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# WHAT IS SWITCH-REFERENCE?

## FROM THE VIEWPOINT OF THE YOUNG PEOPLE'S SWITCH-REFERENCE SYSTEM IN MENGGWA DLA

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### Abstract

Menggwa Dla possesses a switch-reference (SR) system which traditionally functions like those in many other Papuan languages. However, in the speech of younger speakers, the proper reference-tracking function of the SR markers has only been retained when the person-number-gender features of the subject cross-reference suffixes are incapable of disambiguating their referentiality. Otherwise, the coreferential (CR) chain verb forms have become the unmarked SR-neutral chain verb forms. While the disjoint-referential (DR) chain verb forms still indicate the disjoint-reference of the interclausal subjects, the DR chain verb forms are mainly used to indicate some sort of discourse discontinuity (e.g. temporal discontinuity, logic discontinuity) in addition to participant discontinuity. It will be demonstrated that the older speakers' traditional SR system in Menggwa Dla is a canonical SR system which primarily indicates participant continuity versus discontinuity, whereas the younger speakers' innovative SR system is more biased towards the function of reference-tracking.

### 1. Introduction

Menggwa Dla — also known as Duka-Ekor (Galis 1956, Voorhoeve 1975) — is spoken by about 200 people in Jayapura Regency of Papua Province,



Figure 1: Menggwa Dla territory in New Guinea.

Indonesia ('West Papua' / WP) and Sandaun Province of Papua New Guinea (PNG). Menggwa Dla is a dialect of the Dla language ('Dera' in Malay-Indonesian orthography). Dla and its sister language Anggor (e.g. Litteral 1980) form the Senagi language family, one of numerous small Papuan families and isolates found in the North-Central New Guinea region (Donohue & Crowther 2005).

Menggwa Dla shares many typological similarities with the languages of the Trans New Guinea family (eg Ross 2005, Pawley 2005), of which the typological features are often regarded as prototypical of Papuan languages. The most salient of these typological features in Menggwa Dla are: (1) verb-final word order; (2) cross-referencing of arguments on verbs; and (3) rampant clause-chaining with switch-reference (SR) inflected on the chain verbs.

In older speakers' speech, the function of the SR system is canonical: coreferential (CR) and disjoint-referential (DR) chain verb forms indicate the coreference and disjoint-reference, respectively, between the subject of their own clause and the subject of the following clause. In younger speakers' speech, however, the function of the SR system has changed; the proper reference-tracking function of SR (i.e. the indications of coreference or disjoint-reference of the interclausal subjects) is only retained when the person-number-gender features of the subject cross-reference suffixes are not

sufficient to disambiguate whether the subjects are coreferential or disjoint-referential. Otherwise, the CR chain verb forms have become ‘SR neutral’, that is, the CR chain verb forms have become the unmarked chain verb forms which no longer indicate the coreference or disjoint-reference of the interclausal subjects. The DR chain verb forms still indicate the disjoint-reference of the interclausal subjects. Nevertheless, the DR chain verb forms are mainly used by younger speakers to indicate kinds of discourse discontinuity like temporal discontinuity or logic discontinuity (in addition to participant discontinuity).

This paper will begin by introducing some basic concepts and terminologies concerning SR systems in section 2. The morphosyntax of Menggwa Dla will be outlined in sections 3 and 4, and then the functions of the SR system in both older and younger speakers’ speech will be described in section 4. In sections 5 and 6, two different functions of SR — reference tracking and the indication of discourse participant continuity versus discontinuity — will be introduced. In light of this difference, it will be summarised (in section 7) that the traditional SR system in Menggwa Dla represents a canonical SR system where the primary function is the indication of participant continuity versus discontinuity, whereas the younger people’s innovative SR system is more biased towards the function of reference-tracking.

## 2. Switch-reference — some basic concepts

SR systems exist in many Papuan languages. SR systems are realised by a set of ‘SR markers’ — typically verbal affixes — which are compulsorily used in a particular type of clause. Within a system of SR markers,<sup>2</sup> some SR markers function as coreferential (CR) markers and some SR markers function as disjoint-referential (DR) markers; these CR and DR markers indicate the coreference and disjoint-reference, respectively, between a particular reference of their own clause and a particular reference of another syntactically related clause. The interclausal references which are monitored as being coreferential or disjoint-referential by the SR markers are called the ‘SR pivots’ (following Roberts’ (1997) terminologies). Each SR system has its own specific criteria on how the SR pivots are selected. For instance, in Nggem (Etherington 2002: 148–149), subordinate clause verbs are inflected with SR, and the SR pivots are the syntactic subject of the SR-marked subordinate clause and the syntactic subject of the matrix clause. In the following examples, the first clause is a SR-marked subordinate clause which is linearly followed by its matrix clause.

The CR suffix *-rik* in example 1 indicates that the third person singular (3SG) subject of its own clause is coreferential with the 3SG subject of the matrix clause, and the DR suffix *-ma* in example 2 indicates that the third person plural (3PL) subject of its own clause is disjoint-referential with the 3PL subject of the matrix clause.<sup>3</sup>

**Nggem** (Greater Dani, Trans New Guinea; Jayawijaya, WP)

1. *daga*            *wa-g-a-rik*,  
ascend        come-R-3SG:NEARPAST-**CR:SEO**  
*andenam*    *amwa*            *nogo*    *yi-g-as*.  
there        home            sleep    weav-R-3SG:NEARPAST  
‘After [**his**<sub>j</sub>] coming up, **he**<sub>[j]</sub> slept there at his home.’
  
2. *yu-g-u*        *la-g-ag-wa-ma*,  
say-R-PL        stay-R-FARPAST-**3PL-DR**  
*oga-g-ag-wa*.  
do-R-FARPAST-3PL  
‘After **they** had spoken, **they** (different subject) did it.’

In canonical SR systems, an appropriate CR or DR form must be used no matter what person-number-gender features the SR pivots have. In other words, a CR or DR marker must be used even when reference disambiguation is not needed for the SR pivots (e.g. when one or both of the SR pivots are first or second person). In the following examples from Kanite (McCarthy 1965: 67), the non-final clauses are chain clauses (a.k.a. cosubordinate clauses and medial clauses), and the final clauses are independent clauses. Chain clause verbs are inflected with SR, and the SR markers indicate the coreference or disjoint-reference between the subject of their own clause and the subject of the linearly following clause. The chain verbs must be in the appropriate CR or DR forms even when the person and number features of the subject cross-reference suffixes already indicate the coreference or disjoint-reference of the subjects.<sup>4</sup>

**Kanite** (Gorokan, Trans New Guinea; Eastern Highlands, PNG)

3. *a-ke-ne-Ø-?na,*  
 3SG:O-see-SIM-**CR**-1SG:S  
*ne?-v-u-e.*  
 PROG-go-1SG-IND  
 ‘As **I** was looking at him, **I** was going.’
4. *a-k-o-ke-no,*  
 3SG:O-see-1SG:S-**DR**-3SG:S  
*v-i-ke-?na,*  
 go-3SG:S-**DR**-1SG:S  
*ne-n-o-e.*  
 PROG-eat-1SG:S-IND  
 ‘**I** see it, **he** goes, and **I** eat it.’

The clause where a SR marker is found is called the ‘(SR-) marked clause’. One SR pivot of this SR marker is found within the marked clause, and the clause where the other SR pivot is found is called the ‘control clause’ (following Roberts’ (1997) terminologies). A SR-marked clause can itself be the control clause of another SR-marked clause. For instance, in example 4 above, the second clause is the control clause of the first SR-marked clause; at the same time, the second clause is itself a SR-marked clause, of which the control clause is the third clause.

### 3. Menggwa Dla morphosyntax — some preliminaries

Before our discussion on the SR system in Menggwa Dla, we will have a brief look at the independent verbal morphology, noun-phrase morphosyntax and intraclausal syntax in the language.

Independent verbs always carry at least one cross-reference suffix and one affix for tense-aspect-mood. Cross-referencing in Menggwa Dla is rather complicated (and it is beyond the scope of this paper to describe fully; see chapter 5 in de Sousa (forthcoming)). There are seven sets of subject ([S/A]) cross-reference suffixes and four sets of object ([P/R]) cross-reference suffixes. (Ditransitive second objects — in other words the theme or ‘gift’ — are never cross-referenced.) Verbs are lexically-specified as to which sets

of cross-reference suffixes they can take, and based on their cross-referencing properties, verbs can be classified into one of five verb classes. All (finite) verbs carry a subject cross-reference suffix; whether a verb belongs to a verb class which also takes an object cross-reference suffix is not quite predictable from the valence of the verb or the pragmatic status of the object. For instance, the verb *seru* ‘eat’ does not take object cross-reference suffixes, yet it can be either monovalent or bivalent (examples 8 and 18 below). Conversely, both the bivalent verb *homba* ‘see’ and the monovalent verb *hihili* ‘turn around and come back’ take subject and object cross-reference suffixes (*hihili* takes a ‘dummy’ object suffix which takes the default value of 3FSG; compare examples 5 and 6 below). The following are examples of independent verbs.

**Menggwa Dla** (Senagi; Sandaun, PNG & Jayapura, WP)

5. *hihili-wu-a-mbi*.  
turn.back-N1MPL-3FSG:O-PRES:TRANSN  
‘They are turning back now.’
6. *homba-wu-a-ni*.  
see-N1MPL-3FSG:O-TENT  
‘Maybe they saw her.’
7. *pi-wi-hi*.  
go-N1FPL-PRES:CONT  
‘They are going.’ (‘They are currently on their way.’)
8. *ser-ihā-hwa*.  
eat-1SG-PAST  
‘I am eating.’/ ‘I am eating (that).’
9. *simi-wa-hya*.  
drink-3FSG-PAST:FOC  
‘She did drink.’/ ‘She did drink (that).’
10. *sa-mba-i!*  
give-2SG-1SG:O (IMP)  
‘Give me (that) (now)!’

While there are verbs like *hihili* ‘turn around and come back’ and *homba* ‘see’ which have invariant verb root forms, most commonly used verbs show irregularities of various kinds in their verb roots. For example, some verbs have different non-future versus future finite verb root forms. The verb roots in examples 11 to 14 below are future finite verb roots; compare them with the (regular) non-future finite verb roots in examples 7 to 10 above.<sup>5</sup> Later on this paper, we will also see some verbs with irregular DR verb roots (verb root of DR chain verb forms; see section 4).

11. *po-l-a-mby-a.*

go:FUT-LIG-1SG-POS:SMR-1SG  
‘I will go.’

12. *ga det-u.*

NEG:SMR eat:FUT-3MSG  
‘He will not eat.’/ ‘He will not eat (that).’

13. *ma-dom-o?*

NEG:IR-drink:FUT-3FSG  
‘Will she drink?’/ ‘Will she drink (that)?’

14. *da-mba-ya!*

give:FUT-2SG-1SG:O (IMP)  
‘Give me (that) (later)!’

(As a comparison, the following are the future forms of the verbs *hihili* ‘turn around and come back’ and *homba* ‘see’ which have invariant verb root forms:

15. *ga hihili-nya-a.*

NEG:SMR turn.back-N1DU-3FSG:O  
‘They two will turn back.’

16. *ga homba-na-a.*

NEG:SMR see-N1DU-3FSG:O  
‘They two will not see her.’)

As seen in the examples above, well-formed clauses do not need to have free nominals. In fact, clauses which only consist of a verb are very common. When

there are free nominals in a clause, the verb is most usually the last constituent in the clause.<sup>6</sup> A head noun and its modifiers must be contiguous to form a noun phrase, but the word order within noun phrases is free. Otherwise, the relative order of the constituents in front of the verb is both grammatically and pragmatically free. For instance, in example 17 below, the constituents of *yo* ‘I/ we’, *sihafumbo* ‘you (SG:OBJ)’, *suggu* ‘later’ and *ehala ufati* ‘his/her medicine’ can in any order (and ‘his/her medicine’ can also be expressed as *ufati ehala*), as long as the verb *danimganimbya* ‘I will give you’ is placed at the end of the clause. There is a range of nominal clitics: an object ([P/R]) case clitic =*mbo*, various semantic case clitics, a topic clitic =*na* and various focus clitics. Subjects ([S/A]) and ditransitive second objects ([T]) are zero case-marked, as shown in 17 below. The nominals clitics are optionally used with nouns (e.g. *ayamu* ‘chicken’ in example 18 below) and obligatorily used with personal pronouns (e.g. the object pronouns in example 17 and 19 below).

17. *yo sihafumbo suggu [ehala ufati]*  
 1 2SG:OBJ later [3SG:GEN medicine]  
*da-niŋ ga-ni-mby-a.*  
 give:FUT-1SG-2SG:O-POS:SMR-1SG  
 ‘I will give you his/her medicine later.’

18. *(ai) ayamu(=mbo) ser-yefa-hwa.*  
 (3) chicken(=OBJ) eat-N1FDU-PAST  
 ‘They two ate the chicken.’

19. *(yo) aiahefimbo homba-ha-pa-hwa.*  
 (1) 3FDU:OBJ see-1SG-N1DU-PAST  
 ‘I saw them two.’

#### 4. Chain clauses and SR in Menggwa Dla

Similar to many other Papuan languages, clause-chaining is prevalent in Menggwa Dla natural discourse, and the chain clauses in Menggwa Dla indicate switch-reference. Chain clauses are the most common type of dependent clause in Menggwa Dla. One or more chain clauses are ‘chained’ together with one independent clause at the end to form a ‘clause chain’; the chain clauses are dependent on the final independent clause for full tense-mood



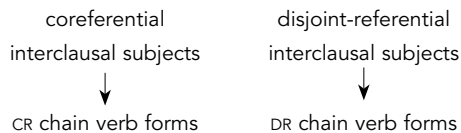
specifications. Chain clause verbs (‘chain verbs’) carry cross-reference suffixes (like independent verbs; see section 3), a ‘dependency’ suffix  $-\emptyset \sim -mbo \sim -mbona$  (grammatical free variations)<sup>7</sup> which indicates that they are dependent on another clause for tense-mood specifications, and a SR marker. There are two SR markers: the coreference (CR) marker  $\emptyset$ , and the disjoint-reference (DR) marker *ma-/ -ma/ -me* (allomorphs)<sup>8</sup> which is affixed immediately to the verb root. Chain verbs which carry the zero CR marker are called ‘CR chain verbs’, and chain verbs which carry the *ma-/ -ma/ -me* DR marker are called ‘DR chain verbs’. There are other morphosyntactic differences between CR and DR chain verbs; for instance, the cross-reference suffixes may be different in form (as shown in examples 20 and 21 below).<sup>9</sup> The following is an example of a CR chain verb and an example of a corresponding DR chain verb. The functions of the CR and DR chain verbs will be demonstrated in the next two subsections.<sup>10</sup>

20. *walambani- $\emptyset$ -o-mbo*,  
 swim-**CR**-3FSG-DEP  
 ‘She<sub>j</sub> swam, and she<sub>j</sub> ...’
21. *walambani-me-wa-mbo*,  
 swim-**DR**-3FSG-DEP  
 ‘She swam, and someone else...’

#### 4.1 The older speakers’ traditional SR system

The traditional SR system as used by older speakers in Menggwa Dla represents a canonical SR system. In older speakers’ speech, CR chain verbs indicate that the subject of its own clause is coreferential with the subject of a linearly following clause, and DR chain verbs indicate that the subject of its own clause is disjoint-referential with the subject of a linearly following clause. The relationship from function to form is one to one.<sup>11</sup>

**Figure 2: Function and form in the traditional SR system.**



In the following pair of examples, the first clause is a chain clause and the following clause is an independent clause. In example 22, the CR chain verb (as marked by the zero CR morph) indicates that the subject of its own clause is coreferential with the subject of the following clause (i.e. the same person swam and saw someone else). In example 23, the DR chain verb (as marked by the DR suffix *-me*) indicates that the subject of its own clause is disjoint-referential with the subject of the following clause (i.e. the person who saw is different from the person who swam).

22. *rani=mbe walambani-Ø-o-mbo, homba-ya-a-hwa.*  
 DEM=INS swim-CR-3FSG-DEP see-3SG-3FSG:O-PAST  
 ‘She<sub>j</sub> was swimming/ swam there, and she<sub>j/\*k/\*l</sub> saw her<sub>k</sub>.’

23. *rani=mbe walambani-me-wa-mbo, homba-ya-a-hwa.*  
 DEM=INS swim-DR-3FSG-DEP see-3SG-3FSG:O-PAST  
 ‘She<sub>j</sub> was swimming/ swam there, and s/he<sub>j/\*k</sub> saw her<sub>j/\*k/l</sub>.’

The following is another example. The DR chain verb form *hwafomembo* ‘he talks and...’ in the first chain clause indicates a change in subject between its own clause and the following (second) chain clause, whereas the CR chain verb form *hahofumbo* ‘he goes up and...’ in the second chain clause indicates that the subjects of its own clause is the same person as the subject of the following independent clause.<sup>12</sup>

24. *wuli=hi afila=lofo hwafo-me-Ø-mbo, Ø-hahof-u-mbo,*  
 house=ADS father=COM talk-DR-3MSG-DEP CR-go.up-3MSG-DEP  
*ye ap-u-hwa.*  
 then sleep-3MSG-PAST  
 ‘He<sub>j</sub> talked with father<sub>k</sub> outside the house (DR), and he<sub>\*j/k/l</sub> went into the house (CR), and then slept.’ (70III)

In many Papuan SR languages (e.g. Amele (Roberts 1988)), the SR pivots are the ‘topics’ rather than the syntactic subjects. Nevertheless, the SR pivots in Menggwa Dla are always the syntactic subjects (as defined by the subject cross-reference suffixes). In the first clause of the following example, the object noun phrase *Pius* is topicalised in the first clause, and the topicalised object *Pius* in the first clause is coreferential with the subject of the second clause. However, this coreference between the object-topic of the first clause

and the subject of the second clause is ignored by the SR marker as SR markers only monitor the syntactic subjects. In the first clause, the non-first person feminine singular (N1FSG) subject suffix *-ya* cross-references with the subject noun phrase *nyewi* ‘person’ (people of unknown gender are cross-referenced as feminine in Menggwa Dla), and the subject of the second clause is represented by the third person masculine (3MSG) subject suffix *-Ø*, of which the referent can be inferred as being the 3MSG referent of the previous clause, *Pius*.

- |                    |                   |                         |  |
|--------------------|-------------------|-------------------------|--|
| OBJ                | SUBJ              |                         |  |
| 25. <i>Pius=na</i> | <i>nŋewi</i>      | <i>ya ga=mbe</i>        | <i>ingufu-<u>ma</u>-ŋa-Ø-mbo,</i>        |
| <i>Pius=TOP</i>    | <i>person</i>     | <i>bush=INS</i>         | <i>attack-<u>DR</u>-N1FSG-3MSG:O-DEP</i> |
| <i>sungwani</i>    | <i>wuli=nambo</i> | <i>pi-Ø-hŋa</i>         | <i>nu.</i>                               |
| <i>sick</i>        | <i>house=ALL</i>  | <i>go-3MSG-PAST:FOC</i> | <i>COP:3MSG</i>                          |
- ‘As for *Pius*<sub>p</sub>, someone<sub>j</sub> attacked him<sub>p</sub> in the bush (DR), and he<sub>p</sub>(/?<sub>j</sub>) went to the clinic.’ (60III)

There are no voice oppositions in Menggwa Dla, and there are basically no morphological valency changing operations (e.g. causativity is conveyed by analytic means, with the causative verb most usually in DR chain verb form). In many Papuan languages, the animate undergoer of involuntary states like ‘be sick’ or ‘be hungry’ is expressed as a non-subject. For instance, in the second clause of example 26 below from Telefol (Foley 1986: 190; Healey 1966), the undergoer is cross-referenced as the beneficiary relation rather than the subject; the third person *feminine* subject of the second clause presumably cross-references with *daál* ‘tiredness’ (the undergoer of the ‘be tired’ state is meant to be coreferential with the third person *masculine* subject of the previous clause). Papuan SR languages vary as to whether the animate undergoer non-subject is selected or not selected as a SR pivot (and also by which SR marker). In the case of Telefol, the animate undergoer is selected as a SR pivot of the CR marker *-al* of the previous clause.<sup>13</sup>

#### Telefol (Ok, TNG; Sandaun, PNG)

- |                  |                                       |                                 |
|------------------|---------------------------------------|---------------------------------|
| 26. <i>daám</i>  | <i>boóyó</i>                          | <i>fákán-bi-al-a-ta</i>         |
| <i>fence</i>     | <i>that</i>                           | <i>make-DELSEQ-CR-3MSG-then</i> |
| <i>daál</i>      | <i>tebe-b?-ee-b-u.</i>                |                                 |
| <i>tiredness</i> | <i>happen-PERFT-3SG:BEN-PAST-3FSG</i> |                                 |
- ‘[H]e got tired of fencing.’

Menggwa Dla avoids this problem as the animate undergoer of involuntary states is always the syntactic subject. In the following example, the animate undergoer is marked as the subject on the verb, while the inanimate force *gihali* ‘hunger’ is represented by an object noun phrase (object noun phrases can optionally take an object case clitic =*mbo*; see section 3).

### Menggwa Dla

27. *gwa*            *gihali*(=*mbo*)            *sufwa-Ø-a-mbo*,  
      but            hunger(=OBJ)            feel-CR-1SG-DEP  
      *stroberi*    *imbu*                            *hihiri-Ø-a-mbo*,            *ser-ih-a-hwa*.  
      strawberry two                            steal-CR-1SG-DEP            eat-1SG-PAST  
      ‘But then I was hungry (CR), and I stole two strawberries and I ate them.’ (50II)

Common to many Papuan SR languages is the phenomenon of clause skipping. Clause skipping refers to situations where a clause is marked as CR or DR in relation to a clause which is not the immediately following clause. For CR clauses, the clause(s) which are skipped convey background information, and hence the SR-marked clause is marked as CR in relation to the next clause which depicts the main line of events. For instance, in example 28 below, the first clause, which depicts foreground information, is marked as CR in relation to the fourth clause, which is the next clause which depicts foreground information; the second clause and the third clause depicts background information, and they are marked as CR and DR, respectively, in relation to their immediately following clause.

28. *pi-Ø-a*            *ma-hya-a-Ø*                            *numb-a-mbo*,  
      go-CR-1SG    COMPL-1SG-3FSG:O-DEP    SEQ-1SG-DEP  
      ‘I would make (the fibre) loose (CR),’  
      *ye*            *pi-Ø-o-mbo*  
      then            go-CR-3FSG-DEP  
      ‘then (**the fibre**) would become loose (CR),’  
      *hupla=mbe*            *ma-ek-wa-mbona*,  
      container=INS            DR-exist-3FSG-DEP  
      ‘and (**the fibre**) would stay in the empty trunk (DR),’

*waplu sa-hya-a hof-a saha-hya-a*  
*numb-a-mbo...*  
 p.bucket carry-1SG-3FSG:O come-1SG put-1SG-3FSG:O  
 STAT-1SG-DEP  
 ‘and I would take the palm leaf bucket here (CR), and...’ (B)

As seen in the examples 22 to 28 above, in older speakers’ traditional SR system, an appropriate CR or DR chain verb form has to be used even when the subject cross-reference suffixes already indicate that the interclausal subjects are coreferential or disjoint-referential unambiguously. Reference disambiguation is basically not needed when one of the subjects is a first or second person reference, or when the gender features are conflicting. In the examples below, the person-number-gender features of the subject cross-reference suffixes already indicate the coreference (example 29) and disjoint-reference (example 30) of the interclausal subjects. Nevertheless, a CR chain verb is still required in example 29, and a DR chain verb form is still required in example 30.

29. *ye Ø-ser-i fa-hya-a-mbo, ap-aha-hi.*  
 then CR-eat-1SG SEQ-1SG-3FSG:O-DEP sleep-1SG-PRES:CONT  
 ‘I eat (CR), and then I sleep.’ (B)

30. *ini. pusi homba-ma-ha-a-mbo, hwi=na han-wa-hwa.*  
 yes cat see-DR-1SG-3FSG:O-DEP water=ALL go.down-3FSG-PAST  
 ‘Yes, I saw the cat<sub>j</sub> (DR), it<sub>j/k</sub> went down towards the stream.’ (60III)

#### 4.2 The younger speakers’ innovative SR system

The function of the SR system is different for speakers of Menggwa Dla who were born since late 1970s. The function of the innovative SR system differs depending on whether the subject cross-reference suffixes can resolve the referentiality of the interclausal subjects or not. The innovative SR system consists of two mutually exclusive sub-systems.

##### *Sub-system 1*

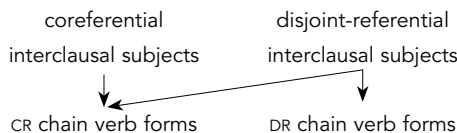
When the person-number-gender information of the two subject cross-reference suffixes already unambiguously indicates that the two subjects are coreferential or disjoint-referential (i.e. when one of the cross-reference suffixes is first or second person, or when the gender features of the two

suffixes do not match), CR chain verb forms are SR-neutral, i.e. the CR chain verb forms have become the unmarked chain verb forms which do not monitor whether the interclausal subjects are coreferential or not. Conversely, grammatically speaking, disjoint-referential interclausal subjects can be conveyed by either CR verb forms or DR verb forms. The relationship from function to form is no longer one to one.

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**Figure 3: Function and form in sub-system 1 of the innovative SR system.**

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In example 31, a CR chain verb form *hofahiambo* ‘I trip over and...’ is used because the interclausal subjects are meant to be coreferential. However, in example 32, the same CR verb form *hofahiambo* is used in the first clause when the interclausal subjects are actually disjoint-referential (1SG and 3MSG). The fact is that the CR verb form in examples 31 and 32 are SR-neutral; this is the case as the person-number-gender features of the subject suffixes *-a* (1SG) and *-Ø* (3MSG) already indicate the disjoint-reference of the interclausal subjects. While the use of a DR verb form like *hofahi-me-aha-mbo* (fall-DR-1SG-DEP) is also grammatical in example 32, most younger speakers (whom I have consulted) would use a CR verb form in a situation like this. Also notice that example 32 does not demonstrate clause skipping (section 4.1); the second clause in example 32 is already the final independent clause of the clause chain, i.e. there are no clauses after the independent clause to ‘skip’ to.

31. *hofahi(-Ø)-a-mbo*,  
 fall(-CR)-1SG-DEP  
*sumbu-aha-hwa*.  
 laugh-1SG-PAST  
 ‘I tripped over and I laughed.’

32. *hofahi(-Ø)-a-mbo,*  
 fall(-CR)-1SG-dep  
*yoambo sumbu-Ø-hwa.*  
 1SG:OBJ laugh-3MSG-PAST  
 ‘I tripped over and he laughed at me.’ (90I)

The following are two more examples. Since the subject cross-reference suffixes in the following examples already indicate the disjoint-reference of the interclausal subjects, most younger speakers would use CR chain verb forms rather than DR chain verb forms in these situations.

33. Peter *atimbati(-Ø)-u-mbona,*  
 Peter sneeze(-CR)-3MSG-DEP  
*bahu pi-wa-hwa.*  
 flying.fox go-3FSG-PAST  
 ‘Peter sneezed and the flying fox flew away.’ (80IV)

34. *aya ifali kwemi(-Ø)-Ø-mbo,*  
 father spear take(-CR)-3MSG-DEP  
*yo=amba aha yowala ifali tamnya*  
 I=too 1SG:EMPH 1SG:GEN spear small:MASS  
*kwami-Ø-a-mbo...*  
 take-CR-1SG-DEP  
 ‘Father took spears with him, I too took my own small spears, and...’ (N)

It is still grammatical to use DR chain verb forms when the interclausal subjects are disjoint-referential. Nevertheless, most younger speakers only use DR chain verb forms to emphasise discourse discontinuity of some sort. For instance, in the following example, a CR chain verb like *pi-Ø-u-mbona* (go-CR-3MSG-DEP) can be used in the first clause in younger speaker’s speech. Nevertheless, the younger speaker used the DR chain verb form *po-me-Ø-mbona* (go:DR-DR-3MSG-DEP), presumably due to the contrastive focus, or alternatively the disruption in spatial continuity (i.e. the spatial settings of the two clauses are significantly different).<sup>14</sup>

35. *dukumi po-me-Ø-mbona,*  
valley go:DR-DR-3MSG-DEP  
*yo lohama roŋgo pi-aha-hwa.*  
1 ridge along go-1SG-PAST  
'He went to the valley, and I went along the ridge.' (N)

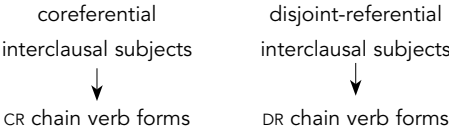
In the following example, the younger speaker may have used the DR verb form to emphasise the termination of the direct quote.

36. *mi "... bani kaha-wa-a!" me-h-wa-mbo,*  
mother "... sago chop-2SG-3FSG:O (IMP)" DR-say:DR-3FSG-DEP  
*pi-Ø-hwa.*  
go-3MSG-PAST  
'Mother said "... you chop sago!" and he went.' (80I)

*Sub-system 2*

When the person-number-gender information of the two subject cross-reference suffixes is not sufficient in resolving whether the interclausal subjects are coreferential or disjoint-referential (i.e. when the two cross-reference suffixes are both third person and when the gender features are not conflicting), the use of CR verb forms obligatorily indicate the coreference of the interclausal subjects, and the disjoint-reference of the interclausal subjects are obligatorily indicated by DR verb forms. The relationship from function to form is again one to one.

**Figure 4: Function and form in sub-system 2 of the innovative SR system.**



In the following example, all subject cross-reference suffixes are third person singular, and the gender features are not conflicting (no gender information — masculine — masculine). The use of CR verb forms in this case necessarily indicates the coreference of the interclausal subjects.



37. *ai* *dukwa-Ø-ya-a-mbo,*  
 3 *wake.up-CR-3SG-3FSG:O-DEP*  
*Hilari=mbo homba-Ø-i-Ø-mbona,*  
*Hilario=OBJ see-CR-3MSG-3MSG:O-DEP*  
*alani-Ø-hwa.*  
*cry-3MSG-PAST*  
 ‘**He**<sub>j</sub> woke up (CR), **he**<sub>j/\*k</sub> saw Hilari<sub>h</sub> (CR), and **he**<sub>j/\*k/\*h</sub> cried.’ (90III)

In a similar situation, if the interclausal subjects are meant to be disjoint-referential, then a DR chain verb form must be used; a CR chain verb form cannot be used in this situation because CR chain verb forms are no longer SR-neutral.

38. *Hilari=mbo homba-ma-i-Ø-mbona* (/ \**homba-Ø-i-Ø-mbona*),  
*Hilario=OBJ see-DR-3MSG-3MSG:O-DEP* (/see-CR-3MSG-3MSG:O-DEP)  
*alani-Ø-hwa.*  
*cry-3MSG-PAST*  
 ‘**He**<sub>j</sub> saw Hilari<sub>h</sub> (CR), and **he**<sub>j/\*h/l</sub> cried.’

The following are two other examples demonstrating the sub-system 2 of the innovative SR system. Also notice that in example 40 below, having overt noun phrases which disambiguates the referentiality of the subjects has no effect on the SR system; what matters to the innovative SR system are the person-number-gender features of the subject cross-reference suffixes.

39. *twaŋ gi=lofo wuli=na Ø-hahof-q-mbo,*  
*white.person=COM house=ALL CR-go.up-3FSG-DEP*  
*aflambli nafi-Ø-a-hwa.*  
*plenty show-3SG-3FSG:O-PAST*  
 ‘She<sub>j</sub> went into the house with the white person<sub>k</sub> (CR), and **she**<sub>j/\*k/\*l</sub> showed her<sub>k/l</sub> many things.’ (90III)

40. *Peter=na wamla ma-ser-u-mbo* (/ \**Ø-ser-u-mbo*),  
*Peter=TOP betel.nut DR-eat-3MSG-DEP* (/ *CR-eat-3MSG-DEP*)  
*Simon=na fofo-Ø-hwa.*  
*Simon=TOP blow-3MSG-PRES:CONT*  
 ‘**Peter** is chewing betel nut (DR), and **Simon** is smoking.’ (80II)

## 5. The (real) functions of SR

In this section, we will have a look at the functions of SR systems in other languages with canonical SR systems. In section 6, we will have a look at two types of deviants from canonical SR systems: ‘third-person’ SR systems and systems of general discourse continuity markers. In section 7, we will conclude that the older speakers’ traditional SR system in Menggwa Dla is a canonical SR system (like the ones described in this section 5), and the younger speakers’ innovative SR system bears similarities to both ‘third-person’ SR systems and systems of general discourse continuity markers (see section 6).

We have seen that the function of the younger speakers’ innovative SR system has significantly diverged from that of the older speakers’ traditional SR system, which is a canonical SR system. One has to ask exactly in what way is the innovative SR system non-canonical. To answer this question, one has to investigate what the (real) functions of canonical SR systems are.

Canonical SR systems can be shown to be serving two different functions. One function of SR is the reference tracking function; this refers to the fact that the SR markers help the addressee in tracking the identities of the referents of the SR pivots. In this sense SR is an operation of the morphosyntactic and semantic levels. Another function, as argued by linguists like Givón (1983), Roberts (1988), Huang (2000) and Stirling (1993, 2001), is the indication of discourse participant continuity versus discontinuity. A piece of linguistic discourse tends to be constructed in such a way that one or a group of topical participants constantly feature as the most salient or foregrounded participant across clauses. The continuation in the foregrounding of the salient participant(s) is called ‘participant continuity’ and the discontinuation in the foregrounding of the salient participant is called ‘participant discontinuity’. SR is in this sense a grammaticalisation of the discourse notions of participant continuity versus discontinuity between two clauses, and where the ‘salient’ references are grammatically realised as the SR pivots. While reference tracking is often an important function of SR (the CR markers in particular), SR is rarely the only reference tracking devices available between two clauses, and there are often more-effective reference-tracking devices like cross-referencing and overt nominals in SR-marked clauses. By contrast, all canonical SR systems (this excludes the so called ‘third-person SR systems’; see section 6) are united by the fact that their CR markers always indicate participant continuity, and their DR markers indicate participant discontinuity *most of the time* (see below for exceptions).

I will just present a few examples where SR is redundant as a reference-tracking device. In many Papuan SR languages, the SR pivot(s) is/are cross-referenced in all SR verb forms. In Roberts (1997)'s survey of one hundred and twenty-two SR languages in Papua New Guinea (and Papua New Guinea already contains more than two-third of the worlds Papuan languages), around forty percent of the languages surveyed mark one or both SR pivots in both CR and DR verb forms. This means that in many instances, the cross-reference affixes would have already indicated the coreference or disjoint-reference of the SR pivots (due to their person-number-gender features), rendering the SR markers redundant as a reference tracking device in a lot of instances. For instance, in examples 41 and 42 below from Amele (Roberts 1987: 294), the subject cross-reference suffixes already indicate the coreference and disjoint-reference of the subjects. The main function of the CR and DR markers are presumably not primarily used for reference-tracking; people certainly do not need a CR marker to remind themselves that 1SG is the same person as 1SG, and similarly, people do not need a DR marker to remind themselves that 1SG is a different person from 2SG. Of course, being redundant for a function is not a valid reason for arguing that a set of grammatical markers is not primarily used for that particular function; after all, grammars are full of redundancies cross-linguistically. However, if reference-tracking is the main function of SR, one wonders why SR markers are obligatorily used for SR pivots of all person categories in nearly all languages (more than 95%) which are said to have SR systems.<sup>15</sup> Rather, the main function of the CR and DR markers is the indication of participant continuity and discontinuity. The CR marker indicates that participant continuity will be maintained; in other words, the salient participant of its own clause, the SR pivot, will continue to be foregrounded in the following clause. The DR marker indicates that participant continuity will be disrupted; in other words, the salient participant of its own clause will no longer be foregrounded in a following clause.

**Amele** (Gum, Madang, Trans New Guinea; Madang, PNG)

41. *ija*            *h-u-m-ig*  
       1SG        come-PRED-**CR-1SG**  
       *sab*        *j-ig-a*.  
       food        eat-**1SG**-TODPAST  
       'I came and ate the food.'

42. *ija*            *ho-co-min*  
       1SG           come-**DR-1SG**  
*sab*            *ja-g-a*.  
       food        eat-**2SG-TODPAST**  
       ‘I came and **you** ate the food.’

There are a relatively small number of languages elsewhere in the world where it is common to have the control clause preceding the SR-marked clause (opposite to the Papuan order of SR-marked clause — control clause). This is the case in many Australian SR languages. For instance, in the example below from Diyari (Austin 1981: 313), the DR morpheme in the second clause is presumably not primarily used for reference tracking; in other words, the DR suffix *-rnanthu* is — but presumably not primarily — indicating that *thalara* ‘rain’ is different from *karna* ‘man’ (or *marda* ‘stone’) in the linearly preceding independent clause. (The SR pivots in Diyari are the ‘nominative arguments’ ([S/A])). The DR morpheme is better understood as an inflection which primarily indicate that participant continuity has been disrupted from the linearly preceding clause; in other words, the salient participant of the previous clause *karna* ‘man’ has been backgrounded in the SR-marked clause *thalara kurdarnanthu*.

**Diyari** (Karnic, Pama-Nyungan; Lake Eyre, South Australia)

43. *karna-li*    *marda-Ø*    *matha-rna*    *warrayi*,  
       man-ERG    stone-ABS    bite-PART    AUX [=immediate past time]  
*thalara-Ø*    *kurda-rnanthu*.  
       rain-ABS    fall-**IMPL:DR**  
       ‘**The man** bit the stone so **the rain** would fall.’

Looking at Papuan languages again, there are some Papuan SR languages like Wambon (de Vries & de Vries-Wiersma, 1992: 85) and Kalam (Pawley & Lane 1998: 203) where the marked-clause SR pivot is cross-referenced on the DR-marked verbs but not on CR-marked verbs. Here, the function of reference-tracking is less redundant than languages where the SR pivots are cross-referenced on all SR-marked verbs like Kobon (Davies 1985: 184-185), which is closely related to Kalam; CR-marked verbs do not need cross-referencing as they can copy the cross-referencing details from their control clauses. Nevertheless, the DR markers are still sometimes redundantly used as

a reference-tracking device as the cross-reference affixes may have already indicated the coreference or disjoint-reference of the SR pivots (e.g. example 46 below). Furthermore, for the DR markers to be an effective reference-tracking device, there has to be exactly one other salient referent in the discourse, which is not always the case. For instance, in example 44 below, there is a DR suffix *-l* in the first clause and no referential expressions at all in the second clause. If the discourse has a third salient participant other than the ‘pig’ and ‘Savanop’, the DR suffix itself would not be very helpful to the addressee in tracking the referent of the subject of the second clause.

**Wambon** (Awyu-Dumut, Trans New Guinea; Merauke, WP)

44. *jam-l-Ø-o,*  
 thus.do-**NFUT:DR-N1SG**-DEP  
*et-mbel-o,*  
 leave-**CR:SEQ**-DEP  
 ap            *nde-t-Ø-mbo.*  
 house        come-PAST-N1SG-PAST  
 ‘Thus the pig did and Savanop let and went home.’

**Kalam** (Kalam-Kobon, Madang, TNG; Madang & W. Highlands, PNG)

45. *np            nŋ-l                            a-ba-al.*  
 2SG:OBJ    perceive-**CR:SEQ**                            go-PERF-3PL  
 ‘Having seen you they went (earlier today).’
46. *kun            g-e-y                            sl                            ag-e-b.*  
 thus        do-**DR:SEQ-2SG**                            weeping                            say-PRES:PROG-3SG  
 ‘You having done thus, she is weeping.’

**Kobon** (Kalam-Kobon, Madang, TNG; Madang & W. Highlands, PNG)

47. *hon    yaŋ            mid-no*  
 1PL    below        be-**DR:1PL**  
*kaj    anibu    dam    utöm    migan    yaŋ    yu-öp.*  
 pig    that    take    hole    hole    below    throw-PERF:3sg  
 ‘We stayed down there and he took the pig and threw it down the hole.’

48. *hon*        *hadö*        *ado*        *g-un*  
 1PL        already        turn        do-**CR:1PL**  
*ram*        *aw-bun.*  
 house        come-PERF:1PL  
 ‘[We<sub>[i+j+k...]</sub> turn and] we<sub>[i+j+k...]</sub> came back to the house.’

There is a minority of Papuan SR languages where the SR pivots are not cross-referenced on SR-marked verbs, like Bargam (Roberts 1997: 151, Hepner 1986). However, even here the role of reference tracking is often fulfilled by the appropriate use of different overt and covert anaphora, as in English. In the second clause of the example below, the DR suffix *-id* indicates that participant continuity will be disrupted in the next clause, whereas the role of reference-tracking is mainly fulfilled by the nominal *anamren* ‘owner’ in the third clause; from an interpretation point of view, the DR suffix *-id* does not actually help the addressee very much in reference tracking. The identity of a SR pivot is often signified by an overt nominal or pronominal after a DR-marked clause in languages which lack cross-referencing in SR marked clauses.

**Bargam** (Isolate, Madang, Trans New Guinea; Madang, PNG)

49. *mileq-eq*  
 return-**CR:IR**  
*leh-id*  
 go-**DR:IR**  
*teq*        *anamren*        *aholwaq-ad*  
 then        owner        see-**CR:IR**  
*in*        *didaq*        *tu-ugiaq.*  
 3SG        food        PERF-GIVE:HAB:3SG  
 ‘When (**the pig**) would return and go then **the owner**, on seeing it, used to give it food.’

In addition, in many SR languages, while the CR markers must indicate participant continuity, the DR markers can be used to indicate other kinds of discourse discontinuity across clauses, like discontinuity in temporal relations, spatial settings and logical relations. This is only a small extension of function if the primarily function of SR markers is the indication participant continuity versus discontinuity. For instance, in the example below from Amele (Roberts 1988: 107), participant continuity is maintained throughout. Nonetheless, the

DR marker in the first clause is indicating the disruption in spatial continuity. In other words, the meaning of the following example is more accurately something like ‘they carried the yams on their shoulders and went *somewhere completely different* and filled up the yam store.’<sup>16</sup>

**Amele** (Gum, Madang, Trans New Guinea; Madang, PNG)

50. *age*            *ceta*            *gul-do-co-bil*  
       3PL          yam            carry-3SG:O-DR-3PL  
       *li*            *bahim*        *na*            *tac-ein.*  
       go:CR      floor        on            fill-3PL:REMPAST  
       ‘**They** carried the yams on their shoulders and went and filled up the yam store.’

Similar use of DR markers for the indication of other kinds of discourse discontinuity has also been documented in other parts of the world, e.g. Yankunytjatjara in Australia (Goddard 1983) and Northern Pomo in North America (O’Connor 1993). (See chapter 2 in Stirling (1993) for further illustrations and discussions on this point.)

## 6. Two deviants from canonical SR systems

In the previous section, we have seen that the DR markers in some SR systems can be used to indicate kinds of discourse discontinuity other than participant discontinuity. One further step from this is systems of *general discourse continuity markers*. In a SR system, the DR markers may be used to indicate other kinds of discourse discontinuity rather than participant discontinuity, but the CR markers always indicate participant continuity at least. In a system of discourse continuity markers, both the discontinuity (D) and continuity (C) markers usually coincide with participant dis/continuity, but both D and C markers may be used to indicate kinds of discourse dis/continuity other than participant dis/continuity. The system in Bauzi (Briley 1997) is an example. In the following example, participant continuity is actually disrupted between the third clause and the fourth clause. Nonetheless, the C suffix *-me* in the third clause is indicating that the situation of the next clause is a natural consequence of the situation of its own clause.

**Bauzi** (East Geelvink Bay; Jayapura & Yapen-Waropen, WP)

51. *labi*        *Vadu-hat*        *ozo-ha*  
 like.that   Vadu-ERG       think-D  
 ‘Then **Vadu**<sub>[V]</sub> thought,’  
*am*        *nà*        *beo-he-mu*        *fa*  
 his        sister        strike-D-because        ITR  
 ‘because (**Aseda**) struck his sister,’  
*Sembina*        *beo-me*  
 Sembina        strike-C  
 ‘(**he**<sub>[V]</sub>) struck Sembina<sub>[S]</sub>,’  
*ab*        *si-h-am*  
 IND        seize-R-IND  
 ‘and (**she**<sub>[S]</sub>) sat down.’ (Briley 1997: 21)

In the third clause of the following example, participant continuity is actually maintained between the third clause and the fourth clause. Nonetheless, the D suffix *-ha* in the third clause is used here to indicate a significant discourse boundary (boundary between discourse paragraphs).

52. *Gienali-m*        *num*        *foti*  
 Gienali-GEN        house        pass.by-C  
 ‘([**W**]e) passed by Gienali’s house’  
*sei*        *debu*        *fu-si*  
 matoa.tree        trunk        arrive-C  
 ‘and (**we**) arrived at the base of the matoa tree’  
*ai-ha*  
 hear-D  
 ‘and listened,’  
*dam*        *meb-dae*        *ab*        *aai-da-m-am.*  
 people        cry-words        IND        HEAR-CONT-IR-IND  
 ‘(**we**) began hearing wailing.’ (1997: 118)

Other examples of general discourse continuity markers are found in Central Pomo (Mithun 1993) and Koasati (Rising 1992), both spoken in North America.

Another type of deviant from SR-proper are the so called ‘*third-person SR systems*’, where functional CR and DR markers are only available for third person references. This type of SR system is non-canonical as they are



primarily used for reference disambiguation. The rationale of having CR versus DR markers only for third person references is that reference disambiguation is often needed for third person references, but seldom for first and second person references. For example, in Eskimo-Aleut languages, there are many different clause-linking devices where CR versus DR marking is only available for third person references. In Aleut (Bergsland 1994, 1997), a dative case marker can be used to link tensed clauses (where the tense of the datively marked-clause is relative to the tense of the independent clause). When used with first or second person subjects (the [S/A] arguments), the dative case clause linker is SR-neutral, as shown in the examples below.

**Aleut** (Eskimo-Aleut; Aleutian Islands & Alaska Peninsula)

53. *hama-aġ*                      *hit-na-q-aang*  
 there-ABL                      go.out-REM-1SG-DAT:1SG  
*tataam*                      *hama-âa-âuta-na-q*  
 again                      there-go-again-REM-1SG  
 ‘I had gone out from there but [I] went back there again.’  
 (Bergsland 1994:347)

54. *taanasxaada-ku-q-aang*  
 camp-PRES-1SG-DAT:1SG  
*igaġta-ġ*                      *waâa-na-ġ*  
 airplane-ABS:SG COME.IN-REM-3SG  
 ‘I was out camping when the airplane came in.’  
 (Bergsland 1997:244)

However, with third person subjects, the use of dative case as a clause linker obligatorily indicates disjoint-reference of the interclausal subjects.

55. *alitxu-ġ*                      *ina-ku-ġ-aan*  
 war-ABS:SG                      END-PRES-3SG-DAT:3SG(3DR)  
*Atġa-m*                      *hadan*                      *uqiti-iġuta-na-s*  
 Atka-REL:SG                      toward.it                      return-again-REM-1NSG  
 ‘When the war was over, we returned to Atka.’ (1994: 346)

For coreferential third person subjects, an absolutive or relative case<sup>17</sup> is used instead (absolutive case signifies immediate sequential events, and relative

case signifies other kinds of temporal relationships), and the use of absolutive or relative case as a clause linker is only available for third person subjects. In effect, functional CR markers (absolutive or relative case) and DR markers (dative case) are only available for third person references.

56. *anqãx̃ta-ku-m*go.out-PRES-REL:SG(**3CR**)*haqa-aġ-aan**aġ-iku-ġ*

come-INT-REL:3SG

AUX-PRES-3SG

‘**He**<sub>[j]</sub> went out (away) but [**he**<sub>j</sub>] will come back.’ (1994: 346)57. *wan hyaaga-ġ adu-lakaġ-im*

this

log-ABS:SG

long-PRES:NEG-REL:SG(3CR)

*tumtatu-ku-ġ*

thick-PRES-3SG

‘**This** **log**<sub>[j]</sub> is not long but [**this log**<sub>j</sub> is] thick.’ (1997: 244)

Another example of third-person SR systems comes from the Tupí-Guaraní languages. According to Jensen (1997, 1998), Proto-Tupí-Guaraní and some modern Tupí-Guaraní languages, e.g. Tapirapé and Tocantins Asuriní, have interclausal and interphrasal CR versus DR cross-reference prefixes for all person categories. However, in some other modern Tupí-Guaraní languages, e.g. Guajajára and Tembé (from the same branch of Tupí-Guaraní as Tapirapé and Tocantins Asuriní), the CR versus DR distinction is only maintained for third person references, whereas the cross-reference prefixes for the other persons have merged into one set.

As we have seen above, indicators of participant continuity versus discontinuity are not available in third-person SR systems when the ‘SR pivots’ are first or second person; this is different from canonical SR systems where participant continuity versus discontinuity are indicated regardless of the identity of the SR pivots. Whether third-person SR systems should be considered as a type of SR system or not hinges on one question: should the (near) absolute effectiveness of the SR markers as indicators of participant dis/continuity be a defining criterion of SR? If one takes a narrower interpretation of SR and answers yes to the question, third-person SR systems are not SR. If one takes a broader interpretation of SR and answers no to the question, which I am slightly biased towards, third-person SR systems can be considered a non-canonical kind of SR. In my opinion, even if reference-tracking is not

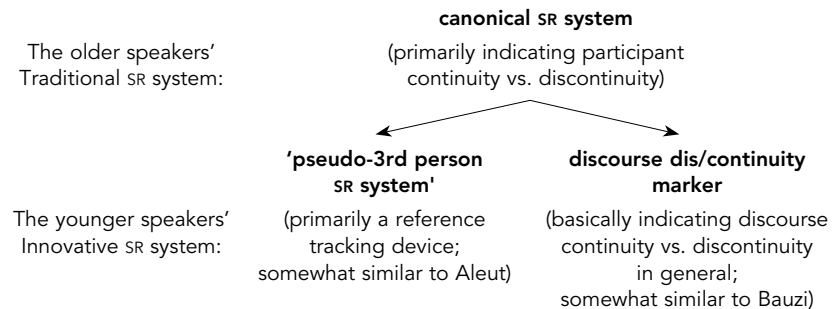
the primary function of canonical SR systems, reference-tracking is still an important function of SR, and the formal and functional similarity of the reference-tracking function between third-person SR systems and canonical SR systems — that they are both not marked on free nominals, and both have very strict criteria in selecting their SR pivots — should not be overlooked.

## 7. The (real) function of the young speakers' SR system

As seen in sections 4.1 and 5, the older speakers' traditional SR system is certainly a canonical SR system where the primary function is the indication of participant continuity versus discontinuity; the CR and DR markers indicate participant continuity versus discontinuity in every chain clause. On the other hand, as in sections 4.2 and 6, the young speakers' innovative SR system is functionally two mutually exclusive systems of which the functions represent two different departures from the function of canonical SR systems. When reference-disambiguation is needed for the subject cross-reference suffixes, the innovative SR system in Menggwa Dla is mainly aimed at reference tracking, somewhat similar to Aleut. (The difference is that in Aleut, functional CR and DR markers are available for third person references, whereas in Menggwa Dla, functional CR and DR markers are available for third person references which agree in number and do not conflict in gender.) When reference-disambiguation is not needed for the subject cross-reference suffixes, the SR verb forms are used to indicate discourse continuity versus discontinuity in general, somewhat similar to Bauzi. (The difference is that in Bauzi, the

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**Figure 5: Changes in the SR system in Menggwa Dla.**



discontinuity markers indicate any kind of discourse discontinuity, whereas the DR markers in Menggwa Dla indicate participant discontinuity plus another kind of discourse discontinuity.)

## **8. Possible cause of the change in the SR system**

Lastly, concerning the cause of this change in the SR system in Menggwa Dla, the *lingue franche* of Malay and Tok Pisin may be the ‘culprit’. The reanalyses of the SR system occurred first in speakers born in the late 1970s and 1980s, when there were huge influxes of West Papuan refugees seeking refuge in Papua New Guinea and stationed in Dla territory on the Papua New Guinean side. Most older speakers of Dla did not survive the diseases brought in by the refugees. In addition, Dla territory was suddenly dominated by refugees, missionaries, foreign aid workers, PNG officials and UN refugee officials speaking Papuan Malay, Indonesian, Tok Pisin and/ or English. People born in the late 1970s and 1980s grew up overwhelmed by these invasive *lingue franche*, of which all have subordinators and coordinators indicating temporal relations and logical relations, but none have grammaticalised marking specifically for participant continuity versus discontinuity. Probably due to the overwhelming influence of these invasive *lingue franche*, the young peoples’ innovative SR system in Menggwa Dla is more geared towards reference tracking and the indication of kinds of discourse continuity other than participant continuity.

## **9. Conclusion**

In conclusion, we have seen that the traditional SR system in Menggwa Dla is a canonical SR system of which the main function is the indication of participant continuity versus discontinuity, and the innovative SR system is sometimes primarily a reference tracking device, and at other times indicating discourse continuity versus discontinuity in general. With the indication of participant continuity versus discontinuity being the primary function of SR systems, linguists investigating SR systems should concentrate on the discourse properties of SR, and investigate SR systems on par with other interclausal continuity systems like systems of interclausal temporal relation markers and logical relation markers.

## Abbreviations

ABL	ablative case	LIG	ligature
ABS	absolutive case	M	masculine
ADS	adessive case	MASS	mass undergoer
ALL	allative case	N	non-
AUX	auxiliary	NEAR	near (past) tense
C	discourse continuity	NEG	negative
COM	comitative case	O	object
CONT	continuous aspect	OBJ	object case
COP	copula(r)	PART	participial
CR	coreferential	PAST	past tense
D	discourse discontinuity	PERF	perfective aspect
DAT	dative case	PERFT	perfect 'aspect'
DEL	delayed	PL	plural
DEM	demonstrative	POS	positive
DEP	(syntactic) dependency	PRED	predicate
DR	disjoint-referential	PRES	present tense
DU	dual	PROG	progressive aspect
EMPH	emphatic	S	subject
ERG	ergative case	SEQ	sequential
F	feminine	SG	singular
FAR	far (past) tense	SIM	simultaneous
FOC	focus	SMR	semi-realis
FUT	future tense	SR	switch-reference
GEN	genitive case	STAT	stative aspect
HAB	habitual aspect	TOD	today (past) tense
IMP	imperative mood	TOP	topic
IMPL	implicative	TRANSN	transitional aspect (inchoative/ completive aspect)
IND	indicative mood	R	realis
INS	inessive case	REL	relative case (ergative/ genitive)
INT	intentional mood	REM	remote (past/ future) tense
IR	irrealis		
ITR	iterative aspect		

## Notes

- 1 Preliminary versions of this paper were presented at the Australian Linguistic Society Conference 2005 (September; Monash University, Melbourne) and the Linguistic Society of New Zealand Conference 2005 (November; University of Auckland, Auckland). An earlier version of this paper was published in the Australian proceedings (de Sousa 2006). I would like to thank my PhD supervisors William Foley and Jane Simpson, the audiences at the two conferences (Leslie Stirling in particular), the two anonymous reviewers of the

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- 2 Within a system of SR markers, the SR markers are most usually, but not necessarily, in paradigmatic opposition. For instance, there are languages like Apali (Wade 1999) where a DR suffix and a CR suffix can coexist to indicate the partial overlap of referents between the SR pivots (i.e. the references monitored by the SR markers).
- 3 Please refer to the list of abbreviations at the end of this paper. All emphases in the quoted examples are mine. Some glosses used in the quoted examples have been altered to conform to the glosses used for Menggwa Dla. Zero-morphs have been inserted in the Kanite and Diyari examples to clarify the morphological structures.
- 4 The suffixes *-ʔna* (1SG:s) and *-no* (3SG:s) in examples 3 and 4 are ‘anticipatory markers’, i.e. cross-reference affixes which cross-reference with the subject of the following clause. Although anticipatory markers seem to only occur in languages with SR systems, the anticipatory markers is a feature of the chain clauses and not a feature of the SR system in Kanite as the same set of anticipatory suffixes is used for both CR and DR chain verbs in Kanite.
- 5 The non-future finite verb roots are ‘regular’ as they are either identical to the non-finite verb root or more similar to the non-finite verb root than the future finite verb root. The non-finite forms of the four lexemes are *pi* ‘go’, *seru* ‘eat’, *simi* ‘drink’ and *sefi* ‘give’.
- 6 One noun phrase can exist after the verb; this post-verbal position can be used to clarify the identity of references which are otherwise only expressed by cross-reference suffixes. Either old or new information can be expressed in this post-verbal position.
- 7 However, see endnote 16.
- 8 The allomorphy of the DR affix is as follow: a) *-me* for verbs which do not take object cross-reference suffixes and the verb root ends in a vowel; b) *ma-* for: (i) verbs which do not take object cross-reference suffixes and the verb root ends in a consonant; and (ii) *sefi* (*sa-/ da-*) ‘give’; and c) *-ma* for verbs which take object cross-reference suffixes except *sefi* (*sa-/ da-*) ‘give’.
- 9 The other morphosyntactic differences between CR and DR chain verbs are: a) CR chain verbs may be serialised with grammatical verbs which indicate completive aspect and/ or interclausal sequentiality, whereas DR chain verbs cannot be serialised; and b) DR chain verbs can be positive or negative in polarity, whereas CR chain verbs can only be positive in function and form. (The scope of negativity does not extend beyond clause boundaries in Menggwa Dla; if a clause is in negative polarity and its subject is coreferential with the subject of the next clause, the first clause must be an independent clause).
- 10 Cases of referential overlap will not be considered in this paper. Cases of referential overlap can be marked as either CR or DR in Menggwa Dla, by both older and younger speakers.

- 11 However, the relationship from form to function is not one to one, as CR and DR chain verb forms can be used to indicate referential overlap (endnote 10).
- 12 Menggwa Dla examples from natural conversations carry a tag with a Hindu-Arabic numeral followed by a Roman numeral, e.g. (80I); the Hindu-Arabic numeral indicates the decade in which the speaker was born, and the Roman numeral is an individual identifying code. Examples from texts carry a tag with an uppercase Roman alphabet, e.g. (B). The texts can be found in appendix 1 of de Sousa (forthcoming).
- 13 However, if the SR-marked clause depicts an involuntary state and the following clause depicts a normal non-involuntary state, the SR-marked clause is marked as DR. This is similar in a lot of other Papuan languages, Amele (Roberts 1988) and Usan (Reesink 1983) for instance.
- 14 The verb root of the first verb *po-* is the irregular DR verb root of the verb lexeme *pi* (*pi-/po-*) 'go'.
- 15 This is different from truly redundant grammatical features like obligatory double negatives (e.g. in Afrikaans) or the third person *-s* agreement suffix in English (as subject nominals are obligatorily expressed in English), where languages with truly redundant grammatical features only form a minority subset of languages which express that function (negation and verbal agreement respectively).
- 16 The phenomenon of DR markers not indicating participant discontinuity has not been discovered in Menggwa Dla. Nonetheless, the dependency suffixes *-Ø*, *-mbo* and *-mbona* (which alternate freely, grammatically speaking) do correlate with discourse continuity and discontinuity to some degree. The unmarked *-Ø* suffix correlates with discourse continuity; it is mostly found with CR chain verbs and seldom found with DR chain verbs. The longer suffix *-mbona* correlates with discourse discontinuity; it is commonly used on DR chain verbs, and when *-mbona* is used on CR chain verbs, usually some kind of discourse discontinuity other than participant continuity is implied. See section 7.5 in de Sousa (forthcoming).
- 17 In Eskimo linguistics, the 'absolutive case' marks absolutive relations ([S/P]), and the 'relative case' marks ergative ([A]) and genitive relations. However, in Aleut, certain cases are called 'absolutive' and 'relative' simply because they are the cognates of the absolutive and relative cases in Eskimo languages. Most importantly, both arguments of a transitive clause can be marked with an 'absolutive' case in Aleut. See Bergsland (1997).

## References

- Austin, Peter. 1981. 'Switch-reference in Australia.' *Language* 57: 309–334.
- Bergsland, Knut. 1994. 'Aleut tenses and aspects.' In Carl Bache, Hans Basbøll and Carl-Erik Lindberg (eds) *Tense, Aspect and Action: Empirical and Theoretical Contributions to Language Typology (Proceedings of seminars on Verbal Semantics at Odense University in 1986 and 1987.)*. Berlin: Mouton de Gruyter. 323–70.

- Bergsland, Knut. 1997. *Aleut Grammar — Unangam Tunuganaan Achixaasix*. Fairbanks: Alaska Native Language Center, University of Alaska Fairbanks.
- Briley, David. 1997. 'Four grammatical marking systems in Bauzi.' In Karl Franklin (ed) *Papers in Papuan Linguistics No. 2*. Pacific Linguistics A-85. 1–131.
- Davies, John. 1985. 'Kobon syntax.' Unpublished PhD Thesis. Cambridge: University of Cambridge.
- de Sousa, Hilário. 2006. 'Switch-Reference in a dying language: The case of Menggwa Dla'. In Keith Allan (ed) *Selected Papers from the 2005 Conference of the Australian Linguistic Society*. <http://www.arts.monash.edu.au/ling/als/assets/desousa-switch.pdf>
- de Sousa, Hilário. forthcoming. 'The Menggwa Dla language of New Guinea'. PhD thesis submitted to the University of Sydney (under examination).
- de Vries, Lourens and Robinia de Vries-Wiersma. 1992. *The morphology of Wambon of the Irian Jaya Upper-Digul area*. Leiden: KITLV Press.
- Donohue, Mark and Melissa Crowther. 2005. 'Meeting in the middle: interaction in North-central New Guinea.' In Andrew Pawley, Robert Attenborough, Jack Golson & Robin Hide (eds) *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples*. Pacific Linguistics 572. 167–184.
- Etherington, Paul Anthony. 2002. 'Nggem morphology and syntax.' Unpublished MAppLing Thesis. Darwin: Northern Territory University.
- Foley, William. 1986. *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- Galis, Klaas Wilhelm. 1956. *Ethnografische notities van het Jafi-district*. Hollandia [Jayapura]: Kantoer Bevolkingszaken.
- Givón, Talmy. 1983. 'Topic continuity in discourse: the functional domain of switch reference.' In John Haiman John and Pamela Munro (eds) *Switch Reference and Universal Grammar*. Amsterdam: John Benjamins. 51–82.
- Goddard, Cliff. 'A semantically-oriented grammar of the Yankunytjatjara dialect of the Western Desert language.' Unpublished PhD thesis. Canberra: Australian National University.
- Healey, Phyllis. 1966. *Levels and Chaining in Telefol Sentences*. Pacific Linguistics B-4.
- Hepner, M. 1986. 'Bargam grammar essentials.' MS. Ukarumpa: SIL.
- Huang, Yan. 2000. *Anaphora — A Cross-linguistic Study*. Oxford: OUP.
- Jensen, Cheryl. 1997. 'Coreferential marking in Tupí-Guaraní languages.' Paper presented at the XIII International Conference of Historical Linguistics, Düsseldorf.
- Jensen, Cheryl. 1998. 'The use of coreferential and reflexive markers in Tupí-Guaraní languages.' *Journal of Amazonian Linguistics* 1(2): 1–49
- Litteral, Robert Lee. 1980. 'Features of Anggor discourse.' Unpublished PhD Dissertation. Philadelphia: University of Pennsylvania.
- McCarthy, Joy. 1965. 'Clause chaining in Kanite.' *Anthropological Linguistics* 7(5): 59–70.



- Mithun, Marianne. 1993. ‘“Switch-reference”: clause combining in Central Pomo.’ *International Journal of American Linguistics* 59: 119–136.
- O’Connor, Mary Catherine. 1993. ‘Disjoint reference and pragmatic inference: anaphora and switch reference in Northern Pomo.’ In William Foley (ed) *The Role of Theory in Language Description*. Berlin: Mouton de Gruyter. 215–242.
- Pawley, Andrew. 2005. ‘The chequered career of the Trans New Guinea hypothesis: recent research and its implications.’ In Andrew Pawley, Robert Attenborough, Jack Golson and Robin Hide (eds) *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples*. Pacific Linguistics 572. 67–108.
- Pawley, Andrew, Robert Attenborough, Jack Golson and Robin Hide (eds). 2005. *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples*. Pacific Linguistics 572.
- Pawley, Andrew and Jonathan Lane. 1998. ‘From event sequence to grammar: serial verb constructions in Kalam.’ In Anna Siewierska and Jae Jung Song (eds) *Case, Typology and Grammar*. Amsterdam: John Benjamins. 201–227.
- Reesink, Gerald. 1983. ‘Switch reference and topicality hierarchies.’ *Studies in Language* 7(2): 215–246.
- Rising, David P. 1992. *Switch Reference in Koasati Discourse*. Arlington: SIL.
- Roberts, John. 1987. *Amele*. London: Croom Helm.
- Roberts, John. 1988. ‘Switch-reference in Papuan languages: a syntactic or extrasyntactic device?’ *Australian Journal of Linguistics* 8: 75–117.
- Roberts, John. 1997. ‘Switch-reference in Papua New Guinea: a preliminary survey.’ In Pawley, Andrew (ed) *Papers in Papuan Linguistics No. 3*. Pacific Linguistics A-87. 101–241.
- Ross, Malcolm. 2005. ‘Pronouns as a preliminary diagnostic for grouping Papuan languages.’ In Andrew Pawley, Robert Attenborough, Jack Golson and Robin Hide (eds) *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples*. Pacific Linguistics 572. 15–66.
- Stirling, Lesley. 1993. *Switch-Reference and Discourse Representation*. Cambridge: Cambridge University Press.
- Stirling, Lesley. 2001. ‘The multifunctionality of anaphoric expressions: a typological perspective.’ *Australian Journal of Linguistics* 21(1): 7–23.
- Wade, Martha. 1999. ‘Switch reference and control in Apali.’ *Language and Linguistics in Melanesia* 28: 1–16.
- Voorhoeve, Clemens Lambertus. 1975. ‘Central and western Trans-New Guinea Phylum languages.’ In Stephen A. Wurm (ed) *New Guinea area languages and language study*, vol 1: *Papuan languages and the New Guinea linguistics scene*. Pacific Linguistics C-38. 345–459.

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