Differential case-marking in Ecuadorian Siona

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CHAPTER 4

A comparativist study: Siona case-marking in typology

For the present chapter, I put on my *comparativist* hat in order to situate the case-marking facts described for (Ecuadorian) Siona in Chapter 3 among those described for languages spoken throughout a proposed northwestern Amazonian (NWA) language area. To date, regarding Tukanoan languages in this region, the literature has privileged the better-described Eastern branch (cf. Duarte and de Oliveira Lopes 2020; Gomez-Imbert 2011; Ramirez 2019[1997], 164-170; Stenzel 2008, 2013b, 2013c; Zúñiga 2007; among others).

With the express aim of placing the Siona case-marking facts in their regional context, I have developed the NWA case-marking dataset, which underpins the discussion in the present chapter. The dataset is presented in full in Appendix A.

This chapter is organized as follows: Section 4.1 outlines the methodology used to develop the NWA dataset, and how the dataset is used for comparison. Section 4.2 describes the most interesting typological insights revealed by the NWA dataset. This discussion is compartmentalized according to the FORMAL, FUNCTIONAL, and REALIZATIONAL domains of inquiry for case-marking and DCM patterns, as conceived in Chapter 2 of this dissertation. Section 4.3 closes the chapter by integrating the findings into the broader typological context and by considering their possible diachronic implications.

Siona in its genetico-areal context: The NWA dataset

The NWA dataset consists of information regarding dependent marking in 21 languages of the region, plotted in the map in Figure 4.1.[1] In the map below, and in the

[1] The languages are identified by their three-letter ISO codes: Siona [*snn*], Sekoya [*sey*], Koreguaje [*coe*], Máíhɨ̄kì [*ore*], Kubeo [*cub*], Tukano [*tuc*], Wanano [*gvc*], Desano [*des*], Barasano [*bsn*], Tanimuka [*tnc*], A'ingae [*con*], Shiwiar [*acu*], Tena Kichwa [*quw*], Imbabura Kichwa [*qvi*], Awa Pit [*kvi*], Murui [*huu*], Bora [*boa*], Tariana [*tae*], Kakua [*cbv*], Hup [*jup*], Yuhup

ensuing discussion, Western Tukanoan languages are identified with the symbol ♦, Eastern Tukanoan languages by ◊, and the Ecuadorian Siona language, targeted in this dissertation, with an asterisk (*). The ISO code for Ecuadorian Siona is presented as ([E]*snn*) to distinguish this language from the Colombian Siona language ([C]*snn*) described by Wheeler (1962, 1970, *et seq.*).[2] The Vaupés cultural-linguistic contact zone, discussed in Section 1.3.2, is traced roughly with a dotted gray line. The relevance of this sub-area for the typological discussion in this chapter is made explicit in what follows.

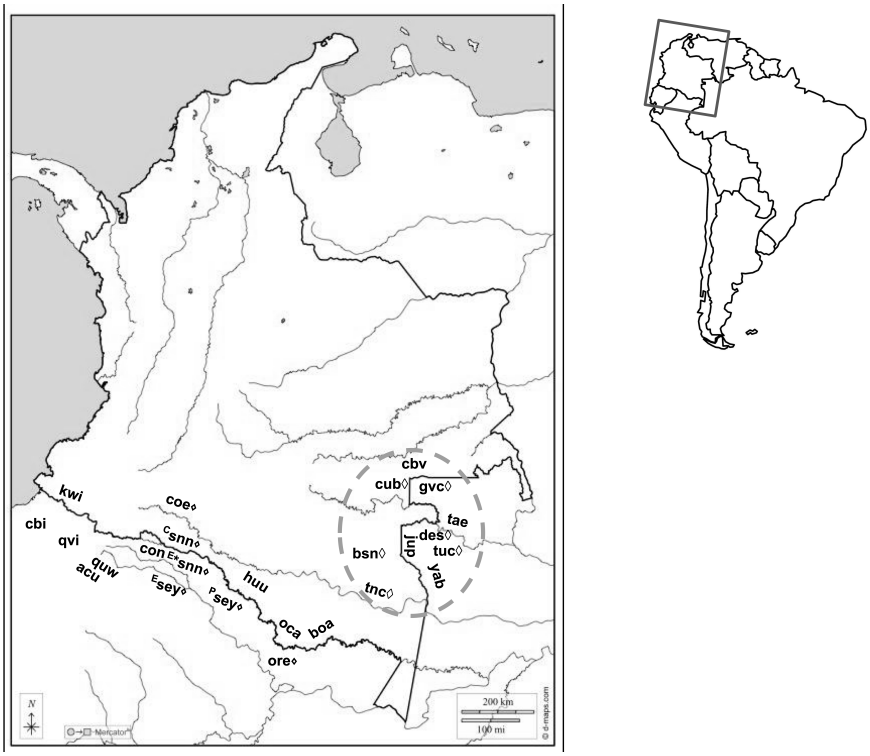

Figure 4.1: Geographical distribution of languages . Map template downloaded from *https://d-maps.com*.

For the sake of this chapter, the following languages may be viewed as forming a continuum: Ecuadorian Siona [[E]*snn*], Colombian Siona [[C]*snn*], Ecuadorian Sekoya [[E]*sey*], Peruvian Sekoya [[P]*sey*], and Koreguaje [*coe*]. Máíhɨ̃kì [*ore*] is the sole Western Tukanoan not considered to belong to this continuum on the basis of several notably different case-marking properties. The continuum is referred to collectively as the Siona+ languages in this chapter, such that one of its objectives is to outline certain ways in which the case-marking systems across Siona+ languages converge and diverge.

[*yab*]. For more information on the languages, see Table A.1 in Appendix A.

[2] I utilize the same convention to distinguish Ecuadorian Sekoya ([E]*sey*) from Peruvian Sekoya ([P]*sey*) in Figure 4.1.

The language sample was chosen to facilitate the comparison with the Siona+ facts in several respects. Firstly, the reported dataset comprises several Western Tukanoan languages, some of which are shown to display case-marking properties that are remarkably similar to those of Siona+. Secondly, the sample includes several non-Tukanoan languages, both from the Vaupés region, where they are spoken alongside the Eastern Tukanoan languages, and from the vicinity of the Western Tukanoan languages. On the one hand, there is ample evidence for linguistic and cultural diffusion within the Vaupés region (cf. Aikhenvald 1999, 2001; 2003; Barnes 1999, 2006; Epps and Michael 2017; van Gijn and Muysken 2020; Stenzel 2008, 2013c; Zúñiga 2007). This includes convergence on the basis of various case-marking properties and DCM patterns. With regards to the Siona+ context, there is some preliminary evidence for contact-induced grammatical convergence with languages in and around the Napo-Putumayo area (Bruil 2015a; van Gijn 2014, 2017; van Gijn et al. 2023), and for some lexical diffusion (Jolkesky 2016; Piispanen 2021).[3] The NWA dataset permits the comparison of the Ecuadorian Siona case-marking facts against a genealogical and areal backdrop simultaneously, contributing to the broader enterprise of tracing areal patterns in Amazonia.

4.1 Methodology: Case-marking questionnaire

The primary goal of linguistic typology is to identify structural similarities and differences across languages. In order to facilitate cross-linguistic comparisons, typologists must navigate descriptions of specific languages to extract comparable features. As such, an important component of typological research is the development of COMPARATIVE CONCEPTS (Bickel 2007, 2009; Croft 2001, 2003, 2009; Haspelmath 2005, 2007, 2008, 2010; Newmeyer 2002). With that objective in mind, the discussion found in this chapter abstracts away from certain phenomena which are very specific to Ecuadorian Siona DCM patterns, but which are not appropriate for comparing this language to others in an informative way. For instance, it is not clear whether the phenomenon of 'promotion', described in Section 3.2.2, is even relevant to case-marking in Siona+ languages, and is therefore set aside here.

The NWA dataset consists of the answers to a questionnaire for each of the languages in Figure 4.1. The structural questionnaire is a tool implemented by many typologists (e.g., Haspelmath 2005, 2008; Krasnoukhova 2012, Birchall 2014; Janic and Haspelmath 2023). This approach permits the researcher to unify generalizations from disparate languages by developing meaningful, abstract questions and constraining the possible answers. The full case-marking questionnaire and the instructions for extracting data from descriptive sources to establish the NWA dataset are spelled out in Section A.1.2 of Appendix A.

According to Birchall (2014, §2.2.2), although structural questionnaires vary greatly with respect to length and details, the resulting comparative datasets ought to be conceived as being organized into the three layers in (1):[4]

[3]Along the Middle Putumayo, several authors provide evidence for a cultural-linguistic contact zone, which is typically called the 'People of the Centre' (cf. Echeverri 1997; Seifart 2005, 2007, 2007, 2009, 2011). This refers to a narrower region within the NWA area than the non-Vaupés sample established in the present NWA dataset. Nonetheless, some of these languages are studied in this sample: i.e., Murui [*huu*] and Bora [*boa*].

[4]Birchall in fact suggests the terms DOMAIN, FEATURE, and VALUE; however, I avoid the

(1) Domain > Question > Value

Domains refer to bundles of related Questions, which are in turn attributed a set of possible Values (i.e., answers to the Questions comprising the questionnaire). The case-marking questionnaire developed to formulate the nwa dataset is divided into three Domains, which align with the three primary descriptive dimensions outlined in Chapter 2 of this dissertation:

- The Formal domain pertains to members of the case-marker inventory and to properties relating to the expression of case-marking morphology ;
- The Functional domain pertains to the distribution of formal case-markers across case-marking grammatical relations (i.e., Case functions) ;
- The dcm domain investigates the Triggers influencing dcm alternations and the formal types of alternations attested in the sample.

By partitioning the questionnaire into these domains, a more nuanced typology of case-marking and dcm properties emerges. For instance, it is conceivable that the Ecuadorian Siona case-marking facts may align with sampled Tukanoan languages regarding certain formal properties, but not regarding their distribution across functions, or other dcm-related properties. These comparisons fall out from the nwa dataset by design.

4.2 Typologizing Siona case-marking

In this section I place Ecuadorian Siona case-marking within the typology that emerges from the nwa dataset. The discussion laid out here does not go into every interesting pattern revealed by the dataset, but rather emphasizes the patterns which shed light on Ecuadorian Siona in its genealogical or areal context.

Each of the three case-marking Domains is discussed in a separate subsection.

4.2.1 Typologizing Siona case: The Formal domain

As shown in Chapter 3, Ecuadorian Siona has six case-marking morphemes in complementary distribution: i.e., *-bi*, *-re*, *-ni*, *-na*, *-hã'ã*, and *-hã're*. Three traits of the inventory of the languages in the sample are compared in this section: (i) the size of the inventory, (ii) the members of the inventory, and (iii) the ban against multiple case-marking.

4.2.1.1 The case-marker inventory (size)

The case-marker inventory size is measured directly in the nwa dataset (i.e., Question *1.1*), replicating data collection guidelines in Iggesen 2013, (wals-49). The inventory size of sampled languages ranges from the very small, two-member inventory attested in Máíhĩkì [*ore*], to the very large, nine-member inventories attested in A'ingae [*con*] and Awa Pit [*kwi*]. The six-member case-marker inventory attested in Ecuadorian Siona roughly aligns with the mean of 5.43.

term Feature for the present discussion given its several uses in linguistic theory. In this chapter, and in Appendix A, I utilize the terms Question, and presume that the implications are connected to typological "traits" or "properties" for the discussion in this chapter.

The distribution of inventory sizes is plotted onto the map in Figure 4.2. Inventory size groups and their labels are developed following the types suggested in Velupillai (2012, 176, footnote 112):[5,6]

Figure 4.2: Areal distribution of inventory size types (*Q1.1*) across NWA sample { SMALL (2-3 members); MEDIUM-SIZED (4-5) ; LARGE (6-7) ; VERY LARGE (8-9) }

[5]Note that the case-marking questionnaire developed in this dissertation does not count zero-marking as a bona fide alternative, which is included to calculate inventory size. Velupillai 2012, based upon the Iggesen 2013 original, includes zero-marking. Therefore, to compare directly with these works, the VALUES presented here ought to be considered as $N + 1$.

[6]The language specimens within the NWA dataset are grouped as follows, with the number of members in each inventory indicated between parentheses, (N):
SMALL INVENTORY: Máíhɨ̄kì♦ [*ore* (2)] ; MEDIUM-SIZED INVENTORY: Koreguaje♦ [*coe* (4)], Tukano◊ [*tuc* (4)], Wanano◊ [*gvc* (4)], Desano◊ [*dsn* (4)], Barasano◊ [*bsn* (4)], Kakua^{V} [*cbv* (4)], Hup^{V} [*jup* (4)], Kubeo◊ [*cub* (5)], Shiwiar◊ [*acu* (5)], Bora◊ [*boa* (5)], Tariana^{V} [*tae* (5)]; LARGE INVENTORY: *Ecuadorian Siona♦ [^{E}*snn* (6)], Colombian Siona♦ [^{C}*snn* (6)], Murui [*huu* (6)], Tanimuka◊ [*tnc* (7)], Imbabura Kichwa [*qvi* (7)], Yuhup^{V} [*yab* (7)]; VERY LARGE INVENTORY: Tena Kichwa [*quw* (8)], A'ingae [*con* (9)], Awa Pit [*kwi* (9)].

The Siona+ languages display a LARGE-sized inventory,[7] with more members than are attested in other Tukanoan languages.[8] In fact, the six-member inventory in Ecuadorian Siona is larger than that described for Koreguaje [*coe*], for Máíhɨ̃kì [*ore*], and for all Eastern Tukanoan languages, with the exception of Tanimuka [*tnc*], which has a seven-member inventory.

On the other hand, most non-Tukanoan languages spoken in the vicinity of Ecuadorian Siona display inventories with six or more members: i.e., belonging to the LARGE-sized or the VERY LARGE-sized type. These include the Murui language [*huu*], A'ingae [*con*], Awa Pit [*kwi*], and the Quechuan languages, Imbabura Kichwa [*qvi*] and Tena Kichwa [*quw*]. The bulk of these larger inventories are attested along the western reaches of the proposed NWA area. Conversely, the dominant inventory size found among the non-Tukanoan languages spoken within the Vaupés region is the MEDIUM-sized inventory.[9]

Based upon the above generalizations, the Ecuadorian Siona language aligns more closely with the languages in its surroundings than with the general Tukanoan pattern as regards case-marker inventory size. In general Tukanoan languages exhibit modest inventories of multi-functional case-markers with complex distributions (cf. Barnes 1999, 2006; Stenzel 2008, 2013d; Zúñiga 2007). Other languages within the NWA area display richer case-marker inventories, which generally include a subset of members which execute a dedicated FUNCTION. Ecuadorian Siona occupies an intermediate position with regards to the case inventory size typology.

4.2.1.2 The case-marker inventory (members)

Although the NWA case-marking questionnaire does not ask for the individual members of case-marker inventories, this section briefly considers the distribution of cognates for the Ecuadorian Siona case-markers in the Tukanoan family.

Table 4.1 directly compares the members of the Ecuadorian Siona case-marker inventory with their cognates in Western Tukanoan languages included in the dataset. The Ecuadorian Sekoya inventory is excluded from this table since its members are identical to those described for Ecuadorian Siona for all intents and purposes (Johnson and Levinsohn 1990, 45-51). Certain items listed in the table are identified a gray X, e.g., X, which indicates that they are excluded from the inventory size metric. These items do not meet the criteria as bona fide case-marker affixes in this study (see also Section A.1.2.1 in Appendix A), although they are relevant to the discussion below:

[7] This includes Ecuadorian Sekoya, according to Johnson and Levinsohn 1990, 45-51, which is described as having a six-member inventory like Ecuadorian Siona.

[8] The mean inventory size in the NWA sample, as restricted to Tukanoan languages, has **4.65 members**. This represents te MEDIUM-SIZED INVENTORY type as conceived here.

[9] Yuhup [*yab*] is an exceptional language with regards to inventory size — i.e., it exhibits a seven-member inventory. This is due in large part to the rich system of spatial case-marking where different markers are made available on the basis of deictic categories (Ospina Bozzi 2002, 159-161; 2013). A similar system is described for Awa Pit (Curnow 1997, 135-140).

*[E]Siona♦	[C]Siona♦	Koreguaje♦	Máíhɨ̃kì♦
-re (N.SBJ)	***-re*** (OBJ.FOC)	***-re*** (N.SBJ.SPEC)	***-re*** (NON.SUBJ)
-ni (N.SBJ2)	*-ni* (OBJ.EMPH.FOC)	*-ni* (PAT)	N/A
-bi (SBJ,SRC,INST)	*-bi* (SBJ.FOC,ABL,INST)	*-pi* (SBJ,SRC,INST)	N/A
-na (GOAL)	*-na* (GOAL.FOC)	*-na* (GOAL)	N/A
-hã'ã (PATH,LIMIT)	*-ja'an* (PATH)	[X]*jatëca* (LIM)	N/A
-hã're (COM)	[X]*naconi* (COM)	[X]*ja'me* (COM)	*-jànù* (COM,INST)
	[X]*tëca* (LIMIT)		
[X]*=kato* (TOP)	*-ga* (SBJ.EMPH.FOC)		[X]*-ga* (TOP)
($N = 6$)	($N = 6$)	($N = 4$)	($N = 2$)

Table 4.1: Cognate candidate sets across the Western Tukanoan languages

The first relevant observation on the basis of Table 4.1 concerns the four case-markers identified in the first four rows. These comprise what is labeled the *rich case-marking* system in Section 1.3.1 of the introductory chapter to this dissertation. This set of markers is found across the Siona+ continuum and they display remarkably similar distributional properties, including DCM properties, which are touched upon at a later point in this chapter. In this chapter, I refer to this set as the Siona+ primary case-markers.

Besides the primary case-marker set, Table 4.1 identifies certain cognates to the case-markers *-hã'ã* and *-hã're* across the Western Tukanoan languages. Wheeler (1987, 132-133) describes a cognate marker *-ja'an* in Colombian Siona, but this marker only displays the PATH function, as shown in (2a). A separate marker is recruited to encode the LIMIT function in this language, as in (2a), which finds a cognate in Koreguaje [*coe*], *jatëca*, illustrated in (3). No corresponding marker is described for Máíhɨ̃kì [*ore*]:

(2) Colombian Siona♦ ([C]*snn* — WESTERN-TUKANOAN)
[W87:112;W70:76]

a. ***sabi-ya ma'a-ja'an*** *gani-ni ti'an-huë*
S-CL:RIV path-ALONG go-SEQ.SS arrive-PST
'(They) went along the Sabiya gorge path and arrived (there).'

b. ***Pedro wɨ'e-se'e-ga tɨ́ká*** *saí-yɨ*
P house-EXCL-GA LIM go-N3S.PRS.ASS
'(I) am going only toward Pedro's house.'

(3) Koreguaje♦ (*coe* — WESTERN-TUKANOAN)
[Cook 1990, 98, *Viaje a Bogotá*.033]

ʉmʉ-ca caje-cheja jatʉ'ka *mʉ'ʉ-re te'e-ʉ-re sesenta*
high-stay land-place up_to 2SG-N.SBJ.SPEC one-M.SG-N.SBJ.SPEC sixty
pesos ro'i-mʉ chii-si'-kʉ-a'-mʉ
pesos pay-M.SG say-PERF-NMLZ.M.SG-VBLZ-M.SG
' "It will cost you $60 pesos to go only up to the airport", (he) told (me).'

The case-like LIMIT-markers shown in (2b) and (3) are not fully integrated into the corresponding nominal words. This criterion suffices to exclude these markers as members of the respective case-marker inventories in the NWA dataset. Importantly, similar

conclusions are drawn in the descriptive sources — i.e., Wheeler (1970, 76; 1987, 132-133) identifies these markers as *function words* in Colombian Siona, whereas Cook and Criswell (1993, 51-52) postulate an independent class of *post-positions*. All authors classify such markers separately from bona fide case-markers on various grounds. The present chapter labels these morphemes as 'pseudo-case-marker'.

According to Table 4.1, Colombian Siona and Koreguaje also recruit pseudo-case-markers to encode the COMPANION function — i.e., separately from the INSTRUMENT function, which is encoded via cognates of *-bi* across the Siona+ group. Colombian Siona [^{c}*snn*] has a marker *naconi*, shown in (4a), whereas Koreguaje [*coe*] exhibits a clear cognate with Ecuadorian Siona *-hã're* (i.e., *jɑ̰'me*), shown in (4b). Notably, another cognate candidate is attested in Máíhɨ̃kì [*ore*], namely the case-marker *-jànù*, illustrated in (4c). However, this final marker encodes both COMPANION and INSTRUMENT functions (e.g., Neely 2012):

(4) a. Colombian Siona♦ (^{c}*snn* — WESTERN-TUKANOAN) [W70:76]
wa'í maú-si'-kɨ́ ***nakóni*** *koká* *ká-wɨ́*
fish catch-COMP-CL:M COM word say-N3S.PST.ASS
'(I) conversed with the one who had caught the fish.'

b. Koreguaje♦ (*coe* — WESTERN-TUKANOAN) [CC93:51]
i-na-re ***jã'me*** *pa-sa* *ɟ̌ii-mɨ́* *ɟ̌ɨ'i*
this-PL.ANIM-N.SBJ COM live-DES.SG want-M.SG 1SG
'(I (M)) want to live with them.'

c. Máíhɨ̃kì♦ (*ore* — WESTERN-TUKANOAN) [Neely 2012, ex. (7) in BERK12]
sáí-yí *Tótóyà* ***Mámàsò-jànù***
go-1SG.PRS T M-COM
'I am going to Totoya with Mamaso.'

The examples shown in (2) through (4) demonstrate that an element, /*hã*/, is the basis for several cognates within the Western Tukanoan languages in the sample. This fact is independent of whether or not a given marker has become fully grammaticalized as a bona fide case-marker in a particular language. For instance, *jã'me* co-occurs with the case-marker *-re* in (4b), which is other disallowed in Siona+ grammars. The fact that a cognate marker is also attested as the instrumental-comitative marker in Máíhɨ̃kì, shown in (4c), points to an early shared innovation in the Western Tukanoan branch; which is unrelated to the development of the Siona+ primary case-markers.

This hypothesis finds support in the fact that no plausible cognates are noted among the Eastern Tukanoan languages, though a very similar marker is attested in Shiwiar [*acu*] — =*hʲãĩ̃* (COM,INST), as described by Kohlberger (2020, 263-264).

Whereas the case-marker *-re* is common to all Tukanoan languages, the origins of the remaining members of the set of primary case-markers remains unclear (i.e., *-ni*, *-na*, and *-bi*).[10] Table 4.2 recognizes a handful of cognate candidates from non-Siona+ languages in the NWA dataset, particularly from Tanimuka [*tnc*], Kubeo [*cub*], and the Witotoan language, Murui [*huu*].

[10]It is relevant to note that the case-marker *-ni* is not attested in Peruvian varieties of Sekoya (Rosa Vallejos, p.c.), spoken further down-river in the Middle Putumayo region. However, cognates to *-bi* and *-na* are attested in this language, and they exhibit similarly complex distributions (e.g., Vallejos and Brown 2021).

	*[E]Siona♦	Tanimuka◊	Kubeo◊	Murui
	-re (N.SBJ)	***-re*** (DEIC1)	***-re*** (N.NOM)	N/A
	-ni (N.SBJ2)	N/A	N/A	*-ri* (PATH)
	-bi (SBJ)	*-ɸí* (INST, ABL)	N/A	N/A
	-na (GOAL)	*-˜rá* (ALL)	*-rã̀* (FOC.LOC)	*-na* (N.S/A.TOP)
			-ta (PATH)	
	...	...	...	...
INVENTORY SIZE (*Q1.1*):	($N = 6$)	($N = 7$)	($N = 5$)	($N = 6$)

Table 4.2: Cognate candidates for Siona+ primary case-marker set

The case-marker *-ni* has a distribution that is tied closely to that of *-re* across the Siona+ languages. The Witotoan language Murui [*huu*] has a spatial marker *-ri* (PATH), also used to encode the Benefactor role (Wojtylak 2021, §8.1.2.4). The nearby Bora language [*boa*] also has a marker *-rì* (glossed OBL.IN, or 'inanimate oblique') which has spatial functions and encodes the INSTRUMENT-argument (Thiesen and Weber 2012, 290-297). Nearer to the Siona+ languages is the isolate Ainga'e [*con*], which has a spatial marker *=ni* (glossed LOC). It is unclear whether these markers are related; however, it is possible that a spatial marker developed into the case-marker *-ni* in Siona+ languages, acquiring its constrained distribution at a later time. Despite some uses of spatial *-ni* on promoted argumentas in Ecuadorian Siona, the dominant function of this marker is to encode animate, non-SUBJECT arguments, with pragmatic overtones.[11] Given that the marker *-ni* is not attested in Peruvian varieties of Sekoya (Vallejos, *p.c.*), spoken further to the east, in the Middle Putumayo region, it is possible that this marker represents a more recent innovation.

A plausible cognate candidate to Siona+ *-bi* is found in Tanimuka [*tnc*] — i.e., *-ɸí*. No other (Eastern) Tukanoan language displays a cognate to this term. In fact, the Tanimuka marker displays both INSTRUMENT- and spatial SOURCE-encoding functions (Eraso 2015, 280), as is noted with the Siona+ cognate. Focusing on its spatial function, the set of spatial case-markers identified for Tanimuka is similar to the spatial functions noted for the primary case-markers across Siona+ languages (*id.*, §6.5.4):[12]

(5) Tanimuka◊ (*tnc* — EASTERN-TUKANOAN)
[E15:210-211, exx. (151a)-(151c)]

a. ***wi'í-a-re'ká*** *ɟi-ĩbé*
maloca_house-N-LOC 1SG-COP
'I am <u>in the maloca house</u>.' [Siona+ L-marker: *-re*]

b. ***wi'í-a-˜rá*** *ɟi-káka-ɟú*
maloca_house-N-GOAL 1SG-enter-PRS
'I am entering <u>the maloca house</u>.' [Siona+ GOAL-marker: *-na*]

c. ***wi'í-a-ɸi*** *ɟi-ɸó-ɟú*
maloca_house-N-SRC 1SG-leave-PRS
'I am leaving <u>from the maloca house</u>.' [Siona+ SOURCE-marker: *-bi*]

[11] It is also noteworthy that the Vaupés languages, Kakua [*cbv*] and Yuhup [*yab*] exhibit the markers *=di'* (OBJ) and *-dìh* (*accusatif*) respectively.

[12] In Tanimuka [*tnc*] that *-re* appears with axial nouns and pronouns, whereas the complex marker *-re'ka* arises on plain nouns representing static LOCATION-arguments

The final marker which concerns this discussion is Siona+ *-na*, which finds a likely cognate in Tanimuka, as shown in (5b). A nearly identical case-marker is described in the Kubeo [*cub*] spatial case-marking system — i.e., *-rã̃*, labeled the FOCAL LOCATIVE by Morse and Maxwell (1999, 120) and Chacon and Genetti (2019, 413). Another form described in Kubeo is the PATH-marker *-ta* (Morse and Maxwell 1999, 121-122), which comes closer to the meaning of Siona+ *-na*:

(6) Kubeo$^{\diamond}$ (*cub* — EASTERN-TUKANOAN) [MM99:122, ex. (392)]
ke *te-Rĩ̃* *ape-kɨ̃* *ɨ̃bĩ̃* *'bA-kɨ̃-RE*
like_that do-GER other-CL:M man be-NMLZ.N.FUT.M.SG-N.SBJ
xaro-RExa-Ibã̃-jA ***boa-I-Rõ̃-I-ta***
send-RMT.PST-3PL-REP kill-I-NMLZ.SG.INAN-LOC-PATH
'Doing it so, so they say, a long time ago they sent another man, who has died since then, up to that killing spot.'

Setting aside possible cognacy with other Tukanoan languages, it is relevant to acknowledge several markers which formally resemble the item *-na*: e.g., *-na* (OBJ.PRO) in Tariana [*tae*]; *-na* (N.S/A.TOP) in Murui [*huu*]; $=n^{j}a$ (OBJ) in Shiwiar [*acu*]; and perhaps even the accusative marker *-ta* in Quechuan languages and in Awa Pit [*kwi*]. Given that these markers all encode the DIRECT OBJECT (P), one might ask whether a common source may be claimed for all of these markers. Despite the relative ubiquity of case-markers resembling *-na*, a plausible diachronic source for the Siona+ marker, with likely cognates in Tanimuka [*tnc*] and Kubeo [*cub*], is its development from the motion predicate *da(i)-* (come), attested in each of these languages (cf. Wheeler 1992).

From the hypotheses put forward in this section regarding the history of Siona+ case markers, I consider particularly compelling that at least *-bi* and *-na* developed at a relatively early stage, accounting for the cognates recognized in Table 4.2 in Tanimuka [*tnc*] and in Kubeo [*cub*]. Most specialists agree that these languages belong to a unified Eastern branch of the Tukanoan family; however, these are precisely those languages which were once proposed to belong to a putative Central branch (e.g., Mason 1950; Waltz and Wheeler 1972; Malone 1987; Barnes 1999) — see discussion in **Section 1.3.1** of the introduction to this dissertation. This is not to suggest that the Central Tukanoan hypothesis be revived per se, since there are convincing motivations for its abandonment (cf. Stenzel 2013c; Chacon 2013, 2014, 2016; Chacon and List 2015). However, case-marking is not taken into account in these sources. Alternatively, it is possible that Siona+ groups and putative Central Tukanoan groups experienced contact with similar groups in the Putumayo region (e.g., Gomez-Imbert 2011; Chacon 2012; Rose et al. 2017; Arias et al. 2022).

4.2.1.3 Single versus multiple case-marking patterns

The presence or absence of the multiple case-marking phenomenon is represented explicitly in the NWA dataset (i.e., QUESTION *1.2*).[13] The multiple case-marking property is attributed to languages which allow multiple case marks to arise on a single nominal word. This pattern is attested in certain languages of the Vaupés region, including certain Eastern Tukanoan languages (cf. Stenzel 2008, 2013a), as shown for Desano [*des*] in (7) and for Kakua [*cbv*] in (8):

[13] A full presentation of the relevant facts is provided in Table A.7 in Appendix A.

(7) Desano$^{\diamond}$ (*des* — EASTERN-TUKANOAN) [M99:32, ex. (119)]
ero-ge-re *gɨa* *árʉ̃-bɨ*
there-LOC-N.SBJ 1PL.EXCL be-N3.PST
'We were there, at that place.'

(8) Kakua$^{\vee}$ (*cbv* — KAKUA-NUKAK) [B16:206, exx. (71)-(72)]

a. *webit* ***'ɨ'=hʉ̃'=di'*** *bû'jup=di'* *mâw=na=ka*
child blow_gun=INST=N.SBJ hummingbird=N.SBJ kill=DECL=ASS
'ʉ̃=tʃãhãp
3PL=PROG
'The children are killing hummingbirds with the blow gun.'

b. *hiw* *'ã=ñap=na=be* ***nin=bʉ̆=di'=hé'***
jaguar 3S.M=jump=DECL=REC.PST this=LOC=N.SBJ=INTENS
'The jaguar jumped right here.'

In the case of Eastern Tukanoan languages, multiple case-marking patterns are generally restricted to spatial case-marking contexts (Ramirez 2019[1997], 169-170; Miller 1999, 30-34). Similar patterns are described for Tariana (Aikhenvald 2003, 157-159). However, the Kakua pattern is slightly more permissive, as shown in (8a), where the INSTRUMENT bears the typical marker *=hʉ̃*, as well as the non-subject marker *=di'*. These patterns are limited to the Vaupés region in the NWA sample consulted here, and are likely the result of contact.[14]

This finding is reported in the current discussion in order to demonstrate that Ecuadorian Siona, and the other Siona+ languages, do not pattern with Eastern Tukanoan languages in this regard. In other words, Ecuadorian Siona exhibits the dominant NWA pattern where case-markers are in complementary distribution.

4.2.2 Typologizing Siona case: The Functional domain

In the *preliminary description* I noted how several Ecuadorian Siona case markers have complex distributions. More concretely, there is not always a one-to-one mapping from case-marker to CASE FUNCTION, such that certain syncretisms emerge. This section compares the Ecuadorian Siona FORM-FUNCTION mapping with the NWA sample. This section closes with a consideration of certain functional gaps — i.e., typical case-marking FUNCTIONS, attested in the area, which do not recruit overt case-markers in Ecuadorian Siona grammar.

4.2.2.1 Situating Siona case-marker correspondences

Table 4.3 traces the FORM-FUNCTION mapping for Ecuadorian Siona case-markers based upon the description laid out in Chapter 3. The upper portion of the table presents argumental CASE FUNCTIONS, corresponding to a mixed set of grammatical

[14] A related phenomenon pertains to the presence of *complex case-markers* — such as the Ecuadorian Siona comitative case-marker *-hã're*, which is presumably a combination of *-hã'*(*ã*) and *-re*. A similar marker is attested in Kubeo, for instance, where the PATH-marker requires the presence of a locative marker, *-i*, to host the dedicated marker *-ta*; an example is provided in (17) in Appendix A. Although the presence such forms may indicate multiple case-marking diachronically, this study finds that Vaupés-type multiple case-marking is synchronically rare in the NWA area.

functions and oblique relations, and the lower portion enumerates the attested spatial FUNCTIONS. The case-markers, *-hã'ã* and *-hã're* are presented in gray text since neither of these markers displays a complex distribution. The table confirms that all and only the Siona+ primary case-markers discussed in the previous section (i.e., *-re*, *-ni*, *-bi*, and *-na*) exhibit synctretic distributions. The FUNCTIONAL DOMAIN within the NWA case-marking questionnaire is developed, in part, to facilitate the comparison of similar complex case-marker distributions in the sample. In particular, QUESTIONS *2.1* through *2.5* implement the notion of case-marker correspondence, adapted from Stolz et al. (2013, WALS-52), in order to compare the distribution of case-markers across sets of CASE FUNCTIONS between sampled languages.

CASE FUNCTIONS	DISTRIBUTION OF FORMS
SUBJECT (S)	*-bi*
DIRECT OBJECT (P)	*-re*, *-ni*
INDIRECT OBJECT (R)	*-re*, *-ni*, *-na*
INSTRUMENT (INST)	*-bi*
COMPANION (COMP)	*-hã're*
LOCATION (L)	*-re*, *-ni*, *-na*
GOAL (G)	*-na*
SOURCE (SRC)	*-bi*
PATH	*-hã'ã*

Table 4.3: Ecuadorian Siona case-markers mapped onto FUNCTIONS

Stolz et al. (2013) identify three types of correspondences, which may arise across a given set of FUNCTIONS. Examples of each type, as well as the corresponding coding procedure, are outlined in Section A.1.2.2 of Appendix A:

- The IDENTITY-type uses the same markers across these FUNCTIONS ;
- The DIFFERENTIATION-type uses different markers across these FUNCTIONS ;
- The MIXED-type displays partial overlap in the markers recruited across both FUNCTIONS, but also additional markers are available to a certain FUNCTION.

The tested correspondences in the FUNCTIONAL domain of the questionnaire are selected based upon the patterns recognized in Table 4.3, described particularly for Ecuadorian Siona. The selected sets of FUNCTIONS for comparison are outlined in Table 4.4, which also identifies the corresponding QUESTION number and the respective Ecuadorian Siona correspondence types, to be compared in the ensuing discussion.

QUESTION	TARGETED FUNCTIONS	SIONA TYPE
Q2.1	SUBJECT-INSTRUMENT	IDENTITY type
Q2.2	DIRECT-INDIRECT OBJECT	MIXED type
Q2.3	COMPANION-INSTRUMENT	DIFFERENTIATION type
Q2.4	OBJECT-LOCATION	MIXED type
Q2.5	LOCATION-GOAL-SOURCE	MIXED type

Table 4.4: Tested case-marker correspondences in the NWA dataset

Turning firstly to SUBJECT-INSTRUMENT case-marking correspondences (*Q2.1*), Ecuadorian Siona displays the IDENTITY type. This type is rarely attested in the sample, according to the full dataset for this QUESTION, as presented in Table A.8. Most languages in the NWA sample do not display any SUBJECT-marking whatsoever, such that the dominant correspondence type is the DIFFERENTIATION type (N=17). Nevertheless, in all Siona+ languages, cognates of -*bi* encode both concerned FUNCTIONS (cf. Cook and Criswell 1993, 47-48, for Koreguaje; Wheeler 1970, 74, for Colombian Siona; Johnson and Levinsohn 1990, 45-46, for Ecuadorian Sekoya). This pattern is demonstrated by the pair of Koreguaje [*coe*] sentences in (9):[15]

(9) Koreguaje♦ (*coe* — WESTERN-TUKANOAN) [CC93:47-48]

a. ***ǰɨ'ɨ-pi*** *ǰo'o-ra*
1SG-SBJ do-DES.SG
'I (M) (i.e., nobody else) will do (it).'

b. ***wa'tʰi-pi*** *ǰo'o-mɨ ǰɨ'ɨ*
knife-INST do-M.SG 1SG-SBJ
'I (M) will do (it) with a knife.'

The only non-Siona+ language in the NWA sample which displays the IDENTITY type for this correspondence is Tariana [*tae*] (Aikhenvald 2003, 143-145), spoken in the Vaupés region. None of its Eastern Tukanoan neighbours display this marking pattern. Consider the instances in (10), where the case-marker -*ne* encodes the SUBJECT in (10a), and the INSTRUMENT in (10b) accordingly:

(10) Tariana[V] (*tae* — ARAWAKAN) [A03:141,152, exx. (7.4),(7.50)]

a. *kiya-ku hiniri di-wha-ka di-ka di-niwa*
strong-PERS ukuki_fruit 3S.N.FUT-fall-SUB 3S.N.FUT-see 3S.N.FUT-collect
di-wake-ta di-yã-nhi-pidana [***diha***
3S.N.FUT-join+CAUS1-CAUS2 3S.N.FUT-stay-ANT-RMT.PST.REP ART
nawiki-ne]
man-SBJ.FOC
'The man saw that the ukukí fruit was falling down a lot (and) he was collecting (them) . . . '

b. *di-wapa* ***mawipi-ne***(INST1) [***diha pupawa***
3S.F-wait hook-COM ART poison
di-sue-ta-nipe-ne](INST2)
3S.F-lay+CAUS1-CAUS2-NMLZ-COM
'He (the Makú man) was waiting (for the demon) with the stick(INST1) (and) with the poison which he had prepared(INST2).'

Although such disparate instances of SUBJECT-INSTRUMENT IDENTITY are uncommon in the the proposed NWA area, similar patterns are attested elsewhere. In particular, patterns of instrumental-ergative syncretism are well-described within several linguistic areas (cf. McGregor 2009; Chappell and Verstraete 2019, §4.1.1): e.g.,

[15] Technically, given that Wheeler (1970, *et seq.*) analyzes -*ga* as the emphatic SUBJECT-marker, which is unavailable to the INSTRUMENT, Colombian Siona displays the MIXED type. However, the relevant observation that -*bi* is distributed to both SUBJECT and INSTRUMENT functions still holds.

Tibeto-Burman languages (LaPolla 1995), Australian languages (Dixon 2002; Palancar et al. 2012), and even in some South American languages, such as Shipibo-Konibo and Sanumá (Borgman 1990).[16] Ultimately, the ergative-instrumental case-marking syncretism, displayed in the Darma language [*drd*] in (11), is strikingly similar to that observed in the Ecuadorian Siona sentence in (12):

(11) Darma (*drd* — Sino-Tibetan)
[Willis 2011, cited in Chappell and Verstraete 2019, 23]
niŋ su$_{(S)}$ ***pharsa su***$_{(Inst)}$ *nadu* *pyel-n-su*
1pl erg ax inst dem.neut chop-1pl-pst
'We$_{(S)}$ chopped it with an ax$_{(Inst)}$.'

(12) Ecuadorian Siona$^{\blacklozenge}$ (^{E}*snn* — Western-Tukanoan)
i̯o̯bi i̯re tsë'bobi tëtojoña i̯re
ĩ-o-bi$_{(S)}$ ĩ-i̵-re **tsi̵'bo-bi**$_{(Inst)}$
3pro-cl:f-sbj 3pro-cl:m-n.sbj ax-inst
ti̵hto-hoo-o-ña ĩ-i̵-re
hit-split-2/3s.f.pst.n.ass-rep 3pro-cl:m-n.sbj
'She$_{(S)}$ killed him with an ax$_{(Inst)}$, they say.' [nat: 20101123slicr001.065]

The next correspondence laid out in Table 4.4 concerns the Direct-Indirect object case-marking correspondence (*Q2.2*). All Siona+ languages display the Mixed type, whereas the remaining Tukanoan languages, and all other languages spoken in the Vaupés region, display the Identity type. The Awa Pit [*kwi*] and Shiwiar [*acu*] languages also display this type — i.e., the dominant pattern in the region (N=13). The fact that the case-marker *-re* encodes both Object functions across the Tukanoan family is well-described (e.g., Ramirez 2019[1997], 164-166; Barnes 1999, 2006; Stenzel 2013d), and Birchall (2014, 139-140) demonstrates that this pattern is also characteristic of the Nadahupan and Arawakan languages spoken in the vicinity of the Eastern Tukanoan languages.[17] The Identity type is demonstrated for Wanano [*gvc*] in (13), for Kakua [*cbv*] in (14), and for Hup [*jup*] in (15):

(13) Wanano$^{\diamond}$ (*gvc* — Eastern-Tukanoan) [S13:336, ex. (54)]
˜bichá-ré *tí-kó-ró* ***hó-ré***$_{(P)}$ ***˜bak-ú-˜dá-ká-ré***$_{(R)}$
today-n.sbj ana-cl:f-sg banana-n.sbj child-cl:m-dim-pl-n.sbj
wá-ré
give-vis.perf.2/3
'Today she gave the little boys$_{(R)}$ banana(s)$_{(P)}$.'

(14) Kakua$^{\vee}$ (*cbv* — Kakua-Nukak) [B16:189, ex. (15)]
Hãmu=di'$_{(R)}$ ***ma=ni̵m=di'***$_{(P)}$ *ma=wĭ-í́*
H=obj 2sg-daughter=obj 2sg=give-imper
'Give Hamu$_{(R)}$ your daughter$_{(P)}$!'

[16]The similar phenomenon of *causative-instrumental* applicative syncretism, described across various Bantu languages, displays possible functional overlap. See Jerro (2017) for a recent discussion.

[17]Birchall (2014, 139-140) remarks that Tukanoan, Nadahupan, and Arawakan languages display *neutral* alignment, such that (di)transitive p and r are coded indiscriminately. Albeit, Desano likely displays the *indirective* type, as illustrated in **Section A.2.2** in Appendix A.

(15) Hup[V] (*jup* — NADAHUPAN) [E08:170, ex. (21)]
núp ***hõp-ăn***$_{(P)}$ *'ăn* *no'-'ũh-'áy* *hám*
DEM.PROX fish-OBJ 1SG.OBJ give-APPL-VENT.IMPER go.IMPER
pawdína-ăn$_{(R)}$
P-OBJ
'Go give <u>this fish</u>$_{(P)}$ <u>to Paulina</u>$_{(R)}$ for me!'

There is a degree of overlap between the Siona+ MIXED-type pattern and the Eastern Tukanoan pattern, illustrated by the Wanano [*gvc*] example in (13). The case-marker *-re* is implicated in encoding both concerned functions. The main difference lies in the fact that additional Siona+ case-markers display this overlap; i.e., the case-markers *-ni* and *-na*. However, crucially, the latter marker may encode the R-argument, whereas this marker is strictly unavailable to the P-argument in all described varieties. (16) illustrates various marking possibilities in ditransitive sentences in Sekoya [[E]*sey*]:

(16) Ecuadorian Sekoya[♦] (*e-sey* — WESTERN-TUKANOAN) [JJ90:48-49]

a. ***yë'ë*** ***yo'je-i̱-re***$_{(R)}$ ***coca***$_{(P)}$ *quëa-huë*
1SG younger_sibling-CL:M-N.SBJ word tell-N3S.PST.ASS
'I told <u>my brother</u>$_{(R)}$ <u>the information</u>$_{(P)}$.'

b. ***yë'ë-ni***$_{(R)}$ ***coca-re***$_{(P)}$ *ca-jë* *da-ë'ë*
1SG-N.SBJ2 word-N.SBJ say-PL.PRS.DEP come-N3S.PST.ASS
'When they came, they told <u>ME</u>$_{(R)}$ <u>the message</u>$_{(P)}$.'

c. ***ja'-quë-na***$_{(R)}$ ***më'ë*** ***do'ro-huë-re***$_{(P)}$ *i̱si-j<u>ë</u>'<u>ë</u>*
parent-CL:M-GOAL 2SG basket-CL:CONT-N.SBJ give-IMPER
'Give <u>your basket</u>$_{(P)}$ <u>to dad</u>$_{(R)}$.'

The pattern shown in (16) is nearly identical to that described for Ecuadorian Siona, except regarding the distribution of *-na*, as described in Section 3.2.3 of the preceding chapter. More specifically, the marker *-na* is only attested on the R-argument in a handful of elicited instances with inanimate RECIPIENTS; which constitutes an accidental DCM pattern as conceived in this dissertation. As such, sentence (16c), would need to be amended so that the R-argument bears *-re* or *-ni* accordingly in Ecuadorian Siona.

This slight discrepancy marks a point of micro-variation across the Siona+ grouping, regarding animacy conditions on certain case-markers. On the one hand, the case-marker *-ni* is strictly available to animate non-SUBJECT arguments across all described varieties.[18] On the other hand, Ecuadorian Siona restricts the distribution of *-na* to inanimate nouns. This restriction does not hold for Ecuadorian Sekoya, as shown in (16), nor does it hold in Colombian Siona [[C]*snn*] (Wheeler 1970, 174; 1987, 126-127), as demonstrated in (17) below:

[18]The notion of promotion, laid out in detail in **3.2.2** in this dissertation, accounts for certain apparent exception to this animacy restriction; albeit, promotion is not described for other Siona+ languages. Some similar observations regarding the derivational functions of the feminine classifier, *-ko*, are laid out in Vallejos 2021, regarding Peruvian Sekoya. However, she does not discuss the implications for case-marking in the language. It is also relevant to note that Peruvian Sekoya does not have a case-marker *-ni*.

(17) Colombian Siona♦ (*c-snn* — WESTERN-TUKANOAN) [W87:127]
ja'yë-na$_{(R)}$ ***yë'e-re***$_{(P)}$ *insi-jë'ën*
older_brother-GOAL basket-OBJ give-IMPER
'Give (your) older brother$_{(R)}$ the basket$_{(P)}$!'

On this basis, the marker *-na* enjoys a broader distribution in Siona+ varieties besides Ecuadorian Siona.[19] Setting aside animacy-based restrictions, the general pattern is one where the spatial GOAL-marker, *-na*, can encode the R-argument in ditransitive constructions. A highly similar MIXED correspondence type is also described for various Quechuan languages (cf. Grzech 2016, 103-104, van Gijn et al. 2023), including the sampled variety spoken nearby to Ecuadorian Siona, Tena Kichwa [*quw*], as shown in (18):

(18) Tena Kichwa (*quw* — QUECHUAN) [G16:103, ex. (2.107)]
Pablo ***sisa-guna-ta***$_{(P)}$ *kuya-n* ***Maria-ma/Maria-ta***$_{(R)}$
P flower-PL-ACC give-3 M-DAT/ACC
'Pedro gave flowers$_{(P)}$ to Maria$_{(R)}$.'

Besides Quechuan languages, a few other languages in the NWA sample recruit spatial case-markers to encode the R-argument, including Murui [*huu*] (Wojtylak 2021, 270-273) and Bora [*boa*] (Thiesen and Weber 2012, 271-279). It remains an open question whether the Siona+ pattern is the product of contact-induced grammar change, since this differs from the IDENTITY type found in all Eastern Tukanoan languages. It is relevant to note that these languages generally exhibit rich sets of spatial case-markers from which additional R-markers could be drawn (cf. Stenzel 2008, 2013a). What the NWA dataset does demonstrate, however, is that the primary spatial marker, *-na*, found across the Siona+ languages, displays both argumental and spatial FUNCTIONS.

The third tested case-marking correspondence concerns the COMPANION-INSTRUMENT correspondence (*Q2.3*), per Table 4.4.[20] The Siona+ languages align in demonstrating the DIFFERENTIATION type, where the COMPANION-argument is encoded with an oblique case-marker (i.e., *-hã're* in Ecuadorian Siona) or a 'pseudo-case-marker', as discussed in Section 4.2.1.2. Despite differences in the forms used to flag the COMPANION, all Siona+ (and Tanimuka) languages have a cognate of the marker *-bi* to encode the INSTRUMENT function. The Koreguaje [*coe*] sentences in (19) represent the general Siona+ pattern, described for Ecuadorian Siona in Chapter 3:

(19) Koreguaje♦ (*coe* — WESTERN-TUKANOAN) [CC93:47-48]

a. ***wa't^{h}i-pi*** *ǰo'o-mɨ* *ǰɨ'ɨ*
knife-INST do-M.SG 1SG-SBJ
'(I (M)) will do (it) with a knife.'

b. ***i-na-re*** ***jã'me*** *pa-sa* *ǰii-mɨ* *ǰɨ'i*
this-PL.ANIM-N.SBJ COM live-DES.SG want-M.SG 1SG
'(I (M)) want to live with them.'

[19]The role of *-na* marking in Koreguaje [*coe*] is not explicitly discussed in the consulted sources. On this basis of this omission, it is determined that *-na* marking is not recruited for the R-argument.

[20]In the original chapter in *WALS*(52), Stolz et al. (2013) discuss *Comitatives and Instrumentals*, referring to conventional labels for the case-markers, rather than the CASE FUNCTIONS, as conceived in the assembly of the NWA dataset.

The DIFFERENTIATION type demonstrated in (19) is the most common correspondence type in the extensive global survey in Stolz et al. (2013, *WALS(52)*; i.e., 66.15% of 322-language sample). Nonetheless, in the NWA survey reported in Appendix A, this is not the dominant type. Besides the Siona+ grouping and Tanimuka, the DIFFERENTIATION type only applies to Bora [*boa*] (Thiesen and Weber 2012, 290-295) and Yuhup [*yab*] (Ospina Bozzi 2002, 158-161). No languages of the MIXED type are attested in the NWA sample. As such, all remaining Eastern Tukanoan languages, Máíhɨ̃kì [*ore*], and other sampled languages, display COMPANION-INSTRUMENT IDENTITY (N=15), as illustrated for the Barasano [*bsn*] language below:

(20) Barasano$^{\Diamond}$ (*bsn* — WESTERN-TUKANOAN)
[JJ91:68-69, exx. (189)-(190)]

a. ***bĩsi-bedo-rãka*** *gate* *bʉto* *asi* *bahi-ro-dẽ* *hʉ̃a-ko-aka-hʉ* *ti*
vine-ring-INST toast very.much hot be-NMLZ-SPCR crisp-FF-MOT-PST-3 3PRO.PL
'Toasting (leaves) with a vine-ring, when they are very hot they become crisp.'

b. ***yʉ-rãka*** *wa-rʉa-be-a-ti* *bʉ*
1SG-COM move-DES-NEG-PRS-Q 2SG
'Don't you (SG) want to come with me?'

For each QUESTION in the FUNCTIONAL domain discussed to this stage, Siona+ languages diverge from the Eastern Tukanoan languages. However, turning to the next tested correspondence outlined in Table 4.4, a pan-Tukanoan pattern is detected, where the case-marking on argumental P (i.e., DIRECT OBJECT) and on spatial L (i.e., STATIC LOCATION) are taken into account (*Q2.4*). Every Tukanoan language in the NWA dataset (except for Máíhɨ̃kì [*ore*])[21] displays the MIXED type, where the P-marker, *-re*, is available to L-arguments, alongside additional spatial case-markers. Table 4.5 spells out the distribution of case-markers across the two concerned FUNCTIONS in all tested Tukanoan languages:

[21]Note that spatial arguments are simply always zero-marked in the Máíhɨ̃kì (cf. Velie 2008[1975], 15-17; Farmer 2015, §3.3; Neveu 2012a, 2012b). This is the only Tukanoan language displaying this pattern to my knowledge, including those excluded from the NWA dataset.

Language	Direct object (P)	Static location (L)
*Ecuadorian Siona♦ [E*snn*]	***-re***, ***-ni***	***-re***, ***-ni***, *-na*
Colombian Siona♦ [C*snn*]	***-re***, *-ni*	***-re***, *-na*
Koreguaje♦ [*coe*]	***-re***, *-ni*	***-re***, *-na*
Máíhĩkì♦ [*ore*]	***-re***	N/A
Kubeo◇ [*cub*]	***-re***	***-re***, *-i*, *-rã*
Tanimuka◇ [*tnc*]	***-re***	***-re***, *-re'ká*
Tukano◇ [*tuc*]	***-re***	***-re***, *-i*, *-pʉ*
Desano◇ [*des*]	***-re***	***-re***, *-ge*
Barasano◇ [*bsn*]	***-re***	***-re***, *-hʉ*
Wanano◇ [*gvc*]	***-re***	***-re***, *-i*, *-pʉ*

Table 4.5: Case-markers on P and L Functions, across Tukanoan sub-sample

Table 4.5 demonstrates how essentially all Tukanoan languages are unified with regards to the distribution of the case-marker *-re* across argumental and spatial domains (cf. Barnes 1999, 2006; Gomez-Imbert 2011; Stenzel 2008, 2013a, 2013d). In several Eastern Tukanoan languages, *-re* may co-occur with other dedicated spatial markers, as considered in Section 4.2.1.3, whereas this pattern never arises in the Siona+ languages. Besides Tukanoan languages, similar MIXED-type correspondences are only described for Hup [*jup*] (Epps 2008, 166-184)[22] and for Awa Pit [*kwi*] (Curnow 1997, 135-140), where L-marking is more complex than P-marking. All other sampled languages display the DIFFERENTIATION type, where there is no overlap between the case-marking found across the concerned Functions.[23]

Returning particularly to the Siona+ MIXED-type pattern, the dominant case-marker used to encode the L-argument, and the P-argument, is *-re*. I set aside patterns of spatial *-ni* attested in Ecuadorian Siona, described in Section 3.3.1 of the preceding chapter, since these patterns are not described for the other Siona+ languages. As regards instances of *-na* marking attested on the L-argument, and *never* on the P-argument, these patterns are illustrated for all Siona+ languages in their respective sources, although they are only recognized in prose comments. For instance, consider instances where *-re* and *-na* are utilized to encode the L-arguments in Koreguaje [*coe*] and Colombian Siona [C*snn*] in (21) and (22) respectively:

(21) Koreguaje♦ (*coe* — Western-Tukanoan) [CC93:48-49; CL85:105]

a. ***wɨ'e-re*** *pa'i-mo repa-o*
house-N.SBJ be-F.SG that-F.SG
'She is <u>in the house</u>.'

b. ***wɨ'e-na*** *kʰãi-me j̃ĩi*
house-GOAL sleep-PL children
'The children are sleeping <u>in the house</u>.'

[22] In fact, Epps (2008, §4.3.2) considers the directional oblique marker, *-an*, to be historically related, but distinct from the stressed, Object case-marker, *-ăn*. Even if these are only historically related, this is a deparature from other non-Tukanoan languages sampled in the NWA dataset, where entirely different markers are selected for the concerned Functions.

[23] Consult **Table A.11** in Appendix A for examples of both attested types.

(22) Colombian Siona♦ ([C]*snn* — WESTERN-TUKANOAN) [W70:62]

a. ***wɨ'é-de*** *ba'ɨ́-hi*
house-N.SBJ be-3S.M.PRS.ASS
'(He) is <u>in the house</u>.'

b. ***yógu-té*** *yũ'ɨ́-hi*
canoe-N.SBJ be_seated-3S.M.PRS.ASS
'(He) is seated <u>in the canoe</u>.'

c. ***yógu-na*** *kãɨ́-hɨ* *daí-ma-té*
canoe-GOAL sleep-PL.PRS.DEP come-RMT.PST-N2/3S.PST.N.ASS
'(We) came as (we) slept <u>in the canoe</u>.'

The sentences (21b) and (22c) demonstrate how the STATIC LOCATION (L) is encoded with *-na* with the predicate 'to sleep' in both languages. As discussed in Section 3.3.3 in the preceding chapter, this is the same pattern noted for Ecuadorian Siona with this predicate. This fact is shown in (23), where the speaker outright rejects the case-marker, *-re*, on the quesiton word, *hero* (where), where the predicate *kã(ĩ)-* (sleep) is concerned:

(23) Ecuadorian Siona♦ ([E]*snn* — WESTERN-TUKANOAN)

a. *jerona caquë'ne go'ye ñami ?*
he-ro-na *kãh-kɨ-'ne* go'je ñami
WH-CL:LOC-GOAL sleep-2/3S.M.PST.N.ASS-Q before night
'<u>Where</u> did (you) (M) sleep last night?'

b. ****he-ro-re*** *kãh-kɨ-'ne* go'je ñami
WH-CL:LOC-N.SBJ sleep-2/3S.M.PST.N.ASS-Q before night
Intended: '<u>Where</u> did (you) (M) sleep last night?'
[VOL/SUG: 20240928ejabi002.020a-b]

Ultimately, this dissertation treats the above-noted pattern as an instance of a predicate-specif DCM pattern, similar to the *-re* vs. *-na* alternation attested on inanimate P-arguments. Following the terminological conventions laid out in Chapter 3, this ought to be labeled an accidental DCM, since these forms do not represent a PLAIN-PROMINENT pair in the relevant sense. Nonetheless, more work is needed to see which predicates take *-na* on their (static) spatial arguments in other Siona+ languages.

A strikingly similar pattern is attested in the nearby lowland Quechuan language, Tena Kichwa [*quw*], as shown in (24b) for the predicate, *traba-* (work). The same pattern is observed with the corresponding predicate in Ecuadorian Siona, *goame nee-* (work, lit. 'do tasks'):

(24) Tena Kichwa (*quw* — QUECHUAN) [G16:68,62; exx. (2.47),(2.29)]

a. *Maria kaspi-wa wajta-n Juan-ta* ***wasi-pi***
M stick-INST hit-3 J-ACC house-LOC
'Maria hits John with a stick <u>in the house</u>.'

b. *Maria* ***chagra-ma*** *traba-nga ra-w-n*
M field-DAT work-FUT make-PROG-3
'Maria will work <u>in the field</u>.'

No patterns of the above type are described for Eastern Tukanoan languages. The predicate has little bearing on the selection of spatial case-marking in these languages. On this basis, the pattern shown above may have arisen due to contact-induced convergence between Siona+ languages and Quechuan languages.

The final correspondence tested in the NWA case-marking questionnaire concerns the spatial FUNCTIONS: LOCATION-GOAL-SOURCE (*Q2.5*). Section 4.2.1.2 already establishes that Siona+ languages recruit distinct markers for each of these FUNCTIONS. Table 4.6 demonstrates that the Siona+ pattern of spatial marking diverges sharply from the dominant Eastern Tukanoan pattern (Stenzel 2008, 2013a) — i.e., corresponding to the IDENTITY type:

LANGUAGE	LOCATION	GOAL	SOURCE	TYPE
*Ecuadorian Siona♦ [E*snn*]	*-re*, *-ni*, *-na*	*-na*	*-bi*	MIXED
Colombian Siona♦ [C*snn*]	*-re*, *-na*	*-na*	*-bi*	MIXED
Koreguaje♦ [*coe*]	*-re*, *-na*	*-na*	*-pi*	MIXED
Tanimuka◇ [*tnc*]	*-re*, *-re'ká*	*-rã*	*-ϕi*	DIFFERENTIATION
Kubeo◇ [*cub*]	*-re*, *-i*, *-rã*	*-re*, *-i*, *-rã*	*-re*, *-i*, *-rã*	IDENTITY
Tukano◇ [*tuc*]	*-re*, *-i*, *-pʉ*	*-re*, *-i*, *-pʉ*	*-re*, *-i*, *-pʉ*	IDENTITY
Desano◇ [*des*]	*-re*, *-ge*	*-re*, *-ge*	*-re*, *-ge*	IDENTITY
Barasano◇ [*bsn*]	*-re*, *-hʉ*	*-re*, *-hʉ*	*-re*, *-hʉ*	IDENTITY
Wanano◇ [*gvc*]	*-re*, *-i*, *-pʉ*	*-re*, *-i*, *-pʉ*	*-re*, *-i*, *-pʉ*	IDENTITY

Table 4.6: Case-markers mapped onto spatial FUNCTIONS, across Tukanoan subsample

The Eastern Tukanoan pattern shown in Table 4.6 is labeled the 'generalized spatial case-marker pattern' for this discussion: i.e., a uniform set of spatial case-markers (including *-re*), encodes all primary spatial FUNCTIONS indiscriminately. Contrast the Ecuadorian Sekoya [E*sey*] examples in (25) with the generalized spatial case-marking pattern illustrated for Desano [*des*] in (26), which also displays an alternation between locative *-ge* and *-re*:

(25) Ecuadorian Sekoya♦ (E*sey* — WESTERN-TUKANOAN) [JJ90:45-49]

a. ***dayá-huë-té*** *huahuá-quë* *pa-jï'i* *huɛ̲qu'ë*
pool-CL:NOM-REF float-CL:M be-3S.M.PST.ASS tapir
'The tapir was floating in the pool.'

b. *jɑ̲* *co'a-ye-re* ***tsia-ya-na*** *jɛ̲o-jɛ̲̈'ë*
DEM.MED be_bad-CL:GEN-REF river-CL:NOM-GOAL throw-IMPER
'Throw that bad thing into the river!'

c. ***tɛ̲̈'të-pa-pi*** *caje-ni* *cuya-huë*
riverbank-CL:NOM-SRC descend-SS bathe-PST
'(I) came down from the riverbank and bathed.'

(26) Desano$^{\diamond}$ (*des* — EASTERN-TUKANOAN) [M99:59-61, ex. (241),(245),(254)]

a. *gɨa yoa-ri-bohe árĩ-bɨ* ***ero-ge-re*** ***iri***
1PL.EXCL be_long-DBV-time be-N3.PST there-LOC-OBJ DEM.PROX
bãkã-ge-re
town-LOC-OBJ
'We were a long time there in this town.'

b. *gɨa* ***õ-re*** *era pɨ'rɨ bu'a-bɨ pare* ***finka-ge***
1PL.EXCL here-N.SBJ arrive after go_down-N3.PST finally farm-LOC
'We arrived here, after which we went down to a farm.'

c. ***gahi-rã-ge*** *ari-biri-bã*
other-AN.P-LOC come-NEG-3PL
'(People) did not come from other places.'

The fact that the generalized spatial marking is attested across the Eastern Tukanoan languages, but differentiated spatial case-marking is the general patterns in Siona+ languages, highlights a fundamental divide between these groupings. Although both types implicate multiple spatial case-markers, their distribution across FUNCTIONS is radically different.

The generalized pattern is found across the Vaupés region,[24] whereas non-Vaupés languages in the NWA sample display either the MIXED or the DIFFERENTIATION type. The common denominator in the non-Vaupés group is that SOURCE is always encoded distinctly from LOCATION and GOAL.[25] This pattern matches those described for other Amazonian areas (cf. Wälchli and Zúñiga 2006; Roosvall 2020). Again, the Siona+ pattern matches the Quechuan pattern, displaying some limited LOCATION-GOAL overlap, and a dominant system of dedicated spatial case-markers. The Tena Kichwa [*quw*], examples in (27) are a case in point:

(27) Tena Kichwa (*quw* — QUECHUAN)
[G16:62-68, exx. (2.47),(2.28),(2.29),(2.30)]

a. *Maria kaspi-wa wajta-n Juan-ta* ***wasi-pi***
M stick-INST hit-3 J-ACC house-LOC
'Maria hits Juan with a stick in the house.'

b. *Maria* ***chagra-ma*** *traba-nga ra-w-n*
M field-DAT work-FUT make-PROG-3
'Maria will work in the field.'

c. *Pablo* ***ista-ma*** *shamu-n*
P party-DAT come-3
'Pablo came to the party.'

d. ... *kay awa* ***luma-manda***
DEM.PROX high hill-SRC
'...from here above, from the hill.'

[24]Technically Hup [*jup*] exhibits the MIXED correspondence type, since more markers are available to encode L than the other spatial FUNCTIONS (Epps 2008, 367-369). However, the primary spatial case-marker, *-an*, does display a *generalized* distribution in typical Vaupés fashion.

[25]Table A.13 in Appendix A provides illustrative instances of both the Vaupés and the non-Vaupés patterns in the NWA dataset.

In summary, Siona+ grouping patterns differently from Eastern Tukanoan as far as the case-marking correspondences analyzed here go. These typological findings are bolstered by the recognition of a handful of CASE FUNCTIONS, which are *not* encoded via case-marking in Ecuadorian Siona, but which do recruit case-marking in other NWA languages. For the sake of the present discussion, I label these FUNCTIONAL GAPS and discuss them briefly in the following section.

4.2.2.2 Functional gaps in Siona case-marking

The remaining questions in the FUNCTIONAL DOMAIN of the questionnaire address two particular FUNCTIONAL GAPS: (i) the POSSESSOR FUNCTION (*Q2.6*), and (ii) the TIME FUNCTION (*Q2.7*).

The POSSESSOR FUNCTION refers to the dependent POSSESSOR element within the possessive noun phrase, as opposed to the POSSESSEE, which is the head of this noun phrase. As such, the NWA questionnaire is designed to categorize languages based on whether they display overt POSSESSOR-marking (i.e., genitive case-marking), as shown to be the case in Kubeo [*cub*] in (28), or not:[26]

(28) Kubeo$^{\diamond}$ (*cub* — EASTERN-TUKANOAN) [MM99:118-119, exx. (381b)-(381c)]

a. ***Vícto-I*** *kɨ̃rãbĩ̃*
V-POSS house
'Victor's house.'

b. ***kai-wɨ*** ***i-Rã̃*** ***bue-I-xiejo-wA-I*** *papera*
all-PL.AN DEM.PROX-PL.AN student-I-child-PL.AN-POSS paper
'all of the students' papers.'

In stark contrast to the Kubeo [*cub*] overt POSSESSOR-marking strategy, the Ecuadorian Siona strategy consists in juxtaposition of the POSSESSOR and the POSSESSEE, in that order. This is a common strategy for encoding phrasal possession within the NWA sample (N=9). Consider the Ecuadorian Siona possessive noun phrase shown in (29) alongside a similar instance from Murui [*huu*] in (30):

(29) Ecuadorian Siona$^{\blacklozenge}$ (*e-snn* — WESTERN-TUKANOAN)
yë' gajei yohuë
jɨ'ɨ **gaje-ɨ** jo-wɨ
1SG friend-CL:M canoe-CL:CONT
'my friend's canoe.' [VOL/SUG: 20240928ejabi002.014]

(30) Murui (*huu* — WITOTOAN) [W21:8, ex. (1.7)]
Lusio *yoe-fai*
L metal-CL:SHORT.THICK
'Lucio's machete.'

The juxtaposition strategy illustrated in (30) and (29) is common to all Western Tukanoan languages.[27] Regarding non-Tukanoan languages, the neighbour to Murui

[26] This determination is made based upon the definition established by Iggesen (2013), as laid out in the methodological discussion in Section A.1.2.1 of Appendix A.

[27] The juxtaposition strategy for encoding possession is discussed in the following sources: See Wheeler (1987, §2.3.3.5) for the decription for Colombian Siona [^{C}*snn*]; Cook and Criswell (1993, 51) regarding Koreguaje [*coe*]; Johnson and Levinsohn (1990, 41) for Ecuadorian Sekoya [^{E}*sey*]; and Velie (2008[1975], 19-20) regarding Máíhɨ̃kì [*ore*].

[*huu*], Bora [*boa*] (Thiesen and Weber 2012, 251), also displays the juxtaposition strategy, as does A'ingae [*con*] (Fischer and Hengeveld 2023, §4).[28]

Besides the languages demonstrating the juxtaposition strategy outlined above, the dominant pattern in the area is the overt POSSESSOR-marking strategy shown in (28). This latter pattern is attested in all Eastern Tukanoan languages and surrounding non-Tukanoan Vaupés languages (Stenzel 2013b), and in various other languages in the sample, including the Quechuan languages (i.e., see Grzech (2016, 64-65) regarding Tena Kichwa [*quw*]; and Jake (1983, 23) regarding Imbabura Kichwa [*qvi*]), Shiwiar [*acu*] (Kohlberger 2020, 240-255), and Awa Pit [*kwi*] (Curnow 1997, 122-126).[29] Ultimately, the languages for which POSSESSOR-marking is not attested happen to form a cluster at the geographical centre of the proposed NWA area, subsuming the Siona+ languages and their closest neighbours.

A similar clustering of languages emerges as concerns the coding of TIME nominals (*Q2.7*), as defined in Section A.1.2.1 of Appendix A. As exemplified for Tukano [*tuc*] in (31), Eastern Tukanoan languages display overt case-marking, whereas the corresponding TIME-argument is not case-marked in the Western Tukanoan, as shown in (32) for Ecuadorian Sekoya [^{E}*sey*]:

(31) Tukano$^{\diamond}$ (*tuc* — EASTERN-TUKANOAN) [R97:237, ex. (580)]
dĩ'ká-de *bu'ê-dã*
today-N.SBJ study-IMPER
'Let's study TODAY!'

(32) Ecuadorian Sekoya$^{\blacklozenge}$ (*sey* — WESTERN-TUKANOAN) [JJ90:43]
ñami jopo-repa *sëta-huë*
night middle-PREC awaken-N3S.PST.ASS
'I woke up at midnight exactly.'

The zero-marking pattern demonstrated for Ecuadorian Sekoya in (32), matches the findings in the corpus-based investigation for Ecuadorian Siona, reported in Chapter 5 in this dissertation.[30,31] However, although there is no general TIME-marking in Koreguaje [*coe*] (Cook and Criswell 1993, §2.3.7), in another work, Cook and Levinsohn

[28]Fischer and Hengeveld (2023, 80) recognize a secondary possession encoding strategy where the POSSESSOR is postponed to the head nominal, i.e., POSSESSEE, in which case the POSSESSOR must be marked with the benefactive marker, -=*mbe*. The authors express that the unmarked, pre-nominal POSSESSOR configuration is the dominant pattern, matching the juxtaposition strategy discussed here.

[29]Two Vaupés languages are technically classified as POSSESSOR-marking NOT-ATTESTED based on the definitions for this marking outlined in Iggesen 2013: i.e., Wanano$^{\diamond}$ [*gvc*] and Tariana [*tae*], for similar reasons. Although these languages have over case-markers involved in encoding possession, and these markers are cognate with -*ya* found in other Eastern Tukanoan languages, these display different morphosyntactic behaviour from the other sampled languages. The relevant facts are laid out in Stenzel 2013b, 374-375, regarding Wanano, and a few other Eastern Tukanoan languages, and Aikhenvald 2003, §6.5.1 regarding Tariana.

[30]In the Siona narrative dataset in Chapter 5, of all coded nominal TIME tokens (N=142), the bulk of tokens were zero-marked (N=130, 91.55%), and, crucially, no tokens are marked with -*re*, as shown with the Tukano cognate -*de* in (31). Instead, a handful of Ecuadorian Siona temporal tokens in the corpus are marked with -*bi* (N=7), with a 'temporal starting point' reading, or with -*na* (N=3), receiving a 'temporal end point' reading. Similar marking patterns are noted regarding -*bi* in Colombian Siona (Wheeler 1987, 125-126), translated as 'since' (*desde* in Spanish), with both spatial and temporal readings.

[31]Regarding Colombian Siona, Wheeler 1987, 125-126 recognizes that, surprisingly, -*bi* may also be used to encode a temporal reading, 'during the whole X', but only with two

(1985, §4) do note a few instances of *-na* to express focus on a particular temporal interval, as shown in (33). Such patterns are not described for other Siona+ languages:

(33) Koreguaje♦ (*coe* — Western-Tukanoan) [CL85:113, ex. (49-i)]
6:30 pa'i-to oracha sa'aro meta jʉosina'me ***ñami-na*** ...
6:30 when_be Maticurú port come_down_river docked.PL night-GOAL
'(We) came downriver and docket at Maticurú when it was 6:30 <u>at night</u>...'

To summarize, despite a few disparate instances of temporal *-bi* and *-na* (but never *-re*) across the Siona+ languages, the dominant pattern is one where Time nominals are left unmarked. Similar patterns are described for Tanimuka [*tnc*] (Eraso 2015, 293-294, §7.6.3), for A'ingae [*con*] (Fischer and Hengeveld 2023, 82, 93-96), and for Bora [*boa*] (Thiesen and Weber 2012, §10.4.6, §17.3). This is a similar grouping of languages to those which do not exhibit overt Possessor-marking.

On the other hand, sampled Eastern Tukanoan languages are described as taking spatial case-markers for the sake of encoding (certain types of) Time arguments. This is demonstrated for Tukano [*tuc*] in (31); and below for Kubeo [*cub*] in (34) and Wanano [*gvc*] in (35):

(34) Kubeo◊ (*cub* — Eastern-Tukanoan) [MM99:114,118; exx. (361b),(378)]

a. *oko-Rɨ̃bɨ̃-A-RE*
water-CL:TEMP-PL.INAN-N.SBJ
'in the rainy season...'

b. *ke te-Rɨ̃* ***ape-xãrãwɨ-I*** *dɨ̃-karã* ...
like_that do-GER other-CL:DAY-LOC go-1PL.EXCL
'So we went <u>another day</u>...'

(35) Wanano◊ (*gvc* — Eastern-Tukanoan) [S08:6 ex. (17),(15)]

a. *tu'sʉ* [***ti*** ***∼yabi-re*** ***∼hi'da***] *∼kha'a-ro-pʉ-re* *ti-ro-re*
finish ANA night-OBJ EMPH dream-SG-LOC-OBJ ANA-SG-OBJ
ya'u-a
warn-ASSERT.PERF
'When (the man) was done, <u>that very night</u>, (someone) warned him in a dream.'

b. *∼phado-pʉ-re* ...
long_ago-LOC-OBJ
'In the olden days...'

It is relevant to note that it is not only the case-marker *-re*, which exhibits a Time-marking Function in these languages, but rather the full arsenal of spatial case-markers may be employed in this way. For instance, temporal uses of the so-called plain locative-marker are attested in Kubeo [*cub*], *-I*, as shown in (34b); and the Wanano item in (35b) displays the typical spatial double-marking pattern discussed

lexical items: *umuguse* (day) and *ñami* (night). The exact same observations are put forth for Ecuadorian Sekoya (Johnson and Levinsohn 1990, 47), and some similar examples are provided for Koreguaje (Cook and Levinsohn 1985, 113). This is similar to a few noted restricted instances of temporal *-na* in Ecuadorian Siona, pointed out in Chapter 5, which require further attention.

in Section 4.2.1.3. Similar facts are attested in the descriptions of Desano [*des*] (Silva 2012, 97-99, 161) and Barasano [*bsn*] (Jones and Jones 1991, §5.5); and described for Quechuan languages (see Grzech (2016, 68) regarding Tena Kichwa [*quw*]; and Cole (1982, 125) regarding Imbabura Kichwa [*qvi*]), Shiwiar [*acu*] (Kohlberger 2020, 264) and Awa Pit [*kwi*] (Curnow 1997, 340-346). To date, temporal case-marking is relatively under-explored and poorly-described compared with other FUNCTIONS, and more targeted data collection is warranted.

The discussion in the present section has demonstrated that the Siona+ languages, and a handful of other languages spoken around the geographical centre of the proposed NWA region, converge on two FUNCTIONAL GAPS: (i) POSSESSOR-marking, and (ii) TIME-marking. A contact-induced explanation for these patterns is conceivable, involving neighbouring languages like A'ingae [*con*] and/or the languages of the *People of the Centre* (i.e., including Murui [*huu*] and Bora [*boa*]).

4.2.3 Typologizing Siona DCM properties

Table 4.7 identifies the relevant properties for each of the five Ecuadorian Siona DCM patterns based upon the *preliminary description* in Chapter 3. Each of these patterns is attributed a QUESTION in the NWA dataset, as indicated in the table. The ensuing discussion typologizes these DCM patterns on a FUNCTION-by-FUNCTION basis:[32]

QUESTION	DCM FUNCTION	AVAILABLE FORMS	ACTIVE MACRO-TRIGGERS			
			ANIM	REF	DISC	OTHER
Q3.1	SUBJECT (S)	{-∅, *-bi*}			✓	
Q3.2	DIRECT OBJECT (P)	{-∅, *-re*, *-ni*}	✓	✓	✓	
Q3.3	INDIRECT OBJECT (R)	{*-re*, *-ni*, *-na*}	✓		✓	
Q3.4	LOCATION (L)	{-∅, *-re*, *-ni*, *-na*}		(✓)	✓	✓ PRED
Q3.5	GOAL (G)	{-∅, *-na*}		(✓)	✓	

Table 4.7: Overview of Ecuadorian Siona DCM patterns — comparative benchmark

4.2.3.1 Situating Siona Subject-oriented DCM

I established earlier that S-oriented DCM in Ecuadorian Siona displays the OPTIONAL formal type, such that the marker *-bi* alternates with zero-marking. This alternation is driven almost entirely by discourse-related properties of the S-argument. As demonstrated in Table 4.8, S-oriented DCM patterns of any type are rare in the NWA sample (*Q3.1*), which includes highly similar patterns in all three included Siona+ languages.

[32]The short-hand labels utilized for MACRO-TRIGGERS are as follows: ANIM refers to animacy-related TRIGGERS, REF refers to referentiality-related TRIGGERS (e.g., specificity, pronominality), and DISC refers to discourse-related TRIGGERS. The OTHER category is reserved for any other TRIGGERS which do not easily fit into one of these MACRO-TRIGGERS.

Language	Forms	Macro-triggers			
		anim	ref	disc	other
*Ecuadorian Siona♦ [E*snn*]	{-∅, *-bi*}			✓FOC	
Colombian Siona♦ [C*snn*]	{-∅, *-bi*, *-ga*}			✓FOC	
Koreguaje♦ [*coe*]	{-∅, *-pi*}			✓CONTR	
Tanimuka◊ [*tnc*]	{-∅, *-re*}	✓HUM			
Murui [*huu*]	{-∅, *=dɨ̀*}			✓TOP	
VTariana [*tae*]	{-∅, *-n(h)e*}			✓TOP	
NO DCM ON SUBJECT:	*ore*♦ *cub*◊ *tuc*◊ *des*◊ *bsn*◊ *gvc*◊ *con boa quw qvi acu kwi* V*cbv* V*jup* V*yab*				

Table 4.8: Subject-oriented DCM patterns in the NWA dataset

S-oriented DCM is not attested in any Eastern Tukanoan language, excepting Tanimuka [*tnc*], which displays an exceptional pattern where S- and P-marking overlap (Eraso 2015, 229-231). Some examples for this pattern are provided in Section A.2.3 of Appendix A. Among non-Tukanoan languages in the NWA sample, only two languages display S-oriented DCM patterns: Murui [*huu*] (Wojtylak 2021, 245) and Tariana [*tae*] (Aikhenvald 2003, §7.2.1, 140-143).

Both the Murui and the Tariana patterns align neatly with Siona+ descriptions for S-oriented DCM with regards to the discourse-related TRIGGERS that drive the realization of the appropriate case-markers. For instance, compare the the naturalistic contrastive focal usage of S-marking in Tariana in (36) with a similar Ecuadorian Siona corpus example in (37), lifted from the sample in Chapter 5:

(36) Tariana[V] (*tae* — Arawakan) [A03:141, ex. (7.4)]
kiya-ku *hiniri* *di-wha-ka* *di-ka* *di-niwa*
strong-PERSIST ukukí_fruit 3S.F-fall-SUB 3S.F-see 3S.F-collect
di-wake-ta *di-yã-nhi-pidana* ***diha*** ***nawiki-ne***
3S.F-join+CAUS1-CAUS2 3S.F-stay-ANT-RMT.PST ART man-FOC.A/S
'The MAN saw that the ukukí fruit was falling down a lot (and) he was collecting (them) (while the evil spirit was trying to steal the fruit).'

(37) Ecuadorian Siona♦ (*e-snn* — Western-Tukanoan)
[**Context:** The black vulture and another personified vulture (condor) are searching for the traps that were set for trapping animals.]
. . . jãre tacarobi ña bã'co — ñani nëcadojaiyo ñani. . .
hãre **tãhkaro-bi** ñaa-a bah-ko — ñaa-ni
like_that black_vulture-SBJ see-NEG be-2/3S.F.PST.N.ASS — look-SS
nɨhka + dohai-yo ñaa-ni
be_standing + wander-CL:F look-SS
'. . . likewise the black VULture was looking out. She was wandering on foot (i.e., on the ground) and looking around (while the condor searched from the sky). . . ' [NAT*: 20151112orapi001.175-176]

The focus- and/or contrastivity-related uses of overt S-marking noted in (36) and (37),

are described for all Siona+ languages.[33] Although Aikhenvald (2003) and Wojtylak (2021) employ the term 'topicality' to describe the discourse-related TRIGGERS they observe, contrastive focus and disambiguation are overtly recognized as sub-patterns of topical S-marking in the relevant portions of these descriptions. These patterns are highly similar, as Aikhenvald (2015) recognizes in a later work.

One point of apparent micro-variation within the Siona+ grouping concerns the HYBRID formal type attested for Colombian Siona in Table 4.8 — i.e., *-bi* and zero-marking alternate with another overt marker, *-ga* (Wheeler 1970, 173-176, 1987, 131). The selection of the appropriate case-marker is determined on the basis animacy conditions[34] and the type of focus — i.e., *-bi* expresses 'plain focus', whereas *-ga* expresses 'emphatic focus'. The three marking alternatives are illustrated in (38).

(38) Colombian Siona♦ (*snn* — WESTERN-TUKANOAN) [W70:47]

a. ***yɨ'i-ga*** *saí-yɨ*
1SG-SBJ.EMPH go-N3S.PRS.ASS
'And I, I am going.'

b. ***ča'kádi-wa'-na-bi*** *bá-gɨ-na* *gahe-ni*
fire_ant-ANIM-PL-SBJ PRO.HUM-CL:M-GOAL go_down-SS
sɨ'á-wɨ
attach-N3S.PST.ASS
'The fire ants came down to him and latched on.'

c. ***'okó*** *ka'ní-hi*
rain gather-3S.M.PRS.ASS
'The rain is gathering.'

Although Ecuadorian Siona does not have a S-marker *-ga*, a cognate exists — i.e., *=kato*, which is analyzed as a contrastive topic marker in Bruil (2014, *et seq.* — see Table 4.1). Interestingly, a formally similar topic marker is described for several surrounding non-Tukanoan languages as well: i.e., *-ka* in Murui [*huu*] (Wojtylak 2021, 245-246); *=ga* in Imbabura Kichwa (cf. Cole 1982, 26-29) and in Tena Kichwa (Grzech 2016, 157-159); $=k^{j}a$ (TOP/Q) in Shiwiar [*acu*] (Kohlberger 2020, 198, 269-273); and *=ka* (EMPH) in Awa Pit [*kwi*] (Curnow 1997, 378-379). To my view, this is a strong candidate for contact-induced convergence, although a full discussion is inappropriate in the present analysis of case-marking. Wheeler (1970, 1987, etc.) analyzes the corresponding marker as belonging to the case-marker inventory. The Ecuadorian Siona discourse marker *=kato* will resurface in the next two chapters, but not as a case marker.

Setting aside the slight formal discrepancy between Colombian and Ecuadorian varieties of Siona, discourse-driven S-oriented DCM is common to the Siona+ languages. Strikingly similar patterns are described for Murui [*huu*] and Tariana [*tae*]. Otherwise, S-marking is typologically rare in the NWA region. An entirely different typology is found regarding the case-marking patterns described for encoding the

[33] Although similar contrastivity-related effects are noted for S-marking elsewhere in the Siona+ sources, a vareity of labels are used: see Wheeler (1970, 1987) regarding Colombian Siona [^{C}*snn*], Johnson and Levinsohn 1990 regarding Ecuadorian Sekoya [^{E}*sey*], and Cook and Levinsohn (1985) and Cook and Criswell (1993) regarding Koreguaje.

[34] According to Wheeler 1970, 174, the SUBJECT-marker *-ga* is strictly available to animates as an 'emphatic focus marker'. This fact is surprising given that the cognate, *=kato*, does not exhibit animacy-based restrictions in Ecuadorian Siona.

DIRECT OBJECT, i.e., the P-argument, which is described for essentially all sampled NWA languages.

4.2.3.2 Situating Siona Direct object-oriented DCM

Patterns of P-oriented DCM are ubiquitous in the NWA region, as they are in nearly all regions of the world (cf. Bossong 1984, 1985; Sinnemäki 2014). The only language in the NWA dataset which is described as displaying obligatory P-marking (i.e., with no DCM pattern for this FUNCTION) is Imbabura Kichwa [*qvi*] (Cole 1982, 103-104).

To guide the ensuing discussion of DCM and the expression of DIRECT OBJECT-marking, Table 4.9 compares the available case-marking forms and the active MACRO-TRIGGERS for Ecuadorian Siona, and for all other sampled Tukanoan languages (*Q3.2*). A full chart, including non-Tukanoan languages, is provided in Table A.20 in Appendix A. This table distinguishes active STRONG TRIGGERS from WEAK TRIGGERS, by representing the latter type in parentheses, (✓), following the distinction laid out in Chapter 2 (inspired by Klein and de Swart 2011). On the one hand, STRONG TRIGGERS rigidly divide the set of P-arguments as receiving a particular case-marking alternative or not, whereas WEAK TRIGGERS represent marking tendencies. This determination adds nuance to the discussion of micro-variation across related languages that display (often subtly) different DCM patterns, including Siona+ languages:

LANGUAGE	FORMS	MACRO-TRIGGERS			
		ANIM	REF	DISC	OTHER
*Ecuadorian Siona♦ [E*snn*]	{-∅, **-re**, -*ni*}	✓ANIM	✓PRO,(SPEC)	✓FOC,(TOP)	✓COORD
Colombian Siona♦ [C*snn*]	{-∅, **-re**, -*ni*}	✓(ANIM)	✓PRO,(SPEC)	✓FOC,(TOP)	
Koreguaje♦ [*coe*]	{-∅, **-re**, -*ni*}	✓(ANIM)	✓PRO,(SPEC)	✓FOC,(TOP)	
Máíhĩkì♦ [*ore*]	{-∅, **-re**}	✓ANIM	✓(SPEC)		
Kubeo◇ [*cub*]	{-∅, **-re**}	✓(ANIM)	✓PRO,(REF)		✓COORD
Tanimuka◇ [*tnc*]	{-∅, **-re**}	✓HUM		✓CONTR	
Tukano◇ [*tuc*]	{-∅, **-re**}	✓(ANIM)	✓PRO,DEF		
Desano◇ [*des*]	{-∅, **-re**}		✓PRO,SPEC		
Barasano◇ [*bsn*]	{-∅, **-re**}		✓PRO,DEF		
Wanano◇ [*gvc*]	{-∅, **-re**}	✓(ANIM)	✓PRO,REF		✓POSITION

Table 4.9: Tukanoan DIRECT OBJECT-oriented DCM patterns in the NWA dataset

Table 4.9 demonstrates that the Siona+ languages display a remarkably stable set of P-oriented DCM patterns, both on formal ground and regarding the TRIGGERS, which drive the observed alternations. On the one hand, *all* Tukanoan languages display at least a zero-marking vs. -*re* marking alternation for this function (Barnes 1999, 2006; Gomez-Imbert 2011; Stenzel 2008, 2013c, 2013d; Zúñiga 2007) — i.e., corresponding to the OPTIONAL formal type, the most common DCM type cross-linguistically (cf. Aissen 2003; de Hoop and Malchukov 2007; Chappell and Verstraete 2019).

On the other hand, each of the Siona+ languages possesses an additional overt marker -*ni*, discussed in the preceding sections of this chapter. See Wheeler (1987, 126) regarding the usage of -*ni* in Colombian Siona [C*snn*]; Cook and Criswell (1993, 48-49) and Cook and Levinsohn (1985, 100-104) regarding Koreguaje [*coe*]; and Johnson and Levinsohn (1990, 47) regarding Ecuadorian Sekoya [E*sey*]. These patterns align neatly

with the distribution of Ecuadorian Siona *-ni* on the DIRECT OBJECT (P-argument), as described in Section 3.2 of the preceding chapter. As such, on formal grounds, the Siona+ languages exhibit the typologically rare HYBRID type, where multiple markers alternate with zero-marking,[35] which is only attested otherwise once in the NWA sample for P-oriented DCM: i.e., in Tariana [*tae*] (Aikhenvald 2003, 145-148), as demonstrated in (80) in Appendix A. The Colombian Siona sentences in (39) illustrate the three marking alternatives available to the P-argument in Siona+ languages:

(39) Colombian Siona♦ (*snn* — WESTERN-TUKANOAN) [W70:43-44]

a. ***jo'ó*** *yo'ó-wɨ̃*
work do_work-N3S.PST.ASS
'(I) did the work.'

b. ***'ãõ-de*** *k^{w}a'kú-yɨ̃*
food-N.SBJ cook.TRS-N3S.PRS.ASS
'(I) am cooking food.'

c. ***ya'ó-ni*** *hu-ɨ́'ɨ̃* 'aídu-na
peccary-N.SBJ2 kill-N3S.PST.ASS forest-GOAL
'(I) shot a peccary in the woods.'

Besides the discrepancy noted regarding formal types of DCM, Siona+ languages are described as displaying complex, multi-dimensional DCM (Klein and de Swart 2011). More concretely, animacy-related, referentiality-related, and discourse-related TRIGGERS must each be considered in order to accurately capture the distribution of the case-marking alternatives shown in (39). In what follows, the relevance of each of these MACRO-TRIGGERS is discussed and contextualized within the NWA sample accordingly.

Firstly, the selection of the appropriate case-marker in Ecuadorian Siona is inextricably connected to the animacy class of the P-argument, as described in Section 3.2 in Chapter 3. More concretely, two related animacy-related patterns are noted: *-ni* may only arise on animate (or promoted) nouns, as in (39c); and these same nouns reject zero-marking. The former pattern is common to all Siona+ languages; however, Table 4.9 highlights a slight discrepancy as to the obligatory case-marking on animate nouns. Unlike the Ecuadorian Siona pattern described throughout this dissertation, zero-marked animate P-arguments are permitted in Koreguaje [*coe*] sentences such as (40) — see Wheeler 1970, 145 regarding similar instances in Colombian Siona [^{C}*snn*]. Ecuadorian Siona speakers outright reject these unmarked instances, as demonstrated in the corresponding elicited sentences in (41):

(40) Koreguaje♦ (*coe* — WESTERN-TUKANOAN) [CL85:105]

a. ***pãi*** *k^{h}u'e-aso-mʉ̃* *kã'ʉ̃*
people look_for-PST-M.SG he
'He is looking for people.'

b. ***ocho*** ***pãi-re*** *soni-aso-mʉ̃* *repa-ʉ̃*
Carijona people called-PST-M.SG that-M.SG
'He called Carijona people.'

[35] In Peruvian varieties of Sekoya, it is the case that the case-marker *-ni* is unattested (Rosa Vallejos, p.c.). Therefore, this variety of Sekoya also displays an OPTIONAL formal type of P-oriented DCM.

(41) Ecuadorian Siona♦ (*snn* — WESTERN-TUKANOAN)

a. *i baire coeji*
ĩ-ɨ **bãĩ-re** *kwee-hi*
3PRO-CL:M people-N.SBJ look_for-3S.M.PRS.ASS
'He is looking for people.'

b. * *i baĩ coeji*
ĩ-ɨ **bãĩ** *kwee-hi*
3PRO-CL:M people look_for-3S.M.PRS.ASS
Intended: 'He is looking for people.'

[VOL/SUG: 20230721eyopa001.009a-b]

On the basis of examples such as (40) and (41), Koreguaje [*coe*] is treated as displaying animacy as a WEAK TRIGGER, whereas animacy is a STRONG TRIGGER in Ecuadorian Siona. No matter the determination of TRIGGER STRENGTH, the animate-inanimate distinction is central to capturing P-oriented DCM patterns across the Western Tukanoan languages, and is the primary factor determining the distribution of *-re* on the DIRECT OBJECT in Máíhɨ̃kì [*ore*] (Farmer 2015, 93-97).

As regards the Eastern Tukanoan sample, the role of animacy in determining case-marking is mixed. On the one hand, Tanimuka [*tnc*] is the only language where this is the primary TRIGGER for P-marking (Eraso 2015, 296). A handful of other authors recognize animacy as a secondary, WEAK TRIGGER among the sampled languages — i.e., Kubeo [*cub*] (Chacon and Genetti 2019, 412), Tukano [*tuc*] (Ramirez 2019[1997], 164-166), and in Wanano [*gvc*] (Stenzel 2008). Among the non-Tukanoan languages in the NWA dataset however, animacy is a STRONG TRIGGER in Awa Pit [*kwi*] (Curnow 1997, 72-74), in Bora [*boa*] (Thiesen and Weber 2012, 273-274); and, interestingly, animacy is the primary driver of P-oriented DCM in various languages spoken among the Eastern Tukanoan languages in the Vaupés region: i.e., Kakua [*cbv*] (Bolaños 2016, 203-205), Hup [*jup*] (Epps 2008, 174-177), and Yuhup [*yab*] (Ospina Bozzi 2002, 141-146). It is relevant to note that the non-Tukanoan, Vaupés pattern draws a human-vs.-non-human distinction, whereas the animacy-based DCM patterns outlined for Western Tukanoan distinguish all animates from their inanimate counterparts. This discrepancy may point to a divergent development of the attested patterns.

Ultimately, as Sinnemäki (2014) finds in his extensive survey, animacy-based DCM patterns are commonly attested in all linguistic areas, including the proposed NWA region. However, the NWA sample underpinning the present discussion traces a marked distinction between Western Tukanoan languages, where animacy is one of the most relevant, STRONG TRIGGERS, for these patterns, and the Eastern Tukanoan languages where this tends to take a secondary position to other TRIGGERS. The most relevant class of TRIGGERS, as concerns the Eastern Tukanoan patterns, pertains to referentiality-related TRIGGERS, including pronominality, specificity, definiteness, etc. On the one hand, it is well-established that pronominal P-arguments require case-marking in all instances, as a generalizable pan-Tukanoan trait (cf. Barnes 1999, 2006; Gomez-Imbert 2011; Ramirez 2019[1997]; Stenzel 2013c); a constraint which is also attested in Awa Pit [*kwi*] (Curnow 1997), and several languages of the Vaupés region (Zúñiga 2007): i.e., Hup [*jup*] (Epps 2008, 172); Kakua [*cbv*] (Bolaños 2016, 193-194); and Tariana [*tae*] (Aikhenvald 2003, 146-147). The dominant pattern across all of these (non-)Tukanoan may be stated as a generalization: non-SUBJECT personal pronouns require overt case-marking.

Despite the pronoun-marking generalization, on the other hand, the status of other referential properties as TRIGGERS for DCM in the NWA area is a less straightforward question. A sharp divide is noted in the literature across the branches of the Tukanoan family. Firstly, referentiality-related TRIGGERS, e.g., specificity and individuation, are described as STRONG TRIGGERS for Eastern Tukanoan languages (Barnes 1999, 2006; Waltz and Waltz 1997), excepting Tanimuka [*tnc*].[36] For instance, the (near) minimal pairs in (42) and (43) are used by Duarte and de Oliveira Lopes (2020) to argue for a definiteness-based analysis for such patterns in Tukano [*tuc*]:[37]

(42) Tukano$^{\diamond}$ (*tuc* — EASTERN-TUKANOAN)
[DL20:30-31, exx. (33)-(34),(38)-(40)]

a. ***ni'ká wi'i*** *da'rê-gɨ'* wee-mí
one house make-SS.M.SG do-PRS.VIS.3S.M
'(He) is making a house.'

b. * ***ni'ká wi'i-re*** *da'rê-gɨ'* wee-mí
one house-N.SBJ make-SS.M.SG do-PRS.VIS.3S.M
Intended: '(He) is making a house.'

(43) a. ***ohô*** *ba'â-ya*
banana eat-IMPER
'Eat (some) banana!'

b. ***ohô-poro-re*** *ba'â-ya*
banana-CL:OBL-N.SBJ eat-IMPER
'Eat the banana!'

c. * ***ohô-re*** *tɨá-yɨ*
banana-N.SBJ eat-IMPER
Intended: 'Eat some/the banana!'

A STRONG TRIGGER analysis for referentiality-based DCM patterns, based upon examples such as (42) and (43), is untenable for Siona+ languages. The corresponding Ecuadorian Siona sentences below demonstrate the starkly different case-marking facts, concerning the availability of *-re* marking on non-specific (inanimate) P arguments. Firstly, the sentence in (44) demonstrates an instance where *-re* is naturally produced with the numeral one, *te'e*, where it receives a non-specific interpretation:[38]

[36] Authors describe referentiality-related STRONG TRIGGERS in their respective sourcese — i.e., Tukano [*tuc*] (Ramirez 2019[1997], 164-167; Duarte and de Oliveira Lopes 2020); Desano [*des*] (Miller 1999, 57; Silva 2012, 171-173); Barasano [*bsn*] (Jones and Jones 1991, 65-66); and Wanano [*gvc*] (Stenzel 2008). Authors tend to bridge the referentiality-based patterns for the distribution of *-re* with the obligatory pronoun-marking generalization, and invoke the *Referentiality hierarchy* (or other incarnations thereof, e.g., the *Individuation scale*) to account for Eastern Tukanoan P-oriented DCM effects.

[37] In order to unpack (43), it is relevant to note that Tukano, like all Tukanoan languages, exhibits a rich system of nominal classification. For Duarte and de Oliveira Lopes 2020, the overt classifier, *-poro*, for oblong objects, serves an individuating function, thereby licensing the referentiality-sensitive *re*-marker and achieving the desired definite reading.

[38] Note that the numeral 'one' is used sparingly in such cases in naturalistic speech. Generally bare nominals are employed with either a specific or a non-specific reading — see the corpus analysis in Chapter 5 and Appendix B of the present dissertation for further details.

(44) Ecuadorian Siona♦ (*e-snn* — WESTERN-TUKANOAN)
yë' jaquëbaibi te'e huë'ere bayë
jɨ'ɨ ha-kɨ-bãĩ-bi **te'-e** **wɨ'e-re** baa-jɨ
1SG parent-CL:M-PL.AN-SBJ one-CL:GEN house-N.SBJ have-N3S.PRS.ASS
'My parents have a house (lit. one house).' [VOL: 20230525ejabi001.023]

The next set of sentences, shown in (45), demonstrates that the presence of the classifier does not have a direct impact on DCM in Ecuadorian Siona. On the basis of Q-A congruence effects (see Chapter 3), obligatory *-re* marking is observed on the focalized DIRECT OBJECT in the answer in (45), independently of the presence of a classifier. Additionally, to further demonstrate the irrelevance of classification on case-marking, the non-classified P-argument, *nohka* (banana), receives a definite reading in (46), but is naturally produced without case-marking:

(45) Ecuadorian Siona♦ (*e-snn* — WESTERN-TUKANOAN)

a. *quere baco mẽ' jëtëre ?*
ke-e-re baa-ko mɨ'ɨ̃ hɨ̃hti-re
WH-CL:GEN-N.SBJ have-2/3S.F.PRS.N.ASS 2SG hand-N.SBJ
'What do you (F) have in your hand?'

b. *nocare bayë*
nohka-re baa-jɨ
banana-N.SBJ have-N3S.PRS.ASS
'I have a baNAna.'

c. *nocamore bayë*
nohka-mo-re baa-jɨ
banana-CL:CYL-N.SBJ have-N3S.PRS.ASS
'I have a baNAna.' [VOL: 20230704eyopa001.015a-c]

(46) Ecuadorian Siona♦ (*e-snn* — WESTERN-TUKANOAN)
[**Context:** A monkey comes and steals the speaker's banana off of the table.]
nasore noca aiquëni co'eyë
[nahso-re **nohka** ãĩ-kɨ-ni] ko'e-jɨ
monkey-N.SBJ banana eat-CL:M-N.SBJ2 look.for-N3S.PRS.ASS
'I am looking for the monkey that ate the banana.'
[VOL: 20231906elupa001.002a]

It is clear from instances such as (44) through (46) that referentiality does not play the same role in Ecuadorian Siona as it does for Eastern Tukanoan languages, such as Tukano [*tuc*]. We reach a similar conclusion in recent corpus-based work (Case & Bruil, *forthcoming* — also see Chapter 5 in this dissertation). It remains to be seen whether referentiality-related TRIGGERS have no bearing on the attested patterns, or whether they are better classified as WEAK TRIGGERS, and similar conclusions are drawn regarding other Siona+ languages: i.e., Colombian Siona [^{C}*snn*] (Wheeler 1987, 127-128), Ecuadorian Sekoya [^{E}*sey*] (Johnson and Levinsohn 1990, 48), and Koreguaje [*coe*] (Cook and Levinsohn 1985). What is clear for all Siona+ languages is that referentiality-related TRIGGERS for P-oriented DCM in these languages is secondary to animacy- and discourse-related TRIGGERS.

Similar analyses regarding referentiality as a WEAK TRIGGER are put forth regarding Máíhɨ̃kì [*ore*] (Farmer 2015, 95-97), and for Kubeo [*cub*] (Chacon and Genetti

2019, 412). Several non-Tukanoan languages in the NWA sample are also claimed to display a WEAK TRIGGER for referentiality: i.e., Murui [*huu*] (Wojtylak 2021, §8.1.15), Awa Pit [*kwi*] (Curnow 1997, 72-74), Kakua [*cbv*] (Bolaños 2016, 200-202), and Hup [*jup*] (Zúñiga 2007; Epps 2008, 174-177). Ultimately, the typology is such that Eastern Tukanoan languages, excluding Kubeo [*cub*] and Tanimuka [*tnc*], exhibit P-oriented DCM patterns where referentiality-related notions, i.e., definiteness and individuation, are the primary drivers for case-marking alternations.

In stark contrast to the dominant Eastern Tukanoan pattern, setting aside the role of animacy, Siona+ languages are better described as displaying discourse-driven DCM patterns. This is already established for Ecuadorian Siona in preceding chapter, based upon examples such as (45) above, demonstrating rigid QUESTION-ANSWER congruence effects, and other patterns of focus marking (see elaborate discussion in Chapter 6). Very similar analyses are advanced for other Siona+ languages: i.e., Colombian Siona [^{c}*snn*] (Wheeler 1970, 43-44) and Koreguaje [*coe*] (Cook and Levinsohn 1985). Compatible descriptions are also made regarding Tariana [*tae*] (Aikhenvald 2003, 145, 2015) and Murui [*huu*] (Wojtylak 2021, 245-258). The focus-driven usage of the appropriate P-marker is shown for Murui and Koreguaje in (47) and (48) respectively:

(47) Murui (*huu* — WITOTOAN) [W21:256,267]
aros$_{i}$ *ati-ñe-iti-o* ***asukar-na***$_{ii}$ *ati-iti-o*
rice bring-NEG-FUT.LK-2SG sugar-N.SBJ.TOP bring-FUT.LK-2SG
'You won't bring <u>rice</u>$_{i}$. You will bring <u>the SUGAR</u>$_{ii}$.'

(48) Koreguaje$^{\blacklozenge}$ (*coe* — WESTERN-TUKANOAN) [CC93:49, ex. (201)]
k^{h}ura-wa'-i-ni *k^{h}u'e-mo* *ji'i*
chickens-creature-M.SG-N.SBJ2 look.for-F.SG 1SG
'I (F) am looking for <u>a chicken</u> (a particular one, not just any).'

Although these authors do recognize focus-driven DCM patterns in their descriptions, they also recognize DCM effects relating to topicality. Each of these authors, regarding Siona+ and non-Tukanoan languages, indicate that case-marking is related to highlighting arguments whose referents will be important to the ongoing narration.[39] For these languages, specialists converge on describing such discourse-related notions as STRONG TRIGGERS for P-oriented DCM. Otherwise, a few claims for corresponding WEAK TRIGGERS are described for Kakua [*cbv*] (Bolaños 2016, 203-205) and for Kubeo [*cub*] (Chacon and Genetti 2019, 412).

To round off the discussion typologizing DCM as found on the DIRECT OBJECT in Ecuadorian Siona, a final sub-pattern is observed. This concerns the restriction of case-marking within coordinated arguments — identified as an OTHER-type TRIGGER in Table 4.9. The quirkiness of case-marking under coordination is relevant to certain DCM-related discussions in the literature (e.g., Kalin and Weisser 2018; Irimia 2024); however, there are little insights into this dimension of DCM within the NWA sources consulted here. The Ecuadorian Siona pattern is such that no case-marking is found on coordinated P-arguments, including animate nouns which otherwise require marking. The example in (50), lifted from a narrative in Chapter 4, illustrates the general pattern. A related pattern is described for Kubeo [*cub*] (Morse and Maxwell 1999, 111-113), where only the first conjunct is *-re* marked, as shown in (49):

[39] cf. Cook and Levinsohn 1985, §2 regarding such uses of *-ni* in Koreguaje, and *ibid*, §3, regarding focal *-re*; also see Wojtylak 2021, §8.1.1.3 regarding the topical role of the case-marker *-na* in referent management and narrative advancement.

(49) Kubeo$^{\diamond}$ (*cub* — EASTERN-TUKANOAN) [MM99:112-113, ex. (353)]
boa-'bI ***jupari-Rɨ-re*** *ape-ko* ***dẽĩdoki-ko*** ***warĩ-ko***
kill-3S.M rabo.colorado-CL:3D-OBJ other-CL:F ñacundá-CL:F jacha-CL:F
pidubã-ko *boa-'bI* *ĩ̃* *bɨkɨ-kɨ*
tucunaré-CL:F kill-3S.M 3PRO.S.M old-CL:M
'The elderly man recently caught a *rabo colorado*, (and also) a *ñacundá*, a *jacha*, and a *tucunaré* (guan).'

(50) Ecuadorian Siona$^{\blacklozenge}$ (*snn* — WESTERN-TUKANOAN)
. . . yo'oquë sai uye naso huasaiya baquë . . .
jo'o-kɨ sai-ɨ **uje** **nahso** wa + sai-a
do-S.M.PRS.DEP go-S.M.PRS.DEP turkey wolly.monkey kill + go-NEG
bah-kɨ
be-RMT.PST-N2/3S.PST.N.ASS
'. . . doing (this), (he) went out to hunt turkey, monkey(, etc.).'
[NAT*: 20151023orocr001.324]

This discussion has situated the Ecuadorian Siona, and the highly similar Siona+, DIRECT OBJECT-oriented DCM patterns within the NWA area. Besides the presence of the marker *-re*, and the non-SUBJECT pronoun-marking generalization, the Siona+ DCM patterns are distinct from Eastern Tukanoan languages in almost all relevant respects: including, the number of marking alternatives, and the role of the primary MACRO-TRIGGERS (i.e., animacy, referentiality, and discourse). Although DCM likely developed prior to the Eastern-Western split in the family, the two branches have since diverged sharply. The Siona+ pattern has far more in common with the rich, discourse-based DCM patterns described for Tariana [*tae*] and Murui [*huu*] (cf. Aikhenvald 2015). Future work will delve into these details to determine the plausibility of a contact-induced grammar shift as a diachronic explanation for the complex Siona DCM system.

4.2.3.3 Situating Siona Indirect object-oriented DCM

Per Table 4.7 above, Ecuadorian Siona exhibits DCM patterns on the INDIRECT OBJECT (i.e., the R-argument), as described in Section 3.2.3 of Chapter 3. The R-argument is obligatorily marked, and the dominant pattern concerns animate Recipients, as in (51), where both *-re* and *-ni* are equally available:

(51) Ecuadorian Siona$^{\blacklozenge}$ (*snn* — WESTERN-TUKANOAN)

a. *yë' ja'co curani isisi'i yë' gajeire*
jɨ'ɨ ha'-ko kura-ni ĩsi-si'-i **jɨ'ɨ** **gahe-ɨ-re**
1SG parent-CL:F chicken-N.SBJ2 give-FUT-N3S 1SG friend-CL:M-N.SBJ
'(I) will give my mother's chicken to my friend (M).'
[VOL: 20230625ejabi001.014]

b. *yëquëni iye cocare quëajë'ë tijubë*
jɨhkɨ-ni i-je kohka-re kɨa-hɨ̃'ɨ̃ tihũbɨ
1PL.EXCL-N.SBJ2 DEM.PROX-CL:GEN story-N.SBJ tell-IMPER again
'Tell us (EXCL) the story again!' [VOL: 20230525ejabi001.024]

Besides the dominant R-oriented DCM pattern shown in (51), an accidental DCM pattern is also attested where *-na* is produced on an inanimate RECIPIENT, in alternation with *-re*, as in (52), replicated from Chapter 3. Together these examples illustrate that all R-arguments exhibit ALTERNATING-type DCM, i.e., excluding zero-marking, such that the available case-markers are determined by animacy-based noun classes:

(52) Ecuadorian Siona♦ (*snn* — WESTERN-TUKANOAN)
yëquë isiye yëyë yijatoayohuë baidaribëna
jɨhkɨ ĩhsi-je jɨɨ-jɨ jiha + toa + jo-wɨ
1PL.EXCL give-CL:GEN want-N3S.PRS.ASS land + fire + canoe-CL:CONT
bãĩ + dari-bɨ *(-na/-re)
people.COL + community-CL:COL-GOAL/-N.SBJ
'We want to give a bus to the community.'
[VOL/SUG: 20220621eerpa001.016a-c]

In the preceding discussion in this chapter concerning the FUNCTIONAL DOMAIN, in Section 4.2.2.1, it was determined that the same case-markers are active across Siona+ languages, despite more permissive patterns of *-na* marking in Colombian Siona [C*snn*] (Wheeler 1987, 126-127) and Ecuadorian Sekoya [E*sey*] (Johnson and Levinsohn 1990, 48-49). In particular, see examples (16) and (17). Such R-oriented DCM patterns are rare in the NWA sample (i.e., *Q3.3*), since most languages simply recruit a single overt case-marker to encode the INDIRECT OBJECT-argument. The fact that Eastern Tukanoan languages, and Máíhɨ̃kì [*ore*], display obligatory *-re* marking is a well-established generalization in the literature (cf. Barnes 1999, 2006; Gomez-Imbert 2011; Ramirez 2019[1997], 164-166; Stenzel 2013c, §5.2.2). The full typology based upon the NWA dataset is reported in Table 4.10:

LANGUAGE	FORMS	MACRO-TRIGGERS			
		ANIM	REF	DISC	OTHER
*Ecuadorian Siona♦ [E*snn*]	{***-re***, *-ni*, (*-na*)}	✓ANIM		✓FOC	
Colombian Siona♦ [C*snn*]	{***-re***, *-ni*, *-na*}	✓(ANIM)		✓FOC	
Koreguaje♦ [*coe*]	{***-re***, *-ni*}	✓ANIM		✓CONTR	
Murui [*huu*]	{*-∅*, *-mo*}		✓PRO	✓CONTR	
Tena Kichwa [*quw*]	{*-ta*, *-ma*}				✓TBD
VTariana [*tae*]	{*-na*, *-nuku*}		✓PRO		
OBLIGATORY R-MARKING:	*ore♦ (-re) cub◊ (-re) tnc◊ (-re) tuc◊ (-re) des◊ (-re) bsn◊ (-re) gvc◊ (-re) con (=nga) qvi (-man) boa (-vu) acu (=n^{y}a) kwi (=ta) Vcbv (=di') Vjup (=ăn) Vyab (-dih)*				

Table 4.10: INDIRECT OBJECT-oriented DCM patterns

Table 4.10 demonstrates that the bulk of the sampled languages (N=15) require overt case-marking on the R-argument, and there is simply one available case-marker. In fact, Murui [*huu*] is the only language which permits zero-marking on pronominal and personal name INDIRECT OBJECTS (Wojtylak 2021, 269), such as the instance shown in (53). This results in an exceptional OPTIONAL DCM pattern, whereas the other

five NWA languages, including the Siona+ languages, display ALTERNATING DCM, as exemplified for Tena Kichwa [*quw*] in (54):[40]

(53) Murui (*huu* — WITOTOAN) [W21:269, exx. (8.95),(8.96)]

a. *dɨo-kaɨ*$_{(P)}$ ***kue***$_{(R)}$ *ine*
tobacco-CL:STEM 1SG give.IMPER
'Give <u>me</u> a cigarette! (normal reading)'

b. *dɨo-kaɨ*$_{(P)}$ ***kue-mo***$_{(R)}$ *ine*
tobacco-CL:STEM 1SG-LOC give.IMPER
'Give <u>ME</u> a cigarette! (abrupt reading, brusque)'

(54) Tena Kichwa (*quw* — QUECHUAN) [G16:103, ex. (2.107)]
Pablo sisa-guna-ta$_{(P)}$ *kuya-n* ***Maria-ma/-ta***$_{(R)}$
P flower-PL-ACC give-3 M-DAT/ACC
'Pedro gave flowers$_{(P)}$ <u>to Maria</u>$_{(R)}$.'

Setting aside the formal types, the Murui pattern demonstrated in (53) aligns with Ecuadorian Siona in that the selection of case-marking alternatives is driven by discourse. More concretely, the overt marking of the R-argument in (53b) evokes a contrastive focal reading (Wojtylak 2021, 269). Chapter 3 provides ample evidence suggesting that such discourse-related notions also drive Ecuadorian Siona DCM and, as stated elsewhere, similar claims are made regarding Siona+ languages (Wheeler 1970, 144-148; Cook and Levinsohn 1985), independently of animacy-based contraints. This analysis is made explicit in the analysis of Colombian Siona [^{c}*snn*] DCM, reflected in Table 4.11, adapted from Wheeler (1970, 174) (cell shading and boldface text not in original. Wheeler does not explicitly define the different focus categories):

	EMPHATIC FOCUS	NORMAL FOCUS	NON-FOCUS
Animate			
S	*-ga*	*-bi*	*-∅*
P	*-ni*	*-de*	*-∅*
R	***-na***	*-ni*	*-de*
Inanimate			
S	X	*-bi*	*-∅*
P	X	*-de*	*-∅*
R	X	***-na***	*-de*

Table 4.11: Focus-dependent case marking alternatives in Colombian Siona (adapted from Wheeler 1970, 174, *Chart XI*)

Side-stepping complications regarding the terminology chosen by Wheeler (1970, *et seq.*), Table 4.11 encapsulates the two primary factors at play in R-oriented DCM across the Siona+ group. On the one hand, animacy-based restrictions on the distribution

[40]Several Quechuan languages display the ALTERNATING DCM pattern shown for Tena Kichwa in (54). However, according to Cole (1982, 104-105), "[t]he use of dative [*-man*] for [R] is obligatory in [Imbabura Kichwa [*qvi*], unlike other Quechuan languages]".

(or concomitant interpretation) of certain markers is reflected by the EMPHATIC FOCUS category — i.e., a category which does not extend to inanimate nouns. On the other hand, the degree of focus is represented in scalar fashion (EMPHATIC FOCUS > NORMAL FOCUS > NON-FOCUS), reflecting the status of this information structural dimension as a STRONG TRIGGER in the language. The former dimension, regarding noun class restrictions, in present in Murui [*huu*], as shown in (53), and is the ony relevant factor in Tariana [*tae*]: i.e., *-na* arises with pronouns, whereas all other arguments take *-nuku* (Aikhenvald 2003, 143-144). The emphatic reading achieved via overt marking in Murui in (53b) aligns fairly neatly with Siona+ focal case-marking patterns.

In summary, R-oriented DCM patterns are rare in the NWA region. The Siona+ languages pattern with other Tukanoan languages in banning zero-marking on the INDIRECT OBJECT; however, variation is observed as to which overt case-marker is selected. The selection of case-markers in this domain is similar to that noted for other argumental DCM patterns in Siona+ languages, such that animacy factors into determining which markers are available to a given nominal, and then discourse-related factors settle the selection of a particular alternative. In this way, the Tariana and Murui languages align with the Siona+ languages, and separately from other surrounding languages, as regards discourse-related factors as STRONG TRIGGERS across the attested argumental DCM patterns.

4.2.3.4 Situating Siona spatial DCM patterns

Up to this stage, this section has typologized the Ecuadorian Siona argumental DCM patterns, and the remainder of the discussion focuses on the spatial DCM patterns attested in the language. Per Table 4.7, there are two spatial CASE FUNCTIONS, which display DCM patterns in the language: i.e., the STATIC LOCATION (L) (*Q3.4* in the NWA questionnaire — described in Section 3.3.1 in the *preliminary description*), and the GOAL-argument (G) (*Q3.5* in the NWA questionnaire — as described in Section 3.3.2). The present discussion collapses these spatial DCM patterns for the purposes of situating the Ecuadorian Siona facts within the NWA dataset.

To guide the discussion below, Table 4.12 spells out the relevant spatial DCM patterns within the Tukanoan languages in the dataset — consult Table A.22 in Appendix A for the full dataset. Since certain languages display the 'generalized spatial-marking' pattern discussed in Section 4.2.2.1 of the present chapter, the CASE FUNCTION(S) are indicated in the table below. Note that the animacy MACRO-TRIGGER is not considered here since this dimension is typically incompatible with spatial roles on semantic grounds:

Language	Function	Form(s)	Macro-triggers		
			REF	DISC	OTHER
*Ecuadorian Siona♦ [ᴱ*snn*]	L	{-∅, ***-re***, (*-ni*, *-na*)}	✓(PRO, SPEC)	✓FOC	✓(PRED)
	G	{-∅, *-na*}	✓(PRO, SPEC)	✓FOC	
Colombian Siona♦ [ᶜ*snn*]	L	{-∅, ***-re***, (*-na*)}	✓PRO, (SPEC)	✓TOP	✓(PRED)
	G	{-∅, *-na*}	✓PRO, (SPEC)		
Koreguaje♦ [*coe*]	L	{-∅, ***-re***, (*-na*)}	✓SPEC	✓TOP	✓(PRED)
	G	{-∅, *-na*}	✓SPEC	✓TOP	
Kubeo◊ [*cub*]	L=G	{***-re***, *-i*, *-rã*}	✓SPEC	✓(FOC)	
Tukano◊ [*tuc*]	L=G	{-∅, ***-re***, *-pʉ*}	✓SPEC	✓(TOP)	
Desano◊ [*des*]	L=G	{-∅, ***-re***, *-ge*}	✓SPEC	✓(FOC)	✓(PROTO)
Barasano◊ [*bsn*]	L=G	{-∅, *-hʉ*, (***-re***)}	✓(SPEC)	✓(FOC)	
Wanano◊ [*gvc*]	L	{***-re***, *-i*, *-pʉ*}	✓REF		✓(DIST)
	G	{***-re***, *-pʉ*}	✓(SPEC)		
No spatial case-markers:		Máíhɨ̃kì♦ [*ore*] (-∅(L/G))			
Obligatory case-marking:		Tanimuka◊ [*tnc*] (*-re'ká*(L); *-rã*(G))			

Table 4.12: Tukanoan spatial DCM patterns attested

It is immediately clear from the data presented in Table 4.12 that *all* Tukanoan languages exhibit rich spatial case-marking patterns. Besides Máíhɨ̃kì [*ore*], overt case-marking is required in Tanimuka [*tnc*], in Kubeo [*cub*] (Morse and Maxwell 1999, 120), and in Wanano [*gvc*] (Stenzel 2013c, 161-162,338, 2013a, 89). Alternating DCM patterns are noted in the latter two languages where multiple case-marking alternatives are available. Formally similar DCM patterns are noted in some surrounding non-Tukanoan languages in the Vaupés region (i.e., Yuhup [*yab*] (Ospina Bozzi 2002, 159-161) and, particularly for L-marking in Hup [*jup*] (Epps 2008, 367-368)), and Alternating spatial DCM is also described for Awa Pit [*kwi*] (Curnow 1997, 135-140) and in Quechuan languages (i.e., L-marking in Tena Kichwa [*quw*] (Grzech 2016, 68), and G-marking in Imbabura Kichwa [*qvi*] (Jake 1983, 22-23)).

Regarding the Siona+ languages, as detailed in Section 3.3 of the preceding chapter for Ecuadorian Siona, zero-marking alternates with multiple case-marking in the context of L-marking, based upon the conspiracy of a principled DCM pattern and an accidental pattern, concerning the marker *-na*. Conversely, zero-marking alternates with the case-marker *-na* in the context of G-marking. As defined in this dissertation, formally, Ecuadorian Siona exhibits Hybrid L-oriented DCM and Optional G-oriented DCM accordingly. The latter Hybrid pattern is accounted for on the basis of certain instances of *-na* marking on the L-argument, as determined by the predicate (i.e., the Other trigger, labeled PRED in Table 4.12), already discussed in the context of the Functional domain, in Section 4.2.2.1 of the current chapter. Nearly identical patterns are described across the Siona+ group. As shown in Table 4.12, zero-marking is also attested for the generalized spatial-marking in certain Eastern Tukanoan languages, representing the Hybrid type: i.e., as described for Tukano [*tuc*] (Ramirez 2019[1997], 161-169), for Desano [*des*] (Silva 2012, 159-161, 174-175), and for Barasano [*bsn*] (Jones and Jones 1991, 69-72), as well as a few other Eastern Tukanoan languages beyond the NWA dataset discussed here (cf. Stenzel 2013a).

Regarding the active Triggers in spatial DCM across the Eastern Tukanoan and the Siona+ sample, a similar pattern is observed to the discussion of argumental DCM. More concretely, these marking patterns tend to be triggered by referentiality-

based factors in most Eastern Tukanoan languages, particularly regarding the usage of *-re*, which overlaps with its distribution on non-SUBJECT arguments (cf. Stenzel 2013a, 2013c, 161-163, 338; Zúñiga 2007). For several authors, this semantic overlap motivates the usage of the label 'referential'- or 'specificity'-marker for the case-marker *-re* (Barnes 1999, 2006; Waltz and Waltz 1997; Ramirez 2019[1997]; Stenzel 2008, 23), and is a primary, STRONG TRIGGER for the various argumental and spatial CASE FUNCTIONS for this case-marker. Nonetheless, a handful of Eastern Tukanoan spatial case-markers are described as being selected to encode discourse-related notions, e.g., the focal locative case-markers, *-rã̀* in Kubeo [*cub*] and *-pʉ́* in Tukano [*tuc*].[41] A similar claim is made regarding the contrastive spatial marker *-có* in the nearby Nadahupan language, Hup [*jup*] (Epps 2008, 367-368). The sentences in (55) demonstrate how the degree of specificity of the concerned locations factors into the selection of spatial case-marking in Tukano [*tuc*]:[42]

(55) Tukano$^{\diamond}$ (*tuc* — EASTERN-TUKANOAN)
[R97:168-170,237; exx. (339),(580),(340)]

a. ***a'tó*** *kãrigɨ́* *dĩĩ-á-pɨ*
here sleep-NOM.M.SG be-REC.PST-1SG
'I usually sleep here.'

b. ***a'tó-de*** *dõ'ó-pɨ* *kãdí-gɨ́* *dĩĩ-a-ti*
here-N.SBJ where-FOC sleep-NOM.M.SG be-REC.PST-Q
'Here, where did you (M) sleep? (here in the city, where did you sleep?)'

c. ***a'tó-pɨ*** *a'tî-a*
HERE-FOC come-IMPER
'Come HERE!'

d. ***toó-pɨ-de*** *peêdu* *sĩ'dí-wɨ*
ANA.LOC-FOC-N.SBJ caxiri_drink drink-REP.PST.VIS
'I will drink *caxiri* THERE (an established location).'

Whereas Eastern Tukanoan languages tend to display referentiality-related TRIGGERS for spatial DCM, aligning with their argumental DCM patterns, Siona+ languages also display similar sets of TRIGGERS for spatial and argumental DCM — i.e., discourse-related STRONG TRIGGERS are the principle drivers of the observed alternations. This is demonstrated for Ecuadorian Siona in Section 3.3 of the *preliminary description.* In a similar vein, Cook and Levinsohn (1985) demonstrate that the distribution of spatial case-marking is determined primarily by topicality in Koreguaje [*coe*]. The authors provide the stretch of discourse in (56), which implicates several G-arguments, and the usage of overt *-na* in (56b) stresses the importance of this location for narrative progression:

(56) Koreguaje$^{\blacklozenge}$ (*coe* — WESTERN-TUKANOAN) [CL85:111, ex. (45i)-(45iii)]

a. ***kee*** ***ja'o-cha*** *coʉ* *sai-na'-me* *chʉkʉna*
DEM.MED leaf-CL:RIV turtle go-PRP-N3S 1PL.EXCL
'We (EXCL) go to the Caquetá River for turtles . . . '

[41] It is relevant to note that Stenzel (2013c, §10.5) claims that the cognate locative marker, *-bʉ* indicates a plain, nonreferential location; whereas *-re*, or the combination *-bʉ-re*, indicates an established, well-defined, referential location.

[42] Similar examples of specificity- and discourse-driven spatial DCM patterns are provided for Kubeo [*cub*] and Desano [*des*] in (103) and (104) respectively in Appendix A.

b. ***meja-huʉ-na*** *coʉ* *mai-na'-me*
sand-CL:CONT-GOAL turtle come-PRP-N3S
'...the turtles come up on the beach ...'

c. *jainʉko* ***meja-huʉ*** *coʉ* *mai-me*
many.PL.ANIM sand-CL:CONT turtle come-N3S
'...many are the turtles which come up on the beach.'

Certain authors also hint at referentiality-related factors for spatial case-marking in Siona+ langauges: i.e., Ecuadorian Sekoya (Johnson and Levinsohn 1990, 47-48), and Koreguaje (Cook and Criswell 1993, 34-37); and similar generalizations are claimed regarding *-na* marking on G in Ecuadorian Siona (Bruil 2014, 170-171). Ultimately, based on the available descriptions, like argumental DCM, discourse-related TRIGGERS for spatial DCM appear to take precedence over referentiality-related WEAK TRIGGERS, as conceived in this dissertation.

At this stage, it is relevant to note that the overlap observed across the Tukanoan language family concerning the set of active TRIGGERS for spatial and argumental DCM is not attested in the non-Tukanoan languages in the NWA sample. Just like the P-L correspondence pattern discussed in the FUNCTIONAL DOMAIN (*Q2.4*), this appears to be a pan-Tukanoan trait, rather than a common property in the NWA area. Outside of the Tukanoan family, most spatial DCM patterns are rather distinct from their argumental counterparts. Two common spatial DCM patterns are noted across the non-Tukanoan sub-sample.

Firstly, as shown in the full dataset for *Q3.4-Q3.5* displayed Table A.22 in Appendix A, some languages restrict zero-marking to inherently spatial concepts (i.e., the OTHER-type TRIGGER, labeled PROTO). This patterns is described for Murui [*huu*] (Wojtylak 2021, 273-275), where DCM is restricted to spatial pronouns or common spatial concepts like, *iyɨ* (jungle), and highly similar patterns are described for Shiwiar [*acu*] (Kohlberger 2020, 256-262), shown in (107) and (108) in Appendix A respectively. Another language with this pattern is Tariana [*tae*] (Aikhenvald 2003, 148-150). Conversely, in most Tukanoan languages, including all Siona+ languages, *all* spatial noun phrases are treated equally as regards DCM.[43]

Per Table A.22, the second type of spatial DCM, which is distinct from the Tukanoan-type patterns outlined above, concerns languages where spatial case-marking is selected on the basis of deictic distance distinctions (i.e., the TRIGGER is labeled DIST). This type of system is attested in Nadahupan languages spoken in the Vaupés region, i.e., Hup [*jup*] (Epps 2008, 367-368) and Yuhup [*yab*] (Ospina Bozzi 2002, 156-162),[44] and is also described for Awa Pit [*kwi*] (Curnow 1997, 135-140 — shown in (110) in the appendix). Similar distance-related uses of spatial markers are described as a WEAK TRIGGER for the Tukanoan language, Wanano [*gvc*] (Stenzel 2013c, 338). Otherwise, such deictic-based spatial DCM patterns are unattested in the Tukanoan languages within the NWA dataset.

Ultimately, as demonstrated in the FUNCTIONAL DOMAIN, particularly *Q2.3*, the dominant Tukanoan spatial DCM system demonstrates significant overlap with argu-

[43] A possible exception to the generalization that all spatial noun phrases exhibit the same DCM properties in Ecuadorian Siona concerns the class of spatial promoted pronouns described in Section 3.3.1 in Chapter 3. As described there, these pronouns, like any promoted L-nominal, must be marked with either *-re* or *-ni*, or obligatorily with *-na* where this refers to a G-argument. Ultimately, this is not a property of spatial marker per se, but rather a property of *promotion*, which is active across all non-SUBJECT arguments.

[44] An illustrative example of this spatial DCM system is provided in (109) in Appendix A.

mental DCM. This generalization holds on formal grounds, since the marker *-re*, and *-na*, as concerns Siona+ languages, are distributed in both types of DCM. This also holds with respect to the active TRIGGERS which drive case-marker selection in subtypes of DCM. The NWA dataset demonstrates that this generalization holds to the extent that Eastern Tukanoan languages favour referentiality-driven DCM, whereas Siona+ languages, including Ecuadorian Siona, favour discourse-driven DCM across all concerned DCM FUNCTIONS. These dominant STRONG TRIGGERS differ across the groups of Tukanoan languages analyzed here (excluding Máíhɨ̃kì [*ore*]); however, there are other WEAK TRIGGERS, which add nuance to the typologization of spatial DCM that merit further investigation.

4.3 Conclusion: Siona case-marking in typology

For this chapter, I put on my *comparativist* hat with the aim of typologizing the Ecuadorian Siona case-marking and DCM properties outlined in Chapter 3. The NWA dataset, reported in Appendix A, is designed to contextualize various case-marking properties, corresponding to the three primary pillars of the characterization of DCM outlined in Chapter 2: comprising the FORMAL DOMAIN, the FUNCTIONAL DOMAIN, and the REALIZATIONAL DOMAIN. This chapter finds that the Ecuadorian Siona facts are consistent with those described across all Siona+ languages, excepting a few points of micro-variation, and strikingly different from the corresponding Eastern Tukanoan facts. On the other hand, there are reasons to believe that certain traits may have arisen due to contact-induced convergence. However, among the candidates for points of grammatical convergence and cognacy, some of the languages are spoken to west of the Siona+ cluster, in the foothills and into the Andes proper (i.e., Quechuan languages, Shiwiar [*acu*] — cf. Bruil 2015a; van Gijn et al. 2023); whereas others implicate potential contact to the east, involving the languages of the *People of the centre* (i.e., Murui [*huu*] and Bora [*boa*] — cf. Echeverri 1997; Epps and Michael 2017; etc.).[45] Ultimately, Ecuadorian Siona displays typical NWA case-marking traits, including an admixture of Tukanoan and non-Tukanoan properties. This section summarizes the targeted discussion in this chapter.

Firstly, as concerns the FORMAL case-marking properties laid out in Section 4.2.1, Ecuadorian Siona exhibits a LARGE case-marker inventory (N=6), which aligns with the mean inventory size in the NWA sample (i.e., 5.43 members). This inventory comprises the set of 'primary' Siona+ case-markers (i.e., *-re*, *-ni*, *-bi*, and *-na*), and two additional, historically related, markers, *-hã'ã* (LIMIT/PATH) and *-hã're* (COM). Whereas these latter two markers find cognates across the Siona+ grouping, displaying varying degrees of grammaticalization, the primary case-marker set is more stable across the group. However, *-ni* likely developed more recently in the Upper Putumayo-Napo Siona+ varieties, given its absence in Peruvian Sekoya, spoken in the Middle Putumayo region (Rosa Vallejos, p.c.).

[45] It is possible that contact-induced convergence with the *People of the centre* groups may have occured indirectly, via contact with Tanimuka [*tnc*] and/or Kubeo [*cub*], if indeed an earlier connection between these particular Eastern Tukanoan and the Siona+ languages can be established. Of course this also introduces the possibility for the extensively-documented contact between Arawakan groups and these Eastern Tukanoan groups as a source for certain cognate forms, or other patterns. However, these languages are not considered in the NWA dataset developed here, so further work is merited.

Based upon several candidates for cognacy discussed in Section 4.2.1.2, it is conceivable that *-bi* and *-na* are retained from a period prior to the east-west split. In particular, the presence of cognate markers, executing similar CASE FUNCTIONS, particularly in Tanimuka [*tnc*] and Kubeo [*cub*], spoken at the western fringes of the Vaupés region, is suggestive of a shared innovation. Admittedly, the relatively impoverished case-marking system in the Western Tukanoan language, Máíhɨ̃kì [*ore*], complicates this picture. Nonetheless, even considering a few non-Tukanoan candidates which may factor into the equation in some way, it is likely that all six Ecuadorian Siona case-markers are retained from earlier stages of development. Further research is awaited to refine the chronology of the establishment of the inventory attested today.

Besides the six members of the Ecuadorian Siona inventory, this chapter also touched upon one marker, i.e., the contrastive topic marker, *=kato* (following Bruil 2014), whose cognate *-ga* is analyzed as a bona fide case-marker in Colombian Siona [^{c}*snn*] (Wheeler 1970, 173-176, 1987, 131). According to the author, *-ga* is the SUBJECT-marking equivalent to the non-SUBJECT marker *-ni*. There are several reasons for which this analysis is incompatible with the Ecuadorian Siona facts, which are discussed in the ensuing chapters of this dissertation (see especially Section 6.4.2 of Chapter 6). However, *=kato* is the most frequently occurring nominal discourse marker in the language,[46] and, more importantly, it displays certain unique co-occurence restrictions with particular case-markers (see Section 6.4.2). Ultimately, as is found with the development of PATH- (or LIMIT-) and COMPANION-markers in Siona+ languages, it is certainly plausible that *-ga* became grammaticalized as a case-marker in Colombian Siona, but developed separately as a discourse marker in Ecuadorian Siona. Yet again, setting aside questions of analysis, these markers are cognate, representing a shared innovation across the Western Tukanoan branch.

Turning to the FUNCTIONAL DOMAIN, discussed in Section 4.2.2, the NWA questionnaire is designed to bias certain case-marking correspondences, and FUNCTIONAL GAPS, which are attested in Ecuadorian Siona grammar. The first tested correspondence (*Q2.1*), found that the familiar SUBJECT-INSTRUMENT IDENTITY-type noted across the Siona+ group, is only otherwise attested in Tariana [*tae*], which is itself unique among the languages in the Vaupés region (cf. Aikhenvald 2015). This observation is compatible with the fact that S-marking is typologically rare in the NWA area; however, Siona+ languages appear to have developed an S-marking system by adapting the oblique marker *-bi*, whose cognates also encode both INSTRUMENT and SOURCE, also encoded by *-ϕí* in Tanimuka [*tnc*] (Eraso 2015, 280).[47]

A related correspondence addressed in the NWA dataset concerns the INSTRUMENT- COMPANION correspondence (*Q2.3*). In none of the languages with a cognate for *-bi*, including all Siona+ languages and Tanimuka [*tnc*], is this marker used to

[46] **Table B.10** in Appendix B spells out the distributional facts pertaining to discourse markers arising in the corpus sample for Chapter 5.

[47] Although no Eastern Tukanoan languages, besides Tanimuka [*tnc*], exhibit S-marking at all; several authors describe discourse markers, which favour S- and spatial argument-marking: i.e., Tukano [*tuc*] (*-pʉ*, glossed FOC in Ramirez 2019[1997]); *-pʉ* in Desano [*des*] (Silva 2012, 162); and *-bɨ* in Máíhɨ̃kì [*ore*] (cf. Neely 2012). In fact, the latter marker is also attested in INSTRUMENT-oriented interrogatives (Neely 2012); suggestive of a supple SUBJECT-INSTRUMENT correspondence. Like *-ga/=kato*, the role of discourse markers may be relevant to the broader enterprise of comparative inquiry into the diachrony of Western Tukanoan nominal morphology. It is unclear whether these facts are directly relevant to the discussion of case-marking at hand.

encode both of these FUNCTIONS, such that the DIFFERENTIATION-type is observed. As demonstrated in Table A.10 in Appendix A, all remaining Tukanoan languages display the dominant IDENTITY-type in the NWA region. This latter type is also displayed by Máíhɨ̃kì [*ore*], where the marker *-jànù* executes both FUNCTIONS, despite the fact that it is historically related to the dedicated COMPANION-marker *-hã̃'re* in Ecuadorian Siona and its cognates in other Siona+ languages.

The remaining tested case-marking correspondences (*Q2.2, Q2.4-2.5*) point to two pan-Tukanoan properties; namely where the Ecuadorian Siona facts align with all Tukanoan patterns revealed in the NWA dataset:

- The DIRECT OBJECT (P) *may* arise with zero-marking, whereas the INDIRECT OBJECT (R) requires overt case-marking ;
- There is a certain degree of overlap regarding the forms available to argumental and spatial case-marking (i.e., *-re*).

Inasmuch as these case-marking properties are common to all Tukanoan languages, Siona+ languages deviate from Eastern Tukanoan languages with respect to a handful of details.

The most relevant discrepancy for the present discussion concerns the role of GOAL-marking, via *-na*, which is available to both the R-argument, and to certain STATIC LOCATION (L-)argument, to varying degrees among the Siona+ languages (discussed especially in Section 4.2.3.3). In none of these languages is the GOAL-marker is permitted on the P-argument. Regarding L-marking, these languages have a relatively stable set of predicates which display (optional) *-na* marking (e.g., 'sleep', 'stay', 'work'), which overlaps with certain GOAL-marker-recruiting predicates attested in neighbouring Quechuan varieties. Although Eastern Tukanoan languages also display rich spatial case-marking systems, none of them display the same non-prototypical uses common to the Siona+ languages — of course, most of these languages do not have dedicated GOAL-marking in any case (see discussion in Sections 4.2.1.3, 4.2.3.4, etc.).

In addition to the discrepancies outlined above, Section 4.2.2.2 discusses a few FUNCTIONAL GAPS (*Q2.6* and *Q2.7*), which also trace a clear divide between the Siona+ group and the Eastern Tukanoan languages. The Siona+ languages do not recruit overt case-marking to encode the POSSESSOR or the TIME FUNCTIONS, as defined here, whereas these patterns are commonplace among the sampled Eastern Tukanoan languages. In this way, Siona+ again patterns more closely with other non-Tukanoan languages, like Murui [*huu*], Bora [*boa*], and A'ingae [*con*].

Finally, the discussion regarding DCM DOMAIN further established the divide between the Siona+ languages and the Eastern Tukanoan family. Above it is noted that SUBJECT-oriented DCM is rare in the NWA area — however, the Siona+ languages pattern fairly closely with Murui [*huu*] and Tariana [*tae*] in displaying discourse-driven DCM for the SUBJECT-argument. In abstract terms, regarding DIRECT OBJECT-oriented DCM, all Western Tukanoan languages, including Máíhɨ̃kì [*ore*] (Farmer 2015, 97), display animacy-triggered patterns; whereas referentiality is the primary TRIGGER across the Eastern Tukanoan languages considered here. It is also the case that discourse-related TRIGGERS are active for all argumental and spatial DCM patterns in the Siona+ languages; whereas only a few disparate discourse-driven DCM patterns are described across the Eastern Tukanoan languages, generally attributed a secondary status to referentiality-related TRIGGERS. Ultimately, although the overlap between argumental and spatial DCM is a general characteristic of both groups of Tukanoan

languages, each sub-type maintains a distinctly Siona+ or Eastern Tukanoan flavour. Various traits particular to, at least, Máíhɨ̃kì [*ore*], and to Tanimuka [*tnc*], complicate the typological and diachronic picture.

In summary, the NWA case-marking dataset presented in Appendix A, and discussed in the present chapter, corroborates the claim in Bruil (2014, 10-12), that Ecuadorian Siona belongs to a continuum of highly related language varieties. Based upon the case-marking properties analyzed here, the Koreguaje [*coe*] also displays compatible patterns. On the one hand, some Tukanoan languages align more closely with Siona+ case-marking than others — particularly Tanimuka [*tnc*] and Kubeo [*cub*]. On the other hand, the NWA data also highlights some aspects of the Ecuadorian Siona case-marking, which align more with neighbouring, non-Tukanoan languages than with other Tukanoan languages. These points of convergence arise from languages spoken both to the west and to the east from the regions where Siona+ languages are spoken today. On this basis, it is plausible that some case-marking traits are the result of contact-induced convergence. The discussion in this chapter is a contribution to the study of the typology of the NWA area and to the diachrony of Tukanoan case-marking, which opens several doors for future scrutiny. The following chapters return to the analysis of DCM patterns particular to Ecuadorian Siona.