

Switch-Reference by Movement

Doreen Georgi*

Abstract

This paper deals with a reference tracking system in which a marker indicates whether two clauses have a coreferent subject or not: Switch reference. I argue that obligatory control and same subject contexts in Switch reference languages have some properties in common. I therefore adopt the movement theory of obligatory control (cf. Boeckx et al., 2010) and develop a similar analysis for same subject environments: There is only a single DP which is moved from the marking clause to the reference clause. The morphological marker is analysed as the realization of T in an embedded clause which is sensitive to whether this movement has applied or not, but it is no longer a marker that tracks referential identity. In this way, indices and binding principles that are needed to account for referential (non-)identity in the traditional analysis of the phenomenon can be dispensed with. Furthermore, it is shown that characteristic cross-linguistic properties and some non-canonical instances of Switch reference follow from the analysis.

1. Introduction

Switch reference (SR) is a term introduced by Jacobsen (1967) that refers to a reference tracking system in which markers encode whether the subject of a verb α is coreferent with the subject of a verb β . Coreference and non-coreference are realized by a *same subject* marker (SS) and a *different subject* marker (DS), respectively. These markers occur in only one of the clauses that are involved and are either verbal affixes or independent morphemes. The clause which exhibits the SR marking is called *marking clause*, the other clause is called *reference clause*. An example from Ancash Quechua is given in (1). The verbal suffix in the adjunct clause indicates whether the subject of the adjunct (the marking clause) is referentially identical to that of the reference clause.

*For discussion of Switch reference I would like to thank the participants of the course on *Local Modelling of Non-Local Dependencies in Syntax* at the University of Leipzig (summer term 09): Anke Assmann, Stefan Keine, Gereon Müller and Philipp Weisser; furthermore, I thank the participants of the workshop ‘The Fine Structure of Grammatical Relations’ (December 2010, Leipzig) for their comments. This paper is a revised version (June 2012) of the original manuscript from 2009.

2 Switch-Reference by Movement

(1) *SR in Ancash Quechua (Cole, 1983, 2, 3):*

- a. Lima-ta chaa-ri-r rikaari-shaq amigu-u-ta
Lima-ACC arrive-after-SS see-FUT.1 friend-my-ACC
After arriving in Lima, I will see my friend.
- b. chakra-chaw urya-pti-i María palluma-rqu-n wayta-kuna-ta
field-in work-DS-1 María pick-REC.PST-3 flower-PL-ACC
While I worked in the field, María picked flowers.

In this paper I develop an account of SR that does not rely on binding as the classic analyses do (cf. *Finer, 1985; Watanabe, 2000*). Instead, I propose that in same subject contexts there is indeed only a single DP that is moved from the marking clause to the reference clause. In section 2 I present the cross-linguistic properties of Switch reference. In section 3 I discuss similarities between SR and obligatory control and I show how the movement analysis developed for the former can derive the characteristics of SR, with only minor theoretical adaptations. Finally, the focus is on the morphological expression of referential (non-)identity and I claim that the SR marker is not a reference tracking marker at all. Cases that seem to deviate from the canonical SR system are discussed in section 4.

2. Characteristics of Switch Reference

In their introduction, *Haiman and Munro (1983)* sum up a number of cross-linguistic properties and tendencies of SR. Note that these are not universals. Some exceptions will be discussed in subsequent sections. These properties include the following:

1. The notion of *subject* that SR is sensitive to is strictly syntactic and not semantic or pragmatic, viz. SR does not track the referential identity of topics or agents, but only of the structurally highest argument that passes subject-hood tests (which may of course coincide with the topic or agent). Even in morphologically ergative languages like Inuktitut with an ergative pattern of case marking (*Pittman, 2005*) it is the external argument of a transitive verb (termed A argument by *Comrie (1978, 1989); Dixon (1994)*) and the sole argument of an intransitive verb (S argument) that are involved in the reference system, hence an SR accusative pattern arises. Consider the following example from Inuktitut (*Pittman, 2005, 4*)

- (2) Alana-up ujugak atja-tlu-gu ani-vuk
Alana-ERG rock-ABS carry-SS-3SG go.out-INTR.INDIC.3SG
While Alana_i was carrying the rock_j, she_{i/*j/*k} went out.

2. SR only tracks the referential (non-)identity of subjects in the sense of point 1; i.e. an SR morpheme does not express whether the subject of clause α is the same as the object of clause β , or that the objects of α and β are (non)-coreferent. There are only very few known exceptions.
3. SS marker are often phonologically zero elements or invariant morphemes, whereas DS markers are fused with subject agreement morphemes or are even identical to those (in the latter case SS is encoded by absence of agreement). DS markers are thus morphologically more complex than SS markers, sometimes even augmented versions of SS markers (see also Comrie (1983, 25), Pittman (2005, 8), Déchaine and Wiltschko (2002)).

In Ancash Quechua, for example, the SS marker is the invariant suffix *-shpa*. The verb *urya* in the marking clause does not show agreement affixes that the verb in the reference clause bears. In contrast to this, the DS marker in (3-b) is followed by a morpheme that cross-references the subject of *urya*.

(3) *SR in Ancash Quechua (Cole, 1983, 3):*

- a. chakra-chaw urya-shpa pallamu-rqu-u wayta-kuna-ta
field-in work-SS pick-REC.PST-1 flower-PL-ACC
While I worked in the field, I picked flowers.
- b. chakra-chaw urya-pti-i María palluma-rqu-n
field-in work-DS-1 María pick-REC.PST-3
wayta-kuna-ta
flower-PL-ACC
While I worked in the field, María picked flowers.

In Seri, the SS marker is \emptyset and the DS marker is an independent morpheme *ta* (realis) or *ma* (irrealis), see the examples in (4) (Moser (1978, 114), Farrell et al. (1991, 433, 434)).

(4) *SR markers in Seri:*

- a. mi-nail kom m-po-k-i:xk (*ta)-X ?ata:p
2PL-skin the 2SG.S-IR-AUG-wet DS-UT mucus
ko-m-si-a: ?a=?a
3OB-2SG.S-IR-be AUX=DECL
If you wet your skin, you will get a cold.
- b. ?im-t-kaʃni *(ma) ?p-yo-o:?a
1SG.O-R-bite DS 1SG.S-DI-cry
Since it bit me, I cried.

4. In SS contexts the subject can occur in only one of the clauses, that is to say

in the reference clause. The realization in both the reference clause and the SS marking clause leads to ungrammaticality. In DS contexts, however, the different subjects are all realized, each in its clause (apart from pro-drop, of course).

This fact is often left implicit in the descriptions, but one can see in the data that in SS contexts the subject is not repeated. Compare also the Ancash Quechua data in (3-a). Of course, this does not yet tell us that it is impossible to repeat the subject in the marking clause. There are, however, several explicit statements that this leads to ungrammaticality. Hyman (1981) claims that for Noni (quotation taken from Wiesemann (1982, 52)): "[. . .] in DS clauses there is always a subject, preceded or followed by the DS marker [. . .] in SS clauses there is never a subject [. . .]". Wiesemann (1982) states the same for another Bantu language, Bafut, and Nichols (1983, 248, 250) alleges that in Chechen and Ingush "[t]he *-na* form [the SS marker, DG] virtually requires that Equi apply; and it requires that a conjunct-clause zero be interpreted as Equi-deleted.". Camacho (2010c, section 3.6) shows the same for Shipibo.

5. SR can occur in subordination, including embedded argument clauses and adjunct clauses. Whether there is SR in coordination is still a matter of debate (cf. Weisser (this volume) and references cited there, see also Keine (this volume)). With respect to subordination, SR marking can only appear in the subordinate clause but never in the matrix clause. With respect to coordination, the SR marker can occur only once, not in every conjunct (in the alleged cases of SR in coordination).
6. Very often, marking clauses in SS contexts lack their own tense/aspect/mood morpheme (see also Moser (1978, 114), Nichols (1983, 246), Camacho (2010c, 247), Pittman (2005, 3), Stirling (1993, 6) among others). They are dependent on the values of their reference clause that determines these values. This means that if SR is expressed by a bound verbal morpheme, there are fewer morphemes attached to an SS marked verb than to a DS or independent verb. This is most obvious in languages which distinguish between medial (or dependent) verbs and final (or independent) verbs, especially Papuan languages, in that only medial verbs show SR marking. Medial verbs show less inflectional markers than final verbs and therefore depend on the latter, i.e. they cannot be used as independent units (Franklin, 1983,

39)¹. In Kewa, for example, final verbs inflect for person and number of their subject, whereas SS medial verbs carry an invariable suffix *-a*, regardless of the ϕ -features of their subject, see (5). Medial DS verbs inflect for person and number of their subject, too, but the forms are different from those of final verbs, see (6). In Amele, both final and medial verbs show ϕ -agreement, but medial verbs lack tense/aspect markers that final verbs bear, see the distribution of the past marker TOD.PST ‘today’s past’ in (7). A similar pattern can be found in Kobon: Only independent verbs show SR marking (Comrie, 1983, 19-20), but they lack tense/aspect/mood distinctions that independent verbs bear.

(5) *SS in Kewa (Franklin, 1983, 40):*

- a. ni piru-a na-wa
I sit.down-SS eat-1SG
I sat down and ate.
- b. ne piru-a na-e
you sit.down-SS eat-2SG
You sat down and ate.
- c. nipu piru-a na-a
he sit.down-SS eat-3SG
He sat down and ate.

(6) *DS in Kewa (Franklin, 1983, 40):*

- a. ni piru-no na-a
I sit.down-DS.1SG eat-3SG
I sat down and he ate.
- b. ne piru-ina na-a
you sit.down-DS.2SG eat-3SG
You sat down and he ate.
- c. nipu piru-na na-a
he sit.down-DS.3SG eat-3SG
He_i sat down and he_j ate.

(7) *SR in Amele (Roberts, 1988, 49):*

- a. ija hu-m-ig sab j-ig-a
1SG come-SS-1SG food eat-1SG-TOD.PST
I came and ate the food.

¹Final verbs are called ‘final’ because they follow all medial verbs in a complex sentence and appear as the rightmost verbal form.

6 *Switch-Reference by Movement*

- b. ija ho-co-min sab ja-g-a
 1SG come-DS-1SG food eat-2SG-TOD.PST
 I came and you ate the food.

Another example of deficient agreement morphology in SS contexts comes from Inuktitut. Usually, a transitive verb agrees with both of its arguments (see (8-a)), but when the verb bears the SS marker, it only agrees with its object (see (8-b)). Hence, the subject involved in the reference tracking system cannot agree with the verb. Besides, SS clauses lack their own tense and are interpreted as simultaneous to the action in the reference clause (Pittman, 2005, 5).

(8) *Agreement and SR interaction in Inuktitut (Pittman, 2005, 4):*

- a. anguti-up arnaq kunik-taa
 man-ERG woman.ABS kiss-PART.3SG/3SG
 The man is kissing the woman.
- b. Arna-p atisassat irrur-lu-git irinarsur-puq
 woman-ERG clothes.ABS wash-SS-3PL sing-INTR.INDIC.3SG
 While woman_i was washing the clothes, she_i sang.

7. SR marking obeys syntactic locality restrictions. A marking clause is marked with DS or SS in comparison to the closest subject, viz. the subject of the immediately superordinate (or coordinate) clause and it cannot ignore an intervening subject. This locality restriction does not rely on linear adjacency, instead SR marking reflects hierarchical organization (Gordon, 1983; Finer, 1985). Consider the example in (9) from Seri (Finer, 1985, 42). All ‘*it*’s are coreferent in this example, however there is DS marking between the first and second and the second and third clause, because the subject of the second clause is *he*.

- (9) taaX iti t-ap ma / yaX kix an i-t-atni ma / ik-attaX
 there on DP-stand DS / belly pos in 3OBJ-DP-hit DS / inf-GO
 i-t-k^waa / ta ʔak iti t-ap ma /
 3OBJ-DP-NEG.know / there SPEC in DP-stand DS /
 k^wʔa-mii-škam
 3REF.1PL.SUBJ-PERF-arrive.PL
 When it_i stood there, after he hit it_i in the belly, it_i could not move,
 it_i stood over in that place, we arrived to where it_i was.

In the following Maricopa example (Gordon, 1983, 93) the verb *yem* is marked for having the same subject as the final verb *yaa* although they are

not linearly adjacent. But note that they are structurally adjacent because the sequence $\text{?}n\text{?ay ntay-sh } \text{?ayuu rav}$ is a reason clause that is syntactically and semantically subordinated to the final verb.

- (10) vakpaly $\text{?}yem-k \text{?}n\text{?ay ntay-sh } \text{?ayuu rav-m } \text{?}yaa-uum$
 Phoenix 1-go-SS 1-father mother-SUBJ s.t. hurt-DS 1-go-ASP
 I am going to Phoenix to see my father's mother because she is sick.

The aim of the following analysis is to derive as many of these crosslinguistic properties of SR as possible by independently motivated principles about the nature of syntactic operations like Merge and Agree.

3. Analysis

3.1. SR, control, and movement

An observation made by Yosuke (2007) and Watanabe (1996) is that SR bears resemblance to obligatory control. Their analysis is based on control structures in Japanese. There are two allomorphs of the complementizer in such constructions: (*yooto* and *yooni*).² The first indicates subject control and the latter object control.

- (11) *Obligatory control in Japanese* (Yosuke, 2007, 2):
- a. Taroo-ga [_{CP} jibun-no ie-ni kaewr(u) ooto/*yooni]
 Taro-NOM self-GEN house-LOC return C
 kokotomi-ta
 attempt-PST
 Taro attempted to return to his house.
 - b. Hanako-ga Taroo-ni [_{CP} jibun-no ie-ni kaer(u)
 Hanako-NOM Taro-DAT self-GEN house-LOC return
 *ooto/yooni] settokusi-ta
 C persuade-PST
 Hanako persuaded Taro to return to his house.

The descriptive generalization they draw from these data is that if the controlled clause is headed by *yooto* its subject must be coreferent to the subject of the controlling clause. Whenever it is headed by *yooni*, the subjects must be disjoint. The complementizer in these structures thus functions as an SR marker. One might not

²The initial /y/ of *yooto* is deleted after consonant-final stems.

find the analysis of *yooni* as a DS marker convincing because it encodes more than the fact that the subjects of the two clauses have disjoint reference. In addition, it indicates that the object of the control clause has the same referent as the subject in the controlled clause. In this sense it is a kind of *same object* marker. Given the crosslinguistic observation of the last section that SR systems in which the SS marker indicates referential identity between an object and a subject are very rare, the Japanese complementizer system does not seem to be a textbook example for an SR system. The basic insight, however, that SR and control are closely connected is worth pursuing because there are indeed similarities between the two constructions. Recall the properties of SS discussed in the last section. The verb in an SS context usually does not bear any agreement morphemes, its subject cannot be overtly realized and its tense depends on the tense of the matrix clause. These properties are well-known from obligatory control in English:

(12) John tried to leave.

The verb in a control clause is infinite, i.e. it does not bear any agreement or tense/aspect exponents. The subject cannot be repeated in the infinite clause and tense is dependent on the matrix clause. Furthermore, SR shares the properties of obligatory control that lead Hornstein (2001, 31, 32) and Boeckx et al. (2010) to a movement analysis of control: The controlled subject (PRO) requires a *local antecedent* which must *c-command* this PRO. The same holds for SR: In an SS context, the silent subject in the marking clause needs a *local antecedent* (compare property 7 in section 2) in order to get its reference fixed. This antecedent is in a *c-commanding* position³ and whether SS or DS marking occurs is fixed relative to the closest structurally higher clause. Because of these similarities, I analyse SR as i) an instance of control and - following Hornstein's (2001) and Boeck et al.'s (2009) analysis for control - ii) as movement (see Hornstein (2007) for a brief sketch that SR might be analysed along these lines).

There are a number of analyses for obligatory control especially for English. The traditional approach (Chomsky, 1981) merges a PRO element in the subject position (Specv) of the controlled clause which is bound by a DP in the matrix clause (where binding involves *c-command*, a shared index, and government). In the same line, Finer (1985) develops an analysis of SR as binding. He assumes that the SS and DS marker are subject to the Binding Principles A and B, respectively, and that binding is possible from \bar{A} -positions. The SR marker is the daughter of Comp

³That the antecedent *c-commands* the subject position is only true for control in subordination and for subordinated marking clauses. The derivations of coordination and adjunction are introduced in section 3.2.

in the marking clause. It shares its index with the DP in SpecT of the same clause. The Comp of the reference clause bears the index of its subject in Spec T, too. The matrix Comp is the governor of the embedded SR-Comp. When there is an SS marker in the lower Comp, it is subject to principle A and needs to be governed by the matrix Comp with the same index. This situation is prohibited for the DS marker since it falls under Principle B and must be free in its governing category, hence the matrix Comp cannot have the same index as the SR-Comp. Since each of the Comps is coindexed with its respective subject DP, it follows indirectly that in an SS context reference and marking clause have a coreferent subject, whereas this is excluded in DS contexts. Watanabe (2000) and Yosuke (2007) transfer Finers core idea to the Agree framework of Chomsky (2001); Déchaine and Wiltschko (2002) develop a similar binding account in which DS markers are R-expressions that cannot be bound and SS markers are variables that must be bound (see also Pittman (2005) for an extension of their proposal).

All of these approaches have in common that they compare referential indices of two subjects (passed on to C). As Stefan Keine (p.c., discussion during the seminar) notes, there is a potential problem in that quantified items and interrogatives can be involved in the SR system, i.e. be the items in the reference and/or marking clause whose reference is compared, as in the example from Pitjantjatjara (Bowe, 1990, 93) in (13). But these elements are non-referential and therefore cannot bear a referential index.

- (13) Minyma tjuta-ngku punu atu-ra nyina-ny
 woman many-ERG wood chop-ANT(MERG) sit-PRES
 Many woman would be sitting around making wooden artefacts.⁴

Because of this fact, I want to pursue an approach that dispenses with indices. I adopt the movement analysis of control by Hornstein (2001) and Boeckx et al. (2010) because of the similarities between control and SR, and because no referential indices are needed in this approach. To see why indices are not needed, let me present the basic idea of the movement theory of control (Hornstein (2001, 2003); Nunes (2001); Boeckx et al. (2010)): A DP is base-merged in the embedded clause and then moved to a θ -position in the matrix clause. As lower copies are usually not phonetically realized, the DP is not overt in the controlled clause.⁵ The

⁴-ra, glossed as ANT(MERG), is an SS marker.

⁵Another option for deriving coreference without indices and a single DP is to allow parallel merge which results in multidominance, as proposed in Citko (2005, 2006) for ATB-movement. The potential problems for this approach are twofold: The first is that the multidominated DP has to be moved to a c-commanding position in order to allow for linearization (for discussion see Citko, 2005). Under the assumption that movement has to be triggered by a feature, this can only be done by stipulating a universal EPP feature on a head that c-commands v, e.g. T, but it may be difficult to find independent

The most important condition is the *Activity Condition* (cf. Chomsky, 2001) in (14-b) which states that the goal must be ‘visible’ for the probe by having an unvalued case feature. In the present context, this means that a DP which is case marked cannot enter into an Agree relation and as Agree is a prerequisite for movement it cannot be moved. These conditions will derive distributional properties of those elements which take part in the reference-tracking system.

Under these assumptions, the derivation of the obligatory control sentence in (15-a) runs as in (15-b) (see Hornstein, 2001, 27). *John* is base generated in SpecV of the embedded clause,⁷ it is then moved to SpecT of the same clause to check the EPP feature. Afterwards, it moves to SpecV of the matrix clause, triggered by the subcategorization feature [**•D•**] of the transitive matrix V, followed by movement to SpecT of the matrix clause.⁸ The moved DP *John* gets its case valued by matrix T and it bears the agent θ -roles of both *win* and *hope*.

- (15) *Obligatory control in English:*
- a. John hopes to win the race.
 - b. John [John [hopes [John to [John win the race]]]]

Movement of *John* from the embedded SpecT position to SpecV of the matrix clause is possible because the DP is still active, i.e. it is not case marked by the embedded T head which is *defective* in infinite complementation: it neither agrees with the subject of the controlled verb nor can it assign case. This codependency of the possibility to assign a case value and to induce agreement has been noted by many researchers (cf. among others Schütze, 1997) and is built in Chomsky’s (2001) definition of Agree, where case valuation on a goal is the result of ϕ -agreement with a probe.

I propose that the derivation of an SR sentence with a marking clause showing SS morphology proceeds in parallel (apart from the obligatory EPP in English): A DP is first merged as the subject of the marking clause in Specv and is then moved on to a second θ -position – Specv of the reference clause. The SS marker tracks that this kind of θ -movement has taken place, it is thus a reflex of movement (as we know them from successive-cyclic movement). DS marking occurs when there

⁷Hornstein (2001) assumes that the subject is merged VP-internally.

⁸If movement is parasitic on Agree, there must be an Agree relation involved in subcategorization/c-selection, at least if the subcategorization feature is checked by internal Merge. I assume that Agree checks whether the categorial feature of the goal DP and the categorial feature of the subcategorizing element v (V in Hornstein’s work) match. (Internal) Merge is then triggered by a structure building feature [**•F•**]. v thus has a probe feature [***D***] and [**•F•**]. For convenience, I will use the abbreviation [**•D•**] on v , but it actually means that there are two features: a categorial probe feature and an EPP feature which triggers movement after Agree has taken place.

are in fact two different DPs in the subject positions of the two clauses, one in the marking clause and another one in the reference clause without having moved the former to a θ -position in the reference clause. In accordance with what has been outlined above, movement of a DP from the marking to the reference clause is only possible if the moving DP has not been case marked before. Hence, the embedded T must also be defective, viz. unable to assign case to the subject DP, which also means – given the tight connection between agreement and case assignment in Agree relations – that it is unable to agree in phi-features with the DP. This fits nicely with what has been observed for SR languages in the previous section: In SS contexts, the verb of the marking clause does not agree with its subject, although it does in reference clauses and DS marked clauses.

Before going through the derivation of the crosslinguistic properties of SR systems, the role of the head C in the embedded clause needs to be addressed. Assume we are dealing with SR in subordination. When movement crosses clause boundaries (as would be the case in SS contexts by moving a DP from the marking to the reference clause), the standard assumption is that it generally applies successive-cyclically through SpecC of the subordinated clause to the intermediate landing site SpecC. The same must then hold for movement to θ -positions. But the step from the intermediate SpecC to Specv in the matrix clause is an instance of improper movement. For SR I suggest that there is no C head in the subordinate SS marking clause and therefore the problem does not arise (the same conclusion for English obligatory control infinitives is defended in Bowers, 2002).⁹ Independent evidence for this assumption comes from the fact that SS marking clauses cannot bear their own mood features (see the previous section) which are usually situated in C. Rather, the mood in the marking clause is understood to be equivalent to the mood in the reference clause.¹⁰ Furthermore, the English translation of the examples from SR languages often include complementizers like *while*, *after*, ... that

⁹In this assumption I deviate from Boeckx et al. (2010) who need to assume that embedded control infinitives are CPs, see especially their chapter 5. But even if it turns out that there is a C layer in SR marking clauses and that successive-cyclic movement through the embedded SpecC is necessary, it does not falsify the general proposal for SR advocated here: Whatever rescues this kind of improper movement in control sentences applies to marking clauses as well. See Hornstein (2001, ch. 3), Salzmann (2005), and Richards (2009) for discussion of whether improper movement really has to be banned from grammar or how its effects are circumvented here.

¹⁰For an approach that builds on the tense/mood dependency of the marking clause from the reference clause see Assmann (this volume).

render the semantic relation of the two clauses transparent for the reader, but often these do not show up in the original language data.¹¹

- (16) a. Utavalu-man chaya-shpa nuka mama-ta rilu-rka-ni
 Otavalo-to arrive-SS my mother-ACC see-PST-1
 When I arrived in Otavalo, I saw my mother.
Imbabura Quechua, Cole (1983, 5)
- b. nee ne-nua-ka paapaa ne pii-ʔiiti
 I 1SG-arrive-SS tortilla 1SG 3SG-give
 When I arrived, I gave him a tortilla.
Huichol, Comrie (1983, 19)
- c. tokatoka-č savakyuva u-t-k čikwar-kiñ
 Tokatoka-SUBJ Savakyuva see-TEMPORAL-SS laugh-COMPL
 When Tokatoka_i looked at Savakyuva, he_i laughed.
Yavapai, Finer (1985, 37)

Another supporting fact is noted by Camacho (2010c) based on data in Black (1992). In Shipibo, main clauses can include second position clitics (evidentiality markers, interrogative markers, imperative morpheme, see the examples in (17)). They have to have exactly one XP to their left, regardless which role or grammatical function it bears. Black analyses these clitics as C-heads. Interestingly, these markers are not available in SR marking clauses. I take this as evidence for the absence of the C head.

(17) *Clitics in Shipibo main clauses (Camacho, 2010c, 247):*

- a. E-n-ra binon be-ke
 1SG-ERG-DIR.EVID aguaje bring-PERF
 I brought aguajes (a fruit).
- b. Tsoa-rin mi-pekao?
 who-Q.COP 2.behind
 Who is behind you?

To summarize this discussion, I assume that there is no C head in clauses with a defective T, but C is present if T is non-defective. This can be implemented by a selectional restriction on C: C only selects for non-defective Ts.¹²

¹¹Often, these relations are expressed by word order (e.g. in Shipibo Camacho (2010c)) or the order of the involved clauses (e.g. in Maricopa Gordon (1983)).

¹²This view is compatible with *feature inheritance* as introduced in Chomsky (2007): He proposes that T does not bear uninterpretable phi-features and a case feature on its own, rather it inherits these features from C. Hence, defective Ts lack C heads, but non-defective Ts are c-commanded by C heads.

Finally, let me stress again that I assume, following Bowers (2008), that movement (internal Merge) to θ -positions is triggered by structure building/subcategorization features, just as any other internal or external Merge operation. In this aspect I depart from Hornstein's assumption that movement is greedy, or as he puts it *enlightened self interest* that applies in order to check its θ -role which is a feature of the verb (Hornstein, 2001, 37).

In the remainder of this section, I go through the derivations of SR in subordination, coordination, and adjunction. Maricopa exhibits SR marking in all three constructions (Gordon, 1983, 87, 88):

(18) *Subordination:*

- a. m-iima-m ?mhan-k
2-dance-DS 1-like-ASP
I like you dancing/you to dance
- b. ?-iima-k (mat) ?-yuu-ksh
1-dance-SS REF 1-see-1PERF
I saw myself dance.

(19) *Coordination:*

- a. nyaa ?-ashvar-k iima-k
I 1-sing-SS 1-dance-ASP
I sang and danced.
- b. Bonnie-sh ashvar-m ?-iima-k
Bonnie-SUBJ sing-DS 1-dance-ASP
Bonnie sang and I danced.

(20) *Adjunction:*

- a. ?iipash-sh paly-k aashuuham-k
men-SUBJ many-SS hit.PL-ASP
Many men hit him.
- b. hat ?-ii-m anoq-m aaham-m
dog wood-ASC small-DS hit-ASP
She hit the dog with a small stick.

I start with subordination and I illustrate the derivation with a transitive verb in both the subordinate marking clause and the matrix clause. There are two parameters in SR languages:

(21) *Parameters:*

- a. Category of the marking clause:
 - a CP (whose head selects a non-defective TP) or
 - a bare TP with a defective head T_{def}
- b. Number of DPs in the numeration:
 - There are fewer DPs than c-selection features on heads (hence, θ -movement must apply in order to check all c-selection features)
 - There are as many DPs as there are c-selection features on heads (hence, no θ -movement is necessary)

When these parameters are cross-classified, 4 possible derivations arise, but only the following two will converge:

(22) *Embedded TP (defective T), fewer DPs:*

- a. $[_{CP} C [_{TP} T(\text{Case:G}) [_{vP} DP_{ext1}(\text{Case:G}) [_{v'} v([\bullet\text{D}\bullet])] [_{VP} V [_{TP} T_{def} [_{vP} <DP_{ext1}([\text{CASE}:\square])] [_{v'} v([\bullet\text{D}\bullet]), \text{Case:F})] [_{VP} V DP_{int}(\text{Case:F})]]]]]]]]]]]$
- b. Numeration at the stage when matrix v is has been merged: Num [T, C] – no DP left for external Merge in $\text{Spec}_{v_{matrix}}$

(23) *Embedded CP (non-defective T), enough DPs:¹³*

- a. $[_{CP} C [_{TP} T(\text{Case:G}) [_{vP} DP_{ext2}(\text{Case:G}) [_{v'} v([\bullet\text{D}\bullet])] [_{VP} V [_{CP} C [_{TP} T(\text{Case:G}) [_{vP} DP_{ext1}(\text{Case:G}) [_{v'} v([\bullet\text{D}\bullet]), \text{Case:F})] [_{VP} V DP_{int}(\text{Case:F})]]]]]]]]]]]]]$
- b. Numeration at the stage when matrix v is has been merged: Num [DP, T, C] – still a DP available for merging in $\text{Spec}_{v_{matrix}}$

All DPs enter the derivation with an unvalued case feature $[\text{*Case}:\square\text{*}]$ that is valued as a consequence of Agree with either v or T. In (22), vP of the embedded clause is generated. DP_{int} agrees with v and gets its case feature valued. DP_{ext} still has an unvalued case feature. Then T_{def} is merged which is a potential case assigner, but as it is defective, it does not have probe features that can initiate an Agree-relation with DP_{ext} and as case valuation is a reflex of Agree, the case feature of DP_{ext} remains unvalued. Matrix V merges with the complement TP and matrix v merges with this VP. As the matrix clause is transitive, too, v has a c-selection

¹³For the derivation it is not important whether there is a C head in an embedded DS clause or not. The crucial point is that T is not defective. I include it here for completeness. See Chomsky (2007)'s discussion of feature inheritance for a similar consequence: defective Ts lack C heads, but non-defective Ts are c-commanded by C heads.

feature [\bullet D \bullet]. When there is no DP left in the numeration (as assumed for (22)), the only option is to move a DP from the c-command domain. This is DP_{ext} of the embedded clause (movement indicated by $\langle \rangle$) because it is the only active DP; the internal argument of the embedded clause is already case marked and thus inactive. The external argument of the embedded clause moves to check [\bullet D \bullet] of matrix v and it receives a second θ -role. Its yet unvalued case feature is valued by the matrix T head with which it agrees. Note that the matrix T head cannot be defective because otherwise the highest argument of a transitive verb could never receive a case value and the derivation would always crash. The derivation in (22) results in SS marking. The morphological realization is discussed in section 3.3.

Imagine that the derivation proceeds in the same way up to the point when matrix v is merged with VP, but then there is still another DP in the numeration that can be merged to satisfy [\bullet D \bullet] of v (=3rd option: embedded TP, enough DPs in the numeration). If this DP is indeed merged by external Merge, it agrees with matrix T and receives a case value. However, this derivation crashes because DP_{ext} of the embedded clause has still an unvalued case feature (Case Filter violation).¹⁴

In (23) the embedded vP is generated. DP_{int} agrees with v and receives its case value. vP is merged with T. As T is not defective, it can Agree with DP_{ext} and value its case feature. As a result, both DPs in the embedded clause have a case value and are thus inactive. Matrix V merges with CP and matrix v with VP. v has a c-selection feature [\bullet D \bullet]. There is still a DP in the numeration which checks this feature and Agrees with matrix T, thereby getting its case feature valued. All DPs have a case value, the derivation converges. This derivation will result in DS marking.

Assume there is no DP left in the numeration to satisfy [\bullet D \bullet] of matrix v (=4th option: embedded CP (non-defective T), fewer DPs). The only way to check it would be to move a DP from the c-command domain. However, both DPs in the embedded clause are inactive and thus not movable (even if they were moved, the derivation would crash because matrix T cannot assign its case value to the moved and already case marked DP).¹⁵

If the analysis of SR developed for subordination is to be transferred to coordination and adjunction, two problems arise: In an SS configuration with a single DP_{ext} for both clauses, this DP would have to move from one conjunct to the other

¹⁴The standard background assumption is that matrix v usually cannot assign accusative case to elements in infinite complements, this is only possible in ECM infinitives.

¹⁵One might think of merging an expletive as a repair strategy - be it in the numeration or be it inserted as a last resort, violating Inclusiveness - it would not help, because expletives cannot bear θ -roles and Spec v is a θ -position.

or from an adjunct to the matrix clause. If this were the case then (i) the landing site of the DP would not c-command its base position and (ii) movement would have to take place from an island.¹⁶ Adjuncts are non-complements and as such they are islands by the CED; movement from a conjunct is restricted by the Coordinate Structure Constraint:

- (24) a. *Condition on Extraction Domains* (cf. Huang, 1982):
 Movement must not cross a barrier. An XP is a barrier if it is not a complement.
- b. *Coordinate Structure Constraint* (Ross, 1967):
 In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

If it turns out that SR is indeed not attested in coordination but is rather a different phenomenon (cf. Weisser (this volume)), this would nicely fit in with the movement approach because this approach predicts that movement from within a conjunct is barred. However, since this issue is not settled and since the same problems remain for adjunction, which also involves movement out of islands, I will show how SR in coordination and adjuncts can be accommodated to the present movement analysis.

Nunes (2001) addresses the aforementioned problems (movement out of islands, landing in a non-commanding position) for the movement theory of obligatory control. His solution is to assume sideward movement: An element in a subtree α can be merged to another subtree β . Movement still extends β at the root, but it does not land in a c-commanding position.

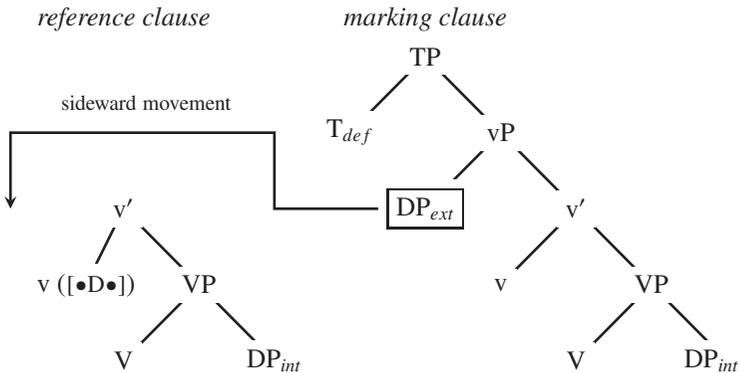
- (25) John saw Mary before <John> leaving the room. (Hornstein, 2001, 36)

How can sideward movement leave an island? Nunes (2001) claims that XPs are islands as soon as they are merged to another subtree, such that an adjunct XP is an island when it is adjoined to the matrix clause, but not when the subtrees are independent of one another. Returning to the example in (25), movement of DP_{ext} *John* from the adjunct takes place *before* the adjunct is attached to the main clause. The adjunct is adjoined to matrix vP , but *John* is merged in matrix *Specv*. Hence, merge of *John* precedes adjunction. I follow Nunes and adopt sideward movement both for movement from adjuncts and conjunctions.

¹⁶If movement from a DP in an adjunct to *Specv* of the matrix clause is to a non c-commanding position depends of course from the actual adjunction site. I assume that adjuncts are adjoined to vP and hence the problem is real.

Turning now to the derivation of SR in adjuncts, the derivations proceed as with subordination, the only difference is that movement is sideways. An adjunct can have a defective or a non-defective T head. If it is defective, DP_{ext} in the adjunct cannot receive a case value from T. If there is no DP that can satisfy the c-selection feature of matrix v, DP_{ext} from the adjunct moves sideways and checks [$\bullet D \bullet$] in the matrix clause. Sideward movement is possible because v in the second clause has a c-selection feature [$\bullet D \bullet$]. The sideward-moved DP gets its case value from matrix T (which cannot be defective in a transitive clause as this would always lead to the crash of the derivation: The case features on matrix DP_{ext} would remain unvalued). If there were still a DP in the numeration that was merged to matrix v and that agrees with matrix T, DP_{ext} in the adjunct would keep its unvalued case feature and the derivation would crash. Assuming that the matrix clause contains a transitive verb, another option arises which was absent in subordination: The internal argument of the matrix clause could move to check [$\bullet D \bullet$] of matrix v, because the internal argument of the reference clause and the external argument of the marking clause do not stand in a c-command relation and hence, none intervenes for the other such that locality does not prohibit this step. This is, however, not an option because DP_{int} is already inactive, being case marked by matrix v. If T in the adjunct is non-defective, it can Agree with DP_{ext} in the adjunct and value its case feature. There must then be a DP left in the numeration for merging in matrix Specv, checking [$\bullet D \bullet$]. Sideways movement of DP_{ext} in the adjunct clause is impossible because it is inactive.

(26) a. *Sideward movement in SS configuration:*



b. *Adjunction of the marking clause to the reference clause:*

$[_{CP} C [_{TP} T [_{vP} vP [\mathbf{TP}]]]]]$

The derivation of a conjunction proceeds in exactly the same way, except for the fact that sideward movement applies from one conjunct to the other. This is pos-

sible because movement to Specv takes place before the conjuncts are conjoined and therefore the marking conjunct is not (yet) an island. For the moment I assume that the categories that are conjoined are TPs. There is a head Conj which takes the marking TP as its complement and the reference clause as its specifier. ConjP is selected by C. It follows from this structure that the conjuncts share the same mood features. The same restrictions on movement that have been discussed for adjunction apply here, too.

(27) $[_{CP} C [_{ConjP} TP [_{Conj'} Conj TP]]]$

Up to now, only those derivations in which both clauses are transitive have been addressed (option a. in (28)), but there are other possible combinations:

(28) *Combinations of reference and marking clause:*

	Reference clause	Marking clause
a.	transitive	transitive
b.	transitive	intransitive
c.	intransitive	intransitive
d.	intransitive	transitive
e.	intransitive	ditransitive
f.	transitive	ditransitive
g.	ditransitive	intransitive
h.	ditransitive	transitive

Regardless of transitivity, in the marking clause only the structurally highest argument can be extracted (provided that T is defective, of course): In transitive clauses this is the external argument, because the internal argument is case marked by transitive v and thus inactive. In ditransitive clause it is also the highest argument in Specv if the goal argument is introduced by a functional head Appl which also case marks the goal (Pylkkänen, 2000). In intransitive clauses this is the sole argument. With respect to unaccusative verbs v cannot assign case (Burzio's generalization); this is also assumed to hold for unergative verbs such that the sole argument of an intransitive verb can only be case marked by T. If T is defective, the sole argument can be moved. This derives the empirical observation that only subjects of the marking clause (i.e. the structurally highest DPs) are involved in the SR system.

With respect to the reference clause, the situation is more complex if more than one landing site for the moving DP is provided. If the reference clause is intransitive (be it unaccusative or unergative), there is only one possible landing site and the element in this position will inevitably be the subject of the clause (the structurally highest argument). This also derives that the subject of an intransitive verb

of the reference clause is involved in SR marking. If, however, the reference clause is transitive, there are several possible landing sites for a moving DP. First, in adjunction and coordinate structures, the internal argument of the reference clause itself could be moved to Specv of the same clause. As already discussed above, this is excluded by the Activity Condition in (14-b). This only leaves moving the structurally highest DP from the marking clause (given that T in the marking clause is defective, as assumed in this discussion). This DP can land in the complement of V in the reference clause or the specifier of v of the reference clause. None of these options is excluded by the constraints adopted so far. If it is moved to CompV it gets its case value by v and another DP is then merged (external Merge) in Specv. If it is moved to Specv after another DP is merged (by external Merge) in CompV, it agrees with matrix T and gets its case feature valued. Remember that the empirical observation is that SR is marked by reference not only to the subject of the marking clause, but also to the subject of the reference clause. However, the present analysis does not rule out that the object of the reference clause is involved. First of all, there are indeed languages in which this is possible, but only very few, see the following example from Warlpiri, pointed out to me by Philipp Weisser, in which the SR marker *-kurra* indicates that the subject of the marking clause is coreferent with the object of the reference clause. If both subjects were coreferent, the marker would be *-karra*.¹⁷

- (29) ngajulu-rlu rna yankirri pantu-rnu, ngapa nga-rninja-kurra
 I-erg aux emu-abs spear-past water-abs drink-inf-S/A=O
 I speared the emu while it was drinking water. (Austin, 1981, 325)

However, the vast majority of SR languages does not allow for objects to participate in the SR system and it would be nice to account for this restriction. An option to derive this fact is to assume that the *Merge-over-Move Constraint* (Frampton and Gutman, 1999; Chomsky, 2001) holds in languages that only allow subjects in the reference clause to be relevant for SR. Here is why: Considering adjunction and coordination, if there is still a DP in the numeration when the reference clause is generated, it has to be merged in CompV before movement of a DP from the marking clause is possible and hence, the landing site of the DP moved from an adjunct/conjunct can only be Specv. SR languages that allow CompV to be a landing site do not have this preference for Merge over Move. In OT terms this difference would amount to the reranking of constraints which demand each of the

¹⁷Another example from Kiowa with an indirect object that takes part in the SR system is provided in (37-b). Note that the present analysis allows for the object of the reference clause to be involved in the SR system, but not the object of the marking clause due the Activity Condition. This seems to born out even in those languages that show SR with objects – they are only found in the reference clause.

two operations to apply as soon as possible (Prince and Smolensky, 1993, 2004): Merge \gg Move in one class of SR languages, and Merge \circ Move (the latter representing a tie between the two constraints encoding that they are not ranked with respect to each other) in the other class of SR languages.

Another case that needs elaboration is one in which the reference clause is ditransitive. For SR in subordination, there are two specifiers that qualify as possible landing sites for a DP from the marking clause: the position to which the agent role is assigned (Specv) and the one to which the goal role is assigned (SpecAppl). Again, if a language has the ranking Merge \gg Move, the only landing site is Specv. If a language has Merge \circ Move both positions are possible landing sites. Evidence that indirect objects can be the basis for SR is provided in section 3.4 from Kiowa, cf. (37-b). For movement from adjuncts/conjuncts into a ditransitive reference clause, three options obtain: landing in CompV, SpecAppl or Specv. Depending on the reranking of the constraints only Specv or all of these positions are possible landing sites. The former seems to be the case in the vast majority of SR languages: SR tracks the reference-identity of *subjects* (i.e. of an agent, the structurally highest argument in a clause). In the present account, this is derived by the Merge-over-Move constraint.

3.3. Morphological realization

In this subsection I turn to the question what the SR marker actually expresses. What distinguishes an SS from a DS marking clause in the analysis proposed here is whether there is still a DP in Specv of the marking clause (I return to unaccusatives in section 4). If it is not, it has been moved to the reference clause and SS marking should occur. This means that the SS marker is analysed a reflex of movement as we know it from successive-cyclic movement. If the DP is still present in the marking clause, another DP has been merged in the reference clause and DS marking should show up. Assuming a postsyntactic morphological component which realizes syntactic features (Halle and Marantz, 1993, 1994; Harley and Noyer, 1999), I propose that the SR marker realizes the head T in an abstract structural scenario (see Bobaljik (2007) for vocabulary items whose insertion depends on the syntactic context of the realized head), namely a head T

- a. which is c-commanded by a head α that is *not* the root node and that is the closest c-commander for T and
- b. in whose accessible domain there is a DP.

If there is such a DP, the DS marker shows up, if there is no such DP, the SS marker occurs.

(30) *Vocabulary items:*

- a. $/X/ \leftrightarrow T / [\alpha_{[-root]}[_ \dots DP]$ *DS marker*
 b. $/Y/ \leftrightarrow T / [\alpha_{[-root]}[_]]$ *SS marker*

The first part of the definition is that the closest c-commanding head for T has to be a non-root head. It is necessary to include this condition, because otherwise an SR marker in subordinate structures could occur in matrix clause, too, but this is excluded. It does not fall out from the system and has to be stipulated here. A head α is the closest c-commanding head for T if there is no other head β which also c-commands T and is c-commanded by α . That means that the relevant heads α are non-root C which selects a non-defective TP, matrix V which embeds a defective TP, the Conj head in coordinations and the matrix T head in adjunction contexts.¹⁸ T heads in matrix clauses cannot be realized by the SR markers because they are embedded by a C head which is the root node, viz. $C_{[+root]}$. Consider the structure of adjunction and conjunction in (26-b) and (27). As for coordination, the closest c-commanding head of the lower TP is Conj, which is not a root node. The closest c-commanding head of the higher TP in SpecConj is C, a root node. Hence, SR marking shows up only once. The same holds for adjunction: Matrix T is embedded under the root C, but the T head of the adjoined clause is c-commanded by matrix T, which is not a root node, hence, SR marking is only possible in the adjoined clause.

The second condition which guides the insertion of the SR markers is whether there is an accessible DP for T (given that T is c-commanded by a non-root head which is the closest possible c-commander). The notion of accessibility needs to be clarified. The relevant distinction is whether there is a DP in Specv thus, Specv must be accessible for T as defined in (31).¹⁹

¹⁸Pittman (2005, 7) also assumes that the SS marker is the realization of a defective T head which does not possess a ϕ -probe.

¹⁹The stipulated notion of accessible domain in (31) can be made follow from more general principles about what parts of the structure are visible for a given head. One possibility is to include the strict version of the PIC (Chomsky, 2001) here, presupposed that it is valid in the morphological component, too (see e.g. Dobler and Skinner (2009) for arguments that the notion of phase plays a role also after the syntactic computation in morphology and phonology).

(i) *Phase Impenetrability Condition:*

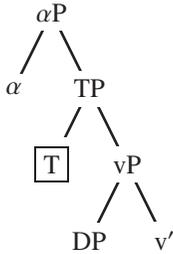
- a. In a phase α with the head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.
 b. The domain is the complement of a phase head, the edge is its specifier.
 c. v and C are phase heads.

- (31) The accessible domain of T is the edge domain of the head v , which is selected by T. The edge includes the specifier(s) of v , but not its complement.

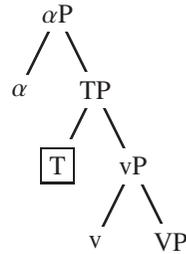
The DS marker in (30) is more specific than the SS marker, because its context restriction includes everything the SS marker's context requires and in addition it requires a DP in its c -command domain. Therefore, the DS marker has priority when it comes to insertion (cf. the *Subset Principle* and *Specificity* in Halle and Marantz, 1993, 1994). The SS marker thus qualifies as an elsewhere marker in marking clauses.

- (32) *Realized T*:

a. DS:



b. SS:



A further remark is in order. The two SR markers differ with respect to the fact whether there is a DP in Spec v of the marking clause or not. SS is inserted when this is not the case. However, it is not an evident assumption that the two scenarios are distinguishable in the morphological component. Under the assumption that movement involves copying of an item, there is no gap in Spec v of the marking clause when a DP is moved to the reference clause. There is a lower copy and this would predict DS marking throughout, which is empirically inadequate. There are two solutions. In what follows I assume that movement does not leave behind anything, neither a trace nor a copy, it just leaves a gap (see also Epstein et al., 1998; Müller, 1998). Under the copy theory of movement additional assumptions are necessary that allow for a distinction between lower copies and copies in the

As a consequence, only Spec v is accessible for T, but T cannot see V 's complement which is in v 's domain. Hence, the only thing that counts for the computation of which VI is inserted, is whether there is a DP in Spec v . This has consequences for an unaccusative verb in the reference clause, whose single argument is VP-internal, because it is predicted that the internal DP is not in T's accessible domain and hence DS marking would be impossible. Indeed, we often find 'unexpected' SS marking with unaccusative verbs in the marking clause. See section 4 for discussion.

final landing site. For example, any member that is not the highest member of the movement chain has to receive a special flag that renders it invisible for the morphological component.

Independent evidence for the claim that SR markers are realizations of T is provided by data from e.g. Ancash Quechua, Mojave, and Maricopa. In Ancash Quechua, SR marking occurs exclusively in adjunct clauses. In DS contexts, the verb cross-references the person of the subject and bears the suffix *-pti*. In SS contexts, the verb does not show subject agreement and there are two SS suffixes, *-r* and *-shpa*. It is remarkable that the marker *-r* is also used as a suffix of embedded infinitives (Cole, 1983, 14):

- (33) papaa-ni qalla-rqu-n maqa-ma-r
 father-my begin-REC.PST-3 hit-1.OBJ-INF
 My father began to hit me.

As was noted in section 2 and 3, SS marked clauses and infinitives (like English clauses with obligatory control) have a lot of properties in common: they do not have an overt subject and they do not agree with their logical subject. This was included in the present analysis by assuming that the T head that mediates subject-verb-agreement is defective (which is a necessary precondition in SS contexts for movement of DP_{ext} from the marking to the reference clause). An SS marker realizes a defective T and defective Ts are standardly assumed to occur in infinitives. In Ancash Quechua the syncretic morphology shows that SS clauses and infinitives involve the same structure, at least the same defective head T.

Furthermore, the fact that SR markers and markers which encode other features of T are in complementary distribution in some languages supports the claim that SR markers realize T. In Maricopa the SS marker *-k* and the DS marker *-m* are identical to the aspect markers *-k* and *-m* which both express neutral irrealis (choice of *-k* or *-m* is lexically determined), see the examples in (18) to (20). What is more, the SR markers are in complementary distribution with the aspect markers which shows that they compete for insertion into the same head. A marking verb that bears the aspect suffix *-m* cannot bear an SR marker in addition. That means that even if the two clauses have the same subject (which is usually indicated by the suffix *-k*) the verb bears only the aspect marker *-m*, adding *-k* or replacing *-k* for *-m* leads to ungrammaticality (Gordon, 1983, 86):

- (34) ?ayuu ?-maa-m v-?-yem-k
 s.t. 1-eat-IRR DEM-1-go-ASP
 I ate and then left.

Assuming that aspect (at least in Maricopa) is encoded in T, the distribution follows.

Finally, as was already noted in section 2 and some examples cited in this paper, DS markers are fused with subject agreement markers or are derived from these and show allomorphic variation, whereas SS markers are often zero or invariant morphemes. Subject agreement is standardly assumed to be a relation between T and the highest DP (i.e. the subject) in the vP. The morphological reflex of this agreement is a realization of the phi-features copied from the subject onto T via Agree. These interactions follow naturally when SR markers spell out T: In SS contexts, T is defective and cannot Agree with the subject, hence there are no overt reflexes of agreement on the verb and there are no phi-features on T which could condition allomorphy of the SS marker. In DS contexts, T agrees with the subject and the cooccurrence of subject-verb-agreement and the DS marker or allomorphic variation of the DS marker with respect to the phi-features of the subject is expected.

The proposal about what the SR marker expresses makes several predictions. As the vocabulary items are sensitive to the closest head that c-commands T, this head must be accessible during realization and it is therefore expected that SR markers can express properties of this head, too, or that there is allomorphy of the markers with respect to features of this head. For example, a DS marker in a subordinate clause could express features of the C head that c-commands it, whereas an SS marker cannot, because - as was argued for in the previous subsection - there is no C head in embedded SS clauses. Evidence for this prediction comes from the two Papuan languages Kewa and Amele. In Kewa, final verbs show person and number agreement with their subject. Medial SS verbs do not agree with their subjects, but medial DS verbs do. However, the agreement markers of medial DS verbs are not identical to those of final verbs. There is evidence that the former are derived from a subjunctive paradigm (Franklin, 1983, 40), hence, they express the category mood, too.

In Amele (Roberts, 1988, 48,49) medial verbs that are marked for SR also express sequentiality vs. simultaneity. Simultaneous medial DS verbs have a distinction for mood that SS verbs do not show, namely whether the verb is realis or irrealis. Thus, Amele exhibits allomorphy of the DS marker for properties of C.²⁰ Note that both SS and DS verbs agree with their subject in person and number.

²⁰There are also languages in which both the DS and the SS are sensitive to properties of C, e.g. Kiowa. This might indicate that the SR marker is a realization of the C head in this language. For the latter proposal see Keine (this volume). However, the alleged SR marker in Kiowa may not even be an SR marker (for arguments see Weisser (this volume)). If this is true, then the Kiowa data are not an exception.

(35) *Amele simultaneous SS and DS markers:*

- a. SS: stem reduplication + set 1 agreement markers
- b. DS irrealis: stem reduplication + set 2 agreement markers
- c. DS realis: stem reduplication + set 3 agreement markers

In SS contexts, the marking clause TP is embedded under the matrix V. As such it should be possible to vary in its form according to properties of matrix V, like e.g. valency. This is indeed what can be found in Cashinahua (Montag, 2005). Among other categories like aspect, SR markers indicate whether the verb of the reference clause is transitive or intransitive.

(36) *Cashinahua SR morphemes:*

<i>-kin</i>	incomplete, SS, trans.	<i>-xun</i>	complete, SS, trans.
<i>-i</i>	incomplete, SS, intrans.	<i>-a, -abu</i>	complete, SS, intrans.
<i>-ai, -aibu</i>	incomplete, DS, trans.	<i>-a, -abu</i>	complete, DS, intrans.
<i>-aya</i>	incomplete, DS	<i>-ken</i>	complete, DS
<i>-tan</i>	completed series, SS	<i>-nun</i>	completed series, DS

Even more compelling is the statement made by Camacho (2010c, 255) about Shipibo which exhibits a similar transitivity sensitive SR marking system: "[...] 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 Spang-Chávez (1998:fn. 19). In addition, most same-subject SR-morphemes track valency. . . . Only same-subject morphemes track the adjacent verb's valency." This is exactly what the present analysis predicts: Only SS clauses have a defective T and lack the C projection with the consequence that matrix V embeds the marking TP. The SS marker needs to see V as its closest c-commander otherwise it could not be inserted. As such it can be sensitive to V's features. This is not possible in DS clauses which have a C projection and therefore the DS marker needs to take C as the closest c-commanding head into consideration, not matrix V.²¹

3.4. Advantages of the movement analysis

The movement analysis of SR has several advantages which I sum up in this section. First of all, the analysis can derive referential (non-)identity without any ref-

²¹This prediction is only valid for SR in subordination, because only then matrix V is the closest c-commander for the embedded T. In Shipibo, however, SR occurs only in adjuncts. But as the adjunct (the marking clause) is the sister of the reference clause's vP after adjunction, it is not surprising to vary for valency of the reference clause (assuming that allomorphy can be triggered by adjacent heads).

erential indices: When two clauses have the same subject, it is literally the *same* item that is moved from one clause to the other, being θ -marked in both. Remember that using indices poses a problem for quantified DPs in the SR system, as discussed in section 3.1.

Let us return to the properties of SR systems collected in section 2. If two or more clauses have the same subject, it can show up only in the reference clause but not in the marking clause(s). In the present analysis, this fact follows because I have assumed that movement leaves nothing behind, neither copies nor traces. But if one prefers to assume that movement involves copying (see the discussion in section 3.3), the fact follows from the more general assumptions about spell-out under the copy theory of movement: Usually, only the copy in the final landing site is spelled out.

Furthermore, an observation in SR languages is that SS marking clauses show less morphological (verbal) markers than DS marking clauses do. e.g. the former often do not show agreement morphology and their mood and tense values are determined by those of the reference clause. This follows under the movement approach because T in the marking clause is assumed to be defective. This is not just a stipulated assumption, it even has to be defective in order to allow for movement of the subject DP to the reference clause: Only active DPs, viz. DPs without valued case, are capable of being a goal for Agree and afterwards a moving element. As valuation of case presupposes Agree in ϕ -features in recent developments of minimalist syntax, the absence of valued case means that there has also been no agreement. T can thus not have a ϕ -probe in SS clauses, in a sense, it is underspecified. If T is defective anyway, it can be underspecified for tense as well and takes over the tense of the T head in whose scope it is, namely T in the reference clause. I also assumed that there is no C head in marking clauses (see the argumentation in section 3.2). Again, mood is then determined by the reference clause C head.

Assuming an iconic relation between the cardinality of expressed features and phonological weight to hold, it is not surprising that SS markers are phonologically less complex (sometimes even null) and more invariant than DS markers. SS markers spell out a *defective* T that has less features than the non-defective T head in DS marking clauses and reference clauses and hence, they are less complex. This is also reflected in the specification of vocabulary items proposed in section 3.3: SS items are default realizations of T in non-root/embedded clauses, DS items are more specific.

Nevertheless, I have to mention that there are languages in which the verb in the marking SS clause can agree with its subject as well, see e.g. the data from Amele in (7), Huichol in (16-b) and Maricopa in (18) - (20).

These data do not fall out from the present account because in SS contexts the external argument cannot agree with T, but it seems to do so in the data at hand. For a possible solution of an identical problem in the movement theory of control

see the discussion of hyperraising and finite control in Boeckx et al. (2010). They suggest that T may be only partially defective (lack e.g. person), but valuation of the other phi-features is possible and hence, these features can be realized morphologically. Case marking is, however, dependent on *complete* phi-feature valuation which is impossible with defective T. Movement of the external argument is thus still possible although (partial) Agree took place.

In addition, it was noted that only syntactic subjects, meaning the structurally highest arguments in clauses, can participate in the SR system (with very few exceptions). This observation has two parts in the current analysis:

- a. Only syntactic subjects can be moved out of marking clauses, and
- b. they can only land in the subject position of the reference clause.

The former follows from the Activity Condition: An internal argument of a transitive verb is case marked by *v* and thus inactive, whereas an external argument of a transitive *v* and the sole argument of an intransitive verb can remain inactive if T is defective. Hence, only the structurally highest argument in a marking clause can be moved. The second observation follows under the assumption that Merge pre-empts Move. A DP cannot land in object position when there is still a DP available in the numeration, hence only the specifier of *v* is a possible landing site.

The fact that SR is a relation between structurally adjacent clauses follows from standard locality conditions on movement. A different matter is the locality of the movement step from the marking to the reference clause. Remember that I made the assumption that there is no C head in an SS clause. If one wants to adopt the strong version of the PIC (Chomsky, 2000) as the currently widely adopted condition on (non-)accessible domains, and if *v* and C are phases, the present movement approach is local enough: The subject of the embedded clause is at the edge of the embedded *v*DP and there is no phase between the base and the landing site of the DP, hence, the *v* head of the matrix clause can access the DP in the embedded clause without complications (this also holds if the moving DP is the sole argument of an unaccusative verb, if unaccusative *v* is not a phase head, see Chomsky (2001)). However, nothing prevents a movement path with intermediate landing sites if more phases (or other local domains) are postulated. The only question that arises is that of how the movement is triggered, but this is a general question that arises with successive-cyclic movement and is not specifically tied to the present analysis.²² Hence, successive-cyclic movement of a DP from the marking to the

²²Several proposals about the trigger of intermediate movement steps have been worked out: These intermediate movement steps may be non-feature driven, as proposed in Heck and Müller (2003), or triggered by inserted edge features under violation of Inclusiveness, as proposed by Chomsky (2001).

reference clause is fully compatible with the movement approach to SR, but the question whether DP movement from one θ -position to another θ -position stops in intermediate landing sites is somewhat orthogonal to the main goals of this paper. The movement analysis makes a further prediction: Movement lands in specifier positions,²³ but this does not have to be Specv in which the agent-role is assigned (if Merge \gg Move holds), as extensively discussed in section 3.2. It should be possible to find examples in which the DP in the reference clause that takes part in the SR system can have a different θ -role, as long as it is assigned to a specifier position, e.g. an experiencer (Belletti and Rizzi, 1988), a benefactive (viz. the role that an argument introduced by an applicative head receives, Hole (2008c)), a possessor (introduced in SpecD or SpecN, (Abney, 1987)) or a goal (introduced in SpecV or the Spec of a functional projection above VP). This is indeed born out in Gokana (Comrie, 1983, 32) and Kiowa (Watkins, 1993, 143).²⁴

- (37) a. m̀̀m dá é gǎ kɔ àè dɔ -è
 I heard him mouth that he fell LOG
 I heard from him_i that he_i fell. *Gokana, source*
- b. k^hodède ámkut y'ɛ-cán gɔ a-ko:dó-ɔ:-thə:
 suddenly your.letter 1SG.III-arrive and.SS 1SG.I-very-happy-feel
 Suddenly your letter came to me_i and I_i felt very happy.
Kiowa, goal/benefactive

In Gokana in (37-a), SR involves the subject with the patient role of the embedded clause and the argument bearing the source role in the matrix clause. In Kiowa in (37-b), it involves the experiencer of the marking conjunct and the goal/benefactive of the reference conjunct.

Finally, the present approach predicts that SS marking should also arise when a subject DP is moved for other reasons than the checking of c-selection-features, because one of the important facts for realization of an embedded T head is whether there is a DP in its domain or not, it does not matter why there is no such DP in certain cases (cf. the discussion above on unaccusative and passive marking clauses). Hence, e.g. wh-movement (if it occurs overtly) of a subject DP should have the same effect and clauses like "Who saw Mary and met John?", "Mary worked in

²³In the analysis developed in this paper, movement *can* actually land in the complement position of the reference clause under certain circumstances (if Merge \circ Move). Nevertheless, the relevant point is that if it lands in a specifier position, nothing requires that this is the specifier to which the agent-role is assigned, it can be any other specifier.

²⁴Note, however, that Gokana and Kiowa are languages for which there are doubts whether they really have SR marking. Weisser (this volume) claims that the alleged SR system in Kiowa is something different and Keine (this volume) argues that SR in Gokana is indeed logophoricity.

the fields while who came?" or "Who do you think left?" should be SS marked in an SR language. Unfortunately, such data are very rare in grammars of SR languages and in addition, wh-movement of subjects is independently barred in some of the languages. I can thus not provide examples that would support or falsify this prediction.

4. Non-canonical Switch Reference

It has been observed that SR marking in many languages patterns in unexpected ways when a traditional view on SR as the expression of pure referential (non-)identity is pursued. Such "non-canonical" SR includes cases where the subject of two clauses are coreferent but there is a DS marker in the marking clause, and cases where two clauses clearly have referentially disjoint subjects but the marking clause exhibits SS marking. In this section I go through some examples and discuss how the present analysis can handle them.

An important observation that can be made when looking at the unexpected data is that these non-canonical cases often involve unaccusative, passivized or impersonal marking clauses, viz. clauses that lack an external argument. Amele has impersonal constructions in which an experiencer DP triggers morphological object agreement. Subject agreement is always 3rd singular (see (38-a)). A conjunct that occurs in verb series with a medial verb and such an impersonal construction exhibits SS marking (see (38-b)), the same holds for weather verbs in a medial conjunct. As both of these constructions do not possess an external argument that is introduced in Specv DS marking would be expected (the two subject DPs in the reference and the marking clause cannot be referentially identical because the marking clause does not possess an external argument), but the opposite is observed. Indeed, these conjuncts can also be marked by the DS marker, but then the clause receives a causative interpretation (see (38-c)). Attaching the other SR marker always leads to ungrammaticality.

(38) *Amele impersonal construction (Roberts, 2001, 201, 228):*

- a. ija wen t-ei-a
1SG hunger 1SG.do-3SG.SUBJ-TOD.P
I was hungry.
- b. Ege co-cob-ob wen g-en
1PL SIM-walk-1PL.SS.R hunger 1PL.do-3SG.REM.P
As we walked, we became hungry.
- c. Ege co-cob-oqon wen g-en
1PL SIM-walk-1PL.DS.R hunger 1PL.do-3SG.REM.P
As we walked, something made us hungry.

This apparently unexpected marking in (38-b) shows first that SR marking does not seem to be a pure reference-tracking system in which indices are compared; if it were such mismatches were completely unexpected. Second, the mismatch directly falls out from the specification of SR markers proposed in the present analysis, cf. (30): The SS marker is inserted into T if there is no DP in Specv. The morphological marking of the experiencer DP and the non-causative interpretation suggests that there is no external argument in the structure, hence the DS marker cannot be inserted for T and the default SR marker, namely the SS marker, has to be used. Thus, I propose that the morphology is blind as to whether there is no DP in Ts domain because it has been moved away or because there was no such DP from the beginning. In (38-c), however, the causative interpretation suggests that there is indeed an external argument in the structure (which is however, non-overt), which is the causer of the event described by the verb. Assuming that this phonologically zero DP possesses morphosyntactic features that are visible in the morphological component, the most specific SR marker, viz. the DS marker, fits and is inserted – there is a DP in Ts domain.

The same pattern is observed in Huichol (Comrie, 1983, 30): When the marking clause is unaccusative, SS marking occurs, as expected under the specification of VIs in (30).

- (39) nunuuci nua-ka, paukuuweijyaazi
 child arrived-SS beat-PASS
 When the child arrived, it was beaten.

Another example of unexpected SR marking can be found in Imbabura Quechua (Cole, 1983; Hermon, 2001). In this language, there are two different impersonal constructions, lexical and desiderative impersonals. Again, morphological considerations and subjecthood tests lead us to the conclusion that the former have an external argument, but the latter do not; as expected by the specifications of VIs proposed here, one finds indeed DS marking with lexical and SS marking with (a certain kind of) desiderative impersonals. However, weather verbs and passives in Amele marking clauses only exhibit DS marking. This does not fall out from the system developed here, in fact the opposite is expected. The same holds in Seri when one of the clauses is unaccusative or passive (see (40), Farrell et al. (1991, 443)). In general, the present system cannot handle non-canonical DS marking because it presupposes that there is an element in Specv but there is no such element in unaccusative structures.

- (40) ʔp-po-a:ʔ-kasni *(ta)-X ʔp-si-o:ʔa ʔa=ʔa
 1sS-Ir-Pa-bite DS-UT 1sS-Ir-cry Aux=Decl
 If I am bitten, I will cry.

Another variant of an SR system is open reference (OR). Languages with OR possess only one of the SR markers (an SS marker in Inuktitut (Pittman, 2005, 2)

and a DS marker in Dargi (Nichols, 1983, 254)). The other marker does not exist, instead the absence of this marker (or the addition of another marker in Inuktitut) does not imply anything about the referential relationship between the subject of the marking and the reference clause, they may or may not be coreferent. Consider the example from Inuktitut in (41). According to Pittman, *-llu* is the SS marker, *-ti* is added to *-llu* for OR.

(41) *Open reference in Inuktitut (Pittman, 2005, 2):*

- a. Alana-up ujugak atja-tlu-gu ani-vuk
 alana-erg rock.abs carry-llu-3s go.out-intr.indic-3s
 While Alana_i was carrying the rock_j, she_{i/*j/*k} went out.
- b. pisuk-ti-llu-ŋa iŋŋi-lauq-tuq
 walk-ti-llu-1s. sing-d.past-3s.
 While I was walking, he was singing.
- c. pisuk-ti-llu-ŋa iŋŋi-lauq-tuŋa
 walk-ti-llu-1s. sing-d.past-1s.
 While I was walking, I was singing.

Note first that in Inuktitut both the verb in the reference and the marking clause agree with their subject and in most cases this disambiguates the OR examples. But this is not the case when both DPs are 3rd person. The present approach cannot handle these facts, because one of the SR markers is always more specific than the other and its absence is mysterious when the context requirements are met. A technical solution would be to impoverish the context before vocabulary insertion takes place (cf. Bonet, 1991), but it is not clear to me, what the motivation for such a deletion rule would be. In Dargi, for example, the DS marker is inserted if there is a DP in Ts domain, but it need not be inserted, because the absence of the marker does not necessarily imply referential identity of the subjects. Hence, something must be able to block the insertion of the DS marker, e.g. an optionally impoverished context feature.

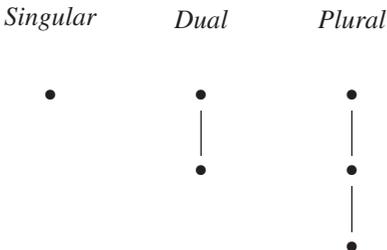
The last phenomenon that I discuss is overlapping reference. According to Comrie (1983), there are three different cases attested in the languages of the world, in which SS marking is possible when the referents of the marking (MC) and the reference clause (RC) stand in a subset/superset relation:

- Referent of the RC contains referent of the MC (see (42))
- Referent of the MC contains referent of the RC (see (43))
- Each of the referents of the (subject) DP in the MC and the RC contains at least one member that is also included in the subject of the other clause.

- (42) ko m-p-áskin ta-X / Xáa ʔaa ʔa-sí-škam-aʔa
 3 2-DF-paddle DS.FUT-COND / soon there 1PL.SUB-FUT-arrive.PL-TM
 If you (included in the group) paddle with it, soon we'll enter there.
Seri (Moser, 1978, 115)
- (43) *Choctaw (Davies (1984, 123), see also Amele (Roberts, 1988) and Diyari (Wiesemann, 1982)):*
- a. alhiha-t chokka kashoffi-cha Chan-at tamaha ia-tok
 group-NOM house clean-SS John-NOM town go-PST
 The group (including John) cleaned the house and John went to town.
- b. alhiha-t chokka kashoffi-na Chan-at tamaha ia.tok
 group-NOM house clean-DS John-NOM town go-PST
 The group (excluding John) cleaned the house and John went to town.

In addition, Comrie (1983, 35) states: "While languages may vary as to whether they treat overlapping reference as same-subject or different-subject, they are more likely to treat as same-subject instances where the referent of the controlling clause noun phrase is properly contained within that of the marked clause than vice versa." The movement analysis can handle this most frequent pattern if the ϕ -features of the involved DPs are decomposed and if movement involves copying (see the discussion in the last section). Assume, for example, that there is only a number difference between the DPs in the reference and matrix clause such that there is a plural DP in the marking and a corresponding singular DP in the reference clause. For ease of exposure, I take number to be decomposed and structured as proposed by Trommer (2006):

(44) *Iconic Representation of Number*



Note that the representation of the singular and the dual is a subset of the plural representation. Now, if movement is copying and the marking clause contains a plural subject, copying can involve only a subset of the features that make up the plural (*full vs. partial copying*, cf. Barbiers et al., 2009). In this way, the copy

of a single bullet, hence a singular entity, can be moved to the reference clause. The DP from which a part is copied must be identifiable as a copy and hence invisible for the VIs in the morphological component when vocabulary insertion takes place such that the SS marker is inserted. This can be achieved under the assumption that the whole DP is marked as a copy even if only a subpart of it has been copied. The same can be done with other features as well, when they are decomposed (for person decomposition see e.g. Harley and Ritter (2002); Béjar (2003)). Of course, this suggestion does not work for the other cases of overlapping reference described by Comrie, unless one is willing to add decomposed items to a representation after movement has taken place.

5. Conclusion

In this article I have shown that the cross-linguistic properties of Switch reference can be derived under a movement theory for some subject configurations. Adopting by and large the framework developed by Boeckx et al. (2010) (and previous works by these authors) for obligatory control that Switch reference shares a lot of properties with, I proposed that a DP whose referent seems to be shared (descriptively spoken) by two clauses exists indeed only once, but it is moved from a θ -position in the marking to a θ -position in the reference clause, where it is overtly realized. In different subject configurations, no such movement applies, instead there are two different DPs, one in the marking clause and another one in the reference clause. In this way, no indices and additional mechanisms that compare or determine reference (like the Binding Principles) are needed to derive referential (non-)identity. In addition, the SR marker is no longer an item that expresses referentiality, but an item which realizes the T head in a marking clause. The difference between DS and SS marking depends on T's structural environment, which changes when movement has taken place. Furthermore, some of the non-canonical instances of SR marking have been shown to fall out from the system, especially those with unexpected SS marking. I made some tentative suggestions for the remaining instances, but more elegant explanations should be found in future research.

Bibliography

- Abney, Steven (1987), *The English Noun Phrase in Its Sentential Aspect*, PhD thesis, MIT, Cambridge, Mass.
- Austin, Peter (1981), 'Switch reference in Australia', *Language* **57**(2), 309–334.
- Barbiers, Sjef, Olaf Koenenman and Marika Lekakou (2009), 'Syntactic doubling and the structure of wh-chains', *Journal of Linguistics* **45**, 1–46.
- Béjar, Susana (2003), *Phi-Syntax: A Theory of Agreement*, PhD thesis, University of Toronto.
- Belletti, Adriana and Luigi Rizzi (1988), 'Psych-verbs and Θ -theory', *Natural Language and Linguistic Theory* **6**, 291–352.
- Black, Andrew (1992), South American verb second phenomena: Evidence from Shipibo, in 'Syntax at Santa Cruz', pp. 35–63.
- Bobaljik, Jonathan D. (2007), The Limits of Deponency: A Chukotko-Centric Perspective, in M.Baerman, G.Corbett, D.Brown and A.Hippisley, eds, 'Deponency and Morphological Mismatches', Oxford University Press (for The British Academy), Oxford, chapter 8, pp. 175–201.
- Boeckx, Cedric, Norbert Hornstein and Jairo Nunes (2010), *Control as Movement*, Cambridge Studies in Linguistics 126, Cambridge University Press, New York.
- Bonet, Eulália (1991), *Morphology after Syntax*, PhD thesis, MIT, Cambridge, Mass.
- Bošković, Željko (1994), 'D-structure, theta-criterion, and movement into theta-positions', *Linguistic Analysis* **24**, 247–286.
- Bowe, Heather J. (1990), *Categories, Constitutents and Constituent Order in Pit-jantjatjara*, Routledge, London.
- Bowers, John (2002), 'Transitivity', *Linguistic Inquiry* pp. 183–224.
- Bowers, John (2008), 'On Reducing Control to Movement', *Syntax* **11**, 125–143.
- Camacho, José (2010c), 'On Case Concord: the Syntax of Switch-reference Clauses in Shipibo', *Natural Language and Linguistic Theory* **28**(2), 239–274.
- Chomsky, Noam (1981), *Lectures on Government and Binding*, Foris, Dordrecht.
-

- Chomsky, Noam (2000), Minimalist Inquiries: The Framework, in R.Martin, D.Michaels and J.Uriagereka, eds, 'Step by Step', MIT Press, Cambridge, Mass., pp. 89–155.
- Chomsky, Noam (2001), Derivation by Phase, in M.Kenstowicz, ed., 'Ken Hale. A Life in Language', MIT Press, Cambridge, Mass., pp. 1–52.
- Chomsky, Noam (2007), Approaching UG From Below, in U.Sauerland and H.Gärtner, eds, 'Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics', Mouton de Gruyter, Berlin/New York, pp. 1–29.
- Citko, Barbara (2005), 'On the Nature of Merge: External Merge, Internal Merge, and Parallel Merge', *Linguistic Inquiry* pp. 475–496.
- Citko, Barbara (2006), 'The interaction between Across-The-Board WH-Movement and Left-Branch Extraction', *Syntax* 9, 225–247.
- Cole, Peter (1983), Switch-reference in two Quechua languages, in P.Haiman, John & Munro, ed., 'Switch-Reference and Universal Grammar', Benjamins, Amsterdam/Philadelphia, pp. 1–15.
- Comrie, Bernard (1978), 'Morphological Classification of Cases in the Slavonic Languages', *The Slavonic and East European Review* 56, 177–191.
- Comrie, Bernard (1983), Switch-reference in huichol: a typological study, in P.Haiman, John & Munro, ed., 'Switch-Reference and Universal Grammar', Benjamins, Amsterdam/Philadelphia, pp. 17–37.
- Comrie, Bernard (1989), *Language Universals and Linguistic Typology*, 2 edn, Blackwell, Oxford.
- Davies, William D. (1984), Choctaw Switch-Reference and Levels of Syntactic Representation, in A.Cook and D. B.Gerdts, eds, 'Syntax and Semantics: Syntax of Native American Languages', Vol. 16, Academic Press, San Diego, pp. 123–147.
- Déchaine, Rose-Marie and Martina Wiltschko (2002), 'Decomposing pronouns', *Linguistic Inquiry* pp. 409–442.
- Dixon, Robert M. W. (1994), *Ergativity*, Cambridge University Press, Cambridge.
- Dobler, Eva and Tobin Skinner (2009), Narrow syntactic movement after Spell-out. Talk given at MASL, August 2009, Budapest.

- Epstein, Sam, Erich Groat, Ruriko Kawashima and Hisatsugu Kitahara (1998), *A Derivational Approach to Syntactic Relations*, Oxford University Press, Oxford and New York.
- Farrell, Patrick, Stephen A. Marlett and David M. Perlmutter (1991), 'Notions of Subjecthood and Switch Reference: Evidence from Seri', *Linguistic Inquiry* pp. 431–456.
- Finer, Daniel L. (1985), 'The Syntax of Switch-Reference', *Linguistic Inquiry* pp. 35–55.
- Frampton, John and Sam Gutman (1999), 'Cyclic computation', *Syntax* pp. 1–27.
- Franklin, Karl J. (1983), Some feature of interclausal reference in Kewa, in P.Haiman, John & Munro, ed., 'Switch-Reference and Universal Grammar', Benjamins, Amsterdam/Philadelphia, pp. 39–49.
- Gordon, Lynn (1983), Switch Reference, clausal order, and interclausal relationships in Maricopa, in P.Haiman, John & Munro, ed., 'Switch-Reference and Universal Grammar', Benjamins, Amsterdam/Philadelphia, pp. 83–104.
- Haiman, John and Pamela Munro (1983), *Switch-Reference and Universal Grammar*, Benjamins, Amsterdam/Philadelphia.
- Halle, Morris and Alec Marantz (1993), Distributed Morphology and the Pieces of Inflection, in K.Hale and S. J.Keyser, eds, 'The View from Building 20', MIT Press, Cambridge, Mass., pp. 111–176.
- Halle, Morris and Alec Marantz (1994), Some Key Features of Distributed Morphology, in A.Carnie, H.Harley and T.Bures, eds, 'Papers on Phonology and Morphology', Vol. 21 of *MIT Working Papers in Linguistics*, MITWPL, Cambridge, Mass., pp. 275–288.
- Harley, Heidi and Elisabeth Ritter (2002), 'Person and Number in Pronouns: A Feature-Geometric Analysis', *Language* **78**, 482–526.
- Harley, Heidi and Rolf Noyer (1999), 'Distributed morphology', *GLOT International* **4/4**, 3–9.
- Heck, Fabian and Gereon Müller (2003), 'Derivational Optimization of Wh-Movement', *Linguistic Analysis* **33**, 97–148.
- Heck, Fabian and Gereon Müller (2007), Extremely Local Optimization, in E.Brainbridge and B.Agbayani, eds, 'Proceedings of WECOL 26', California State University, Fresno, pp. 170–183.

- Hermon, Gabriella (2001), Non-canonical marked A/S in Imbabura Quechua, in A.Aikhenvald, R.Dixon and M.Onishi, eds, 'Non-Canonical Marking of Subjects and Objects', Benjamins, Amsterdam, pp. 149–176.
- Hole, Daniel (2008c), *Dativ, Bindung und Diathese*. Habilitationsschrift. Humboldt-Universität zu Berlin.
- Hornstein, Norbert (2001), *Move. A Minimalist Theory of Construal*, Blackwell, Oxford.
- Hornstein, Norbert (2003), On control, in R.Hendrick, ed., 'Minimalist syntax', Blackwell, Oxford, pp. 6–81.
- Hornstein, Norbert (2007), Pronouns in a Minimalist Setting, in N.Corver and J.Nunes, eds, 'The Copy Theory of Movement', John Benjamins, pp. 351–385.
- Huang, Cheng-Teh James (1982), *Logical Relations in Chinese and the Theory of Grammar*, PhD thesis, MIT, Cambridge, Mass.
- Jacobsen, William Jr. (1967), Switch-Reference in Hokan-Coahuiltecan, in W.Hymes, D. & Bittle, ed., 'Studies in Southwestern Ethnolinguistics', Mouton, The Hague, pp. 238–263.
- Keine, Stefan (2012), Switch-Reference as Coordination, in P.Weisser, ed., 'Perspectives on Switch-Reference: Local Modeling and Empirical Distribution', Vol. 89 of *Linguistische Arbeitsberichte*, Universität Leipzig.
- Montag, Richard (2005), Participant Referencing in Cashinahua. SIL international, www.sil.org/silewp/2005/silewp2005-013.pdf.
- Moser, Mary B. (1978), 'Switch-Reference in Seri', *International Journal of American Linguistics* pp. 113–120.
- Müller, Gereon (1998), *Incomplete Category Fronting*, Kluwer, Dordrecht.
- Nichols, Johanna (1983), Switch Reference in the Northeast Caucasus, in P.Haiman, John & Munro, ed., 'Switch-Reference and Universal Grammar', Benjamins, Amsterdam/Philadelphia, pp. 245–265.
- Nunes, Jairo (2001), 'Sideward Movement', *Linguistic Inquiry* pp. 303–344.
- Pittman, Christine (2005), Non-canonical switch reference in Inuktitut, in C.Gurski, ed., 'Proceedings of the 2005 annual conference of the Canadian Linguistic Association'.

- Prince, Alan and Paul Smolensky (1993), *Optimality Theory. Constraint Interaction in Generative Grammar*. Book ms., Rutgers University.
- Prince, Alan and Paul Smolensky (2004), *Optimality Theory. Constraint Interaction in Generative Grammar*, Blackwell, Oxford.
- Pylkkänen, Liina (2000), What applicative heads apply to, in 'Proceedings of the 24th Annual Penn Linguistics Colloquium', University of Pennsylvania. UPenn Working Papers in Linguistics 6.4.
- Richards, Marc (2008), Quirky Expletives, in R.d'Alessandro, G. H.Hrafnbjargarson and S.Fischer, eds, 'Agreement Restrictions', Mouton de Gruyter, Berlin, pp. 181–213.
- Richards, Norvin (2009), Tough-constructions. Talk given at MASL, August 2009, Budapest.
- Roberts, John R. (1988), 'Amele Switch-Reference and the Theory of Grammar', *Linguistic Inquiry* pp. 45–63.
- Roberts, John R. (2001), Impersonal constructions in Amele, in A.Aikhenvald, R.Dixon and M.Onishi, eds, 'Non-Canonical Marking of Subjects and Objects', Benjamins, Amsterdam, pp. 201–250.
- Ross, John (1967), *Constraints on Variables in Syntax*, PhD thesis, MIT, Cambridge, Mass.
- Salzmann, Martin (2005), On an alternative to long \bar{A} -movement in German and Dutch, in 'Proceedings of ConSOLE XIII', SOLE Board, Leiden, pp. 353–375. <http://www.sole.leidenuniv.nl>.
- Schütze, Carson (1997), *INFL in child and adult language: Agreement, Case, and Licensing*, PhD thesis, MIT, Cambridge, Mass.
- Sternefeld, Wolfgang (2006), *Syntax*, Stauffenburg, Tübingen. Two volumes.
- Stirling, Lesley (1993), *Switch-reference and Discourse Representation*, Vol. 63 of *Studies in Linguistics*, Cambridge University Press, Cambridge.
- Trommer, Jochen (2006), Plural Insertion is Constructed Plural, in G.Müller and J.Trommer, eds, 'Subanalysis of Argument Encoding in Distributed Morphology', Vol. 84 of *Linguistische Arbeitsberichte*, Universität Leipzig, pp. 197–228.
- Watanabe, Akira (1996), 'Switch reference in control: Toward a minimal theory of control.', *Studies in Linguistics and Language Teaching* 7, 89–160.

Watanabe, Akira (2000), 'Feature Copying and Binding: Evidence from complementizer agreement and switch reference', *Syntax* 3(3), 159–181.

Watkins, Laurel (1993), 'The discourse functions of Kiowa switch-reference.', *International Journal of American Linguistics* 59, 137–164.

Weisser, Philipp (2012), Is there Switch-Reference Marking in Coordinated Clauses?, in P. Weisser, ed., 'Perspectives on Switch-Reference: Local Modeling and Empirical Distribution', Vol. 89 of *Linguistische Arbeitsberichte*, Universität Leipzig, pp. 165–190.

Wiesemann, Ursula (1982), 'Switch Reference in Bantu Languages', *Journal of West African Languages* XII, 52–57.

Yosuke, Sato (2007), Switch-Reference and Control at the Syntax-Morphology Interface: An AGREE-Based Account. Paper presented at the ONLI Conference June 2007, University of Ulster, Ireland.

Contact:

Universität Leipzig
Institut für Linguistik
Beethovenstraße 15
D-04107 Leipzig
Germany