On Case Concord: the Syntax of Switch-reference Clauses

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Abstract This paper discusses switch-reference (SR) systems in Pano and Muskogean languages, and propose that grammatical case plays an essential role in licensing same subject SR constructions in these languages. Specifically, case activates an agreement relationship between two clauses, allowing for transmission of information about participant coreference. Different subject SR, on the other hand, does not involve case concord, but signals the activation of a discourse participant that was either inactive in the background or not present.

1 Introduction

Since the 1980s, case has played an essential role in all versions of Generative Grammar as a mechanism by which verbs license their arguments.\(^1\) One of the underlying insights about this grammatical mechanism is the connection between case assigning and tense: in the Government and Binding framework, for example, only tensed verbs assign case to their subjects, accounting, among other things, for the distribution of obligatorily null infinitival subjects (PRO). In more recent versions of the Minimalist Program, the connection between case and tense, on the one hand, and tense and \(\phi\)-features (person and number) becomes the central tenet of the Agree relationship. In recent versions (cf. Pesetsky & Torrego 2001, 2004, for example), nominative case is seen as a manifestation of an uninterpretable tense feature on the noun.

Since both person and number (\(\phi\)-features) and case are lexical features of any given lexical entry, it is an open matter whether \(\phi\)-features and case

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\(^1\) Throughout the paper, I use case in small capitals to signify an abstract feature that may be instantiated as an overt morpheme case feature.
(or T) manifest themselves outside of the traditional realm of argument-verb agreement, and if they do, whether the result has the same properties as it does in argument-verb agreement. It is well-known that there are instances of person/number/gender feature sharing or matching between nouns and adjectives, but those instances do not usually involve CASE. In this paper, I will explore switch-reference systems in two unrelated language families: Shipibo (Pano, Peru), and Muskogean languages. I will argue that the mechanisms by which SR clauses establish their temporal linking and subject coreference with another clause involve a case-agreement relationship that ties in exactly the ingredients described above: φ-feature and tense-feature sharing. Specifically, I will argue that a subset of SR morphemes bears uninterpretable φ and tense features that must be valued and deleted by some element in one of the clauses they link. By establishing a grammatical relation through agreement, the SR morpheme insures a necessary temporal linking of both clauses and subject coreference. Another subset does not have uninterpretable tense or φ features, resulting in no agreement, hence disjoint subject reference.

The proposal builds on the notion of CASE as a type of Agree relationship and extends it from the traditional realm of verb-argument to a relationship between clauses. By connecting clauses, CASE allows for information to be transmitted from one clause to another.

2 Perspectives on Switch-Reference

Switch-reference morphemes relate two clauses, one of them is usually an adjunct and the other one is a main clause, as illustrated in the Shipibo example in (1). In this example, the clause ‘when the dog bit him’ is marked with a switch-reference morpheme -a which links it to ‘the boy yelled’.

(1) [Ochítinin natés-a] -ra, báke saí ike.
    dog bite PRIOR.MAIN-SUBJ=EMBD.OBJ-DIR.EV, boy yell AUX
    ‘When the dog bit him, the boy yelled.’

Henceforth, I will refer to the clause that carries the switch-reference (SR) morphology as the SR clause, and the clause to which it refers as the reference clause. Thus, in (1) ochítinin natés-a ‘when the dog bit him’ is the SR clause, and báke saí ike ‘the boy yelled’ is the reference clause.

2 Glosses used for the Pano and Muskogean examples: ACC = accusative, ASP = aspect, AUX = auxiliary, CONF = confirmation, COP = copular, D.ACC = demonstrative accusative, ERG = ergative, DIR.EV = direct evidential, IMPERF = imperfective, NEG = negation, NOM = nominative, PCPL = participle, PERF = PAST = past, perfective, PL = plural, POSS = possessive, RCNT.PAST = recent past, Q = question, REPORT = reportative, RESP = response, SG = singular, SUP = supposition, TNS = tense. For switch-reference morphemes, I use PRIOR, SIMUL, SUBSEQ to indicate previous, simultaneous or following event, TRANS or INTR to indicate the transitivity or intransitive of main verb, SS to indicate same subject and DS for different subject. MAIN-SUBJ = EMBD.OBJ indicates that the main subject is coreferent with the embedded (SR) object.

3 The morpheme -ra is a second position clitic that appears in main clauses, as I will review below. In this example, it is attached to the whole SR-clause.
SR clauses convey several types of information, depending on the language: most SR systems indicate whether the arguments in two adjacent clauses are coreferential or disjoint, and many of them also provide indication about the sequence of events in those clauses. For example, in (1) above, the object of the SR clause ('him') is coreferential with the subject of the reference clause ('boy'). In most SR systems, referential dependencies are established between subjects: either clauses have coreferential subjects (same subjects) or they have disjoint subjects (different subjects). Some researchers, such as Finer (1985), have suggested that this argument coreference is the driving force in SR systems. Following that line, he suggests that SR is a part of the Binding Theory, particularly Generalized Binding (Aoun 1981, 1985, 1986). In Finer's analysis, same subject is an A'-anaphor, bound by an element (COMP) in its binding domain (the clause containing the SR clause), whereas different subject is an A'-pronominal, free in that same domain. Broadwell (1997), among others, also assumes this approach.

The second line of analysis questions whether SR is best seen as a matter of establishing the conditions for coreference between subjects or arguments in general. Several researchers (Stirling 1993, Rising 1992, Sparing-Chávez 1998, among others) have pointed a number of cases where SR patterns in unexpected ways if one assumes the traditional co-reference analysis. For example, the reference clause may be an impersonal clause that lacks a referential subject, but triggers same subject marking on the SR clause, or it may be the case that an experiencer argument that lacks typical subject properties establishes coreference with the SR-clause subject.

SR has also been analyzed as event-continuity, rather than participant coreference. Stirling (1993: 11), for example, views SR as “giving information about the clause, via giving information about the verb.” As we will see in section 5, topic-continuity has been claimed to explain some instances of unexpected SR-marking in Koasati (cf. Rising 1992).

For a subset of unrelated SR languages, SR-markers are similar or identical to the morphemes that mark case on nominals. This is transparently true in several Muskogean languages (see section 5), and in several Australian languages (cf. Austin 1981, Dench 1988, Dench and Evans 1988, Wilkins 1988 and Stirling 1993), and, less transparently so in Pano languages (see below, Valenzuela 2003 and Sparing-Chavez 1998 for Amawaca, Montag 2005 for Cashibo). Given the fact that these language families are completely unrelated, the coalescence between SR and case suggests some principled connection. This connection is sensible: case is one of the grammatical devices that relates predicates and arguments, and SR encodes properties of arguments (coreference) and properties of predicates (event sequencing, etc.).

In this paper, I will argue that case does, indeed, play a central role in establishing SR links, at least in a subset of SR-languages (Pano and Muskogean). Since case has been argued to be one side of the operation of agreement (cf. Chomsky 1995, 2000, 2001, among others), this proposal extends the notion of case from a grammatical mechanism that relates predicates and arguments to a mechanism that links two connected clauses. This grammatical mecha-
nism opens a conduit for other relevant information to be transferred between them. This information may be argument coreference, but it may also be event sequencing. In the paper, I will limit the analysis to argument coreference.

I will first analyze SR in Shipibo, a Pano language spoken in Eastern Peru, which shows a fairly rich SR paradigm. I will start from the observation that Shipibo has a set of SR morphemes that varies depending on whether the reference-clause verb is transitive or intransitive, but these morphemes only vary when the subjects of the two clauses are the same. When the two subjects are different, the SR morpheme does not vary depending on the valency of the RC reference-clause verb.\footnote{Crosslinguistically, whether a verb is transitive or intransitive is reflected in the case system: in nominative/accusative languages, accusative is usually associated with transitivity, whereas in ergative/absolutive languages, ergative is. For this reason, I take the valency-tracking properties of the same-subject SR morpheme to be a manifestation of case. Specifically, I argue that a transitive case feature establishes agreement with the reference clause, and allows for the \(\phi\)-features of some item (typically the subject) to be copied to the SR-morpheme in the SR clause. In clauses with different subjects, on the other hand, there is no case concord, so no \(\phi\)-features can be copied, hence a new discourse participant is introduced or a participant in the background is activated (along the lines of Stirling’s analysis for DS, cf. her hypothesis 4, p. 81). The proposed analysis will then be extended to Muskogean languages, where the SR-case homophony also exists.}

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The paper is organized as follows: in section 3, I present the basic asymmetry between main clauses and SR clauses in Shipibo, in section 4, I construct an argument for the analysis of SR as case concord, in section 5, I formalize the analysis of same subject and different subject marking. Finally, in section 6, I turn to an overview of the SR-system Muskogean languages, in light of the analysis presented in the preceding sections.

3 Clauses in Shipibo

Shipibo has two types of clauses that can be distinguished fairly clearly on the basis of three properties: first, main clauses can appear on their own as independent clauses, whereas SR clauses only appear as adjuncts to another clause. Second, main clause verbs have one set of terminal morphemes that is in complementary distribution with those of SR verbs. Finally, second position clitics only appear in main clauses. I will illustrate each of these properties in turn.

\footnote{This state of affairs also holds of Amawaca and Cashinawa as well, cf. Sparing-Chávez 1998 and Montag 2005 respectively.}
3.1 Clause independence

Example (2a) shows an independent main clause and (2b) an independent main clause with a SR clause in first position. The SR clause is attached to the evidential marker -ra, that systematically appears in second position of the main clause. As (2c) shows, the SR clause cannot appear by itself, with or without an overt subject.

(2) a. Ea-ra moa k(a)-ai.
       I-DIR.EV now go-IMPERF
       ‘I am leaving.’

 b. [Ka-kin] -ra non mananšawe bai napomea
       go-SIMUL.TRANS.SS-DIR.EV 3.PL.ERG turtle path middle
       b(i)-iba-ke.
       find-RCNT.PAST-PERF
       ‘When we were going, we found a turtle in the middle of the path.’
       (Faust, 1973: 93)

c. *(Non) ka-kin
       we-ERG go-SIMUL.TRANS.SS

3.2 The Shipibo verbal template

Verbs in Shipibo main clauses conform to the template in (3) (cf. Loriot, Lauriault and Day 1993: 50-54). In this template, the root is followed by a set of lexical morphemes, followed in turn by inflectional morphemes that include tense and number, and finally by a terminal morpheme. The list of possible morphemes in each of the slots is presented in (4), and (5) illustrates a verbal form with several of those morphemes.\(^5\)

(3)  **Verbal template for main clauses:**

Root+non-inflectional morphemes+inflectional morphemes+
aspectual (terminal) morphemes

\(^5\) As pointed out by an anonymous reviewer, the set of non-lexical morphemes includes a variety of items, ranging from adverbials like *much* to higher predicates like *want* and negation, as well as valency changing arguments like causative -*ma* or transitivizer -*n*. The only thing they have in common is that they occupy a slot closer to the verb root in a verbal complex than inflectional or terminal morphemes. Whether each of them projects a different syntactic node or not is an open question that does not bear on the analysis of switch reference.
(4) a. **Non-inflectional morphemes:** -t 'reflexive', -ma 'causative', -n 'transitivizer', -kin 'help', -yama 'negation', -kean 'limitative', -yora 'much', etc.

b. **Inflectional morphemes:** -ya 'future', -wan 'recent past (today)', -iba 'recent past (yesterday)', -yanta 'distant past', kati 'imperf. past'

c. **Aspectual (terminal) morphemes:** -ai 'imperfective', -ke 'perfective'

(5) Oin-kin-kash-(y)ama-wan-ke.
see-help-want-NEG-RCNT.PAST-PERFECT
‘S/he hasn’t wanted to help (him/her) to see (it) today.’
(from Loriot, Lauriault and Day 1993: 53)

In the case of SR clauses, the terminal morpheme is drawn from a different set than the one used for main clause terminal morphemes, as shown in (6). These morphemes encode three different properties: 1) information about the coreferential properties of the SR-clause subject and the subject of an adjacent reference clause, 2) whether the event depicted by the SR clause precedes, co-occurs or follows the event in the RC, and 3) for some of them, whether the verb in the reference clause is transitive or intransitive.²

² Loriot, Lauriault & Day (1993) have a longer list of different subject SR morphemes, including ken, -ain, -ketian, -aitian and -nontian. However, as Valenzuela (2006) points out, these can be decomposed into an aspectual and a SR morpheme: -ke + -n/-tian and -ai + -n/-tian. The aspectual morpheme would in turn provide the meaning corresponding to the sequence of events reading associated with each combination. For example, -ketian is interpreted as having the embedded (SR) event precedes the main subject. Since -ke denotes perfective aspect, the event sequencing of ketian is predicted. The same compositional logic applies to -nontian, although unlike -ke, -ai, -non does not appear as a terminal aspectual morpheme in main clauses. However it does appear as what seems to be an aspectual morpheme in subordinate clauses. In (i), from Loriot, Lauriault & Day (1993: 294), -non appears with the intransitive form of the auxiliary verb (it could also appear with the intransitive under the right conditions), and the auxiliary has a separate SR morpheme -as. The possibility of a compositional analysis for the SR morphemes was first suggested to me by Elias-Ulloa (p.c.).

(i) Nokon tita isin-ai oṣa-non ik-aṣ -ra noa ọbo
1.PL.POSS mother be.sick-IMPERF sleep-ASP.AUX.INTR-PRIOR.INTR.SS-DIR.EV 1.SG house
meranoṣ piko-ke.
from leave-PERF
‘We left the house so that my mom would sleep because she is sick.’
(6) Shipibo switch-reference morphology (modified from Loriot, Lauriault & Day’s 1993: 55)

<table>
<thead>
<tr>
<th>Argument coreference</th>
<th>Tracking of valency of reference verb</th>
<th>Embedded event precedes reference event</th>
<th>Simultaneous events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same subj.</td>
<td>Intrans. main</td>
<td>-as</td>
<td>-i</td>
</tr>
<tr>
<td></td>
<td>Trans. main</td>
<td>-son</td>
<td>-kin</td>
</tr>
<tr>
<td></td>
<td>No val. tracking</td>
<td>-taanan</td>
<td>-anan</td>
</tr>
<tr>
<td>Diff. subjects</td>
<td>No val. tracking</td>
<td>-n</td>
<td>-tian</td>
</tr>
<tr>
<td>Embed. obj. = main subj.</td>
<td>No val. tracking</td>
<td>-a</td>
<td></td>
</tr>
</tbody>
</table>

The first two properties encoded by SR morphemes are illustrated in (7)-(8). In the first example, the terminal SR morpheme -son indicates that the subject of both clauses is the same and that the SR-event (seeing Nima) preceded the other event (Jose’s calling him).

(7) [Nima oin-ṣon] -ra Jose-kan ken-ai.
   nima see-PRIOR.TRANS.SS-DIR.EV Jose-ERG call-IMPERF
   ‘When he (Jose) saw Nima, Jose called (him).’
   (ex. from Loriot, Lauriault and Day 1993: 55-6)

(8) a. [Ja ói be-áin-bi] -ra, ea k(a)-ai.
   3 rain bring-SIMUL.DS-although-DIR.EV, 1 leave-IMPERF
   ‘Even if it is raining, I am leaving.’

      book do-SIMUL.SS-DIR.EV, 1.POSS brother works-IMPERF
      ‘My brother studies and at the same time he works.’

      dog bite-PRIOR.MAIN-SUBJ=EMBD.OBJ-DIR.EV, boy yell AUX
      ‘When the dog bit him, the boy yelled.’
      (ex. from Loriot, Lauriault and Day 1993: 55-6)

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7 For a full description of the interaction between sequence of events and switch-reference, see Valenzuela (2003: 429-434).
The third property, namely the ability of certain SR morphemes to track the valency of the reference verb can be seen by comparing (7) with (9). In (7), the reference-clause verb (‘calling’) is transitive, so the SR marker is -ù, whereas in (9), the reference-clause verb (‘leave’) is intransitive, so the SR morpheme is -aù.

(9) [Nima oin-aù] -ra Jose-kan pikot-ai.
    nima  see-PRIOR.INTR.SS-DIR.EV Jose-ERG leave-IMPERF
    ‘When he (Jose) saw Nima, Jose left.’

In all of the examples above, the reference clause is a main clause, but it is possible to have another SR clause as the reference clause, yielding a chain of SR clauses the last of which links to a main clause. This option will be illustrated and analyzed below (cf. (21)).

Among the suffixes quoted in the verbal template in (3)-(4), the non-inflectional suffixes, and some inflectional ones can appear with SR-verbs, as shown in (10). In (10a-b), we find -pake ‘down’ in kaka-pake-kin and -shin ‘all night’ in jojo-shin-i. In (10c), we find the causative morpheme -ma in șoi-ma-șonshokores as part of an embedded (SR) clause.

    go-go-down-SIMUL.TRANSSS-INDIR.EV sand hit-PAST-PERF
    ‘(They say that) when he was going down, he hit a sand beach.’

    b. Jainoaù on-ki bane-yantan-ke Miaoshi-ain
       from.there-INDIR.EV return-PAST-ASP Pucallpa-to
       nokot-a-mabi, jo-jo-shin-i.
       arrive-PCPL-without go-go-all.night-SIMUL.INTR.SS
       ‘From there, he returned without arriving in Pucallpa, travelling all night.’

       (exs. from Faust 1973: 116)

    c. șoi-ma-șon-shokores.
       broil-CAUS-PRIOR.TRANSSS-only.little
       ‘... making it broil only a little.’

       (ex. from Fuchshico 1998: 14)
In some instances, SR-verbs include independent temporal morphemes, as seen in (11). In this example, the auxiliary verb *i-wan-a* is a pro-verb that refers to one in the preceding clause. It appears with a temporal affix *-wan* preceding the SR marker *-a*. Notice that *-wan* is in some sense redundant, because the SR-marker already indicates that the event precedes the event from the adjacent verb. Possibly for this reason, inflectional suffixes are infrequent with SR-verbs.

(11) I-wan-a, bake rabe jawenkiakasa iki, 
do.INTR.PAST-PRIOR.INTR.ss child two be.hungry AUX 
jaskara iṣon yoia iki: Papa noa-ra pi-kas-aí 
this do.INTR say-PCPL AUX father1.pl-DIR.EV eat-want-imperf 
AUX 
‘After doing this (being tired of being in the tree), the two children 
got hungry and said (to their father): father, we are hungry.’ 
(ex. from Fucshico 1998: 136)

This availability of temporal morphemes in SR-verbs, together with their ability to assign case to their subject (cf. (12), where the subject *ochitin* has ergative case) suggest that SR verbs are not non-finite in the sense that infinitives are in English. However, I will assume that in most instances, they lack independent tense, and that their temporal anchoring is determined by reference to the tense of another verb.

(12) Ochitin natés-a -ra, báke 
dog-ERG bite-PRIOR.DIFF.OBJMAIN-SUBJ=EMBD.OBJ-DIR.EV child 
sai ike. yell AUX 
‘When the dog bit him, the child yelled.’ 
(ex. from Loriot, Lauriault and Day 1993: 56)

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8 Verbs introducing direct quotes frequently have the structure seen in (11): *jaskara iṣon yoia iki*, where *jaskara iṣon* is a SR clause. The whole sequence could literally be translated as “saying the following, (s/he) said . . .”

9 The first pro-verb in this example *wan-a* has the intransitive root (*i*), which matches the valency of the verb it refers to. In this particular case, the tracked verb (in the preceding clause, not shown in the example) is intransitive. The SR-marking, on the other hand, refers to the following verb *jawenkiakasa iki* ‘be hungry’.
3.3 Second position clitics and the categorial nature of SR clauses

In addition to the differences just seen (ability to appear as independent clauses and having different terminal morphemes), main and SR clauses can be distinguished by the availability of second position clitics (cf. Black 1992). These include two evidentiality markers, four interrogative markers and an imperative morpheme, as illustrated in the following examples. The examples in (13) show -\textit{ra} ‘default evidential’ and -\textit{ronki} ‘indirect evidence’. The main interrogative marker -\textit{ki} is illustrated in (14a). Others include the interrogative form -\textit{rin} of the copular verb in (14b); an interrogative of response -\textit{kan} shown in (14c), used to mark continuity in a dialogue; an interrogative of supposition -\textit{main} in (14d), and an interrogative of confirmation -\textit{tsi} in (14e). These clitics obligatorily appear in second position, and must have an XP to their left.

(13) a. E-n-\textit{ra} binon be-ke.
    1.SG-ERG-DIR.EV aguaje bring-PERF
    ‘I brought aguajes (a fruit)’ (from Black 1992, ex. (1))

    b. Kai-\textit{ronki} reokoo-kain-yantan-ke.
    go-INDIR.EV turn.over-DEPART-PAST-PERF
    ‘(They say that) when he had gone, he turned over.’
    (from Black 1992, ex. (42))

(14) a. Tso-\textit{ki} e-bé ka-kas-ai?
    who-Q 1.SG-with go-want-IMPERF
    ‘Who wants to go with me?’
    (from Black 1992, ex. (30))

    b. Tsoa-\textit{rin} mi-pekao?
    who-Q.COP 2.behind
    ‘Who is behind you?’
    (from Black 1992, ex. (33))

    c. Mia-\textit{kan}, jawekeská iki?
    2.SG-Q.RESP how be
    ‘And you, how are (you)?’
    (from Black 1992, ex. (35))

    d. Jawerano-\textit{main} ba-wan-ke
    where-Q.SUP carry-RCNT.PAST-PERF
    ‘Where could he have carried it today?’
    (from Black 1992, ex. (38))
As a cursory look at the SR examples above will reveal, second position clitics are absent in SR clauses, a generalization that further distinguishes them from main clauses.

To summarize this section, I have argued that main and SR clauses in Shipibo have clearly distinct distributions: SR clauses cannot be independent, the morphology of the the SR-verb is partially different from that of main clauses, the temporal interpretation in SR clauses is dependent, and they lack second position clitics.

3.4 The Structural position of SR clauses

Before looking at the position of SR clauses, it will be useful to briefly describe the clause structure of main clauses in Shipibo. As mentioned earlier, any constituent can appear before the second position clitic (-ra, -ronki, -ki, etc.). For Black (1992), this means that the clitic is a C-head, and the first constituent appears in its specifier, which he takes to be a focus position. Thus, an example like (2a), repeated below, would have the structure in (15).

(2) a. Ea-ra moa ka-(a)i.
    1.sg-dir.ev now go-imperf
    'I am leaving.'

Shipibo is a head-final language, and Black’s proposal has C as head-initial and the rest of the functional categories as head-final. In order to make all functional categories consistent in directionality, we would have to postulate right-adjunction of IP to CP, as illustrated in (i), or remnant movement of IP, an option that requires several extra functional positions. In the absence of evidence for right adjunction or for the extra functional projections, I will assume that Black’s structure is theoretically more desirable (cf. Zepter 2003 for a proposal on how to derived mixed directionality parameters within Optimality Theory).

(i) \[
\text{[CP [CP XP tIP CCL2 ] IP]}
\]
In addition to other constituents, it is also possible to have SR clauses in first position, as illustrated in (16), where the whole subordinate clause appears before the second position clitic -ra ‘DIR.EV’. In these cases, the whole SR clause represents the XP in (15). Whether the SR clause is moved to that position or merges directly into it is not relevant for present purposes.

(16)  [Och'tin nates-á] -ra báke saí ike.
      dog-erg bite-PRIOR.MAIN-SUBJ=EMBD.OBJ-DIR.EV child yell AUX
      ‘When the dog bit him, the child yelled.’ (from Faust 1973: 107)

While this clause-first position is the most frequent one for SR clauses, it is also possible for them to appear at different positions within the main clause. One of those positions is at the end of the main clause, as seen in (17a). In this example, the subject of the main clause (noa) appears as the first constituent before the second position clitic -ra, and the SR clause follows the main clause verb, as schematized in (17b).

(17) a.  Noa-ra ka-tan-iba-ke [jono bena-i]
      1.PL go-DIR-RCNT.PAST-PERF peccary look.for-SIMUL.INTR.SS
      ‘We went to look for a peccary.’          (from Faust 1973: 107)

   b.  [Main.Clause XP-ra V_{Main} [SR clause V]]
The proposed structure for (17a) assumes that the SR clause is an adjunct to a maximal projection, as represented in (18). In this structure, the SR clause is adjoined to IP, but an alternative adjunction site could be CP.\footnote{\textsuperscript{11}}

(18) Structural representation of non-canonical SR-main clause word order

```
   CP
  /   \       /   \\
XP C'    C_{CL2} IP
     /  \   /   \\
IP_{main} SR_{clause}
```

(19) illustrates another option for attaching the SR clause in a lower position.\footnote{\textsuperscript{12}}

This example also illustrates that the clause-internal word order in SR clauses is SOV.

(19) Rama-ra [en nato rao motsa-son] nkon
    now-DIR.EV 1.SG this medicine prepare-PRIOR.TRANS.SS 1.POSS
    jema jaatiobi nkon mai aki ka-(a)i.
    clearing whole 1.POSS land AUX go-FUT
    'Now I, having prepared this medicine, will go to do my whole clearing, my land.' (from Loriot and Hollenbach, 1970: 45)

For this structure, I will assume that the SR clause occupies a projection higher than IP, as in (20).

\footnote{\textsuperscript{11}} It is not clear that choosing either adjunction site has consequences for the analysis to be presented below, particularly if one assumes that IP and CP are extended verbal projections, following Grimshaw (2000).

\footnote{\textsuperscript{12}} Note that the pronoun is the subject of the SR clause in (19), not the main clause: its case is ergative, and the main verb clause assigns absolutive. Additionally, the main-clause subject would not appear in this position, but rather in first position.
It is possible to have more than one SR clause per main clause, as shown in (21a). In this example, the main clause *sa’bake* ‘someone screamed’ is preceded by two SR clauses, *non bikin* ‘when we picked it up’ and *nincata* ‘we heard someone’. The subject of the first SR clause is coreferential with the subject of the second SR clause, and the object of the second SR clause is coreferent with the subject of the main clause (this is what the SR marker *-a* encodes), as schematized in (21b). This is the only possible linking pattern for this example, given the valency of the SR-morphemes: if the first SR clause were linked to the main clause rather than to the second SR clause, the first SR-morpheme would have to be intransitive *-i* rather than transitive *-kin*, since the main clause verb *sa’bake* ‘scream’ is intransitive.

(21) a. No-n bi-kin,
   1.pl-erg pick.up-simul.trans.ss
   nincat-a -ra, sa’ibake
   hear-prior.main-subj=embd.obj-dir.ev scream-rcnt.past-perf
   When we, picked (it) up, we, heard (someone) and s/he screamed.’

b. [SR1 Subj, V] [SR2 pro subj= i pro obj= j V] [Main Clause pro subj= j V]

The proposed structure for this type of example with recursive SR clauses is presented in (22).

(i) [CP SR clause1 [CP SR clause2 C CL2 IP main]]
3.5 The internal structure of SR clauses

SR clauses tend to appear with a bare verb and no overt arguments, however, when overt arguments appear, the SOV word order is fixed, as seen in (19), repeated below.

(19) Rama-ra [en nato rao motsa-son] nokon
                 Now-DIR.EVL.SG this medicine prepare-PRIORITY.TRANS.SS 1.Poss
jema  jaatiobi nokon mai aki ka-(a)i.
      clearing whole 1.Poss land AUX go-FUT
‘Now I, having prepared this medicine, will go to do my
whole clearing, my land.’

Assuming that SR morphemes are located in C as Finer (1985) and Broadwell (1997) have proposed for other SR systems, the analysis of the internal word order of the SR clause implies that a projection containing the subject and object -presumably a VP- must have raised to Spec, CP, once the verb has raised to I. This is presented in (23), the representation of the SR-portion of example (19).  

---

The alternative analysis suggests that the SR morpheme heads an IP projection that has the subject in its specifier and the object inside VP, in a parallel structure to that of main clauses. For reasons to be explored immediately below, I will not assume this possibility.
As pointed out in section 3.3 above, Black (1992) observed that SR morphemes and second position clitics are in complementary distribution. This could be taken as evidence in favor of merging the SR morpheme in C (as in (23) above): if both items are in the same C₀ position, the incompatibility between second position clitics and SR morphemes would follow from the prohibition against having multiply headed structures.¹⁵

The suggestion that SR heads a CP is supported by the ordering of morphemes in verb-complexes. Recall that certain different-subject SR morphemes appear with aspectual morphemes (-ke+n, -ke+tian, -ai+n, -ai+tian, -non+tian). For these cases, the aspectual morpheme appears closer to the verbal root than the SR morpheme. In main-clause verbs, on the other hand, aspect is the terminal morpheme. If we assume that the SR morpheme is in C, and that aspect heads IP, then there is an explanation as to why aspect is not terminal in SR clauses: C dominates IP, as in (24).

(24) Comparative structure of main and SR clauses in Shipibo.

<table>
<thead>
<tr>
<th></th>
<th>CP</th>
<th>AspP</th>
<th>IP</th>
<th>VP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main clauses</td>
<td>-ra-ronki...</td>
<td>-ai 'IMPERF'</td>
<td>-wan 'RCNT.PAST'</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>-ke 'PERF'</td>
<td>-yantan 'PAST'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR clauses</td>
<td>-n-tian...</td>
<td>-ai-ke-non</td>
<td>-wan 'RCNT.PAST'</td>
<td>V</td>
</tr>
</tbody>
</table>

I will adopt the representation in (25), where the same subject SR clause projects to CP. Note that the embedded CP projection is right-headed, as opposed to the root CP projection, which is left-headed. In this sense, CP_{main} has a unique and special status.

¹⁵ An anonymous reviewer points out that the second position clitic appears attached to any category in first position, whereas the SR morpheme must appear attached to the verb, in this sense they are different.
To summarize so far, I have assumed that SR clauses are CPs headed by the SR morpheme, whereas main clauses are CPs headed by a morpheme that signals evidentiality, clause type, etc. This analysis accounts for why SR morphemes and evidentials are in complementary distribution. It also establishes a straightforward parallelism between the structures of both types of clauses, by claiming that C selects for Asp in both types of clauses.

3.6 The distribution of overt subjects in Shipibo

Shipibo clauses require at least one overt subject per combination of SR clause and reference clause (cf. Camacho and Elías 2008), as schematized in (26). The preferred configuration for same subject clauses is (26a), which has the overt subject in the reference clause, as illustrated in (27a). In this example, the subject non ‘we’ is part of the reference clause.16 The pattern in (26b) is illustrated in (27b), which has four separate clauses: [the man got upset], [he said], [now I am going to kill him] and the SR clause [having gotten mad]. The SR clause links to [he said], and within those two clauses, the overt subject ja ‘he’ appears in the SR clause, not in the reference clause.

(26) a. \[SR-\text{clause} \text{pro}_i \text{V} \] \ldots [RC \text{DP}_i \text{V} ]

b. \[SR-\text{clause} \text{DP}_i \text{V} \] \ldots [RC \text{pro}_i \text{V} ]

(27) a. Noko-son \[RC \text{non } \text{koko-ke} \]
find-PRIOR.TRANS.SS \text{Ip.Pl.Erg} \text{eat-PERF}
‘Having found it, we ate it.’ (from Faust 1973: 104)

---

16 There are additional complications in the distribution of null subjects: 3rd persons can be null, 1st and 2nd persons cannot. See Camacho and Elías (2008).
b. Sinat-a iki joni, [SR ja sina-son -ronki]
get.upset-PCPL.AUX man, 3.SG get.upset-PRIOR.TRANS.SS-DIR.EV
aka iki: rama-ra en rete-ai.
do-PCPL.AUX now-DIR.EV 1.SG-ERG kill-IMPERF
'The man got mad, having gotten mad, he said: Now I am going to kill (him).'
(from García 1994: 33.)

Different-subject clauses, on the other hand, tend to appear with an overt subject, as seen in (28), although (29) shows that it is also possible to have a null subject in the SR clause. In this example there are two SR clauses, the second one karesaitian has a different-subject marker -tian with no subject.\footnote{I do not have enough information about whether the overt subject is more frequent in the dependent clause or in the main clause for different-subject clauses, although I strongly suspect that the overt subject tends to be in the SR clause.}

(28) [Papa-n pi-aitian] -ra Jose-kan atapabena-ke
can-ERG eat-SIMUL.DS-DIR.EV Jose-ERG hen look-for-PERF
'While father was eating, Jose was looking for a hen.'
(from Faust 1973: 108)

(29) [Non chiban-a], [ka-res-ai-tian], [non
1.PL.ERG follow-PRIOR.DS go-just-IMPERF-SIMUL.DS 1.PL-ERG
jene-yama-ke]
allow-NEG-PERF
'After we followed (it), (it) just kept going, but we didn’t allow (it).'
(from Faust 1973: 108)

The two typical configurations for null and overt subjects are schematized in (30).

(30) a. SS: [\(\text{CP-SR pro}_i \text{V-SR}\) [\(\text{RC DP}_i \text{V}\)]

b. DS: [\(\text{CP-SR DP}_i \text{V-SR}\) [\(\text{RC DP}_j \text{V}\)]

One tempting analysis of same-subject SR is that it involves agreement between the \(\phi\)-features of the two subjects. Following this idea, the null subject would receive its \(\phi\)-feature values from the overt one, regardless of which clause hosts the overt subject (cf. (31a-b)). If both clauses have overt subjects, then their \(\phi\)-features would match (cf. (31c)).
(31) **Same subject:**

a. \[[RC \text{DP} \ldots [SR\text{clause pro} \ldots]]
   \phi(p, \#) \quad \phi(\_ \_)
\]

b. \[[RC \text{pro} \ldots [SR\text{clause DP} \ldots]]
   \phi(\_ \_ \_ \_ \_ \_) \quad \phi(p, \#)
\]

c. \[[RC \text{DP} \ldots [SR\text{clause DP} \ldots]]
   \phi(p, \#) \quad \phi(p, \#)
\]

However, this analysis based on the direct valuation of subject \(\phi\)-features does not explain why the SR marker tracks the valency of the RC. The alternative I will propose assumes that the valuation of the \(\phi\)-features is indirect, through the SR-morpheme.

4 **CASE concord in SR clauses**

If we return to the SR paradigm presented in the table in (6) above, we notice the generalization in (32): no different subject SR-morpheme tracks valency. This is true for several other Pano languages as well, possibly with the exception of Cashibo, according to Sparing-Chávez (1998: fn. 19). In addition, most same-subject SR-morphemes track valency.

(32) Only same subject morphemes track the adjacent verb’s valency.

In order to formalize this observation, it is necessary to flesh out what valency means. Valency classifies verbs in lexical groups depending on the number of arguments they can take (one vs. two vs. three-argument verbs). It could be possible to formalize the observation in (32) by proposing a syntactic feature that codifies the number of arguments a verb takes. However, it seems to me this would simply be a restatement of the facts, since this notion of valency as a feature does not seem to have any other syntactic effect. An alternative route would be to frame the analysis on a distinct syntactic notion that is indirectly linked to valency, namely **CASE**. The syntax of CASE is based, for a fairly large

---

18 If one assumes Chomsky’s (2001) theory of agreement, the direct subject-matching analysis is not enough, because both categories have what is called interpretable features, and **Agree** is assumed to take place in that theory between an uninterpretable feature and an interpretable one.
subset of instances, on the number of arguments a verb has. For example, in nominative/accusative systems, only transitive verbs have accusative case. In a language like Shipibo, only subjects of transitive verbs are marked with ergative marking.

Given this correlation between valency and case, one way to formalize the observation in (32) is by linking it to the grammar of case, as I will suggest. In addition to this conceptual linking between case and valency, we find that the SR-morphology used for tracking valency is the same as the morphological marking for case in Muskogean languages (as shown in section 6), and possible the same also for Shipibo. The proposed formalization of (32) is presented in (33).

(33) **Case-same subject SR Correspondence Generalization:**

same subject SR-morphemes involves a transitive case feature.

As mentioned above, there is some evidence in Shipibo for morphological correspondence between verb-assigned case and SR-related case. In particular, all SR markers that indicate transitive verb concord (i.e. that the adjacent verb is transitive) end in a nasal consonant, just as the ergative case marking in nominals, as shown in (34).

(34) Verb-assigned case endings and SR-related transitive-tracking endings in Shipibo.

---

19 The existence of -taanan ‘PRIOR’ and -anan ‘SIMUL’ disallows the stronger claim for (33), namely that same subject is always case-related, because these two morphemes do not track valency. Their status in Shipibo is unclear: Faust (1973) does not include them in her SR paradigm, but all the examples I have been able to locate suggest they behave as SR morphemes. They have no counterpart in Capanawa, a closely related Pano language with a similar set of SR morphemes. In any case, it is clear that there must be other ways in which two clauses share information, so perhaps these two morphemes fall in that category. I leave this issue open for further research.

20 The transitivizer morpheme that can be added to the verb, is also a nasal.

21 All of the ergative allomorphs but -nin can be reduced to a nasal consonant, with an epenthetic vowel for roots ending in consonants (pórók-an ‘stomach’, mékem-an ‘hand’, wítá-an ‘leg’). The quality of the epenthetic vowel depends on the preceding consonant, and varies from speaker to speaker. The -nin variant appears with three syllable roots (cf. tē.o.ti.nin ‘necklace-erg’). In the case of SR morphemes, the allomorphic process does not occur, so the SR variant does not depend on the number of syllables of the verbal root. I am extremely grateful to José Elias-Ulloa for information and extensive discussion on this point. See Elias-Ulloa (2000) for discussion on the conditions of this allophonic rule.
Since the evidence for the identity of morphological and SR case is not as strong in Shipibo, I will not assume that the case feature for SR has the same morphological representation as verb-assigned case on nominals. Rather, I will assume the representation in (35), with separate representations for the nominal and the SR case systems. This assumption results in a split case system for Shipibo: ergative/absolutive for nominals vs. transitive for clauses.\(^\text{22}\)

\[(35)\]

a. Verb-assigned nominal case: \text{ERG/ABS}

b. SR valency-tracking case: \text{TR/INTR}

### 4.1 Clause-internal and interclausal CASE

Assuming that case features have two distinct realizations, as proposed above, one for verb-assigned case in nominals (\text{ERG/ABS}) and one for valency tracking in SR-markers (\text{TR/INTR}), we expect them to be independent to a certain degree, and this is what we find. Recall that \text{TR/INTR} relates a SR-morpheme to a verb in an adjacent clause, whereas \text{ERG/ABS} is checked internally to its clause, as schematically represented in (36).

\[(36)\]

\[\begin{array}{c}
\text{SR} & \text{case} & \text{DP} & \text{case} & \text{V} & \text{case} & \text{SR} & \text{case} & \text{DP} & \text{case} & \text{V} \\
\text{Ref. clause} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} & \text{case} \\
\end{array}\]

As a result, the verb-assigned nominal case-features and the SR case-features can appear under different possible combinations, as illustrated in (37).

\[(37)\]

Possible verb-assigned and SR case combinations in Shipibo.

\(^{22}\) Sparing Chávez (1998) proposes that SR-morphemes in Amawaca are marked for case (the same case as nominals). For example, she analyzes the SS-morpheme -\textit{taito-n} as ‘ss-ergative’ and -\textit{taito-ù} as ‘ss-nominative’. Each of them track a transitive and intransitive verb respectively. However, unlike Shipibo, Amawaca has a split case system where nominative marks focused, preverbal subjects of intransitive verbs.
To take a specific example, in (38a) the SR-marker -kin bears a transitive case feature, but is attached to an intransitive verb root ka- ‘go’, which assigns absolutive to its subject. Likewise, -i in (38b) has an intransitive case feature but is attached to a transitive verb root pi- ‘eat’, whose subject will be ergative. Given this partial independence in case features, the lexical representation for each of the SR-verbs in (37) would be the one in (39).

(38)a. Ea-ra ka-kin mananšawe b(i)-ba-ke.
   I.abs-dir.ev go-simul.trans.ss turtle find-rcnt.past-perf
   ‘When I was going away, I found a turtle.’

b. En-ra atsa pi-i ka-ke
   I.erg-dir.ev yucca eat-simul.intr.ss go-perf
   ‘When I was eating yucca, I left.’

(39) a. ka- -kin ‘go-simul.trans.ss’
   <ABS> <TR>

b. pi- -i ‘eat-simul.intr.ss’
   <ERG> <INTR>

In sum, I have proposed that a subset of the same subject SR-morphemes in Shipibo involve case marking to the extent that they track valency, but that this case marking is independent of the clause-internal case marking. As I will argue below, the availability of case marking between clauses can explain the mechanism by which arguments become coreferential, as well as also the possibility of having clause sequencing.

In the next section, I propose a mechanism to formalize the intuition that case is involved in establishing the possibilities of coreference in same-subject clauses. This is done through the mechanism of Agree developed in Chomsky (2000) and subsequent work. The notion that SR clauses agree with other clauses is not new, Stirling (1993: 123), for example, defines SR as “a kind of clause-level agreement, which normally marks the clause it occurs in as syntactically and semantically dependent, and indicates whether there is continuity
or discontinuity between the eventuality described by the marked clause and that described by the controlling clause.” My essential contribution is to subsume this type of agreement in the specific theory of agreement developed in the Minimalist framework, and to explore the role that case plays in the grammar of switch reference in Shipibo. In the next section, I briefly review the theory of agreement, and present the analysis I am proposing.

5 SR, CASE, AGREEMENT AND COREFERENCE

5.1 The Agree relationship

In current Minimalist theories, agreement features involve two distinct dimensions of variation: interpretability and valuation. Interpretability refers to whether the feature can be read by the semantic and/or phonetic interface; valuation relates to whether a given feature has a specific value. For example, one could assume that a null pronoun must be interpreted for person, but the actual value of that person is only realized in connection with the person value of an antecedent. In contrast to Chomsky’s (2000, 2001) original proposal, Pesetsky & Torrego’s (2001, 2006, 2007) propose that all possible combinations of interpretability and valuation are logically possible. In particular, it is possible to have an interpretable, unvalued category, and an uninterpretable, valued category, which Chomsky’s system disallows. Uninterpretable features must be deleted and unvalued features must be valued at the interface.

Additionally, I assume with Baker (2008) that a category can agree with another category when either one c-commands the other. This is a departure from standard analyses, which assume asymmetric c-command of one of the categories by the other. Based on these proposals, I assume the following conditions for Agree in (40). Conditions (40b-c) are taken from Baker (2008: 65), conditions (40a, d) are taken from Pesetsky & Torrego (2006: ex. 5).

(40) Definition of Agree

1) Conditions for Agree
   a. An unvalued feature F (a probe) on a head H at syntactic location α (F_α) scans its agreement domain for another instance of F (a goal) at location β (F_β) with which to agree.

   b. The probe must c-command the goal or the goal must c-command the probe.

   c. The probe and the goal must be in the same phase or one of them must be on the edge of adjacent phases (Chomsky’s (2001) Phase Impenetrability Condition)

   .
2) The Agree operation

Replace $F_\alpha$ with $F_\beta$, so that the same feature is present in both locations.

In Chomsky’s (2000) original conception and in subsequent work, strong phases are defined as syntactic domains (CP and vP) that bound syntactic operations such as movement and agreement, unless the targeted category is on the edge of the phase (the head of the highest projection or its specifier).

I will also assume the version of agreement proposed by Pesetsky & Torrego in which once agreement is established between two categories by the feature-sharing mechanism in (40d), the link between them remains accessible to subsequent processes. This proposal contrasts with Chomsky’s system, where uninterpretable features are erased once checked. In Pesetesky and Torrego’s proposal, two unvalued features can agree, become shared, and then receive a value by a subsequent agreement operation with a third feature.

5.2 Agreement in same subject SR clauses

I have assumed that same-subject SR clauses have an additional TR or INTR CASE feature. Pesetsky & Torrego (2001, 2004) argue that structural case on DPs is uninterpretable T ($uT$). I will extend this proposal to the CASE feature on SR morphemes, suggesting the representation in (41): the SR morpheme has uninterpretable, unvalued T and uninterpretable, unvalued $\phi$.23

(41) Feature specification of the SR morpheme

\[
\begin{bmatrix}
  uT
  \\ uT
\end{bmatrix}
= \text{TR}
\]

With these assumptions in mind, let us consider how the agreement process works when the SR clause has a null subject. The first step involves agreement in $\phi$-features between the inflection, the interpretable subject and the SR morpheme of the SR clause, as shown in (42). All of them share $\phi$ features as indicated by the common subindex, but remain unvalued.24

---

23 The notation for agreement features is as follows: $u\backslash i$ indicates uninterpretable\interpretable, $T\backslash \phi$ the feature content (tense or person\number), curly brackets indicate the value of the feature, which can be unvalued ($\{\}$).

24 In order to avoid confusion, I ignore the SR-internal CASE assignment to the subject.
(42) **Same subject** in Shipibo: SR-internal agreement with null pro

\[
\phi\text{-feature sharing}
\]

\[
\begin{align*}
\text{DP}_i & \quad I_{\text{main}} \ldots \\
& \quad \text{r}_{T_a(t)} \quad \text{u}_{T_a(t)}
\end{align*}
\]

\[
\text{CP-SR} \quad \text{[C V}_{\text{INTR-son}} \quad [\text{IP pro}_{\text{ABS}} \quad \text{VP} [i \ I ]]]
\]

When the SR clause in (42) above merges with the reference clause, the result is the one in (43), where the unvalued \([u_{T_a}, \phi_a]\) features of the SR morpheme are located at the edge of the strong phase. In this case, the SR morpheme is located at the edge of the CP strong phase and can probe upwards to find another feature that will provide a value, in this case the higher IP and subject. Recall that I have assumed that SR clauses attach either to CP or IP, hence their search domain would be at least IP. I assume that as a result of copying values for the \(\phi\)-features, the two DPs having the same reference.\(^{25}\)

(43) **Same subject** in Shipibo: Interclausal agreement with null pro

\[
\phi\text{-feature valuation}
\]

\[
\begin{align*}
\text{DP}_i & \quad I_{\text{main}} \ldots \\
& \quad \text{r}_{T_a(t)} \quad \text{u}_{T_a(t)}
\end{align*}
\]

\[
\text{CP-SR} \quad \text{[C V}_{\text{INTR-son}} \quad [\text{IP pro}_{\text{ABS}} \quad \text{VP} [i \ I ]]]
\]

Let us now consider the case in which there is an overt subject in the SR clause, illustrated in (44). Since the subject has explicit \(\phi\)-feature values, when it agrees with the inflection and the SR-morpheme, it will value the \(\phi\)-features of those two items. However, the uninterpretable T features of the SR-morpheme remain unvalued, and the only goal that can match them is the inflection in the reference clause. This inflection, in turn, is associated with the \(\phi\)-features of the reference-clause subject. Under the reasonable assumption that two sets of agreeing features cannot have contradictory values, then the only grammatical option is for the two subjects to agree, as shown in (45).

---

\(^{25}\) This is not to say that all copying of \(\phi\)-features results in coreference. I assume that agreement between N and Adj can result in copying of a subset of \(\phi\)-features, but to the extent that adjectives don’t refer, there is no coreference. When two DPs are subject to syntactic agreement, they are typically coreferential. For example, anaphors and antecedents must agree and corefer, and I assume, share \(\phi\)-features.
Finally, it is possible to have two overt subjects, one in the reference clause and one in the SR clause (cf. Camacho and Elías 2008). In this case, each of the subjects will have its own $\phi$-features, and the derivation is very similar to the one just presented: the uninterpretable T feature still establishes the relationship between the SR and the reference clause. In this case, given that the overt DPs have their own $\phi$-features, I will assume that some grammatical principle insures that the $\phi$-feature values of the two agreeing categories cannot have contradictory indices.

To summarize, the proposed analysis assumes that a crucial part of the SR-suffix’s contribution is an uninterpretable case feature that is formalized as two separate features: uninterpretable, unvalued T, and uninterpretable, unvalued $\phi$. The case feature acts as a link to establish coreference and temporal ordering relationships between the elements in the SR-clause, and those in the reference clause.

5.3 Disjoint reference (different subject)

The distribution of same subject morphology that led to the generalization in (32) above was built on the observation that same subject markers systematically alternate between those that track transitivity and intransitivity on the adjacent clause. Different subject markers, on the other hand, do not systematically alternate depending on the valency of the reference verb, although, as we will see below, in the Pano languages, some of them indirectly indicate valency. Furthermore, different subject markers do not codify the sequence of
events between the SR and the reference clause. Following the logic developed earlier, this means that they lack a CASE feature, both the uninterpretable, unvalued T, and $\phi$. In the following sections I describe how grammar of disjoint reference works.

5.3.1 Strictly disjoint SR markers

Different subject morphemes in Shipibo (and Pano in general) can be classified into two basic subtypes (cf. Valenzuela 2006): in one, the referent of the subject of the SR clause is different from the referent of any DP present in the reference clause, as shown in (46). According to Valenzuela (2006: 10), this morpheme requires strict disjoint reference between subjects.\[^{26}\]

\[(46) \quad \text{[Jene-n rete-ai-tian]} -ra \quad \text{ainbo} \]
flowing.water-ERG kill-IMPERF-DS-DIR.EV woman

\[\text{sai ik-ai.} \]
onom: cry.out.for.help do.-IMPERF

\'Since (s)he was drowning, the woman cried out for help.\'

\[^{*}\]Since she was drowning, the woman cried out for help.\]

(from Valenzuela 2006 (31), glosses adapted)

Thus, for -tian, the requirement is that the subject be new, at least with respect to the reference clause. This does not mean that the referent cannot be present in previous discourse, but it has to be new in the reference clause. In this sense, this different-subject marker introduces a new discourse referent or promotes to the foreground a discourse referent that is inactive in the background. I will suggest that these notions can be encoded as “x is active”, a state that can be achieved either by becoming activated from the background or by being newly introduced in discourse. The informal semantic interpretation of the relevant portion of (46) is presented below.\[^{27} 28\]

\[(47) \quad \text{a. The woman cried for help since s/he was drowning.} \]
\[\text{b. drown(x) & x is active & s/he(x)}\]

\[^{26}\]Note that Valenzuela’s observation contrasts with Faust’s (1972) example quoted above in (29b) and Faust’s description of -aitian, which, according to her allows (and possibly requires) coreference between the main clause subject and the SR object. I do not know whether this is a matter of dialectal variation. In any case, coreference between main subject and embedded object is described and accounted for below.

\[^{27}\]Assuming that pronominals presuppose discourse familiarity, the subject of the SR clause in (46) must have become active, not newly introduced.

\[^{28}\]I would like to thank an anonymous reviewer for discussion of this issue and Roger Schwarzschild for suggestions on on ways to implement this idea. All errors remain mine.
The syntactic representation is presented in (48), where the SR-morpheme lacks T and $\phi$-features. This means that the pro establishes its discourse reference through the regular mechanisms by which pronominals establish discourse reference. Since there is no case to activate the relationship between the reference clause and the SR clause, $\phi$-feature agreement is not available (and, arguably, not possible).

(48) **Different subject** in Shipibo:

$$[\text{Ref.Clause} \quad \text{DP}_1 \ldots \left[\text{CP}_{SR} \quad \text{SR-active}(x) \quad \left[\text{pro} \ (x) \ldots \right]\right] \quad \phi\{p, \#\}$$

The structure in (48) does not preclude accidental coreference between the two subjects. In the general case, this may be problematic: if the speaker intends the two subjects to be coreferential, s/he will typically use a same subject marker, not a different subject marker.

To prevent accidental coreference between subjects with a different subject marker, I will adopt an idea from Hornstein’s work on control PRO (cf. Hornstein 2007). In this work, he argues that in certain contexts, derivations with movement preempt derivations without movement. Specifically, he suggests that certain cases of controlled PRO are derived by copying the controlled PRO to the antecedent position, as shown in (49). Whenever this is possible, overt pronouns are not, as seen in (50). In this analysis, both clauses have similar derivations, and the first one blocks the second one because the second involves merging the pronoun in the lower position, whereas the first one involves moving the DP from the base position to the higher subject position. Since movement is considered more economical than merging, the movement derivation blocks the merging one.

(49) Harry$_1$ hated \((\text{t}_1 \text{kissing Mary})\) \hspace{1cm} (Hornstein 2007 (45))

(50) *Harry$_1$ hated \((\text{him}_1 \text{kissing Mary})\) \hspace{1cm} (Hornstein 2007 (46))

Hornstein’s analysis relies on preference for movement over merger, whereas the analysis pursued here relies on agreement, but Hornstein’s underlying idea can be easily adapted. Specifically, let us consider the two possible derivations of a SR clause with coreferential subjects, one with same subject marking, the other (the one we want to prevent), with different subject marking. Following Hornstein’s analysis, the difference between (51) and (52) is that the second one inserts a pronoun, or, in my terms, comes with valued $\phi$-features, hence need not be valued outside its clause. However, given that there is the alternative in (51), where valuation is done by copying features (rather than merging them), then the movement derivation in (51) will preclude one in (52).
(51) Coreferential subject with same subject marking

\[
\phi\text{-feature valuation}
\]

\[
\begin{array}{cccc}
\phi \{p, #\} & \phi \{p, #\} & \phi \{p, #\} & \phi \{p, #\} \\
\psi \{p, #\} & \psi \{p, #\} & \psi \{p, #\} & \psi \{p, #\} \\
\end{array}
\]

\[
\begin{array}{l}
DP_i \rightarrow I_{main} \rightarrow [CP - SR \left[ \begin{array}{c} C \ V_{INTR - son} \ [IP \ pro_{i-ABS} \ VP \ [I \ I \ ]] \end{array} \right]] \\
\end{array}
\]

\[
\begin{array}{l}
t_{T_a}\{t\} \rightarrow u_{T_a}\{t\} \ \\
\text{CASE agreement} \\
\end{array}
\]

(52) Coreferential subject with different-subject marking

\[
\phi\text{-feature valuation}
\]

\[
\begin{array}{cccc}
\phi \{p, #\} & \phi \{p, #\} & \phi \{p, #\} & \phi \{p, #\} \\
\psi \{p, #\} & \psi \{p, #\} & \psi \{p, #\} & \psi \{p, #\} \\
\end{array}
\]

\[
\begin{array}{l}
DP_i \rightarrow I_{main} \rightarrow [CP - SR \left[ \begin{array}{c} C \ V_{INTR - tian} \ [IP \ pro_{i-ABS} \ VP \ [I \ I \ ]] \end{array} \right]] \\
\end{array}
\]

\[
\begin{array}{l}
t_{T_a}\{t\} \\
\end{array}
\]

If the subject of the SR clause is also an overt DP, the same logic does not apply for two reasons: overt DPs do not usually come unvalued, so no movement is necessary, therefore the two derivations are not comparable and one cannot preempt the other. As a result, an overt pronominal is predicted to be possible, and it is attested, as seen in (53).

(53) [Ja jo-ke-tian] -ra ea k-ai.

3.SG come-imperf-ds-dir.ev 1.SG leave-imperf

‘When s/he comes, I will leave.’

(from Loriot, Lauriault and Day 1993: 346)

Notice that if both clauses have a coindexed DP, the structure would result in a violation of Principle C of the Binding Theory.

5.3.2 Subject-disjoint SR markers

In the second type of different subject marker, the subjects of the clauses involved are also distinct, but coreference is still necessary between the object (direct or indirect) and a subject. The most frequent example of this type in Pano establishes coreference between the SR object and the reference-clause subject, as schematized in (54).
There are good reasons not to believe that Shipibo -a and Capanawa -a? track valency on the reference-clause verb. Note, for example, that the cross-referenced object in these examples can be direct, indirect, or prepositional, as seen in (55), where a clay pot is the PP complement in the SR clause, but the subject of the reference clause.

Furthermore, there is reason to doubt that -a, -a? are truly SR markers. First, note that they are homophonous with one of the relative clause morphemes (cf. Valenzuela 2002 for Shipibo). Compare the following two examples, one given as a SR clause, the other one as a relative clause. Both examples fall under the schema in (54): in the first one, the null indirect object of meni ‘gave’ is the subject of kake ‘go’, in the second one, the object of onanibata ‘meet’ is the subject of kake ‘meet’.

29 The surface form kobinha-?a in example (55) is the result of two phonological processes: one that fuses glottal stops to vowels in coda position of even-numbered syllables, the other one, an insertion of a glottal stop between dimorphemic vowels, cf. Loos (1969) and Elías-Ulloa (to appear). Thanks to J. Elías-Ulloa for clarification on this point.
Second, both relative clause morphemes and the SR morphemes encode similar event-sequencing relations: relative clause -a encodes a past participle that indicates that the event of the relative clause precedes that of the main clause, and the SR morpheme indicates that the SR event must precede the reference-clause event. A third parallelism between SR -a and relative clause -a is that they both involve impoverished verbal morphology (cf. Valenzuela 2002: 8 for relatives and the discussion of example (11) above for SR). Finally, neither allow for second-position clitics.

These parallelisms strongly suggest that the alleged SR -a is simply a subcase of the relative clause participial -a. There is one area where SR and relative -a diverge: Faust (1973:85) and Valenzuela (2002:12) point out that relative clauses are marked with case when they are subjects of a transitive verb, as seen in (57). In this example, the relative clause is marked with -tonin, an ergative case marker reserved for participles (cf. Faust 1973 and Loriot, Lauriault and Day 1999: 412). Since SR clauses are typically adjuncts, it is expected that they will not be case marked.\(^{30}\) I will tentatively conclude that the SR -a marker is not really a SR marker, but a subset of a the relative clause morphemes.\(^{31}\)

(57) Ainbo [Kako-nko-nia nokot-a]-tonin -ra
woman Kako-LOC-ABL.INTR arrive-PAST.PCPL-ERG-DIR.EV
rao kobin-ak-(a)i.
plant.medicine boil-do.TRAN-IMPERF

‘The woman who arrived from Kako is boiling the plant medicine.’

(From Valenzuela 2002, ex. (16))

To summarize, I have argued that the alleged cases of valency-tracking different subject SR markers do not really involve syntactic case concord, unlike the same subject markers seen earlier. I have suggested that one subcase does not really track transitivity, because it can be coreferential with any vP-internal argument (or even PPs). The other subtype plausibly involves a different analysis, one that groups this marker with relative clause participles.

---

\(^{30}\) Certain adverbs are case marked in Shipibo, in very similar ways to SR-clauses.

\(^{31}\) If this is correct, the SR marker would have to have the semantics of an appositive relative, since there is no evidence that the SR use of -a forces a restrictive reading as restrictive relatives do.
In the following section, I turn to Muskogean languages, where case concord involves both same subject and different subject marking.

6 Muskogean SR

The analysis developed so far correlates valency concord with same subject by postulating that the case feature with the feature $uT\{\_\}$, $u\phi\{\_\}$ on the SR-marker activates an agreement relationship that values the $\phi$-features of the same subject subject. Muskogean languages provide data that confirm the proposal developed so far.\footnote{Thanks to Mark Baker for pointing out the relevance of Muskogean to my proposal.}

Several Muskogean languages have an overlap between case markers and SR-morphemes (see, for example Schuetze-Coburn 1987 for Oklahoma Seminole Creek, Rising 1992 for Koasati and Broadwell 2006 for Choctaw).\footnote{Unlike Shipibo, however, case markers are not obligatory in Koasati and Creek, and their appearance seems to be pragmatically determined. According to Schuetze-Coburn (1987: 149, presence of a case marker correlates with a specific/salient/given (including contrastive).} Choctaw, for example, has eight different SR markers. Of those, the three bolded in (58), partially from Broadwell (2006: 264) can be directly related to nominal case marking (-at NOM, -a ‘ACC’). This is illustrated in the examples in (59). In the first set of examples, the same subject or different subject morpheme correlates with a coreferent or disjoint referent 3rd person subject in each clause.\footnote{Underlining indicates vowel nasalization.}
(58) Chocktaw switch-reference and nominal case morphology

<table>
<thead>
<tr>
<th>Same subject</th>
<th>Different subject</th>
<th>Case marking on NPs</th>
<th>Gloss</th>
<th>Nom.</th>
<th>Accus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-kat</td>
<td>-ka</td>
<td></td>
<td>‘that’ 'when'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-hmat</td>
<td>-hma</td>
<td>COMP</td>
<td>‘when’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-kmat</td>
<td>-kma</td>
<td>‘if’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-oosh</td>
<td>-ø</td>
<td>‘that’ 'for'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-haatokoosh</td>
<td>-haatoko</td>
<td>PART</td>
<td>‘because’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-ohmakoosh</td>
<td>-ohmako</td>
<td>‘although’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-ookakoosh</td>
<td>-ookako</td>
<td>‘but’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-cha</td>
<td>-na</td>
<td>‘and then’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(59) a. Pisachokma-kat ikhánah
    handsome-COMP.ss know
    ‘He₁ knows that he₁ is handsome.’

b. Pisachokma-ka ikhánah
    handsome-COMP.ds know
    ‘He₁ knows that he₂ is handsome.’

(60) a. Chókf-yat iit taloowa-hma, oklah- hilhattook
    rabbit-NOM toward sing-when.DS PL dance
    ‘When Rabbit sang, they danced.’

b. Makaatokoosh ihasbis-ma takaachittook miyah
    and.then.ss tail-D.ACC hang EVID
    ‘And then he hung it on his tail, they say.’

(from Broadwell 2006: 264, exs. (3)-(4))

(60) a. Chókf-yat iit taloowa-hma, oklah- hilhattook
    rabbit-NOM toward sing-when.DS PL dance
    ‘When Rabbit sang, they danced.’

b. Makaatokoosh ihasbis-ma takaachittook miyah
    and.then.ss tail-D.ACC hang EVID
    ‘And then he hung it on his tail, they say.’

(from Broadwell 2006: 70, exs. (36), (38))

As these examples show, in Muskogean languages the correlation between case and SR is transparent, suggesting that the analysis proposed for Pano can also account for these cases in Muskogean. The parallelism between both language families goes further: Broadwell (1997), following Finer (1985), suggests that Muskogean SR markers appear in COMP. Given the similarity in distribution,
I propose an extension of the analysis developed so far to Muskogean, in particular, I argue that the SR morpheme also has a case feature instantiated as $uT\{t\}, u\phi\{,t\}$.

As in Shipibo, the SR morpheme in Muskogean has a nominative case feature that probes upwards, until it finds a nominative case feature on IP. As a consequence, an agreement relationship is established between the two clauses and the $\phi$-features of the reference-clause subject value the $\phi$-features of the SR-morpheme. The SR-morpheme in turn agrees with the SR subject, yielding coreference between both subjects, as illustrated in (61).

(61) **Same subject** in Choctaw:

\[
\phi\text{-feature valuation}
\]

For ease of presentation, I have represented the main clause first and the SR clause second in this schema, although this order does not reflect the presumed syntactic structure of Choctaw, which is head final, as shown in (62).

(62)

The analysis presented above suggests that same subject is an indirect relationship between a nominative case-marked SR marker and a nominative subject. This idea is further confirmed by certain interactions between SR markers and possession raising in Choctaw and Chickasaw.\(^{35}\) Broadwell (1997) points out that these two languages have a rule that extracts the possessor of the subject of an intransitive verb and marks it as nominative, as seen in the Chickasaw

\(^{35}\) I wish to thank an anonymous reviewer for pointing out these data.
example in (63a). According to Broadwell, the raised possessor is adjoined to
the sentence. By contrast, when the rule doesn’t operate, the possessor is not
marked for nominative case (cf. (63b)).

(63) a. John im-ofi'-at im-illi-h
    John-NOM III-dog(-NOM) die-TNS
    John’s dog died.’

b. John im-ofi'-at illi-h
    John III-dog-NOM die-TNS
    John’s dog died.’ (quoted in Broadwell 1997, exs. (3)-(4))

When a SR clause is attached to an intransitive with a raised possessor, as
in (64), the SR subject can take either the subject or the raised possessor as
antecedent. If the possessor is not raised, only one interpretation is possible
(the dog is the antecedent of the SR subject).

(64) a. John-at ofi'-at im-abiika-tok [sa-kisili-tokat]
    John-NOM dog-NOM III-sick-PAST 1.sg.II-bite-when.ss
    John’s dog was sick when he/it bit me.’

b. John im-ofi'-at abiika-tok sa-kisili-tokat
    John III-dog-NOM sick-PT 1.sg.II-bite-when.ss
    John’s dog was sick when *he/it bit me.’
    (from Broadwell 1997, ex. (7)-(8))

Under the analysis proposed here, these data are expected: since SR is argued
to be a relationship mediated by nominative-case concord, one would predict
that SR would track either of the constituents marked with nominative in
the raised construction as in (64a), represented in (65). In the case when the
possessor is not raised, coreference is predicted to be with only the possessee
which is the only argument marked as nominative (cf. (64b) and (66)).

(65) Same subject with possessor raising in Chickasaw:

φ-feature valuation

\[
\text{DP}_{NOM-i} \ldots \text{DP}_{NOM-j} I_{\text{main-i/j}} \ldots [CP [c \ V-tokat [IP \text{pro}_{i/j} \text{VP [i I}_{i/j}]]]]
\]

\[
\phi_{T_a(t)} \leftarrow u_{T_a(t)} \rightarrow \text{CASE agreement}
\]
Same subject without possessor raising in Chickasaw:

\[
\phi\text{-feature valuation}
\]

\[
\begin{array}{c}
\text{DP}_i \cdots \text{DP}_{\text{NOM-j}} \text{I}_{\text{main-j}} \cdots [\text{CP} [C \text{ V-tokat} [\text{IP} \text{ pro}_j \text{ VP} [I I_j]]]]
\end{array}
\]

CASE agreement

Note that the proposed analysis requires an active agreement relationship (i.e. valuating features) among constituents, it is not enough to have two constituents that happen to accidentally share a set of \(\phi\)-feature values. Specifically, the analysis requires raised possessors to be part of the chain that licenses nominative CASE in (65).

6.1 Apparent counterexamples: topic-tracking vs. subject-tracking

In a number of the Muskogean languages, there are cases where the SR marker has been argued to track the topic of the other clause, rather than the argument. We can find examples of this type at least in Choctaw and Koasati. In the first language, some cases of SR track the topic of the RC, not the subject, as illustrated in (67). In this example, “the different subject pro-verb \(aatoko\) is used, even though ‘I’ is the subject of both the preceding and following clauses” (Broadwell 2006: 267). However, if SR tracks topics (as opposed to arguments), this example would no longer be an exception, since the topic changes from the first clause (‘the other kids’) to the second one (‘I’).

\[
(67) \quad \text{Alla' alhiiha ila-kat hohchifo' ima-ka h\text{\'aklo-li-ttook.}}
\]

\[
\text{child group other-COMP.SS name give-COMP.DS hear}
\]

\[
\text{Aatok-o an-akkia noksh\text{\'apah ch\text{\'oyyo}hmih-oosh s}ihochchifo'}
\]

\[
\text{be-PART.DS I-also afraid sort.of-PART.SS name}
\]

\[
\text{lohma-t anooolilittook}
\]

\[
\text{quite tell}
\]

‘I heard the other kids give their names. So I also said my name, timidly and softly.’

(from Broadwell 2006: 267, ex. (16))

As an anonymous reviewer points out, it would be possible to include these cases in the analysis suggested so far. The pro-verb \(aatok-o\) can be analyzed as ‘X did that’, where the reference of X and of ‘that’ is picked up among the salient subjects and events in the local discourse. In this particular case, the pro-verb picks ‘the other children gave their names’. If so, the pro-verb
is predicted to have a different subject marking with respect to ‘I heard’, as illustrated in (68).³⁶

(68) \[ [C_{11} \text{ I heard} [C_{12} \text{ kids}_j \text{ give . . .}]] [C_{13} \text{ kids}_j \text{ did that}_{C_{12}}-\text{DS} . . .] \]

In Koasati, nominative and same subject switch reference are both marked with -k, and oblique and different subject with -n (cf. (69)).³⁷ As the glosses suggest, -k appears both on subjects (as a case marker), and on SR-verbs to indicate same subject (\textit{itcokhalihkok} ‘entered-SS’, \textit{hihco-k} ‘saw-SS’). The morpheme -n, on the other hand, indicates object marking (cf. \textit{Edkà} in (69a) vs. \textit{Edkak} in (69b)) and different subject (\textit{hihca-n} in (69b) vs. \textit{hihco-k} in (69a)).³⁸

(69) a. Joe-kak roomkà itcokhalihko-k Edkà hihco-k cokko:lit
    joe-SRk room-SRn enter-SRk Ed-SRn see-SRk sit.down
    ‘Joe came into the room, saw Ed, and sat down.’

   b. Joe-kak roomkà itcokhalihko-n Edk-k hihca-n cokko:lit
    joe-SRk room-SRk enter-SRn Ed-SRk see-SRn sit.down
    ‘Joe came into the room, Ed saw him, and Joe sat down.’

(From Rising 1992, exs. (3) and (5))

According to Rising (1992), up to 5% exceptions in his corpus show deviations from the pattern of correlation between SR and case marking in Koasati. Kimball’s (1991) very extensive grammar on the other hand, doesn’t present any. Rising’s exceptions include instances where either nominative is assigned to an object, accusative is assigned to a subject (a single case), or where the SR marking does not match the expected pattern. He argues that the distribution of -k and -n marking is best analyzed as the tracking of information continuity: -n marks new information (-continuity) and -k signals old information (+continuity). Of these counterexamples, some can be argued not to be real cases, and others can be given a different analysis.³⁹

---

³⁶ A similar analysis is proposed for the distribution of SR marking in connection with coordination in Navajo in Camacho (2003).

³⁷ I have adapted Rising’s (1992) glossing system to make it easy to follow. In particular, I will only gloss the relevant morphemes, and will not give the underlying form for other morphemes. The possible sr morphemes (-k and -n or nasalized vowel) are glossed as Srk and Srn. The reader should keep in mind that these morphemes appear both on nouns and on verbs, as explained below.

³⁸ In the Oklahoma Seminole dialect of Creek, -n also marks oblique case in nominals (cf. Schuetze Coburn 1987), and different subject in SR; but -t marks nominative and same subject.

³⁹ For example, Rising quotes (i), as a case where the subject \textit{kayakkon} ‘kayak’ is unexpectedly marked with -n, but as an anonymous reviewer points out, the only evidence suggested
Some other cases seem to be real counterexamples, for example, (70), where
-k links two clauses ([others did not stop entering-k] and [the room was full])
with the different subjects. Rising’s explanation of this mismatch is that “one
intuitively sees a causal connection between clause 1 and clause 2, and this
connection is encoded but not spelled out by the -k (p. 54).”

(70) Miita mao-k ilma:kat itcokkahka-k fayahko-k alotkaahosit
other 3.pro-sr come enter-sr_b quit-sr_b be.full.very
ano:ka-k roomkasi-k coki:boshcooliskan
be.done-sr_b room-sr_b be.big
‘Other people did not stop coming and entering until the room was
completely full since it was quite small.’ (from Rising 1992, ex. (77))

In this case, an alternative analysis would be that -k morpheme is not the same
subject suffix, but an homophonous morpheme with the meaning ‘if, when’,
according to Kimball (1991: 214-215). The -k ‘if, when’ suffix does not seem to
vary between same subject and DS, and is not followed by a SR morpheme.

6.2 Different subject in Muskogean

As argued, same subject involves case concord between clauses and transmission
of φ-features to the subject of the SR clause. For the different subject
case, the situation is slightly different: if the different subject marker probes
upwards and finds an argument with the relevant feature in the RC, the re-
sult would be coreference with that argument (presumably a non-subject),
contrary to fact. Rather, as in the case of Shipibo, I take different subject to
indicate lack of case agreement. In this sense, Rising’s observation that the
by Rising that kayak is a subject is that it controls (some of) the agreement on the verb.
However, with verbs of possession, it is not unusual for objects to control the selection or
suppletion of the verb, allowing for an alternative explanation for the unexpected -n.
Example (ii) illustrates an object kosno ‘us’ marked with -k, but as Rising points out, this
element was found in a recording, and was not accepted by any of the native consultants.

(i) Mafã kayakko-n am-naahooli-k
there kayak-sr_b exist-sr_b
‘There I used to have a kayak’

(ii) Isno-k poli:katiskap kosno-k matkosob:ayli
2-pl.pro-sr pray 1.pl.pro-k remember
‘When/if you pray, remember us.’ (from Rising 1992, ex. (58) and (66))

Rising only gives one example for the opposite mismatch (-n marking SS), and it involves
coordination, which may be introduce other complications.

Thanks to an anonymous reviewer for pointing out this possibility.
morpheme that appears in nominals and also marks different subject marking in Muskogean has a number of functions when it is on a noun: locative, oblique, etc.), suggesting that it may best be treated as non-nominative, rather than as case uniquely associated with one type of argument. If so, the different subject SR marker will lack any specific case features, hence there will be no agreement with the RC and no argument. As in the case of Shipibo, I assume that the existence of a feature copying derivation in the language to express same subject preempts another derivation that expresses same subject coreference accidentally.

As in the case of Shipibo, lack of agreement means that the SR morpheme will not be able to find a value in the adjacent clause. Its presence signals the activation of a discourse participant that can be new or inactive. The structure is shown in (71).

(71) Different subject in Koasati:

\[
\begin{array}{c}
[\text{RC} \quad \text{DP}_i \quad \ldots \quad \text{CP}_{\text{SR}} \quad \text{SR-active}(x) \quad [\text{DP}(x)_j \quad \ldots \quad ]] \\
\phi\{p, \#\} \\
\phi\{\ldots\} \\
\phi\{p, \#\}
\end{array}
\]

7 Conclusions

I have argued that case is the essential mechanism to account for the same subject SR relationships in Shipibo and in Muskogean. Case is expressed through an abstract feature in Shipibo (\text{TR}) and by a nominative case morpheme in Muskogean. In both instances, it corresponds to an uninterpretable T and uninterpretable \(\phi\) feature, which needs to be valued. The uninterpretable T feature is typically valued by the \(\phi\)-features of the reference verb. As a result, the \(\phi\)-features of the SR and the reference clause must match in one of two ways: if one of the subjects is null, the values of that subject will be copied to the other one, if both subjects are overt, they must have identical indices. The feature-copying operation insures that coreferential relationships will be local, since Agree can only take place within strong phases or between the edge of one strong phase and another strong phase. In this sense, this proposal derives same subject SR as a case of feature copying, in the spirit of Hornstein’s (2007) copy theory of control.

This conception of SR as intimately linked to case and feature movement extends the conception of case that has been prevalent in generative grammar, particularly in the last decade. In this view, case is seen as the means to connect nominal arguments with elements that bear tense (T). This view is central in Chomsky (2000) and Pesetsky & Torrego (2001, 2006, 2007). However, if this view is correct and case links tense-related categories with \(\phi\)-feature-related categories, one would expect to see manifestations of case in
other instances where a tense-related category is connected with a \( \phi \)-feature related category. I have proposed evidence arguing that SR systems of the Pano and Muskogean type is precisely such a case: embedded clauses that must be interpreted with respect to tense, but whose tense feature is deficient, also show a \( \phi \)-feature dependency, and both relations are connected through case.

The converse situation is seen in different-subject SR clauses: for these cases, I have argued, tense dependency is not as strong, and \( \phi \)-feature dependency is also absent, precisely because case is not involved.

References


*Syntax at Santa Cruz* 1: 35–63.


