47th Colloquium on African Languages and Linguistics
Leiden, 28 – 30 August 2017

Remarks on transitivity prominence in the languages of Sub-Saharan Africa

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1. Introduction

In this presentation, I give an overview of an investigation in progress on the status of the languages of Sub-Saharan Africa with respect to a typological parameter to which attention has been drawn recently: transitivity prominence.

The notion of transitivity prominence accounts for the cross-linguistic variation in the extent to which languages make use of transitive coding. For example, like English or French, Wolof (Atlantic) extends the transitive coding typically found with verbs such as 'break' to a verb like 'forget' (whose arguments cannot be described as an agent and a patient), whereas in Mandinka (Mande), 'forget' has an *extended intransitive construction* in which one of the arguments is an oblique argument, i.e. an argument whose coding is not different from that of adjuncts in the construction of monovalent verbs.

(1) Wolof (Atlantic – pers.doc.)

(1a) **Xale bi toj na weer bi.**
child CLb.D break PRF.3SG glass CLb.D
'The child has broken the glass.'

(1b) **Xale bi fàtte na sama sant**
child CLb.D forget PRF.3SG my name
'The child has forgotten my name.'

(2) Mandinka (Mande – pers.doc.)

(2a) **Díndíŋò yè wéeróo tèyí.**
child.D CPL.TR glass.D break
'The child has broken the glass.'

(2b) **Díndíŋó ñìná-tà ŋ́ kòntóŋò lá.**
child.D forget-CPL.INTR 1SG name.D POSTP
'The child has forgotten my name.'

It has long been known that English or French have a much stronger tendency to employ transitive verbs than for example Russian. Say (2014) provides a precise picture of the variation in transitivity prominence across European languages. As regards the languages of the world, some precise data are now available due to the Leipzig Valency Classes Project, whose database contains data from 36 languages world-wide. Haspelmath (2015) classifies

them according to their degree of transitivity prominence on the basis of the sample of 80 verb meanings whose equivalents were systematically collected for all the languages of the project. In the 36 languages of the Leipzig Valency Classes Project, according to Haspelmath's count, the percentage of the sample verbs that show transitive coding varies form 75 (Chintang) to 40 (Bezhta):

Table 1: The 36 languages of the Leipzig Valency Classes Project ranked according to Haspelmath's (2015) evaluation of their degree of transitivity prominence

1.	(75)	Chintang
2-3.	(70)	**Emai**, **N||ng**
4.	(69)	Ojibwe
5.	(68)	**Yorùbá**
6-8.	(66)	Xârâcùù, Bora, Balinese
9-11.	(65)	Zezontepec Chatino, Mandarin Chinese, Yucatec Maya
12-16.	(64)	Jakarta Indonesian, Sliammon, Ainu, Yaqui, Mapudungun
17.	(63)	Even
18.	(62)	Italian, **Mandinka**
20-22.	(61)	Hoocąk, Japanese (standard), Jaminjung
23.	(60)	Modern Standard Arabic
24.	(59)	Evenki
25-28.	(58)	Mitsukaido Japanese, English, Hokkaido Japanese, Korean
29.	(56)	German
30-31.	(54)	Nen,[1] Eastern Armenian
32.	(50)	Russian
33.	(47)	Icelandic
34.	(46)	Ket
35.	(45)	Sri Lanka Malay
36.	(40)	Bezhta

On this basis, Haspelmath (2015) concludes that, in the languages of the world, the low degree of transitivity prominence that characterizes the languages of Eastern Europe and of the Caucasus is rather exceptional, whereas languages with a degree of transitivity prominence higher than that found in West European languages are common.

Four languages of Subsaharan African are among the languages whose degree of transitivity prominence has been evaluated by Haspelmath (2015). Three of them (Emai, N||ng, and Yorùbá) are among the top 5, whereas Mandinka ranks exactly in the middle (18th out of 36, ex-æquo with Italian), which suggests that its degree of transitivity prominence is comparable to that found in the languages of Western Europe. According to my own evaluation (see below) Mandinka shows a degree of transitivity prominence lower than that of Italian, but still much higher than that of Russian. I do not have the data that would allow me to comment on the ranking of Emai and N||ng. As regards Yorùbá, my own evaluation (see below) is at odds with Haspelmath's, since in my count, the degree of transitivity prominence of Yorùbá is not significantly higher than that of Mandinka. There is however a very simple explanation: Haspelmath based his evaluation of transitivity prominence in Yorùbá on an account of the

[1] Note that Nen does not refer here to the Bantu language Nen, but to a Papuan language of the same name.

valency properties of Yorùbá verbs (Atoyebi 2015) in which transitive coding proper is not distinguished from another type of coding frame found with quite a few bivalent verbs, in which the second argument is not coded like typical patients, but like adnominal possessors, which led to an over-evaluation of the proportion of verbs showing transitive coding.[2]

The aim of the investigation whose first results are presented here is to analyze the variation in transitivity prominence across Sub-Saharan languages on the basis of a sample of languages as diverse as possible, genetically and areally. For the moment, I have been able to gather and process data for the 17 following languages:

Table 2: The language sample

Languages	Affiliation	Sources
Baule	Niger-Congo ⊃ Kwa	Tymian et al. (2003), Jérémie N. Kouadio (pers.comm.)
Beja	Afroasiatic ⊃ Cushitic ⊃ North Cushitic	Martine Vanhove (pers.comm.)
Fon	Niger-Congo ⊃ Kwa	Segurola & Rassinoux (2000)
Gagnoa Bete	Niger-Congo ⊃ Kru	Pageaud (1972)
Gbaya	Ubangian	Roulon-Doko (2008), Paulette Roulon-Doko (pers.comm.)
Hausa	Afroasiatic ⊃ Chadic	Abraham & Mai Kano Malam (1949), Caron & Amfani (1997), Newman (2000), Newman (2007)
Jamsay	Dogon	Heath (2007, 2008)
Jóola Fóoñi	Niger-Congo ⊃ Atlantic ⊃ Bak	pers.doc.
Kanuri	Nilo-Saharan ⊃ Saharan	Lukas (1937, Cyffer & Hutchinson (1990), Cyffer (1993)
Koroboro Senni	Songhay	Prost (1956), Heath (1998, 1999)
Lingala	Niger-Congo ⊃ Benue-Congo ⊃ Bantu	Ngalasso-Mwatha (2013)
Mandinka	Mande ⊃ West Mande	pers.doc.
Sar	Nilo-Saharan ⊃ West Sudanic ⊃ Sara	Palayer (1992)
Soninke	Mande ⊃ West Mande	pers.doc.
Tswana	Niger-Congo ⊃ Benue-Congo ⊃ Bantu	pers.doc.

[2] The origin of this error is that the distinction between transitive coding and the coding frame in which the second argument is encoded like adnominal possessors is obvious only if the second argument is a 2nd or 3rd person singular pronoun. In other cases it relies on vowel length and tone distinctions that are not apparent in the current orthography, and consequently easily pass unnoticed in a superficial observation.

Wolof	Niger-Congo ⊃ Atlantic ⊃ North Atlantic	Diouf (2003)
Yorùbá	Niger-Congo ⊃ Benue-Congo	Abraham (1962), Sachnine (2009), Nicolas Aubry (pers.comm.)

In its present state, the language sample cannot be viewed as representative of the diversity of Sub-Saharan languages. However, as it stands, it already allows us to make some interesting observations about the variation in transitivity prominence across the languages of Sub-Saharan Africa.

In this paper, after briefly presenting the theoretical background (Section 2) and the questionnaire I use to evaluate the degree of transitivity prominence of individual languages (Section 3), I propose some remarks about the variation in transitivity prominence observed across the Sub-Saharan languages that I have been able to include in my language sample so far (Section 4), and about the greater or lesser propensity of the individual verb meanings to be encoded transitively (Section 5).

2. The theoretical background

2.1. Transitivity

The notion of transitivity encompasses semantic transitivity and syntactic transitivity. There is a relationship between semantic and syntactic transitivity, since logically, syntactic transitivity can only be defined with reference to semantic transitivity. However, it is crucial to distinguish them carefully, since they do not necessarily coincide: transitive constructions do not necessarily refer to transitive events (cf. **The child saw a dog**), and transitive events are not necessarily encoded by transitive constructions (cf. **The glass was broken by the child**).

Semantic transitivity refers to the type of interaction between participants in two-participant events. As a semantic notion, it is gradient rather than categorical: two-participant events should not be characterized as transitive *vs.* non-transitive, but rather as more or less transitive. Prototypical transitive events (or events characterized by the highest possible degree of transitivity) involve a change of state or position undergone by one of the two participants (the patient) and triggered by the action of the other participant (the agent); moreover, prototypical transitivity implies that the action of the agent is conscious and voluntary, and aims at changing the state of the patient or controlling its position.

For example, the lexical meaning of **break** is compatible with the highest possible degree of semantic transitivity, but this is not the case for **hit** or **eat**. Hitting events are not prototypically transitive events, because the affected (or non-agentive) participant in a hitting event does not undergo a change of state or position, and consequently is not a typical patient. As regards eating events, the point is that the primary motivation of the action performed by the active participant in an eating event is not to change the state of the other participant or control its position, but rather to satisfy a physiological need, and consequently, the active participant in an eating event is not a typical agent.

2.2. Core transitive verbs

In the terminology to which I adhere, verbs encoding events involving one, two, or three essential participants are designated as *monovalent*, *bivalent*, and *trivalent*. *Transitive* and

intransitive do not refer to the number of essential participants in the events denoted by verbs, but to the fact that they select a coding frame identical or not to that of verbs encoding a particular type of event. The delimitation of the set of transitive verbs is language-specific and relies on formal criteria, but the sets of transitive verbs of the individual languages are universally defined as including a particular semantic class of verbs, the *core transitive verbs*, defined as bivalent verbs that can head clauses encoding events characterized by a maximum degree of semantic transitivity as defined in Section 2.1 above.

In other words, a core transitive verb is a bivalent verb that has the ability to refer to two-participant events involving two well-individuated participants, a typical agent (i.e. a human participant consciously and willingly controlling an activity oriented towards the other participant), and a typical patient (i.e. a participant undergoing a change of state or position triggered by the activity of an agent). **Break** is a good example of a core transitive verb. By contrast, as already commented in Section 2.1, **hit** is not a core transitive verb, and in quite a few languages, hittees are coded differently from typical patients. This is for example the case in Moloko (Chadic), where in the coding frame of **ɓay** 'hit', the hittee is assigned dative coding – Ex. (3).

(3) Moloko (Chadic; Friesen & al, 2017: 275)

Mana	**a-ɓ=aŋ**	**ana**	**kəra.**
Mana	3SG-hit=3SG.IO	DAT	dog

'Mana hits a dog.' (lit. he hits to him to dog)

Similarly, **eat** is not a core transitive verb either (which explains why many languages have two totally different translational equivalents of English **eat**, one of them transitive and the other intransitive, a situation that seems to never occur with core transitive verbs).

It is commonly assumed that, in the languages of the world, the set of the verbs recognizable as core transitive verbs according to the restrictive definition posited above shows a high degree of formal homogeneity, in the sense that, in each individual language, all core transitive verbs, or almost all, assign the same coding characteristics to their agents and patients. By contrast, cross-linguistically, as discussed among others by Tsunoda (1985) and Lazard (1994) and confirmed by Hartmann et al. (2013), no other class of verbs defined in terms of semantic role assignment shows a comparable propensity to group together into the same valency class. This suggests a cognitive prominence of this semantic class of verbs, and justifies giving it a central status in a typology of argument coding and in a typology of the interface between argument structure and morphosyntax.

2.3. Syntactically transitive verbs

In all languages, many verbs that are not core transitive verbs according to the definition put forward above select a type of argument coding identical to that selected by core transitive verbs. In this article, the term *transitive verb* without further specification refers to verbs whose construction includes two terms coded like the two arguments of core transitive verbs, whatever their semantic roles. For example, English **see** is not a core transitive verb, but the coding it assigns to its arguments identifies it as transitive, since verbs such as **break** or **fix** assign the same coding to their arguments. In Soninke (Mande) **ŋàrí** 'see' is also a transitive verb, since its coding frame with two NPs in pre-verbal position and a transitivity marker inserted between them in the completive aspect is the same as that of **kárá** 'break' – Ex. (4). By contrast, in Koroboro Senni (Songhay), **dii** 'see' is not a transitive verb: as illustrated by Ex. (5a), transitive coding in Koroboro Senni is characterized by the same rigid A P V X

constituent order as in Soninke (A = agent, P = patient, V = verb, X = others), and by the presence of a transitivity marker between A and P in the completive aspect, but as illustrated by Ex. (5b), **dii** 'see' belongs to a distinct valency class of verbs, characterized by post-verbal position of the second argument and absence of the transitivity marker in the completive aspect.

(4) Soninke (Mande; pers.doc.)

(4a) **Yàxàré-n dà qóllè-n kárá.**
woman-D TR calabash-D break
'The woman broke the calabash.'

(4b) **Yàxàré-n dà qóllè-n ŋàrí.**
woman-D TR calabash-D see
'The woman saw the calabash.'

(5) Koroboro Senni (Songhay; Heath 1999: 121, 212)

(5a) **Woy-oo na ar-oo wii.**
woman-D TR man-D kill
'The woman killed the man.'

(5b) **Ay dii boro foo.**
1SG see person one
'I saw a person.'

Similarly, Ex. (6) shows that, contrary to their English of French equivalents, the Mandinka verbs **làfí** 'want' and **ñìná** 'forget' are not transitive, since constituent order in Mandinka clauses is absolutely rigid, and the verbs in question select a coding frame NP1 V NP2 Postp different from the coding frame NP1 NP2 V typical for transitive clauses, illustrated in (6a).

(6) Mandinka (Mande; pers.doc.)

(6a) **Kèwôo yè fòolèesúwòo dádâa.**
man.D CPL bicycle.D repair
'The man repaired the bicycle.'

(6b) **Kèwôo làfí-tà kód-òo lá.**
man.D want-CPL money.D POSTP
'The man wants money.'

(6c) **Kèwôo ñìná-tà ŋ́ kòntóŋò lá.**
man.D forget-CPL 1SG name.D POSTP
'The man has forgotten my name.'

2.4. Basic transitive coding

The notion of *basic transitive coding* is central in the typological study of transitivity. The basic transitive coding is a construction involving a verb and two NP's designated as A and P,

whose coding is identical to that of the agent and the patient in the construction of core transitive verbs.

The question that arises here is that, in some languages, the coding of agents and patients in the construction of core transitive verbs may show different types of variation which do not have the same consequences for the identification of a particular construction as the basic transitive construction in a given language, and sometimes make this identification problematic. For example, in many languages, the coding of the arguments of core transitive verbs shows variations that have an obvious explanation in terms of choice between the basic transitive construction and detransitivized variants thereof (either passive or antipassive, depending on the languages), but in some languages, the competition between two or more possible constructions of core transitive verbs is not easy to analyze.[3] It is however not possible to discuss this complex question in detail within the limits of this presentation.

2.5. Transitivity prominence

Transitivity prominence is defined by Haspelmath (2015) as the extent to which languages make use of transitive coding. This formulation is ambiguous in the case of predicates lexicalized as compounds, with an argument encoded like the agent of prototypical transitive verbs, and the non-verbal element of the compound showing coding characteristics similar to those of the patient of prototypical transitive verbs. For example, in Italian, 'love' is usually expressed as **voler bene** lit. 'wish good (to someone)', with the object slot in the construction of **volere** 'want' arguably occupied by **bene** 'good', whereas the second argument of the complex predicate **voler bene** is assigned dative coding. The question is whether such constructions should count as instances of transitive coding or not. The same question arises with semantically bivalent predicates lexicalized as light verb compounds.

In my investigation of transitivity prominence in the languages of Sub-Saharan, I adopt a restrictive definition according to which transitivity prominence refers to the extent to which non-monovalent predicates that are not prototypically transitive assign <A, P> coding to two of their arguments.

3. The questionnaire

In order to be able to compare languages with respect to this particular aspect of their transitivity system, building on my experience of working on languages belonging to various families and spoken in various parts of the world, I designed a questionnaire consisting of 30 verb meanings involving two participants. The verb meanings I selected are neither among those expressed by verbs that assign A coding and P coding to their arguments in (almost) all the languages for which I have been able to check the relevant data, nor among those that, according to my observations, have a marked tendency to be expressed by verbs assigning other types of coding to their arguments. I also tried to avoid verb meanings strongly marked as culture-specific, and to select verb meanings, that, cross-linguistically, are commonly lexicalized as simplex verbs.

The 30 verb meanings I selected are listed in Table 3. They are quoted by means of English verbs in capitals. Since most of the English verbs used to quote the meanings selected for the questionnaire are polysemous verbs that may be found in various coding frames depending on

[3] Uduk (Koman) is a case in point – cf. Kilian (2015).

the precise meaning they encode, it must be emphasized that the only relevant meaning is that illustrated by the English sentence that accompanies each of the entries.

Table 3: The 30 verb meanings selected to test the extension of <A, P> coding to the arguments of bivalent predicates that depart from the transitive prototype

1	ATTACK	as in: During the night enemy aircraft attacked several towns.
2	BE AFRAID OF	as in: The child is crying because he is afraid of the dog.
3	BETRAY	as in: He betrayed his best friend.
4	BITE	as in: Do you know what to do if your dog bites you?
5	CALL	as in: Feel free to call me if you need any help.
6	CLIMB	as in: The monkey climbed the tree, or Do you know who was the first person to climb Everest?
7	CROSS	as in: Don't cross the road without looking in both directions!
8	DESPISE	as in: She despises him for failing his exam.
9	ESCAPE FROM	as in: The mouse escaped from the cat.
10	FIND	as in: I found a set of keys in the street yesterday.
11	FOLLOW	as in: A dog followed me home.
12	FORGET	as in: I'll never forget you.
13	HATE	as in: Why does he hate me so much?
14	HEAR	as in: We heard a noise that resembled a bomb.
15	HELP	as in: I don't think he is willing to help us.
16	HIT	as in: Parents hit children because they were hit as children.
17	KNOW	as in: Do you know the man who greeted us?
18	LAUGH AT	as in: Don't laugh at me!
19	LIKE	as in: I cannot understand why she likes him so much.
20	LISTEN TO	as in: Listen to me when I am talking to you!
21	LOOK AT	as in: He looked at me with a strange look on his face.
22	NEED	as in: Don't leave me alone, I need you.
23	PITY	as in: She wasn't sure whether she loved or pity him.
24	SCOLD	as in: She scolded the child for taking sweets without first having permission.
25	SEARCH FOR	as in: I searched for him but I didn't find him.
26	SEE	as in: I saw him on TV.
27	TOUCH	as in: She touched his hand reassuringly.
28	TRUST	as in: Don't trust this man, he is a liar.
29	WAIT FOR	as in: I waited for him but he never came.
30	WANT	as in: I don't want more money, just less work to do.

The relevance of this questionnaire for the cross-linguistic investigation of transitivity prominence is illustrated by Table 4, which compares the usual constructions expressing the 30 verb meanings in the following languages:

- Fooñi (Atlantic), a language with an extremely high level of transitivity prominence;
- Italian and Mandinka (Mande), two languages with a moderate level of transitivity prominence;

– Russian, a language with a relatively low level of transitivity prominence;
– Akhvakh (East Caucasian), a language with an extremely low level of transitivity prominence.

In this table, the verbs that assign <A, P> coding to their arguments when expressing the relevant meaning are tagged with (+), those assigning other types of coding are tagged with (–), and those with two possible constructions for the relevant meaning are tagged with (±).

Table 4: The 30 verb meanings in Fooñi, Italian, Mandinka, Russian, and Akhvakh

	Fooñi	Italian	Mandinka	Russian	Akhvakh
1	lóúm (+)	attaccare (+)	bòyí + kâŋ (–) bòyìŋkâŋ (+)	napast' na (–)	ʟ'ado abažuruʟa (–)
2	kólí (+)	aver paura (–)	sílà + lá (–)	bojat'sja + gén. (–)	ʟūruʟa (–)
3	bunt (+)	tradire (+)	jàmfâa (+)	izmenit' + dat. (–)	χijanałilōruʟa (–)
4	rum (+)	mordere (+)	kîŋ (+)	kusat' (+)	q̄'eleč'uruʟa (–)
5	wonk (+)	chiamare (+)	kílì (+)	zvat' (+)	žōruʟa (+)
6	ñito (–)	scalare (+) arrampicarsi (–)	sélè (+ lá) (±)	vlezt' na (–), podnjat'sja na (–)	χ̄eruruʟa (–)
7	típ (+)	traversare (+)	tèyí (+ lá) (±)	perexodit' (+)	goč'uruʟa (+)
8	jútú (+)	disprezzare (+)	jùtú + lá (–)	prezirat' (+)	maɬuq̄'ełuruʟa (–)
9	pak (+)	sfuggire a (–)	kàná + má (–)	sbežat' ot (–)	χ̄ʷašarilōruʟa (–)
10	took (+)	trovare (+)	tàrá (+)	naxodit' (+)	mičunuʟa (–)
11	riiben (+)	seguire(+)	báyíndì (+)	sledovat' za (–)	q'edoɪ̄uruʟa (–)
12	loŋ (+)	dimenticare (+) dimenticarsi di (–)	ñìná + lá (–)	zabyvat' o (–)	hidičuruʟa (–)
13	lat (+)	detestare, odiare (+)	kôŋ (+)	nenavidet' (+)	kit'ałuruʟa (–)
14	jam (+)	sentire (+)	móyì (+)	slyšat' (+)	ãʟ'unuʟa (–)
15	ramben (+)	aiutare (+)	dèemá (+)	pomoč' + dat. (–)	komoki gūruʟa (–)
16	tek (+)	colpire (+)	búsà (+)	udarit' (+)	ɪ̄'ʷaruruʟa (–)
17	manj (+)	conoscere (+)	lôŋ (+)	znat' (+)	beq'uruʟa (–)
18	lúu (+)	burlarsi de (–)	jélè (+)	izdevat'sja nad (–)	ʟ'ado badaʟuruʟa (–)
19	maŋ (+)	amare (+) voler bene a (–)	kànú (+)	ljubit' (+)	kʷīɬunuʟa (–)
20	janten (+)	ascoltare (+)	lámóyì (+)	slušat' (+)	hãdax̄uruʟa (–)
21	jikeer (+)	guardare (+)	jùubêe (+)	smotret' na (–)	eq̄uruʟa (–)
22	soola (+)	aver bisogno, occorrere (–)	sùulá + lá (–)	nuždat'sja v (–)	q̄'ʷāraʕunuʟa (–)
23	bótění (+)	aver pità di (–)	báláfâa + yé (–)	žal' + dat., gén. (–)	guħilōruʟa (–)
24	ñuumul (+)	sgridare (+)	dóoyâa (+)	rugat' (+)	naɬ̄uruʟa (–)
25	ñes (+)	cercare (+)	ñínì (+)	iskat' (+)	eq̄edōruʟa (+)
26	juk (+)	vedere (+)	jé (+)	videt' (+)	hariguruʟa (–)
27	gor (+)	toccare (+)	măa (+)	dotronut'sja do (–)	q'ūnuʟa (–)
28	fium (+)	fidarsi di (–)	lâa + lá (–)	doverit'sja + dat. (–)	bužuruʟa (–)
29	kob (+)	aspettare (+)	bàtú (+)	ždat' (+ gén.)	čani biχ̄uruʟa

30	maŋ (+)	volere (+)	làfí + lá (–)	xotet' (+)	kʷĩɬunuʟa (–)
	29 vs. 1	23 vs. 7	20,5 vs. 9,5	15,5 vs. 14,5	3vs. 27

Within the limits of this sample, the ratio of <A, P> coding and other types of coding is 29 vs. 1 for Fooñi, 23 vs. 7 for Italian, 20.5 vs. 9.5 for Mandinka, 15.5 vs. 14.5 for Russian, and 3 vs. 27 for Akhvakh.[4]

Recall that, in Haspelmath's (2015) evaluation of the degree of transitivity prominence in the 36 languages of the world-wide sample of the Leipzig Valency Classes Project, Mandinka occupies the 18th rank (ex-æquo with Italian), Russian occupies the 32nd rank, and the last rank is occupied by a language (Bezhta) belonging to the same East Caucasian language family as Akhvakh. Interestingly, the 50% of transitive verbs found by Haspelmath for Russian on the basis of the questionnaire of the Leipzig Valency Classes Project is not very different from the ratio of <A, P> coding vs. other types of coding (15.5 vs. 14.5) for the 30 verb meanings of my questionnaire.

4. Transitivity prominence in the languages of the sample

According to the ratio of <A, P> coding vs. other types of coding, the languages of the sample can be divided into 4 groups:

4.1. Languages with a very high ratio of <A,P> coding (more than 25 out of 30)

This group includes the following languages:

Tswana	29.5 vs. 0.5
Fooñi	29 vs. 1
Wolof	29 vs. 1
Lingala	28.5 vs. 1.5
Beja	27.5 vs. 2.5
Kanuri	26 vs. 4

The highest degree of transitivity prominence is found in the 2 Atlantic and the 2 Bantu languages included in the sample. Interestingly, the parameter of transitivity prominence confirms the well-known typological similarity between Atlantic and Bantu.

The other languages in this group are Beja (North Cushitic) and Kanuri (Saharan).

4.2. Languages with a relatively high ratio of <A,P> coding (between 20.5 and 25 out of 30)

This group includes the following languages:

Jamsay	25 vs. 5
Gbaya	24 vs. 6
Sar	23 vs. 7

[4] In this evaluation, cells including two verbs with different constructions, or a single verb with two possible constructions both expressing the relevant meaning, have been counted for 0.5.

Yoruba	21 vs. 9
Baule	20,5 vs. 9,5
Hausa	20,5 vs. 9,5
Mandinka	20,5 vs. 9,5

4.3. Languages with a ratio of <A,P> coding between 15,5 and 20 out of 30

This group includes the following languages:

Soninke	18 vs. 12
Gagnoa Bete	17.5 vs. 12.5
Fon	17 vs. 13

4.4. Languages with a low ratio of <A,P> coding (under 15 out of 30)

This group includes only one language:

Koroboro Senni	13 vs. 17

The low ratio of <A, P> coding in Koroboro Senni can be related to the following particularity of this language. In addition to transitive verbs, characterized by the N_1(A) N_2(P) V X coding frame, and to bivalent verbs with a coding frame of the extended intransitive type (i.e., with one of the two arguments encoded like typical adjuncts: N_1 V N_2 Postp X), Koroboro Senni has a class of bivalent verbs (designated as 'VO verbs' by Heath (1999)), whose second argument is encoded in postverbal position (which distinguishes it from the P term in basic transitive coding), but is not flagged by an adposition (which distinguishes it from the oblique argument in a coding frame of the extended intransitive type) – Ex. (5), reproduced here as (7). This valency class typically includes verbs that are not prototypically transitive, but have nevertheless a relatively strong propensity to be treated as transitive cross-linguistically. In addition to **dii** 'see', this valency class includes verbs such as **hambur** 'be afread of', **naaney** 'trust', **haŋga** 'follow', **muraadu** 'need', **baa** 'want', **maa** 'hear'.

(7) Koroboro Senni (Songhay; Heath 1999: 121, 212)

(7a) **Woy-oo na ar-oo wii.**
woman-D TR man-D kill
'The woman killed the man.'

(7b) **Ay dii boro foo.**
1SG see person one
'I saw a person.'

4.5. Conclusion of Section 4

The overwhelming majority of the languages of the sample can be characterized as having a relatively high or extremely high level of transitivity prominence. The languages of Sub-Saharan Africa are however not uniform with respect to this parameter, and the variation observed within the limits of the sample is not radically different from that suggested by

Haspelmath (2015) for the languages of the world. One can however note a particularly high proportion of languages with a very high degree of transitivity prominence, and the total lack of languages with a level of transitivity prominence as low as that observed in some East Caucasian languages.

5. The transitivity prominence of the individual verb meanings included in the questionnaire

A brief look at the data (cf. Appendix) immediately shows that the variation in the transitivity prominence of the individual verb meanings cannot be summed up in the form of implications: if a given meaning is expressed transitively in a given language, it is not necessarily expressed transitively in the languages that have a higher level of transitivity prominence, and the meanings expressed transitively in a higher proportion of languages are not necessarily expressed transitively in the language in question. To take just one example, CLIMB is expressed transitively in Fon, which has a relatively low level of transitivity prominence, but not in Fooñi and Wolof, whose lever of transitivity prominence is very high.

In Table 5, the 30 verb meanings included in the questionnaire are ranked according to the percentage of the languages in the sample in which their usual expression involves <A, P> coding of the participants.

Table 5: the 30 verb meanings ranked according to the percentage of languages in the sample in which their usual expression involves <A, P> coding of the participants

100%	FIND, HIT, KNOW, WAIT FOR
97%	LOOK AT
94%	BITE, SEARCH FOR
91%	BETRAY, CALL, CROSS, HELP
88%	HEAR, LAUGH AT, SEE, WANT
85%	TOUCH
79%	FOLLOW
76%	HATE, LISTEN TO
73%	LIKE
70%	DESPISE
58%	SCOLD
55%	FORGET
50%	ATTACK, CLIMB
47%	NEED
44%	BE AFRAID OF
41%	PITY, TRUST
35%	ESCAPE FROM

For the ten verb meanings that are also included in the questionnaire of the Leipzig Valency Classes Project, it is interesting to compare this ranking with that established by Haspelmath. The verb meanings in question are BE AFRAID, FOLLOW, HELP, HIT, KNOW, LIKE, LOOK AT, SEARCH FOR, SEE, TOUCH. Table 6 compares their ranking in Haspelmath's evaluation and mine.

Table 6: the ranking of 10 verb meanings according to Haspelmath (2015), and in the language sample used for this study

Haspelmath (2015)	This study
1. HIT (100%)	1-2. HIT, KNOW (100%)
2. SEE (93%)	
3-4. SEARCH FOR, KNOW (88%)	3. LOOK AT (97%)
	4. SEARCH FOR (94%)
5. TOUCH (84%)	5. HELP (91%)
6-7. HELP, LIKE (78%)	6. SEE (88%)
	7. TOUCH (85%)
8. FOLLOW (74%)	8. FOLLOW (79%)
9. LOOK AT (73%)	9. LIKE (73%)
10. BE AFRAID OF (53%)	10. BE AFRAID OF (44%)

In this restricted list of 10 verb meanings, the most important discrepancy beetween Haspelmath's ranking and mine concerns LOOK AT, which ranks 3rd out of ten on my list, and 9th out of ten on Haspelmath's list. As noticed by Haspelmath, Tsunoda's (1985) transitivity scale predicts a relatively high level of transitivity prominence for LOOK AT. Interestingly, this prediction is not borne out by the language sample of the Leipzig Valency Classes Project, but it holds true for the sample of Sub-Saharan languages examined in this presentation.

6. Conclusion

In this presentation, I have presented and commented the first results of a study of the variation in transitivity prominence that can be observed across the languages of Sub-Saharan Africa. The restricted language sample does not allow ambitious conclusions about possible correlations with the genetic affiliation of languages, their typological profile or geographic location, but it at least shows that this is an issue that deserves to be further explored.

Abbreviations

A: agent, ABS: absolutive, CL: noun class, CPL: completive, D: definite, DAT: dative, ERG: ergative, INTR: intransitive, NP: noun phrase, P: patient, pers.comm.: personal communication, pers.doc.: personal documentation, PL: plural, POSTP: postposition, PRF: perfective, PRS: present, SG: singular, TR: transitive, V: verb

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Appendix: Summary of the data

		Tswana	Fooñi	Wolof	Lingala	Beja	Kanuri	Jamsay	Gbaya	Sar
1	ATTACK	+	+	+	+	+	+	–	–	+
2	BE AFRAID OF	+	+	+	+	+	–	–	–	+
3	BETRAY	+	+	+	+	+	+	+	+	+
4	BITE	+	+	+	+	+	+	+	+	+
5	CALL	+	+	+	+	+	+	+	+	+
6	CLIMB	+	–	–	±	+	–	–	+	±
7	CROSS	+	+	+	+	+	+	+	+	+
8	DESPISE	+	+	+	+	+	+	+	+	±
9	ESCAPE FROM	+	+	+	+	–	–	–	+	–
10	FIND	+	+	+	+	+	+	+	+	+
11	FOLLOW	+	+	+	+	+	+	+	+	–
12	FORGET	+	+	+	+	+	+	+	+	–
13	HATE	+	+	+	+	±	+	+	+	+
14	HEAR	+	+	+	+	+	+	+	+	+
15	HELP	+	+	+	+	+	+	+	+	+
16	HIT	+	+	+	+	+	+	+	+	+
17	KNOW	+	+	+	+	+	+	+	+	+
18	LAUGH AT	±	+	+	+	+	+	+	+	+
19	LIKE	+	+	+	+	+	+	+	+	+
20	LISTEN TO	+	+	+	+	+	+	+	+	+
21	LOOK AT	+	+	+	+	+	+	+	+	+
22	NEED	+	+	+	+	–	–	+	–	–
23	PITY	+	+	+	+	+	+	+	–	–
24	SCOLD	+	+	+	+	+	+	–	–	+
25	SEARCH FOR	+	+	+	+	+	+	+	+	+
26	SEE	+	+	+	+	+	+	+	+	+
27	TOUCH	+	+	+	+	+	+	+	+	+
28	TRUST	+	+	+	–	+	+	+	–	–
29	WAIT FOR	+	+	+	+	+	+	+	+	+
30	WANT	+	+	+	+	+	+	+	+	+
		29.5	29	29	28.5	27.5	26	25	24	23

		Yoruba	Baule	Hausa	Mandinka	Soninke	Gagnoa Bete	Fon	Koroboro Senni
1	ATTACK	+	–	–	±	–	–	–	–
2	BE AFRAID OF	–	+	±	–	–	–	–	–
3	BETRAY	+	–	±	+	+	+	+	+
4	BITE	+	+	+	+	+	+	–	+
5	CALL	–	+	+	+	+	+	+	±
6	CLIMB	+	–	+	±	–	+	+	–
7	CROSS	+	+	+	±	±	+	+	±
8	DESPISE	+	–	±	–	–	+	–	+
9	ESCAPE FROM	–	–	–	–	–	–	+	–
10	FIND	+	+	+	+	+	+	+	+
11	FOLLOW	+	–	±	+	+	+	+	–
12	FORGET	–	–	±	–	–	–	+	–
13	HATE	–	+	+	+	+	±	–	–
14	HEAR	+	+	+	+	+	–	+	–
15	HELP	+	+	±	+	+	+	–	+
16	HIT	+	+	+	+	+	+	+	+
17	KNOW	+	+	+	+	+	+	+	+
18	LAUGH AT	+	+	–	+	±	+	+	+
19	LIKE	–	+	±	+	+	–	–	–
20	LISTEN TO	–	+	+	+	+	–	–	–
21	LOOK AT	+	+	+	+	+	±	+	+
22	NEED	–	+	+	–	–	+	–	–
23	PITY	–	–	–	–	–	–	–	–
24	SCOLD	+	±	–	+	–	±	–	–
25	SEARCH FOR	+	+	+	+	+	–	+	+
26	SEE	+	+	+	+	+	–	+	–
27	TOUCH	+	+	+	+	–	±	–	+
28	TRUST	+	–	–	–	–	–	–	–
29	WAIT FOR	+	+	+	+	+	+	+	+
30	WANT	+	+	+	–	+	+	+	–
		21	20.5	20.5	20.5	18	17.5	17	13