# Differential case-marking in Ecuadorian Siona

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# CHAPTER 7

# Conclusions

This dissertation set out to refine the characterization of Siona DCM patterns, as established in previous research (Bruil 2014, §4.4; Case and Jeretič 2021).[1] In particular, the research questions in (1) are addressed, as reiterated from (8) in Chapter 1:

(1) a. Which DCM patterns can be identified in Siona? What properties do these DCM patterns have in common, and how do they differ?

b. Which factors determine the selection of case marking alternatives in a given context — such as animacy status, focus, specificity? A combination thereof? How do the active factors interact to determine the DCM patterns in usage?

c. How does Siona DCM compare to other DCM systems described in the Tukanoan literature? In the northwestern Amazonia area? In the broader DCM typology?

In order to achieve a holistic description of DCM in the language, a broad array of data types are assembled via the implementation of different methodologies. This diverse research program integrates both controlled elicitation-based and naturalistic text-based data so as to establish corroborating evidence for a strong empirical backdrop for the description and analysis purported here (Matthewson 2004, 2022; Tonhauser and Matthewson 2016; Davidson 2020; etc.), laying the groundwork for future research.

Chapter 2 lays out definitions for DCM, and related phenomena, in addition to establishing the pillars for this holistic description aspired to in this dissertation. An adequate characterization of any DCM phenomenon touches upon three descriptive

[1] In Bruil & Case, *forthcoming*, we undertake a corpus-based analys of P-oriented DCM patterns, which will also contribute to this broader enterprise.

dimensions — i.e., as schematized in Table 2.1: (i) The *formal* set of case-marking alternatives implicated in a given alternation; (ii) The *functional* dimension, pertaining to distribution of DCM patterns across grammatical relations; and (iii) The identification and ranking of TRIGGERS, which drive the observed DCM patterns. Each of these dimensions is addressed in this dissertation regarding Siona DCM, although the latter dimension receives the lion share of attention.

The *preliminary description* in Chapter 3 largely satisfies the first two dimensions, and sets the stage for the targeted exploration of the third. By mapping the six case-markers in the language to the grammatical relations that they encode, the *preliminary description* lays out a novel conception of principled DCM patterns in the language as comprising PLAIN-PROMINENT pairs. Principled argumental DCM patterns define case-marking for core arguments – i.e., SUBJECT and (IN)DIRECT OBJECT;[2] and strikingly similar patterns characterize the case-marking of certain spatial arguments – i.e., STATIC LOCATION and GOAL. Table 7.1 summarizes the distribution of Siona case-markers in paradigmatic fashion:

| | INANIMATE | | ANIMATE (∧ ↑INAN) | |
|---|---|---|---|---|
| | PLAIN | PROMINENT | PLAIN | PROMINENT |
| **Argumental DCM:** | | | | |
| SUBJECT (S) | *-∅* | *-bi* | *-∅* | *-bi* |
| DIRECT OBJECT (P) | *-∅* | *-re* | *-re* | *-ni* |
| INDIRECT OBJECT (R) | *-re* (*-na*) | | *-re* | *-ni* |
| *Obligatory case-marking:* | *-bi* (Instrument); *-hã're* (Companion) | | | |
| **Spatial DCM:** | INANIMATE | | ↑INANIMATE | |
| LOCATION (L) | *-∅* | *-re* | *-re* | *-ni* |
| [*some L] GOAL (G) | *-∅* | *-na* | *-na* | |
| *Obligatory case-marking:* | *-bi* (Source); *-hã'ã* (Path, Limit) | | | |

**Table 7.1:** Siona case-inventory, incl. DCM patterns across argumental and spatial domains

The paradigm laid out in Table 7.1 establishes the foundation for the analysis of active TRIGGERS for these DCM patterns. The highest level TRIGGER concerns a rigid animacy-based class split, which forms a wedge between S-oriented DCM on the one hand, and *all* non-SUBJECT DCM patterns in the language. Once the phenomenon of promotion (identified with ↑) is taken into account, a pattern emerges such that the PLAIN- and PROMINENT-markers for inanimate non-SUBJECTs *never* align with those found with their animate (or promoted) counterparts; which extends equally to spatial DCM. Animacy has a unique role in determining the distribution of formal alternatives, whereas other TRIGGERS are different in kind.

[2] **Section 3.2.4** demonstrates that the PLAIN *-re* and PROMINENT *-ni* pattern for animate non-SUBJECT DCM also obtains for the coding of non-core relations, such as the Experiencer and the Beneficiary argument. Similar patterns are attested throughout the Tukanoan family.

Contrastivity is shown to be a STRONG TRIGGER, which characterizes all principled DCM alternations, as it is the best predictor for the selection of PROMINENT-marking. The *preliminary description* banks on stable patterns of QUESTION-ANSWER congruence, where PROMINENT-marking is forced on the focal element in the ANSWER turn − i.e., as demonstrated in (2) through (4) below. In each instance the appropriate PROMINENT-marking is found, such that, for both non-SUBJECT arguments (i.e., shown in (3) and (4)), the noun class split comes to the fore:

(2) [ANSWERS THE QUESTION: *Who wants to go (somewhere)?*]
*yë'ë gajeobi yëco saiye*
**ji'i gahe-o #(-bi)** jii-ko sai-je
1SG friend-CL:F-SBJ want-3S.F.PRS.ASS go-CL:GEN
'My FRIEND (F) wants to go.' [VOL: 20220623emipa002.008-009]

(3) [ANSWERS TO THE QUESTION: *What did you buy yesterday?*]

a. *yohuëre huerohuë*
**jo-wi #(-re)** wero-wi
canoe-CL:CONT-N.SBJ buy-N3S.PST.ASS
'(I) bought a caNOE.'

b. *yohuë huajëconi huerohuë*
↑**[jo-wi wahi-ko *(-ni)/(#-re)]** wero-wi
canoe-CL:CONT new-CL:F-N.SBJ(2) buy-N3S.PST.ASS
'(I) bought a new caNOE.'

c. *huequëni huerohuë*
**wẽki *(-ni)/(#-re)** wero-wi
cow-N.SBJ(2) buy-N3S.PST.ASS
'(I) bought (a) COW/COWS.' [VOL: 20230617eyopa001.003-005]

(4) [ANSWERS THE QUESTION: *Where do you (PL) live?*]

a. *ba'iyë iye huë'ere*
ba'i-ji **i-je wi'e #(-re)**
go-N3S.PRS.ASS learn + house-GOAL
'(We) live in THIS house.'

b. *ba'iyë yë'ë ñicuëbai huë'e nesiconi*
ba'i-ji ↑**[ji'i ñihkw-i-bãĩ wi'e**
live-N3S.PRS.ASS 1SG grandparent-CL:M-PL.AN house
**nee-sih-ko *(-ni)/(#-re)**]
make-PERF-CL:F-N.SBJ2
'(We) live in the HOUSE that my grandparents built.'
[VOL: 20230619elupa002.006a-g]

The question-answer sequences shown above demonstrate obligatory uses of PROMINENT-marking; although these are not the only contexts where PROMINENT case-markers are attested in Siona. In other words, several questions emerge as to how PROMINENT-marking functions in other, non-obligatory contexts − i.e., corresponding to the notorious 'gray area' described for most, if not all, DCM systems described in the literature (Moravcsik 1978; Bossong 1984, 1985; Aissen 1999, 2003; Haspelmath 2021; etc.): Which WEAK TRIGGERS are active in the attested multi-dimensional DCM

patterns in Siona (as conceived in Chapter 2)? On the basis of which other TRIGGERS do principled DCM patterns in Table 7.1 converge? In what ways do they diverge?

The remaining chapters in this dissertation take the *preliminary description* and bolster it in various respects. As such, the ultimate goal is to further the characterization of particular aspects of the REALIZATIONAL DOMAIN of Siona DCM. Section 7.1 summarizes the contributions of each individual chapter. Section 7.2 closes this conclusion by outlining future directions of research to further refine the description and analysis of Siona DCM patterns.

## 7.1 Summary of findings

The content arising in Chapter 4 through Chapter 6 comprises independent studies, where I put on a different metaphorical *hat* and implement diverse analytical techniques to build upon the *preliminary description*. This section is concerned with summarizing the key evidence purported in each content chapter and with bridging these findings into broader discussion at hand. This section is organized as follows: Section 7.1.1 summarizes the findings from Chapter 4. Chapter 5 is summarized in Section 7.1.2. Finally, Chapter 6 is summarized in Section 7.1.3.

### 7.1.1 A typological investigation of Siona case-marking

For Chapter 4, I put on my *comparativist* hat. This chapter aims to situate various properties of Siona case-marking and DCM, laid out in the *preliminary description* in Chapter 3, in their typological context. Via the development and implementation of the structural questionnaire technique (Haspelmath 2005, 2010; Krasnoukhova 2012; Birchall 2014), the NWA case-marking dataset in Appendix A positions the Siona facts within a representative sample of Tukanoan and non-Tukanoan languages spoken in the putative NWA area. Besides a handful of typical Tukanoan traits, various Siona case-marking properties, including the set of complex, discourse-driven DCM patterns, diverge sharply from those described for Eastern Tukanoan languages. Some evidence is garnered which suggests that certain Siona traits may have arisen under the pressures of contact-induced convergence. As such, this chapter affords certain insights into the diachronic development of Siona DCM, while highlighting fundamental synchronic discrepancies with Eastern Tukanoan languages.

To begin with the prototypical Tukanoan traits exhibited by Siona, these concern the case-marker *-re*. All Tukanoan languages possess this marker in their respective inventories and aspects of its distribution are shared across the family (Barnes 1999, 2006; Stenzel 2008, 2013d; Ramirez 2019[1997]; etc.). Every Tukanoan language in the sample recruits *-re* marking to encode both DIRECT and INDIRECT OBJECTS, where zero-marking is blocked on the latter. Additionally, besides the above-noted argumental uses of *-re* marking, all Tukanoan languages extend *-re* marking to the encoding of spatial arguments in one way or another. Besides these points of overlap, Siona case-marking diverges markedly from that noted for Eastern Tukanoan languages in the sample (and for the Western Tukanoan outlier, Máíhɨ̃kì [*ore*]).

On the one hand, Siona and its closest relatives − conceived as the Siona+ language complex (incl. Colombian Siona [$^{c}$*snn*], Ecuadorian Sekoya [*sey*], and Koreguaje [*coe*]),[3] share a set of four 'primary' case-markers, which, in addition to *-re*, comprises

[3]The Peruvian variety of Sekoya has received some attention in recent work − Vallejos

cognates to the marker *-ni*; the GOAL-marker *-na*; and the multi-functional marker *-bi*. The latter marker encodes the SUBJECT, INSTRUMENT, and spatial SOURCE in each of these languages. Each of the 'primary' markers is implicated in the complex Siona+ DCM patterns, exemplified by the Ecuadorian Siona paradigm in Table 7.1 above. The identification of cognate candidates in the Eastern Tukanoan languages Tanimuka [*tnc*] and Kubeo [*cub*] for *-bi* and *-na* points to an earlier, genetic origin. Otherwise cognate markers are not attested in the family.

On the other hand, besides the formal case-marker inventory, Siona+ languages diverge from Eastern Tukanoan languages on the basis of TRIGGERS for the attested DCM patterns. Eastern Tukanoan languages are primarily driven by referentiality (i.e., specificity or definiteness), which is, at best, a WEAK TRIGGER in Siona (as found in Chapter 5). Conversely, Siona+ languages display discourse-driven DCM patterns, which extend equally to SUBJECT-marking, aligning closely to the facts gathered regarding Murui [*huu*] and Tariana [*tae*], spoken to the east. Additionally, as regards non-SUBJECT DCM in Siona+ languages, a STRONG animacy-related TRIGGER determines morphological case-marking splits for particular grammatical relations (also in *Maíhĩkì* [*ore*]), which conspires with discourse-related TRIGGERS to drive the selection of particular alternatives in their discursive context. A unique brand of multi-dimensional DCM emerges, unlike that attested for Eastern Tukanoan in this sample.

Ultimately, the typology developed in Chapter 4 indicates that Siona displays an admixture of Tukanoan and non-Tukanoan case-marking traits. As regards the latter, on account of the geographic position of Siona+ languages at the north-westernmost edge of Amazonia, candidates for grammatical convergence are noted with languages spoken in the Andean foothills region to the west, and with the languages of the *People of the centre* spoken to the east (Echeverri 1997; Epps and Michael 2017; etc.). On the one hand, the presence of a dedicated GOAL-marker, and its exceptional usage with certain non-prototypical predicates, overlaps notably with similar marking patterns described for Quechuan languages spoken to the west. Siona+ languages also display certain FUNCTIONAL GAPS – i.e., they have certain plausible CASE FUNCTIONS which are not encoded via case-marking, including to encode temporal nouns or POSSESSORS. These same gaps are described for languages spoken to the east, such as Murui [*huu*] and Bora [*boa*]. A possible easterly origin for S-oriented DCM is also suggested above. Ultimately, various Siona case-marking traits, including aspects of the particular brand of DCM patterns attested in the language, likely developed due to the unique linguistic context at the northwestern frontier between Amazonia and the Andean foothills.

### 7.1.2 A corpus-based investigation of Siona DCM

For Chapter 5 (supplemented by Appendix B), I put on my *variationist* hat and develop the modest Siona narrative dataset (8078 word forms; 1914 nominal tokens). This chapter provides a welcome contribution of quantitative evidence to the description of Siona DCM. On the one hand, this chapter measures the rate of PROMINENT-marking in a naturalistic sample: i.e., for SUBJECT (S), DIRECT OBJECT (P), and LOCATION (L) tokens accordingly.

On the other hand, it ascertains statistical evidence, which is utilized to determine the relative impact of a handful of factors (TRIGGER CANDIDATES) on the proportion

and Schwarz 2016; Vallejos 2021; Vallejos and Brown 2021. Although a complete description is lacking at present.

of PROMINENT-marking. The results of this analysis provide statistical support for the generalization laid out in Chapter 3, that discourse-related TRIGGERS have primacy in Siona DCM, particularly the notion of contrast. Furthermore, this chapter sheds light on the relevance of various WEAK TRIGGERS, whose subtle effects are notoriously tricky to address via elicitation-based methodologies. What emerges is a ranking of statistically significant TRIGGERS for each grammatical relation, corresponding to the notion of TRIGGER STRENGTH – as conceived in Section 2.2.3, which is at the core of the analysis of the REALIZATIONAL DOMAIN of Siona DCM in this dissertation.

The results are summarized in Table 7.2, reiterated from Section 5.4:

| TRIGGER CANDIDATE<br>[GLOBAL MARKING RATE] | S-marking<br>[21.18%] | P-marking<br>[24.27%] | L-marking<br>[52.63%] |
|---|---|---|---|
| | | **Sentence-level factors** | |
| WORD ORDER | MODERATE EFFECT$_3$ | SMALL EFFECT$_4$ | !NO EFFECT |
| THEMATIC STATUS | !NO EFFECT | !NO EFFECT | !NO EFFECT |
| | | **Referent-level factors** | |
| ANIMACY STATUS | !NO EFFECT | SMALL EFFECT$_5$ | N/A |
| SPECIFICITY STATUS | MODERATE EFFECT$_2$ | MODERATE EFFECT$_3$ | MODERATE EFFECT$_2$ |
| | | **Discourse-level factors** | |
| CONTRASTIVITY STATUS | LARGE EFFECT$_1$ | LARGE EFFECT$_1$ | LARGE EFFECT$_1$ |
| LOOK-AHEAD TOPICALITY STATUS | !NO EFFECT | MODERATE EFFECT$_2$ | !INVARIABLE |
| LOOK-BACK TOPICALITY STATUS | !NO EFFECT | !NO EFFECT | !NO EFFECT |

**Table 7.2:** Summary of proportional and statistical evidence, Chapter 5

As shown in Table 7.2, the *varbrul* results (reported in full in Appendix B) indicate that CONTRASTIVITY STATUS is the strongest predictor for PROMINENT-marking for each grammatical relation tested in the study. No other large effects are detected in this analysis. This finding corroborates the descriptive generalization that Siona DCM is primarily driven by a contrast-related STRONG TRIGGER. For instance, this pattern aligns with the fact that the emphatic contrast reading is typically associated with PROMINENT-marking in elicited contexts, described in Chapter 3 and Chapter 6.

Regarding other significant factors, smaller effects are noted for a handful of TRIGGER CANDIDATES in this analysis. Firstly, the discourse-related TOPICALITY STATUS is correlated with PROMINENT-marking for non-SUBJECT DCM patterns in the sample. This analysis applied two topicality metrics (see Section 5.2), and the significant effect concerns LOOK-AHEAD TOPICALITY, as conceived here: Categorizing tokens based upon whether their referent(s) persist(s) in immediately ensuing narration. This finding, along with the above-noted contrastivity effect, confirm the primacy of discourse-related TRIGGERS for Siona DCM established throughout this dissertation.

Besides discourse-related TRIGGERS, this chapter finds relatively smaller effects for SPECIFICITY STATUS across all tested DCM patterns. Specific full nouns favour PROMINENT-marking as compared with their non-specific and pronominal counterparts across-the-board. Another smaller effect is detected regarding WORD ORDER; although this effect does not obtain in the L-marking sub-sample. The general pattern is such that pre-verbal arguments display a propensity for PROMINENT-marking, such that sentential word order and case-marking may represent interrelated strate-

gies for indicating the pragmatic status of noun phrases in natural discourse. This pattern is not noted in previous research, and is difficult to ascertain on the basis of elicitation techniques, given that speakers generally judge word order, and sometimes case-marking, to be flexible components of Siona grammar. Ultimately, these findings shed light on the activity of certain WEAK TRIGGERS in Siona DCM in actual usage.

Setting aside some grammatical relation-particular quirks, the analysis largely detects stable patterns regarding the role of particular factors. It is clear that discourse-related factors outrank others, and that SPECIFICITY STATUS is ranked next highest for all DCM patterns. Of course, by extension, this chapter also finds statistical evidence *against* the activity of certain TRIGGERS: i.e., THEMATIC STATUS (*agentivity*, *affectedness*, and *subcategorization status*) is not relevant to Siona DCM. Similarly, GLOBAL TOPICALITY STATUS, pertaining to the recency of previous mentions of a given referent are non-consequential for Siona DCM.

A final observation is in order regarding the smallest significant effect detected in the P-marking sub-sample, concerning ANIMACY STATUS. On the one hand, this finding confirms that PROMINENT *-re* on inanimate P and PROMINENT *-ni* on animate P display compatible distributions in the sample. On the other hand, it also inspires another hypothesis. Given that inanimate *-re* marking alternates with zero-marking, which is not the case for animate *-ni*, this subtle difference in PROMINENT-marking may be due to the fact that *-re* is selected in certain instances to avoid zero-marking – i.e., for the sake of ambiguity avoidance. This dissertation side-steps the question of disambiguation in Siona DCM (see Section 2.2.3.2), although a more elaborate investigation of ambiguity avoidance in a naturalistic sample is in order to more thoroughly test for the extent of such effects on case-marker selection in usage.

### 7.1.3 An elicitation-driven investigation: Focus-sensitive case-marking

The final content chapter of this dissertation, Chapter 6, develops an analysis of PROMINENT case-marking as a contrastive encoding strategy, sensitive to certain focus contexts. More specifically, overt PROMINENT-markers are analyzed as a brand of argument-associated FOCUS PARTICLES (Büring 2009, 22-24; Aannestad 2021). This analysis complements the description of emphatic contrast and QUESTION-ANSWER congruence effects laid out in the *preliminary description*, and the statistical effects for CONTRASTIVITY STATUS in Chapter 5, by implementing an elicitation-based research program to properly *diagnose* the focal effects of PROMINENT-marking (van der Wal 2015, 2016, etc.).

The example in (5), for instance, is elicited via the CONJURED CONTEXT technique (van der Wal 2016, §2). The speaker provides careful, introspective judgments regarding the use of PROMINENT-marking, which are often judged as 'optional' on the basis of straightforward translation tasks:

(5) *yë'ë ocore u̲cusi'i cayë*
ji'ɨ **ohko #(-re)** ũhku-si'-i kaa-jɨ
1SG water-N.SBJ drink-FUT-N3S say-N3S.PRS.ASS
'I want to drink wAter.' ⇒ {I want to drink coffee, I want to drink tea,... }
[**Suggested context:** A boy comes home to find coffee and tea on the table.]
[VOL/SUG: 20230623ejabi001.024-025]

The careful application of elicitation-based techniques, including CONJURED CONTEXT tasks, QUESTION-ANSWER (Q-A) tests, and CO-TEXT diagnostics injects a degree of researcher control over variables and context, which refine the empirical basis for the analysis of the dominant TRIGGER for PROMINENT-marking in Siona DCM. With this methodological arsenal at hand, the focus-sensitive distribution of the PROMINENT case-marking strategy are elucidated.

This chapter establishes two sets of findings regarding PROMINENT-marking, which align with properties of cross-linguistically common focus constructions (Büring 2009): On the one hand, Section 6.3 unveils certain focal syncretisms, as emerge via the application of Q-A and CO-TEXT diagnostics. This includes the cross-linguistically robust broad-narrow focus syncretism (e.g., Dik et al. 1981, 1997; Rooth 1985, 1992; Krifka and Musan 2012). For instance, (6) demonstrates how the PROMINENT *-re* marker is obligatory in both broad- and narrow-scope questions, and PROMINENT-marking arises obligatorily on the answer turn in either case, shown in (6b). This happens to surface as *-re* in the case of (6b-i), but as *-ni* on the promoted argument in (6b-ii):

(6) a. i. NARROW-SCOPE QUESTION: *quere nede'huaquë'ne ?*
**ke-e *(-re)** nee + de'wa-kɨ-'ne
WH-CL:GEN-N.SBJ make + repair-2/3S.M.PRS.N.ASS-Q
'What are you (M) fixing?'

ii. BROAD-SCOPE QUESTION: *quere yo'quë'ne ?*
**ke-e *(-re)** jo'-kɨ-'ne
WH-CL:GEN-N.SBJ do-2/3S.M.PRS.N.ASS-Q
'What are you (M) doing?'

b. i. ANSWER′: *yë'ë jaërëre nede'huayë*
jɨ'ɨ **hãĩ-rɨ #(-re)** nee + de'wa-jɨ
1SG hammock-CL:MAIZE-N.SBJ make + repair-N3S.PRS.ASS
'I am [fixing [a/the HAmmock]].'

ii. ANSWER″: *yë'ë jaërë yetesiconi nede'huayë*
jɨ'ɨ ↑**[hãĩ-rɨ jehte-sih-ko-ni/(# -re)]** nee
1SG hammock-CL:MAIZE tear-PERF-CL:F-N.SBJ(2) make
+ de'wa-jɨ
+ repair-N3S.PRS.ASS
'I am [fixing [a/the frayed HAmmock]].' or,
'I am [fixing [a/the FRAYed hammock]].'
[VOL/SUG: 20230617elupa001.017a-e]

In fact, the multiple interpretations possible within the complex noun phrase in (6b-ii) reveal a second type of syncretism — i.e., (i) where focus is interpreted narrowly on the head noun 'hammock', or (ii) where the modifier, 'frayed', receives focus. Similar patterns are described for various FOCUS PARTICLE languages (Aannestad 2021, §4.2.1). Together these focus size-related patterns point to the fact that Siona case-marking is not restricted to expressing WH focus on the full nominal constituent which is case-marked, despite the 'particle' being morphologically restricted to realization of nominal hosts.

On the other hand, in addition to size-related facts, Section 6.4 illustrates certain focus contexts where the PROMINENT-marking strategy, which go beyond QUESTION-ANSWER pairs and the emphatic contrast reading. In particular, Siona PROMINENT-marking is implicated in so-called OPPOSITION constructions, which overtly contrast

multiple nominal constituents. For instance, it is deemed infelicitous to leave either of the GOAL-arguments in (7) zero-marked:

(7) *yë'ë tsiayana gajeyë – yë' yojei saiji huë'ena*
ji̵'i̵ **tsia-ja #(-na)** gahe-ji̵ ji̵'i̵ johe-i̵
1SG river-CL:RIV-GOAL go_down-N3S.PRS.ASS 1SG younger_sibling-CL:M
sai-hi **wi̵'e #(-na)**
go-3S.M.PRS.ASS house-GOAL
'I am going to the RIver, (whereas) my little brother is going HOME.'
[VOL: 20230617eyopa001.014-015]

Section 6.4 refines the analysis of the PROMINENT-marking strategy by demonstrating that it is *not* recruited for other prototypical functions: i.e., CORRECTIVE FOCUS constructions, SIMILARITY constructions. Additionally, this strategy is absent for various classes of QUESTION-ANSWER pairs, concerning alternative questions or even certain information questions where complex WH-items are employed – e.g., *ke tsi̵hkabi̵* (which family), on either the QUESTION or the ANSWER turn. The incompatibility with certain discourse suffixes, such as *-se'e* (only) and *-hẽ* (also), equally indicates a relatively limited distribution of the PROMINENT-marking strategy compared to other focus-encoding strategies described in the literature. There is no monolithic conception of contrast (or contrastive focus) which applies equally to all languages (Zimmermann and Onea 2011; Matić and Wedgwood 2013; Kratzer and Selkirk 2020; etc.). As such, the relatively limited distribution of PROMINENT-marking in Siona, compared to focus-encoding strategies in better-studied languages, points to PROMINENT-marking strategy as a focus-sensitive case-marking pattern, rather than a bona fide focus-encoding strategy. The dominant information structural effect related to overt PROMINENT-marking is contrastivity, complementing findings in the other chapters of this dissertation. Ultimately, these findings bolster the language-particular description aspired to in this dissertation and delimit the shape of a technical focus-based account of Siona DCM in future work.

The content chapters of this dissertation contribute to the characterization of Siona DCM laid out in the *preliminary description* in several respects. Corroborating corpus-based and elicitation-based evidence are assembled, which demonstrate that PROMINENT case-markers encode contrastive focus for all grammatical relations displaying principled DCM patterns in the language. In this way, once animacy- and promotion-based marking splits are accounted for, the distribution of case-markers is predictable in the various focal contexts where the strategy is recruited. Despite certain points of micro-variation, compatible facts are identified across the Siona+ complex analyzed in Chapter 4.

The information structural uses of PROMINENT-marking uncovered in this dissertation do not exhaustively account for selection of PLAIN and PROMINENT markers, however. Put simply, not all PROMINENT-marking is based upon information structure, since Siona grammar strictly recruits PROMINENT-marking in a small subset of focal contexts (as discussed in Chapter 6). The text-based investigation in Chapter 5 provides some further, often subtle, insights into the WEAK TRIGGERS that also factor into Siona DCM. The following section outlines certain directions for expanding this investigation in future research.

## 7.2 Future research directions

This dissertation addresses various aspects of Siona DCM via comparativist, variationist, and elicitation-driven techniques in Chapters 4 through Chapter 6, and follow-up studies are postulated at various points throughout these chapters. The opening of this section provides a summary of the future investigations proposed for the continued implementation of these techniques. Other appealing techniques exist in the literature, which are not discussed here.

Firstly, the typological-comparative dataset developed in Appendix A to feed Chapter 4 may be elaborated upon in several ways. The modest typological sample ($N$=21) can be expanded to include certain neglected Eastern Tukanoan languages, and to have geographical coverage beyond the restricted NWA region scrutinized in this chapter. More and better grammatical descriptions are constantly being released which may be integrated into the study accordingly. Since several components of Appendix A are designed specifically to contextualize the Siona facts − such as the selection of tested CASE-MARKING CORRESPONDENCES; less language-specific sub-parts may be expanded upon more easily than others.

Besides simply expanding the case-marking typology in Appendix A, Chapter 4 also calls for a more targeted typologization of (nominal) discourse-markers. A comparative study of discourse markers in the region is lacking at present, despite the fact that most grammars consulted in this dissertation have such a class of morphemes. Such a study is particularly appealing given the presence of various cognate forms for the Siona marker *=kato*, noted in the region (see Section 4.3).

It is relevant to mention one final follow-up study to Chapter 4: This chapter highlights various cognate candidates and plausible points of grammatical convergence concerning Siona and other (non-)Tukanoan languages in the typological sample in Appendix A. A more appropriate technique ought to be applied in order to further elucidate the diachronic pathways for the case-markers found in Siona+ languages, and this chapter lays some preliminary groundwork for such a study.

Turning to the corpus-based study reported in Chapter 5, there is a clear need for a follow-up to expand the narrative sample for the sake of ascertaining more viable statistics for spatial DCM patterns. This ought to be a first order of business regarding follow-up textual research.

A second aspect of Siona DCM which warrants its own investigation concerns disambiguation effects. A text-based analysis is conceivable, which analyzes certain plausible instances of overt case-marking which do not fall out naturally from discourse-related uses of PROMINENT-marking. Variationist techniques may be appropriate to account for the effect of ambiguity avoidance for certain case-marking discrepancies, such as that noted between inanimate and animate P-marking in Chapter 5. In general, disambiguation effects require further attention and further elicitation-based fieldwork is also in order.

Finally, Chapter 6 applied elicitation-based technique to bolster the empirical coverage for focal case-marking patterns. The evidence sets the descriptive backdrop for a formal analysis, incorporating negative data points and collecting introspective speaker judgments. The next step is to flesh out the formal analysis. Section 7.3 closes the present discussion by laying out the groundwork for a formal Minimalist analysis of Siona DCM, where focus is treated as a morphosyntactic feature (e.g., Kratzer and Selkirk 2020).

## 7.3 Towards a formal analysis of Siona DCM

The general approach to a formal analysis suggested here assumes all empirical evidence presented in Chapter 3 and Chapter 6. An adequate formal theory of Siona case-marking (including DCM patterns) must satisfy the following desiderata:

- Animacy effects arise such that *all* non-SUBJECT, animate arguments must bear overt case-marking. The ideal analysis accounts for the class of promoted nominals, which inherit this animacy status for the sake of case-marking.
  - This case-marking requirement is separate from the obligatory case-marking on the R-argument, and found with pseudo-spatial *-na* marking.
- The animacy-based STRONG TRIGGER for non-SUBJECT DCM must outrank the focus-related STRONG TRIGGER, which is active in all principled DCM patterns.
- The principled interaction of these STRONG TRIGGERS must outrank other plausible WEAK TRIGGERS, which factor into the distribution of case-marking alternatives in practice.

The set of desiderata laid out above certainly implicate a multi-dimensional analysis of Siona DCM (Klein and de Swart 2011). Additionally, based upon the rigidity of the animacy and focus effects outlined in this chapter, there is ample evidence that two separate features (or feature sets) ought to be independently active in the syntax: e.g., (i) animacy as $\varphi$ [anim], and (ii) focus as $\delta$ [foc] (Miyagawa 2009, *et seq.*).[4] This analysis presumes that focus may be codified as a feature, implicated in the calculus of case-marking, and that the language does not make available focus-specific morphology.

The conspiracy of these putative features can be taken to underpin the proposed SPLIT *-re* ANALYSIS, where two featural decompositions can be posited for obligatory *-re* marking on the P-argument, as in (8). By extension, the featural decomposition is conceived as in (8b):[5]

(8) a. $\textit{-re}_{[\varphi]}$ : PLAIN *-re* on animate P ;
b. $\textit{-re}_{[\delta]}$ : PROMINENT *-re* on focal inanimate P ;
c. $\textit{-ni}_{[\varphi \wedge \delta]}$ : PROMINENT *-ni* on focal animate P

Several questions persist as to how these features are projected in the syntax. For instance, how do singular, inanimate nouns acquire the feature $\varphi$ under particular modification contexts? It is also unclear which model can account for *-re* as realizing an underlying featural disjunction (i.e., $\varphi \vee \delta$), compared with *-ni* as a featural conjunction, as in (8c). An adequate theory would capture these generalizations based upon the empirical facts laid out in this dissertation.

The remainder of this section outlines various families of analyses which have been postulated in the literature for DCM to date, although most analyses are restricted to *differential object marking*. According to Kalin (2014, 2017, 2018), in the Minimalist

[4] Perhaps the latter feature is similar to the [±Foc] feature suggested in Kratzer and Selkirk 2020. The authors suggest that the distribution of this feature is sensitive to language-particular factors, relating to the active focus contexts where the focus-encoding strategy is recruited.

[5] I am currently working with Paloma Jeretič on an analysis along these lines.

literature, there are three primary families of syntactic analyses: (i) movement-based accounts, (ii) size-based accounts, and (iii) licensing-based accounts. Below, I demonstrate how the final type of account is likely the best avenue for analyzing Siona DCM.

Firstly, as concerns movement-based approaches to DCM, many authors analyze case-marking (on the DIRECT OBJECT) as arising due to A-movement of the argument from its base-generated position as the verbal complement (e.g., de Hoop 1996; Rodríguez-Mondoñedo 2007; Baker and Vinokurova 2010; López 2012; Ormazabal and Romero 2013a, 2013b; Baker and Kramer 2014; Baker 2015). This movement permits interaction with higher Case-assigners, and is often taken to induce a specific or definite interpretation (e.g., Diesing 1992); which is considered a primary driver of DCM alternations cross-linguistically. To my view, this approach falls flat for Siona for several reasons. On the one hand, position-based diagnostics are untenable in Siona on the basis of rampant scrambling, both in semi-spontaneous speech and in controlled elicitations. Other researchers working with DCM languages reject this class of analysis for this reason: e.g., Kalin (2018) regarding Neo-Aramaic, Levin (2019) regarding Palauan. On the other hand, it is not clear that this approach can be extended to account for DCM patterns besides P-oriented DCM in Siona.

Turning to size-based approaches to DCM, the general analysis is such that the lack of case-marking is associated with (pseudo-)incorporation, whereas case-marked noun phrases have a more elaborate internal structure (e.g., Massam 2001; Danon 2006, 2011; Dayal 2011; Lyutikoval and Pereltsvaig 2023). Whereas, Siona does exhibit certain fringe constructions that resemble incorporation (discussed in Bruil & Case, *ms*, *forthcoming*), this approach is certainly not tenable as a general analysis for Siona DCM. It is likely that Siona is one of several languages which exhibit both pseudo-incorporation and DCM as independent components of its grammar (Driemel 2023). Besides positional constraints, there is no semantic or syntactic reason to consider unmarked arguments in Siona as incorporated (i.e., unlike what is claimed for other Tukanoan languages, like Koitiria, as analyzed by Stenzel 2008). I follow Kalin (2017, 2018) and others in acknowledging conceptual reasons to eschew the Split DP-hypothesis, for the purposes of DCM or otherwise.

Finally, licensing-based Minimalist approaches to DCM have been recently cultivated in the works of Kalin (2014, 2017, 2018; and since employed in Mursell 2018; Levin 2019; Murphy and Meyase 2022; van der Wal 2022, and many more). These approaches offer a promising direction for analyzing Siona DCM. Oversimplifying considerably, case-marking arises based on the interaction of two principles: (i) only certain classes of nominals *require* licensing (e.g., animates); and (ii) certain nominal-licensers are always active, like the S-licenser, whereas others are optional, and only arise as a last-resort mechanism to check the Case-feature on a nominal which requires it. This is not altogether different the classical conception of 'of'-insertion in English in the absence of a structural Case-assigner — e.g., inside a nominalization: *the descruction* *(*of*) *the city* (Chosmky 2004[1970], 149).

The licensing-based model addresses some of the desiderata for an analysis of Siona DCM outlined above − i.e., the SUBJECT vs. non-SUBJECT divide is accounted for based upon the different licensing mechanisms which define these grammatical relations. It is even conceivable that the SPLIT *-re* HYPOTHESIS may be accounted for if both animacy and focus are encoded by such features (e.g., $\varphi$ and $\delta$ accordingly). However, it is not immediately clear how PROMINENT S-marking can be modeled in this way. Future work will navigate these issues as part of an account of Siona DCM.