Split-S in Beria[1]

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1.   Introduction

The Saharan language group has two branches, the eastern branch comprising Beria and the extinct Berti language and the western branch comprising Kanuri-Kanembu (along with their ancestor Old Kanembu) and Teda-Daza. Beria is also known by the xenonym Zaghawa, Teda-Daza by the name Tubu.

The typological features, characteristic of Beria, include advanced tongue root (ATR) vowel harmony, verb-final constituent order, and agglutinative morphological structure. Fused morphemes and suppletive roots expressing participant plurality are also common. The language is head-marking on the clause level[2] which means that the agent (A), patient (P), and sole argument of intransitive clause (S) are indexed on the verb (i.e. the head) of the clause rather than on the dependents (i.e. the core constituents) of the clause, see example (1).

(1)   **mɔ̄rɔ́**   **ɨ̂ɨ**   **à-gàà-r̩-ɨ́**[3]
      gazelle.A   eye.P   1sg.P-knock.out-3sg.A-PRF[4]
      'The gazelle knocked out my eye.'

The person markers comprise a series of prefixed P markers and a series of suffixed A markers. Due to their presence on the verb, a finite verb may represent a whole clause, see (2).

(2)   **nɔ́-rɔ̄-g-ɨ̄**
      2sg.P-marry-1sg.A-IPF
      'I will marry you.'

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[2]   The terms head-marking and dependent-marking are adopted from Nichols (1986).
[3]   The symbol r̩ (with a dot below) represents an alveolar lateral flap.
[4]   Abbreviations not explained in the text are as follows: 1 = 1st person; 2 = 2nd person; 3 = 3rd person; A = A argument/agent; IPF = imperfective; intr = intransitive; LVB = light verb; P = P argument/patient; pl = plural; PRF = perfective; S = S argument/sole argument of intransitive clause; sg = singular; tr = transitive; V = vowel; VAL = slot for valency related prefixes.

The present paper focuses on the person affixes and valency changing prefixes which are involved in the morphosyntactic marking of grammatical relations[5] on verbs. The paper is particularly concerned with intransitive verbs and the differential grammatical treatment of their S arguments. There are two groups of intransitive verbs, i) S_a verbs whose single S argument is treated like the A argument of a transitive clause and ii) S_p verbs whose single S argument is treated like the P argument of a transitive clause, briefly S_a = A, S_p = P. The presence of different inflection patterns for intransitive verbs is known as split-S or split-intransitivity[6] (Merlan 1985, Mithun 1991). The main point of this paper is that all S_p verbs have two grammatical arguments though most of these verbs have only one referential argument. Having two grammatical arguments S_p verbs are formally transitive. S_a verbs, by contrast, have only one grammatical argument. They are truly intransitive.

2.   Verb classes

Before embarking on the main topic of the paper, I will first address the recent reclassification of the major verb classes in Teda and Beria as proposed by Mark Ortman (ms 2003), Joshua Kellenberger (ms 2008), and Maha Abdu El-Dawi (ms 2010). This discussion will be followed by re-analyzing the Beria data in Jakobi & Crass (2004) and Jakobi (2006, 2007, 2010).

Nachtigal (1881: 197) was the first to recognize three different inflectional patterns or conjugation classes in the Saharan languages, i) a class of verbs inflected by subject suffixes, ii) another class where the inflectional morphemes are attached to the light verb **n** ("Hilfsverb")[7] rather than being attached to the lexical verb root, and iii) a third class of

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[5]   Generally, there are three devices for marking grammatical relations: case markers on the core constituents, constituent order, and participant reference markers on the verb. My paper is concerned with the last-mentioned ones.

[6]   As Mithun (1991) points out, apart from split-S and split intransitivity there are several terms, including active, active-neutral, active-inactive, active-static, stative-active, agentive, and agent-patient. Split-S or split-intransitivity is used in this paper because – in contrast to the other semantically defined terms – it is the most neutral term for the grammatical phenomenon at hand. Wichmann (2008: 4) suggests the alternative term 'semantic alignment' arguing that "it makes little sense to posit a S category, only to have it split up into the subcategories such as S_a and S_p."

[7]   In Saharanist tradition, the light verb **n** is known as 'auxiliary' (German 'Hilfsverb'). Both of these terms are inadequate since an auxiliary is combined with a main verb. A light verb, in contrast, has a coverb as its complement which may originate in different word categories. In the Saharan languages, a coverb may be represented by a noun, adjective, ideophone, interjection, or lexemes borrowed from other languages.

verbs inflected by object prefixes. According to Lukas' suggestion, these three conjugation patterns have come to be known as verb class 2, 3, and 1 or rather in roman numerals as II, III, I, respectively (Lukas 1952: 5).

For a long time, the assumption of three verb classes was widely accepted in Saharan language research. Only recently, Ortman (ms 2003) offered convincing evidence of four verb classes. Taking as criterion the position of the affixes that mark nominal forms of Teda verbs, he distinguishes first between a "suffixing" class (marked by **-di/-ti**) and a "prefixing" class (marked by **nd-**). Moreover, on the basis of numerous paradigms and a detailed morphological analysis of the Teda verb inflection, he shows that both the prefixing and the suffixing class further split into two classes differentiated by "semantic transitivity", i.e. the presence of one or two participants.

In their Beria grammar, Jakobi & Crass (2004: 79-82) recognize a group of verbs being morphologically characterized by a light verb ("auxiliaire") which is inflected according to the pattern of class I but they treat it as a subgroup of class III verbs rather than establishing a distinct fourth class.

Ortman's analysis has stimulated Kellenberger's morphological re-analysis of Beria verbs. He, too, comes to the conclusion that there are four rather than three verb classes. He first distinguishes between a class of "integrated" and another class of "detached" lexical verb roots. Verbs of the integrated class have a lexical root to which the inflectional morphemes are directly attached. Verbs assigned to the detached class, in contrast, have a detached entity (which Kellenberger misconceives as "lexical verb root", see below). The inflectional morphemes are not attached to that entity but rather to a light verb ("base verb") that follows it.

Like Ortman, Kellenberger argues that both the integrated and detached class are further split into two subclasses distinguished by "semantic transitivity".

The entity which Kellenberger labels detached lexical verb root is otherwise known as "meaning carrier" (Cyffer 1991) or "morphème lexical", i.e. lexical morpheme (Jakobi & Crass (2004). Note that this morpheme is not a lexical verb root, as Kellenberger claims. Rather, various word categories – nouns, ideophones, interjections, adjectives, borrowings – may serve as a complement of a light verb (Jakobi & Crass 2004: 64f). In recent linguistic literature, 'coverb' is used as a less idiosyncratic term for such an uninflected meaning carrier or lexical morpheme, whereas the inflected entity is labeled 'light verb' (Butt 2003,

Schultze-Berndt 2006). While the coverb expresses the lexical information in a complex predication the light verb provides the base to which the inflectional and derivational morphemes are attached.

In her thesis on the Wegi dialect of Beria, Maha Abdu El-Dawi (ms 2010: 68) recognizes four basic verb classes, too. Her classification rests on two criteria, the presence or absence of the light verb ("auxiliary") and the obligatory presence of an "object" or "subject" morpheme.

Table 1 summarizes the correspondences between the traditional (abbreviated as 'trad') verb classification and Marc Ortman (MO)'s, Joshua Kellenberger (JK)'s, and Maha Abdu (MA)'s classification. I suggest to continue using the traditional roman numerals to distinguish between the major verb classes. In addition to class I, II, and III, the previously unrecognized class IV should be distinguished. There are two reasons for this suggestion: i) Ortman's term "prefixing" class takes its name from the prefixed morpheme marking verbal nouns of class I and II. It may be a useful term for Teda but not for Beria where verbal nouns of class I are mostly marked by the suffix **-na**. Only verbal nouns of class II are marked by a prefix (Jakobi & Crass 2004: 117); ii) Kellenberger's term "detached" is not recommendable. As I have argued above, the detached item is not a lexical verb root, as he claims, but rather a coverb that originates in different word categories.

Table 1: Summary of verb classification

	prefix **nd-**	prefix **nd-**	suffix **-ti/-di**	suffix **-ti/-di**
MO	semant. intr	semant. tr	semant. tr	semant. intr
JK	integrated	integrated	detached	detached
	semant. low tr	mostly semant. tr	semant. tr	semant. intr
MA	-	-	light verb	light verb
	obj prefix obligatory	sbj suffix obligatory	sbj suffix obligatory	obj prefix obligatory
trad	I	II	III	IV (previously unclassified)

One of the problems with Ortman's, Kellenberger's, and Maha Abdu's studies is the use of the terms "subject" and "object" markers, which are - admittedly - also employed by Jakobi & Crass (2004) and Jakobi (2006; 2007, 2010). In fact, these terms are appropriate for a language exhibiting a nominative-accusative system, in which the single S argument of an intransitive clause is aligned with the A argument of a transitive clause and where the P argument is marked differently. That system is often briefly described in the formula, $S = A \neq P$.

However, as Creissels (2006/07: 277) has rightly pointed out, the terms "subject" and "object" marker obscure "the split intransitive nature of argument indexation". Verbs of intransitive clauses divide into two groups, i) verbs whose single S argument is aligned with the A argument of a transitive clause and ii) verbs whose single S argument is aligned with the P argument. Following Creissels' suggestion, the person markers that encode both S_a and A will be termed A markers, and those encoding S_P and P will be termed P markers. Furthermore, verbs whose S argument is aligned with A will be labeled S_a verbs and those whose S argument is aligned with P will be termed S_P verbs (Creissels 2007). In the next sections, first the series of P and A markers are discussed and then the split-S alignment system. The language data orginate from my own fieldwork on the Kube dialect of Beria.

3.   P markers and A markers

The series of prefixed P markers and suffixed A markers are presented in table 2. The series of P markers exhibits a rather symmetric pattern. There is a nasal prefix **n-** marking the 2sg and 2pl P. When **n-** attaches to a 2pl form the verb is additionally marked by tone. There is zero marking both for the 3sg and 3pl P. Because of the symmetry but also because of comparative evidence from Teda where the 1sg and 1pl is **d-**, it is assumed that the corresponding 1sg P prefix ***t(V)-** is lost in Beria.

The series of suffixed A markers includes **-g** for the 1sg, **-n** for the 2sg, **-d** for the 1pl, and **-b** for the 2pl. The 3sg and 3pl A marker has three allomorphs, **-ṛ**, **-n**, and zero. The distribution of these allomorphs is partly lexicalized, zero marking often occurring in the perfective aspect form, see table 7. Zero is also determined by the phonological environment, **-ṛ** being deleted when it is preceded by a consonant, see table 4 (Jakobi & Crass 2004: 58). The prefix **k(V)-** is an additional A marker which is, however, restricted to the 3rd person perfective form of agentive verbs.

Table 2: P and A markers[8]

		P markers	A markers
sg	1	**Ø(V)- < *t(V)-**	**-g**
	2	**n(V)-**	**-n**
	3	**Ø**	**-ṛ, -n**, **Ø** **k(V)-**
pl	1	**t(V)-**	**-d**
	2	**n(V)-**	**-b**
	3	**Ø**	**-ṛ, -n**, **Ø** **k(V)-**

4.   Split-S

This section deals with the split-S system showing in section 4.1. the semantic alignment of S with P and then in section 4.2. the alignment of S with A. While there are only two inflectional patterns for S_a verbs depending on whether they are based on a lexical verb root (class II) or on a coverb plus light verb (class III), there is considerable complexity regarding the inflectional patterns of S_p verbs. This is due to three facts. First, S_p verbs occur both in class I and IV. Second, the lexical verb root and the light verb to which the P and A markers attach may be extended by a **k(V)-**, **t(V)-**, or **s(V)-** prefix. These prefixes have to do with increased or decreased valency. Third, the number of arguments does not necessarily match the single participant in an event designated by a S_p verb.

To facilitate the comparison of the different inflectional patterns, all tables display the same arrangement. The verb forms based on lexical roots (class I and II) are broken down into their morphological components. Except for S_a verbs which do not have a P marker slot, there are five slots, i) a P marker slot, ii) a slot for one of the valency related prefixes **k(V)-**, **t(V)-**, or **s(V)-**[9], iii) a slot for the lexical verb root, iv) an A marker slot, and v) a TAM morpheme slot. In case of verbs based on coverbs plus light verb (class III and IV), there is an additional slot for the coverb which appears in initial position, the light verb filling the same slot as the lexical root of class I and II verbs.

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[8] For phonotactic reasons, consonantal prefixes in Beria are extended by a vowel V when they precede a consonant. The quality of that vowel is predictable from the phonological context.

[9] The fact that **k(V)-**, **t(V)-**, and **s(V)-** share the same slot was first recognized by Andrew Wolfe in his insightful paper "Splits in the middle. On the confluence of split intransitivity and middle voice systems (ms 2010)."

The morphophonological alternations of the verb root and its affixes are mainly due to assimilatory processes, the voicing of voiceless consonants in intervocalic position, and metathesis. The surface realisation of the verb forms is shown in the last but one column. Tone is not considered. The verbs are provided by their singular forms only. This decision was taken because the inflectional paradigms often involve different suppletive roots for singular and plural forms which would unnecessarily complicate the analysis proposed here.

In order to facilitate the comparison of transitive (two participants) and intransitive (one participant) verbs, first some inflectional forms of the transitive verb **bʊ̣rɪ/kʊbʊɪ** 'tell' are offered in table 3. There are three sets of inflected forms. The first set shows the alternation of the A markers **-g**, **-n**, **-ṛ** with the 3rd person P being marked by zero. The second set illustrates the alternation of the P markers. Note that the **k(V)-** prefix displayed in the third set occurs solely in the 3rd person A form of the perfective aspect. In the perfective aspect forms of **bʊ-**, the A marker is deleted (i.e. zero).

Table 3: Two argument verb **bʊ̣rɪ/kʊbʊɪ** 'tell'

P	VAL	Root	A	IPF	realized as	
Ø	Ø	bʊ	g	ɪ	bʊgɪ	I tell him/her
Ø	Ø	bʊ	n	ɪ	bʊnɪ	you tell him/her
Ø	Ø	bʊ	™	ɪ	bʊṛɪ	s/he tell him/her
ØV	Ø	bʊ	n	ɪ	abʊnɪ	you tell me
nV	Ø	bʊ	g	ɪ	nabʊgɪ	I tell you
ØV	Ø	bʊ	ṛ	ɪ	abʊṛɪ	s/he tells me
nV	Ø	bʊ	ṛ	ɪ	nabʊ̣rɪ	s/he tells you
				PRF		
ØV	k(V)	bʊ	Ø	ɪ	agʊbʊɪ	s/he told me
nV	k(V)	bʊ	Ø	ɪ	nagʊbʊɪ	s/he told you
Ø	k(V)	bʊ	Ø	ɪ	kʊbʊɪ	s/he told him/her

4.1.   S$_P$ verbs

There are two major groups of S$_P$ verbs, those being based on a lexical verb root and those being based on a coverb plus light verb. S$_P$ verbs with a lexical verb root (class I) divide into four inflectional patterns, P-**k(V)**-Root-A-, P-**s(V)**-Root-A-, P-**t(V)**-Root-A-, and P-Root-A-. S$_P$ verbs based on a coverb plus light verb (class IV) either display the patterns Coverb-P-**k(V)**-LVB-A- or Coverb-P-**t(V)**-LVB-A- (see section 4.1.5. and 4.1.6.).

4.1.1. P-**k(V)**-Root-A- (class 1)

In the available data, the P-**k(V)**-Root-A- pattern is attested only by three S$_P$ verbs (quoted in the 3rd person imperfective/perfective forms), **ını/kını** 'hurt'[10], **saı™ı/kısaaı** 'toil, struggle', **tarı/kıtarı** 'be enough'.

As shown in table 4, the **k(V)-** prefix is restricted to the 3rd person A forms of the perfective. This suggests that **ını/kını, saı™ı/kısaaı**, and **tarı/kıtarı** are based on such a 3rd person A forms.[11]

Table 4: Two argument S$_P$ verb **ını/kını** 'hurt'

P	VAL	Root	A	IPF	realized as	
ØV	Ø	**ın**	Ø	**ı**	**ɛını**	it hurts me
nV	Ø	**ın**	Ø	**ı**	**nɛını**	it hurts you
Ø	Ø	**ın**	Ø	**ı**	**ını**	it hurts her/him
				PRF		
ØV	**k(V)**	**ın**	Ø	**ı**	**ɛgını**	it hurt me
nV	**k(V)**	**ın**	Ø	**ı**	**nɛgını**	it hurt you
Ø	**k(V)**	**ın**	Ø	**ı**	**kını**	it hurt her/him

On first sight **ını/kını** 'hurt' looks like a normal transitive verb displaying two grammatical arguments as the comparison with the perfective forms of **bʊɾı/kʊbʊı** 'tell' in table 3 shows. The A marker is deleted (zero) because the root **ın** ends in a consonant. In contrast to **bʊɾı/kʊbʊı** 'tell' whose agentive argument is encoded in an A marker, the argument referring to the animate participant of events designated by **ını/kını**, **saı™ı/kısaaı**, and **tarı/kıtarı** is encoded in a P marker, suggesting that the participant plays a patient-like role.

4.1.2. P-**s(V)**-Root-A- (class I)

The **s(V)-** prefix is restricted to imperfective forms. It is assumed that **s(V)-** originally used to be a valency decreasing[12] (more precisely an anti-

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[10] The verb 'hurt' was elicited within the clause 'The foot hurt(s) me/you/him'. The corresponding Beria clause has a 3rd person A marker cross-referencing the agent-like participant (i.e. the hurting foot) whereas a P marker cross-references the animate experiencer.

[11] As **k(V)-** occurs on 3rd person perfective forms only, Jakobi & Crass (2004: 55) consider this prefix to be a secondary aspect marker. Important for the identification of **k(V)-** is, however, its occurrence in the valency slot of agentive verbs. This suggests that **k(V)-** is a portmanteau morpheme marking the 3rd person A, increased valency, and also perfective aspect. The correlation between perfective aspect and agency requires further research, however.

[12] As the prefix **s(V)-** is restricted to the imperfective forms of class I verbs, Jakobi & Crass (2004: 55) consider it as a secondary aspect marker. However, since **s(V)-** fills

causative) prefix employed to derive intransitive from transitive verbs[13], as still attested by the suppletive verb roots **ni-** and **nʊɪ-**, see table 5 and 6. The choice between these class II roots depends on number, **ni-** 'kill' being associated with a singular P marker and **nʊɪ-** 'kill' with a plural P marker. From these roots the class I verbs ***s(V)-ni-** 'die'[14] and **s(V)-nʊɪ-** 'die' are derived by **s(V)-** which requires the single argument S to be encoded in a singular or plural P marker, respectively.

Table 5: Derivation of **s-in-** 'die' from **ni-** 'kill'

'die' (singular P markers)						
P	VAL	Root	A	IPF	realized as	
ØV	s(V)	ni > in	Ø	i	**esini**	I die
nV	s(V)	ni > in	Ø	i	**nesini**	you (sg) die
Ø	s(V)	ni > in	Ø	i	**sini**	s/he dies
'kill' (singular P markers)						
P	VAL	Root	A	IPF	realized as	
ØV	Ø	**ni**	ṛ	i	**eniṛi**	s/he kills me
nV	Ø	**ni**	ṛ	i	**neniṛi**	s/he kills you
Ø	Ø	**ni**	ṛ	i	**niṛi**	s/he kills him/her

Table 6: Derivation of **sʊ-nʊɪ-** 'die' from **nʊɪ-** 'kill'

'die' (plural P markers)						
P	VAL	Root	A	IPF	realized as	
tV	s(V)	nʊɪ	ṛ	ɪ	**tɔsʊnʊɪṛɪ**	we die
nV	s(V)	nʊɪ	ṛ	ɪ	**nɔsʊnʊɪṛɪ**	you (pl) die
Ø	s(V)	nʊɪ	ṛ	ɪ	**sʊnʊɪṛɪ**	they die
'kill' (plural P markers)						
P	VAL	Root	A	IPF	realized as	
Ø	Ø	**nʊɪ**	d	ɪ	**nʊɪdɪ**	we kill them
Ø	Ø	**nʊɪ**	b	ɪ	**nʊɪbɪ**	you (pl) kill them
Ø	Ø	**nʊɪ**	ṛ	ɪ	**nʊɪṛɪ**	they kill them

Except for the derived class I verbs ***s(V)-ni-** and **s(V)-nʊɪ-** 'die', other verbs marked by the **s(V)-** prefix do not have a counterpart in class II.

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the valency slot it is better considered as portmanteau morpheme marking both decreased valency and imperfective aspect.

[13] Apart from decreasing valence, **s(V)-** also has valence increasing function. This is attested by class III verbs which acquire a causative reading when derived by **s(V)-** (Jakobi & Crass 2004: 91).

[14] Due to phonotactic restrictions, the **s(V)-** prefix triggers the verb root **ni-** to metathesize and to be realized as **in-**. Due to the consonant-final root, the 3rd person A marker **ṛ** is deleted, see table 5.

Therefore the prefix on the imperfective forms of the verbs displayed in table 7 is considered to be a frozen rather than a productive derivational morpheme. The verb roots marked by '(ZF)' are drawn from Fadoul Khidir (2005). All other verbs are quoted in the 3rd person form of the imperfective and perfective aspect.

Table 7: S_P verbs with the P-**s(V)**-Root-A- pattern

Imperfective	Perfective	Gloss
s-aba-, **s-ʊba-**	**baa-** (ZF)	reach a place before nightfall
sa-gaʊ-r̩-ɪ	**gaʊ-r̩-ɪ**	dose, drowse
s-argʊ-r̩-ɪ	**argʊ-r̩-ɪ**	rest, spend the day
s-aʊ-	**aʊ-** (ZF)	stop producing milk
s-aʊ-n-ɪ	**aʊ-n-ɪ**	stop, stand
s-awaɪ-r̩-ɪ	**awaa-r̩-ɪ**	learn
s-ɔmʊ-	**ɔmʊ-** (ZF)	become frail
sɛ-hɛ-	**hɛ-** (ZF)	brood
s-ɛɪ-	**ɛɪ-** (ZF)	deny oneself a meal
s-ei-r̩-i	**ei-r̩-i**	return
s-ɛn-n-ɪ	**ɛn-n-ɪ**	stay (sg P marker)
s-ɪgɛ-r̩-ɪ	**gɪɛ-Ø-ɪ**	lie down, sleep
s-ɪmɛ-r̩-ɪ	**mɪɛ-r̩-ɪ**	forget
s-ɪ-r̩-ɪ	**ti-Ø-i**	go, go to
s-iye-r̩-i	**jie-r̩-i**	cry, weep
s-orgu-r̩-ɪ	**orgu-r̩-i**	stay (pl P marker)
s-ou-r̩-i	**ou-r̩-i**	enter, dress (sg P marker)
sʊ-baɪ-r̩-ɪ	**barʊ-Ø-ɪ**	swell
sʊ-gʊa-r̩-ɪ	**kʊa-r̩-ɪ**	dry
sʊ-gʊr-Ø-ɪ	**kʊr-Ø-ɪ**	get lost
sʊ-ma-r̩-ɪ	**ma-Ø-ɪ**	ripen
sʊ-nʊ-	**nʊ-** (ZF)	mourn

The majority of verbs inflected by the P-**s(V)**-Root-A-pattern have one referential argument (referring to the single participant) but they formally display two grammatical arguments encoded in the P and A marker. They resemble transitive verbs, as illustrated in table 8. Lacking a second referent, the argument indexed by the 3rd person A marker is considered to be an impersonal agent.

Table 8: Two argument S$_P$ verb **sagaʊɽɪ/gaʊɽɪ** 'dose'

P	VAL	Root	A	IPF	realized as	
ØV	s(V)	**gaʊ**	**ɽ**	**ɪ**	**asagaʊɽɪ**	I dose
nV	s(V)	**gaʊ**	**ɽ**	**ɪ**	**nasagaʊɽɪ**	you dose
Ø	s(V)	**gaʊ**	**ɽ**	**ɪ**	**sagaʊɽɪ**	s/he dose
				PRF		
ØV	Ø	**gaʊ**	**ɽ**	**ɪ**	**agaʊɽɪ**	I dosed
nV	Ø	**gaʊ**	**ɽ**	**ɪ**	**nagaʊɽɪ**	you dosed
Ø	Ø	**gaʊ**	**ɽ**	**ɪ**	**gaʊɽɪ**	s/he dosed

However, a few verbs in table 7 – **s-awaɪ-** 'learn', **s-ɪmɛ-** 'forget', and **s-ou-**'enter, dress' – have two participants. They are characterized by three grammatical arguments. The argument that refers to the animate participant is indexed by a P marker thus signaling that the participant has patient-like properties, it is affected and it lacks control. The second argument referring to the entity being learnt, forgotten, or entered is morphologically unmarked, see **bɛ́ɽíá** in (3). Its status as P argument is reflected by the fact that it takes the clitic P focus marker, as Jakobi (2010) shows. The third argument is a non-referential one being indexed by the 3rd person A marker, representing an impersonal agent.

(3)   **bɛ́ɽíá   Ø-áwáá-ɽ-î**
        Beria.P   1sg.P-learn-3sg.A-PRF
        'I have learnt Beria.'

4.1.3. P-t(V)-Root-A- (class I)

This inflectional pattern is characteristic for two groups of verbs. In one group **t(V)**- is employed as a productive valency decreasing derivational morpheme, in the other group **t-** (or **d-**) is frozen.

4.1.3.1. P-**t(V)**-Root-A- (**t(V)**- productive)

Table 9 displays an S$_P$ verb extended by the valency decreasing **t(V)-** prefix which requires the single participant to be cross-referenced by a P marker. When attached to a transitive verb such as **ja-** 'hide' the verb has a reflexive reading, as illustrated by 'hide (oneself)'. Despite of the fact that only one participant is involved in the hiding event, the derived verb formally displays two grammatical arguments, the referential one indexed by P, the non-referential argument indexed by the 3rd person A marker.

Table 9: Two argument S$_P$ verb **tajaɽɪ** 'hide' (**t(V)-** productive)

P	VAL	Root	A	IPF	realized as	
ØV	**t(V)**	**ja**	**ɽ**	**ɪ**	**adajaɽɪ**	I hide
nV	**t(V)**	**ja**	**ɽ**	**ɪ**	**nadajaɽɪ**	you hide
Ø	**t(V)**	**ja**	**ɽ**	**ɪ**	**tajaɽɪ**	s/he hides

Other verbs attesting the productive valency decreasing function of **t(V)-** are **t-ɔfɔɪ-** 'turn (oneself) round', **ta-dʊ-** 'shave (oneself)', **ta-tʊr-** 'pour on oneself'.

The **t(V)-** prefix is also attested deriving intransitive class IV verbs from class III verbs (see below section 4.1.6.).[15]

4.1.3.2. P-**t**-Root-A- (**t ~ d** frozen)

A conspicuous feature of the S$_P$ verbs in this group is that they have an alveolar plosive, **t** or **d**, in root-initial position, as table 10 shows. The alternation of **t** and **d** is not conditioned by the phonological environment but appears to be lexicalized. These consonants resemble the valency decreasing **t(V)-** prefix introduced in section 4.1.3.1. (Jakobi & Crass 2004: 87-90). In addition, some verbs, **daraɪ** 'fight, wrestle', **darɪ** 'pay blood money', **darsɪnɪ** 'gather', **tɔrʊi** 'play', **tɛrɛɽɪ** 'take a bath' begin in **dar**, **tɔr**, or **tɛr**. They are reminiscent of the **dVr-** prefix which designates inherently reciprocal events (Jakobi 2010). Since corresponding verb roots without initial **t**, **d**, **dar**, **tɔr**, **tɛr** are missing, however, there is no evidence of the productive derivational function of these elements. Hence they are regarded as frozen prefixes.

Table 10: S$_P$ verbs with the P-**t**-Root-A- pattern (**t ~ d** frozen)

Imperfective	Perfective	Gloss
daɪ-ɽ-ɪ	**dara-Ø-ɪ**	fight, wrestle (pl P marker)
daɪ-ɽ-ɪ	**dar-Ø-ɪ**	pay blood money
darsɪ-n-ɪ	**darsɪ-n-ɪ**	gather, meet (pl P marker)
dɛbɛ-ɽ-ɪ	**dɛbɛ-Ø-ɪ**	enter, dress (pl P marker)
dɛgɛrɛ-ɽ-ɪ	**dɛgɛrɛ-Ø-ɪ**	jump up
tɔʊ-ɽ-i	**tɔrʊ-Ø-ɪ**	play
tei-n-i	**tei-n-i**	be/get big, grow
tɛrɛ-ɽ-ɪ	**tɛrɛ-Ø-ɪ**	take a bath

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[15] The **t(V)-** prefix has, in fact, two values, it either decreases or increases the valence of the verb (Jakobi & Crass 2004: 87-91, Maha Abdu el-Dawi 2010).

These verbs display two grammatical arguments, the only referential one being treated as P, the non-referential one as A, interpreted as impersonal agent, as seen in table 11.

Table 11: Two argument S$_P$ verb **dɛbɛɹɪ/dɛbɛɪ** 'enter, dress'[16]

P	VAL	Root	A	IPF	realized as	
tV	**Ø**	**dɛb**	**ɹ**	**ɪ**	**tɛrbɛɹɪ**	we enter
nV	**Ø**	**dɛb**	**ɹ**	**ɪ**	**nɛrbɛɹɪ**	you (pl) enter
Ø	**Ø**	**dɛb**	**ɹ**	**ɪ**	**dɛbɛɹɪ**	they enter

4.1.4. P-Root-A- (class I)

Table 12 displays S$_P$ verbs inflected according to the P-Root-A- pattern. It is attested by one fully inflected verb, **kɛdɛɹɪ/kɛdɛɪ** 'fall' and by three defective copula verbs displaying imperfective forms only. The last two copula verbs are quoted in their 1sg and 2sg form. Only these forms are clearly S$_P$ verbs. The corresponding 3rd person forms (not shown in table 12) are suppletive. Their morphological analysis and assignment to any of the established verb classes is difficult (Jakobi & Crass 2004: 99-106).

Table 12: Two argument S$_P$ verbs with P-Root-A- pattern

Imperfective	Perfective	Gloss
kɛdɛ-ɹ-ɪ, kɛtɛ-ɹ-ɪ	**kɛdɛ-Ø-ɪ, kɛtɛ-Ø-ɪ**	fall
-	**sɪ-Ø-ɪ**	be there in future
-	**ɛ-ɹ-ɪ** (1sg) **n-ɛ-ɹ-ɪ** (2sg)	be, be there
-	**ɛ-Ø-ɪ** (1sg) **n-ɛ-Ø-ɪ** (2sg)	be with, be in company

Note that the list of S$_P$ verbs displaying the P-Root-A- pattern could be extended. The verbs with the P-**k(V)**-Root-A- and the P-**s(V)**-Root-A- pattern (discussed in section 4.1.1. and 4.1.2.) display their **k(V)-** and **s(V)-** prefix only in the perfective and imperfective forms, respectively. In the opposite aspect forms (imperfective and perfective, respectively) these verbs do not have such a valency related prefix and therefore display the P-Root-A- pattern like the verbs displayed in table 12.

Table 13 shows that the one participant verb **kɛdɛɹɪ/kɛdɛɪ** 'fall' has two grammatical arguments, the single referential argument being treated as P, the second, the non-referential argument as impersonal agent.

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[16] When an overt P marker is attached to the verb root **dɛb-**, it metathesizes triggering the stop **d** to be weakened to **r** so that the root is finally realized as **ɛrb-** (Jakobi & Crass 2004: 37).

Table 13: Two argument S$_p$ verb **kɛdɛṛɪ/kɛdɛɪ** 'fall'

P	VAL	Root	A	IPF	realized as	
ØV	Ø	**kɛd**	**ṛ**	**ɪ**	**ɛgɛdɛṛɪ**	I fall
nV	Ø	**kɛd**	**ṛ**	**ɪ**	**nɛgɛdɛṛɪ**	you fall
Ø	Ø	**kɛd**	**ṛ**	**ɪ**	**kɛdɛṛɪ**	s/he falls

The next two sections, 4.1.5. and 4.1.6., are concerned with S$_p$ verbs based on a coverb plus light verb (class IV). There are two subgroups, one group inflected by the Coverb-P-**k(V)**-LVB-A- pattern and the other group by the Coverb-P-**t(V)**-LVB-A- pattern. They designate events with a single participant but formally they display two grammatical arguments. The sole referential argument is indexed by a P marker, the non-referential argument by the 3rd person A marker coding an impersonal agent.

4.1.5. Coverb-P-**k(V)**-LVB-A- (class IV)

As table 3 has illustrated, the **k(V)-** prefix is restricted to 3rd person perfective forms of agentive verbs. Therefore, the presence of **k(V)-** in the inflectional paradigm shown in table 14 suggests that verbs displaying the pattern Coverb-P-**k(V)**-LVB-A- are based on such a verb form (which corresponds to the class I verbs discussed in section 4.1.1.).

There are two grammatical arguments, a referential and a non-referential one. The referential argument referring to the animate participant is treated as P indicating that it has patient-like semantic properties. The non-referential argument is encoded in the 3rd person A marker. It is therefore interpreted as impersonal agent.

Table 14: Two argument S$_p$ verb **hiini/hiigini** 'feel dizzy'[17]

Coverb	P	VAL	LVB	A	IPF	realized as	
hii	**ØV**	Ø	**n > i**	**ṛ**	**i**	**hiieiṛi**	I feel dizzy
hii	**nV**	Ø	**n > i**	**ṛ**	**i**	**hiineiṛi**	you feel dizzy
hii	**Ø**	Ø	**n**	**Ø**	**i**	**hiini**	s/he feels dizzy
					PRF		
hii	**ØV**	**k(V)**	**n**	**Ø**	**i**	**hiiegini**	I felt dizzy
hii	**nV**	**k(V)**	**n**	**Ø**	**i**	**hiinegini**	you felt dizzy
hii	**Ø**	**k(V)**	**n**	**Ø**	**i**	**hiigini**	s/he felt dizzy

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[17] In the 1sg and 2sg imperfective forms, the light verb **n** is realized as vowel **ɪ** (allomorph **i**) adopting its ATR features from the coverb. The 3rd person A marker **ṛ** is deleted (zero) when following a consonant.

Verbs with the Coverb-P-**k(V)**-LVB-A- pattern designate states and spontaneous processes. Table 15 offers just a few examples in addition to those listed in Jakobi & Crass (2004: 80).

Table 15: S$_P$ verbs with the Coverb-P-**k(V)**-LVB-A- pattern

Imperfective	Perfective	Gloss
agɪ-n-ɪ	**agɪ-kɪ-n-ɪ**	be/get hungry
hii-n-ɪ	**hii-kɪ-n-ɪ**	feel dizzy
hʊʊ-n-ɪ	**hʊʊ-kɪ-n-ɪ**	pant
kɛdɛb-n-ɪ	**kɛdɛb-kɪ-n-ɪ**	stumble
mara-n-ɪ	**mara-kɪ-n-ɪ**	be/get red
marɪ-n-ɪ	**marɪ-kɪ-n-ɪ**	fall ill
tarʊ-n-ɪ	**tarʊ-kɪ-n-ɪ**	have diarrhea
ʊrgaa-n-ɪ	**ʊrgaa-kɪ-n-ɪ**	be/get thirsty

4.1.6. Coverb-P-**t(V)**-LVB-A- (class IV)

As already shown in section 4.1.3.1., the **t(V)**- prefix is a productive morpheme deriving S$_P$ verbs with decreased valency. This prefix is here attested deriving class IV verbs from class III verbs. The derived verbs have a reflexive reading, as illustrated in table 16.

Table 16: S$_P$ verb **kʊ tɛɪṛɪ/kʊ tɛɪ** 'scratch oneself'

Coverb	P	VAL	LVB	A	IPF	realized as	
kʊ	**ØV**	**t(V)**	**n**	**ṛ**	**ɪ**	**kʊ ɛdɛɪṛɪ**	I scratch myself
kʊ	**nV**	**t(V)**	**n**	**ṛ**	**ɪ**	**kʊ nɛdɛɪṛɪ**	you scratch y.self
kʊ	**Ø**	**t(V)**	**n**	**ṛ**	**ɪ**	**kʊ tɛɪṛɪ**	s/he scratches h.self
					PRF		
kʊ	**ØV**	**t(V)**	**n**	**Ø**	**ɪ**	**kʊ ɛdɛɪ**	I scratched myself
kʊ	**nV**	**t(V)**	**n**	**Ø**	**ɪ**	**kʊ nɛdɛɪ**	you scratched y.self
kʊ	**Ø**	**t(V)**	**n**	**Ø**	**ɪ**	**kʊ tɛɪ**	s/he scratched h.self

Alternatively, the 1st and 2nd person forms of the **t(V)-** derived light verb may be replaced by the **s(V)-** derived light verb which is inflected by P markers, too, as seen in table 17. The **s(V)-**prefix is probably identical to the valency decreasing **s(V)-** prefix employed in the inflectional pattern P-**s(V)**-Root-A- (see section 4.1.2.) where **s(V)-** is restricted to the imperfective forms, however. The 3rd person form of the light verb, **tɛɪṛɪ/tɛɪ** is the same for the **t(V)-** and **s(V)-** derived light verb.

Table 17: Two argument S$_p$ verb **kʊ tɛɪ[TM]ɪ/kʊ tɛɪ** 'scratch oneself'

Coverb	P	VAL	LVB	A	IPF	realized as	
kʊ	**ØV**	**s(V)**	**n > ɪ**	**ɾ̣**	**ɪ**	**kʊ ɛsɪɾ̣ɪ**	I scratch myself
kʊ	**ØV**	**s(V)**	**n > ɪ**	**ɾ̣**	**ɪ**	**kʊ nɛsɪɾ̣ɪ**	you scratch yourself
kʊ	**Ø**	**t(V)**	**n > ɪ**	**ɾ̣**	**ɪ**	**kʊ tɛɪɾ̣ɪ**	s/he scratches him/herself
					PRF		
kʊ	**ØV**	**s(V)**	**n > ɪ**	**Ø**	**ɪ**	**kʊ ɛsɪ**	I scratched myself
kʊ	**nV**	**s(V)**	**n > ɪ**	**Ø**	**ɪ**	**kʊ nɛsɪ**	you scratched yourself
kʊ	**Ø**	**t(V)**	**n > ɪ**	**Ø**	**ɪ**	**kʊ tɛɪ**	s/he scratched him/herself

Other verbs attested with these inflectional patterns are (quoted in their 3rd person perfective form) **gaɾ̣ɪ tɛɪ** 'to disperse' (intr), **kʊr tɛɪ** 'to cling to sth with one's teeth', **kʊra tɛɪ** 'wash oneself', **nɔ tɛɪ** 'look at oneself', **saɪ tɛɪ** 'hit oneself', and **tɪm tɛɪ** 'cut oneself'.

4.2. S$_a$ verbs

Only few intransitive (one participant) verbs are inflected by A markers. They divide into two groups, one group being based on a lexical verb root (class II), the other on a coverb plus light verb (class III). Most S$_a$ verbs belong to the semantic field of motion verbs.

4.2.1. Root-A- (class II)

S$_a$ verbs based on a lexical verb Root-A- are few. Table 18 presents the first three verbs in their 3rd person imperfective and perfective forms. The presence of **k(V)-** offers additional evidence of the agentive semantic properties of the single participant. The second and third verb are distinguished by number, **sʊr-** being inflected by singular A markers, **kʊdʊ-** by plural A markers. The last two verbs, **ju-** 'go' and **kei-** 'come' are presented with their root as it appears in the 1st and 2nd person forms (The 3rd person forms are based on suppletive roots inflected as S$_p$ verbs. They are not provided in table 18).

Table 18: S$_a$ verbs based on lexical verb roots (class II)

Imperfective	Perfective	Gloss
hɪɪ-ɾ̣-ɪ < *hɪɾ̣ɪ-ɾ̣-ɪ	**k-ɪɪ-ɾ̣-ɪ < *k-hɪɾ̣ɪ-ɾ̣-ɪ**	run
sʊr-Ø-ɪ	**kʊ-sʊr-Ø-ɪ**	come out, go out (sg A)
kʊdʊ-ɾ̣-ɪ	**kʊdʊ-Ø-ɪ**	come out, go out (pl A)
ju-	**ju-**	go, go to
kei-	**kei-**	come

Table 19 shows that the single argument S of **hɪ̣ɪ̣-** 'run' is encoded in an A marker suggesting that the single participant has agentive properties, such as control, intention, and volition.

Table 19: Sₐ verb **hɪɪ̣ɪ̣/kɪɪ̣ɪ̣** 'run'

VAL	Root	A	IPF	realized as	
Ø	**hɪ̣ɪ̣**	**g**	ɪ	**hɪ̣ɪ̣gɪ**	I run
Ø	**hɪ̣ɪ̣**	**n**	ɪ	**hɪ̣ɪ̣nɪ**	you run
Ø	**hɪ̣ɪ̣**	**ɹ̣**	ɪ	**hɪɪ̣ɪ̣**	s/he runs
			PRF		
Ø	**hɪ̣ɪ̣**	**g**	ɪ	**hɪ̣ɪ̣gɪ**	I ran
Ø	**hɪ̣ɪ̣**	**n**	ɪ	**hɪ̣ɪ̣nɪ**	you ran
k(V)	**hɪ̣ɪ̣**	**ɹ̣**	ɪ	**kɪɪ̣ɪ̣**	s/he ran

4.2.2. Coverb-**k(V)**-LVB-A- (class III)

A sample of Sₐ verbs inflected by the Coverb-**k(V)**-LVB-A- pattern is provided in table 20. Note that the 3ʳᵈ person forms of Sₐ verbs inflected by that pattern (class III) do not differ from the corresponding forms of the Sₚ verbs inflected by the Coverb-P-**k(V)**-LVB-A- pattern (class IV), as can be seen when comparing table 20 to table 15.

Table 20: Sₐ verbs assigned to class III

Imperfective	Perfective	Gloss
ju-n-i	**ju-ki-n-i**	ascend, climb up
hui-n-i	**hui-ki-n-i**	climb
gʊɪ-n-ɪ	**gʊɪ-kɪ-n-ɪ**	set out, get up and leave
hɛr-n-ɪ	**hɛr-kɪ-n-ɪ**	be silent
hir-n-i	**hir-ki-n-i**	fly
jar-n-ɪ	**jar-kɪ-n-ɪ**	gallop
kɛɪ-n-ɪ	**kɛɪ-kɪ-n-ɪ**	leave, go off
mʊrɪ-n-ɪ	**mʊrɪ-kɪ-n-ɪ**	go for a walk
tei-n-i	**tei-ki-n-i**	descend
iri-n-i	**iri-ki-n-i**	be annoyed

These verbs have a sole grammatical argument which is treated as A, as can be seen from the following paradigm in table 21. So the participant referred to is conceived of as having agentive properties, such as control, intention, volition.

Table 21: Sₐ verb **kɛɪnɪ/kɛɪgɪnɪ** 'leave'[18]

Coverb	VAL	LVB	A	IPF	realized as	
kɛɪ	Ø	n > ɛ	g	ɪ	**kɪɛgɪ**	I leave
kɛɪ	Ø	n > ɛ	n	ɪ	**kɪɛnɪ**	you leave
kɛɪ	Ø	n	Ø	ɪ	**kɛɪnɪ**	s/he leaves
				PRF		
kɛɪ	Ø	n > ɛ	g	ɪ	**kɪɛgɪ**	I left
kɛɪ	Ø	n > ɛ	n	ɪ	**kɪɛnɪ**	you left
kɛɪ	k(V)	n	Ø	ɪ	**kɛɪgɪnɪ**	s/he left

Because of the one to one correspondence between the single participant and the sole referential argument, Sₐ verbs are considered to be the only true intransitive verbs.

4.3. Summary of verb classes

As summarized in table 22, the preceding sections offer evidence of two macro verb classes, one class comprising verbs based on inflected lexical verb roots, the other class comprising verbs based on coverbs plus an inflected light verb. Each of the two macro classes further divides into two major verb classes, class I and IV being restricted to verbs whose most agent-like argument is treated as P, class II and III being characterized by verbs whose agent-like argument is treated as A.

Transitivity depends on the number of participants in the event, the number of grammatical and referential arguments and on the treatment of the most agent-like argument as P or A.

True intransitive (i.e. one participant, one grammatical argument) verbs are few. They all belong to the category of Sₐ verbs, as their single argument is associated with A, e.g. **hɪɪṛɪ/kɪɪṛɪ** 'run' (class II) and **kɛɪnɪ/kɛɪgɪnɪ** 'leave' (class III). Corresponding true intransitive Sₚ verbs do not exist. Thus, the majority of the single participant (i.e. semantically intransitive) verbs is formally transitive as they display two grammatical arguments, the most agent-like argument being treated as P.

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[18] The coverb **kɛɪ** is realized as **kɪ** when followed by the allomorph **ɛ** of the light verb (Jakobi & Crass 2004: 29). The segmentally identical forms of the imperfective and perfective differ in respect to tone, e.g. **kɪ̀ɛ̀gɪ̀** (1sg imperfective) versus **kɪ́ɛ́gɪ́** (1sg perfective).

Table 22: Classification of verbs

Macro verb classes	Major verb classes	Most agent-like argument treated as	Number of participants & gramm. arguments	Minor verb classes
Lexical verb root	I	P	1 or 2 participants 2 arguments	P-**k(V)**-Root-A-
				P-**s(V)**-Root-A-
			1 participant 2 arguments	P-**t(V)**-Root-A-
				P-Root-A-
	II	A	2 participants 2 arguments	P-Root-A- = transitive[19]
			1 participant 1 argument	Root-A- = <u>true intr</u>
Coverb + Light verb	III	A	2 participants 2 arguments	Coverb-P-LVB-A- = transitive
			1 participant 1 argument	Coverb-LVB-A- = <u>true intr</u>
	IV	P	1 participant 2 arguments	Coverb-P-**k(V)**-LVB-A-
				Coverb-P-**t(V)**-LVB-A-

5.   Concluding remarks

The split-S system of Beria displays several morphological, morphosyntactic, and semantic features which – on the basis of cross-linguistic studies by Merlan (1985), Mithun (1991), and Comrie (2011) – are identified as typical of split-S languages. They will be addressed in the following.

The split-S system is characterized by head-marking morphology, i.e. it is marked by person affixes on the verb. Cross-linguistically, split-S marking by means of person affixes on the verb is much more frequent than by means of case marking on the core constituents (Comrie 2011).

Marking the A, P, and S argument on the verb (i.e. the head of the clause) rather than on the core constituents (i.e. the dependents) appears to be rare in Africa. Nichols & Bickel (2011) point out that "[t]he head-marked clause is common in the Americas and Australia-New Guinea

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[19] This group of agentive class II verbs divides into two groups depending on how the 3rd person perfective form is marked, either by the **k(V)-** prefix or by the **-ɛ** suffix (Jakobi & Crass 2004: 59).

and very rare elsewhere. (There are five tokens in Africa, but three of them come from the young but widespread Bantu family.)". The three Bantu languages are Swahili, Zulu, and Luvale. The remaining two languages are Lango (Eastern Sudanic, Western Nilotic) and Bagirmi (Central Sudanic, Bongo-Bagirmi). Beria (and Teda) should be added to this list of African head-marking languages.

The recognition of the split-S system is not only relevant for the understanding of grammatical relations in the Saharan languages; it is interesting for typological reasons, too. Split-S systems are mainly known from languages spoken outside of Africa, especially American Indian, Caucasian, Austronesian, Papuan, Tibeto-Burman and Indo-European languages. In Africa, however, split-S systems appear to be rare or at least they have rarely been documented. Apart from Beria (and Teda), split-S is – as far as I know – attested in two African languages only, in Loma, a Mande language of Liberia (Rude 1983), and in Kalanga, a Southern Bantu language of Zimbabwe (Kangira 2004).

The large class of S_P verbs contrasts with the small class of S_a verbs. Moreover, the valency decreasing **t(V)-** and **s(V)-** prefixes attests the productivity of the S_P inflectional pattern. A corresponding productive device deriving S_a verbs is lacking, however. The different size and productivity of the S_P and S_a classes is another characteristic of split-S languages.

Most S_P verbs display two grammatical arguments though only one referential argument. These verbs are therefore formally transitive. Their non-referential argument is always indexed by a 3rd person A marker considered to represent an impersonal agent.

According to Comrie (pers. comm.), it is striking that the split-S system of Georgian and Basque has essentially the opposite pattern, S_P verbs having one grammatical argument, S_a verbs having two grammatical arguments, though only one referential argument.

While Georgian and Basque S_a verbs are characterized by a mismatch between the sole referential argument and the obligatory presence of two grammatical arguments, it is Beria S_P verbs that exhibit this mismatch.

A few S_P verbs ('learn', 'forget', 'enter, dress') have two participants though three grammatical arguments. One of these arguments is referring to the animate participant; it is encoded in a P marker. The second argument (referring to the participant which learns, forgets, enters/dresses) is encoded in an unmarked core constituent. Only when focused it becomes obvious that this constituent is another argument

encoded as P. According to Mithun (1991: 517), it is not uncommon for split-S languages to have two P arguments "if neither participant performs/effects/instigates or controls." The third argument is encoded as non-referential 3rd person A marker.

The valency decreasing **t(V)-** and **s(V)-** prefixes require the sole argument S to be treated as P. The interaction of derivational morphology with the grammatical treatment of S as P or A is a common morphosyntactic feature of split-S languages.

The participants in events designated by S_P or S_a verbs play different semantic roles. In processes such as growing, falling, dying, or dozing, the participant is an unvolitional and unintentional undergoer. In perceptional events such as hearing and feeling pain, the animate participant plays the role of an experiencer lacking control of the event. Other S_P verbs like 'fight', 'wrestle', 'pay a fine' and 'play' designate events that are inherently reciprocal, the animate participants playing simultaneously an actor and undergoer role. States, changes of state and location as well as change of body posture such as 'lie down', 'sit down', 'stand up', have an affected patient-like participant. However, events such as running, going, leaving, coming are conceived of as having a volitional, intentional, and controlling participant as suggested by the fact that the participant is cross-referenced by an A marker.

Thus Beria corroborates the assumption that the alignment of S with P or A has a semantic basis. However languages differ in respect to the particular semantic feature to which they are sensitive, such as agency, animacy, control, volitionality, and effectiveness. In Beria the system of grammatical relations appears to be particularly sensitive to control, intention, and volition or the lack thereof.

Although a split-S system has some semantic basis, membership in the group of S_P or S_a verbs cannot be predicted, it is lexicalized. This finding is supported by the *verba sentiendi* **hiini/hiigini** 'feel dizzy' and **irini/irigini** 'be annoyed', the first being inflected by P markers, the second by A markers.

Split-S languages are also characterized by the presence of a major intransitive verb class displaying 'middle' semantics. In Beria, this class is represented by the S_P verbs. As illustrated by the "Medium-Verben" listed in Jakobi (2010), they designate events oriented to the (body of the) subject. Evidence of middle semantics is also corroborated by Wolfe's paper "Splits in the middle".

The split-S system exists in Beria (and in Teda) but not in Kanuri which has an accusative system. Important questions yet to be answered are:

Has the accusative system developed from the split-S system or is there evidence of the reverse direction of change? What are the driving forces for the restructuring of the system of grammatical relations?

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