Extensions in the sample and naturalness.

	LOC	ABL	ALL	COM	INS	DAT
Overlap	13	4	3	4	1	1
Condition	4					2
Sequence	8	7	4			1
Reason	2	2		1	1	1
Until			3			1
Purpose	1	1	3			7

The naturalness effects predicted by Genetti (1986) are certainly not all found in the data, though a few can be observed: a preference for locative markers to extend towards overlap markers, as well as between dative and purpose. Furthermore, ablative markers most often extend towards sequence subordinators, and comitative markers most often to overlap subordinators.

In summary, general principles do seem to play a role in the distribution of case-derived subordinators in South America, on at least three levels:

i. Nominalizations express the syntactically nominal status of subordinate clauses
ii. There is a clear space-time connection

[14] I have counted categories such as 'inessive' as locatives; limitative markers were grouped with allative, perlative markers are disregarded in Table 11. General temporal subordinators have been counted both as overlap and as sequence markers.

iii. Certain specific 'natural' semantics extensions (locative-overlap, dative-purpose, and to a lesser extent ablative-sequence and comitative-overlap) can be observed.

A second potential influence on the distributional patterns of case-based subordinators is areality. Above I mentioned four major linguistic areas. I will briefly survey each of these areas with respect to case marking and extensions to subordinators.

The *Andean linguistic area* is generally associated with structural case and accusative alignment (Torero 2002, Adelaar 2008). Although object markers are certainly also found in the Amazonian macro area, they do seem to be subject to more restrictions than the accusative markers of the highlands. Extensions of accusative case markers to subordinate clauses is also predominantly restricted to Andean languages, though this seems to partly be a genealogical effect, as it is mainly restricted to Quechuan languages. The fact that Aguaruna (at the periphery of the Andean area) also has extensions to complement marking of the accusative marker may be the result of language contact. Another potentially areal phenomenon at the periphery of the Andean linguistic area is the extension of dative/benefactive markers to purpose clauses found in the foothill languages Mosetén and Leko.

The *Vaupés region*, in terms of case marking, is characterized by a nominative-accusative profile, differential object marking (with information structure interfering), and a multi-purpose spatial marker (Aikhenvald 2002). It is unclear whether any of the extension patterns have areal motivations. Spatial case markers have been extended to temporal clauses in Tariana, Desano, Hup, and Dâw, but the extensions seem to be rather different, except for the extension of multi-purpose spatial markers to at least temporal overlap clauses in Hup and Tariana.

The *Guaporé-Mamoré linguistic area* is characterized by head-marking patterns, and at most peripheral case. Nominalized subordinate clauses are also mentioned as an areal trait (Crevels & Van der Voort 2008: 171). In terms of case extensions, a number of languages on the Bolivian side of the area show extensions of oblique markers to subordinators, though with rather different semantics. There may also be a negative areal effect in the lack of extensions of spatial case markers to subordinators in the (north)eastern part of the Guaporé-Mamoré (and adjacent areas). As mentioned above, the western fringe of the area may show some contact effects with the Andean linguistic area in terms of the extension of the dative/benefactive.

The *Chaco* is mainly characterized by the absence of case (see also Comrie et al. 2010: 91).[15] This is in itself an interesting fact, since case markers seem to be generally present in South American indigenous languages. More particularly, Chaco languages seem to have a preference for expressing relations between an event and its arguments and/or adjuncts on the verb by means of applicatives and person markers, or — in the case of Tapiete — by person-marked adpositions.

Summarizing, there are some potential areal effects, both within and between linguistic areas, although areal accounts, in the absence of actual forms being borrowed, remains speculative.

A third potential factor in shaping distributions of case markers as subordinators is genealogy. Looking at the representatives of the larger families Arawak, Carib, Macro-Ge, Panoan, Quechuan, and Tupian may yield certain consistent genealogical trends, or further evidence for contact-induced change in the case of inconsistent patterns.

The members of the *Arawak* family in the sample are characterized by relatively small and semantically versatile case inventories. Although nominalization is a frequent subordination strategy for relative clause formation (Aikhenvald 1999: 100), complement and adverbial clauses are often formed by more verbal strategies. Nevertheless, some case extensions are found in the sample. Tariana and Yanesha' have extended their spatial case markers to temporal and reason clauses, respectively, and Apurinã uses its oblique case marker (locative/instrument) to mark temporal clauses. The latter language also has further markers (because of, at the time of) that can be used both with nouns and subordinate verbs.

Nominalization is the dominant strategy in *Carib* subordination (Gildea 1998, Derbyshire 1999: 56-7, Gildea 2012: 481). Carib languages furthermore often have a host of postpositions, which can be inflected for person. These postpositions cannot always be counted as case markers according to the definition given at the beginning of this paper, but some of them can because they either do not take person inflection or because their inflection is in complementary distribution with an overt complement. Of the three Cariban sample languages, Hixkaryana is the only one that uses case markers as subordinators (instrument to reason,

[15] Vilela (Lule-Vilela), not part of the sample of this paper, has peripheral case markers.

allative to purpose, as well as the marker *horɨ* 'for the purpose of' to purpose clauses). Some of the adpositions that cannot be counted as case markers seem to play a role in subordinate clause formation in all three Cariban sample languages, whether directly or historically (e.g. the locative adposition *tao* seems to be present in Tiriyó *ahtao* 'temporal/conditional' (Meira 1999), and Payne & Payne (2013: 421) mention several adpositions as potential sources for subordinating suffixes in Panare.

Not very much is known about general strategies that *Macro-Ge* languages use for subordinate clauses. Rodrigues (1999: 197) mentions the presence of switch-reference systems in some languages to mark coordinate clauses. The three Macro-Gean sample languages Bororo, Timbira, and Rikbaktsa show rather divergent patterns in their case marking systems as such (e.g. Timbira has an ergative case marker, Bororo and Rikbaktsa accusative), though the languages generally share the presence of a large inventory of peripheral case markers. Extensions to subordinate clauses are not abundant in the data that I have looked at, and are restricted to the extension of the accusative case marker to marking complements, as well as of the comitative marker to simultaneity clauses in Bororo, uncertain extensions of the ergative/genitive case marker to reason and the dative to (DS) perception complements in Timbira, and of the inessive *-ere(ka)* to temporal/conditional clauses.

The *Panoan* languages are relatively homogeneous in a number of aspects, such as the presence of an ergative marker (generally containing some nasal element) that has a number of other functions as well. Most Panoan languages also have a complex switch-reference system in common, which is used to encode many different adverbial clause types (especially temporal and purpose). The switch-reference markers may show potential connections with case markers, although in a number of instances this is due to the fact that both case markers and switch reference markers are part of the same bigger transitivity concord system. Apart from those correspondences, there does not seem to be a lot of extensions of case markers to subordinators (extension of the ablative to temporal clauses with a time lapse between the two events in Yaminahua, and an extension of the similative to cognition complements in Kakataibo).

The central and southern *Quechuan* languages share many properties, also in their case systems, and also in their extensions to subordinators:

extensions of the accusative marker to marking several complement types, of the dative to purpose clauses, the ablative to reason clauses, the limitative to 'until' clauses, and the 'because of' marker to reason clauses are typical Quechuan extensions. Although the northern Quechuan varieties underwent some changes in their case systems compared to the southern ones (such as a merger of the benefactive and genitive in Imbabura Quechua), the 'Quechuan' extensions still exist.

Like Cariban languages, many *Tupian* languages have adpositions that can inflect for person, although in a number of languages these adpositions have developed into inflectional case markers (Rodrigues & Cabral 2012: 517). With the exception of Kamaiurá which, in Seki's analysis, has a nuclear case marker, Tupian languages do not have structural case markers. Dative/benefactive, comitative (and to a lesser extent instrument), and spatial cases are common. Again, extensions to subordinate clauses are relatively marginal: Emerillon uses the comitative marker *-ehe* to mark reason clauses, and the spatial markers *-koti* 'allative' to cognition complements, and *-upi* 'perlative' to comparative constructions. The Karitiana oblique *-ty*, like *-koti*, is used to mark complement clauses.

The language families, then, show rather diverse effects, possibly related to the time-depth and/or geographical spread of the families, with Quechuan and Panoan languages being relatively homogeneous, the others less so. In conclusion it seems that genealogical effects can influence distributional patterns, but at the same time case systems (and their extensions to subordinators) seem to be diachronically rather unstable, so that older, or more dispersed language families show more disparate patterns.

5. Conclusion

Nominalized subordinate clauses are very common cross-linguistically, but perhaps especially in South American languages. It is therefore not unexpected to find many examples of case markers that have been extended to mark subordinate clauses, following proposed diachronic channels for subordinate clauses arising from or being equated with nominal structures (Heine & Kuteva 2007).

The semantics of the extensions show some unity across languages, which seems to be attributable to a combination of naturalness effects,

areal effects, and genealogical effects, which can be summarized as follows.

General, functionally/cognitively motivated principles:

i. Nominalizations express the syntactically nominal status of subordinate clauses.
ii. There is a clear space-time connection.
iii. Certain specific 'natural' semantics extensions (locative-overlap, dative-purpose, and to a lesser extent ablative-sequence and comitative-overlap) can be observed.

Potentially areal effects:

i. Accusative to complement clause markers in northern Andes and adjacent areas.
ii. Dative to purpose clauses in southern-central Andes and adjacent foothills.
iii. General spatial markers to complement clauses in Tariana and Hup (Vaupés).
iv. Lack of extensions of case markers in the eastern Guaporé-Mamoré region and adjacent areas.
v. Lack of case in general in the Chaco.

Genealogical effects:

i. Relatively few extensions of case markers to subordinators in Arawak, Macro-Ge, and Tupian.
ii. Some potential diachronic but uncertain connections between case markers and subordinators in Carib and Panoan.
iii. Perhaps a (minor) pattern of extensions of peripheral case markers to complement-marking elements in Tupian.
iv. A relatively homogenous set of extensions of case markers to subordinators in Quechuan languages.

Abbreviations

1 first person; 2 second person; 3 third person; 4 fourth person (we inclusive); A transitive subject; ABL ablative; ABS absolutive; ACC accusative; ACT action; ADH adhesive; ADV adverbial; AFF affirmative; APPL applicative; ART article; ASSERT assertive; ASUF adjective suffix; AUX auxiliary; BEN benefactive; C coreferent; CAUS causative; CL

classifier; COM comitative; COMP complementizer; COP copula; DAT dative; DECL declarative; DEM demonstrative; DIM diminutive; DIR direction; DR direct (voice); DSC discontinuative; DUR durative; EMPH emphasis; ERG ergative; EXC exclusive; F feminine; FM formative; FOC focus; FUT future; GER gerund ; HAB habitual; HIAF high affectedness; HSAY hearsay; IMPFV imperfective; INAN inanimate; INC inclusive; INESS inessive; INF infinitive; INST instrument; INTN intention; INTR intransitive; INTS intensive; IRR irrealis; LIM limitative; LK linker; LOC locative; LOCUT locutor; M masculine; MID middle voice; MOT motion; MST mental state; MST mental state; N/H non-human; NEG negation; NEUT neuter; NLZ nominalizer; NONA/S non-subject; NONFUT non-future; NPREF noun prefix; NUC nuclear case; OBJ object; OBL oblique; OBLG obligatory, obligative; PAST past; PERF perfect; PERL perlative; PFV perfective; PL plural; POSS possessive; PREP preposition; PRES present; PROG progressive; PRP purpose; PTC participle; REA realis; REAS reason; REAS reason; REC reciprocal; RED reduplication; REF reference; REFL reflexive; REL relativizer; REP reportative; S intransitive subject; SG singular; SIM simulative; STD standing; STV stativizer; SUB subordinator; TEMP temporal; THM theme; TR transitive; VSM verbal stem marker; WH question word

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