

Perception and Cognition in Language and Culture

Edited By

Alexandra Y. Aikhenvald and Anne Storch



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CHAPTER EIGHT

PERCEPTION VERBS AND THEIR SEMANTICS IN DONGOLAWI (NILE NUBIAN)¹

Angelika Jakobi and El-Shafie El-Guzuuli

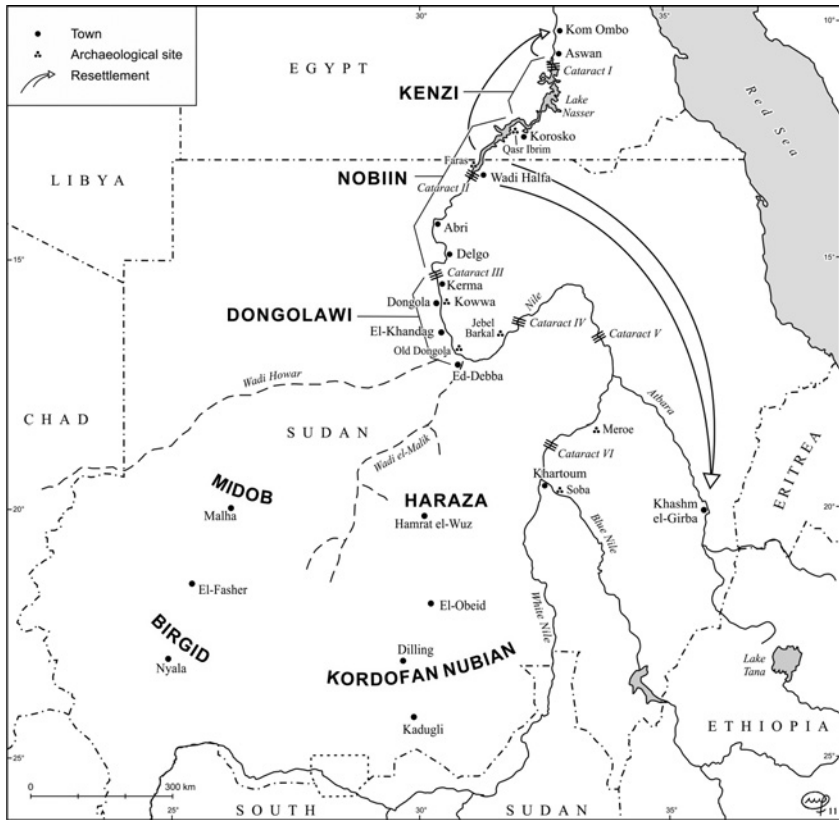
1 INTRODUCTION

The Dongolawi language is spoken in the Nile Valley of northern Sudan, roughly between the 3rd cataract south of Kerma town upstream to the big bend of the Nile near ed-Debba (as shown on Map 8.1). 'Dongolawi' is an Arabic term based on the name of the town of Old Dongola on the eastern side of the Nile, which was the centre of Makuria, the famous Christian kingdom that flourished between the 6th and 14th century. Today's Dongola was founded during the 19th century on the western side of the Nile. The Dongolawi speakers call their language *Andaandi* (*an-daa-n-di*) '[the language] of my/our home'.

Dongolawi speakers are also speakers of Sudanese Colloquial Arabic, the lingua franca of Sudan. Arabic/Dongolawi bilingualism can be characterized as replacive in the sense that Dongolawi is threatened by complete replacement by Arabic (Jakobi 2008). This is reflected by the dwindling number of Dongolawi speakers and the growing impact of Arabic on this language. This paper will show that Arabic loan words are attested even in the semantic field of perception verbs.

Dongolawi is closely related to Kenzi which is spoken in southern Egypt. In linguistic studies, therefore, both languages are often referred to by one term, Kenzi-Dongolawi, even though, *Ethnologue* now treats Kenzi and Dongolawi as two separate languages (i.e. [xnz] and [dgl], respectively). Along with Nobiin and Old Nubian these languages form the Eastern, i.e. Nile Nubian branch of the Nubian language family. Nubian is a member of the Northern sub-group of Eastern Sudanic and ultimately classified as a Nilo-Saharan language.

¹ We gratefully acknowledge Alexandra Aikhenvald and Anne Storch's commentary on the first draft of this paper. We are also very grateful to Gerrit Dimmendaal for reading a more recent draft. His suggestions have deepened our understanding of the topic.



Map 8.1. The location of Dongolawi and other Nubian languages

Kenzi-Dongolawi boasts a long record of linguistic studies including the works of Leo Reinisch (1879, 1911), Richard Lepsius (1880), Herman Almqvist (1911), Gertrud von Massenbach (1933), and Charles H. Armbruster. The latter published an impressively detailed Dongolawi grammar (1960) and lexicon (1965). There are a large number of annotated Kenzi texts published by Heinrich Schäfer (1917 and 1935), by Hermann Junker, and Heinrich Schäfer (1921). Moreover, Gertrud von Massenbach (1962) published a volume of Kenzi and Dongolawi texts along with a glossary. The first modern study of Kenzi is Ahmed Sokarno Abdel-Hafiz' reference grammar of Kunuz (i.e. Kenzi) published in 1988. Recently linguistic research on Dongolawi has been resumed by Marcus Jaeger and Kamal Hissein (2008) as well as by Marcus Jaeger and El-Shafie El-Guzuuli (2012). Moreover, Naasir Satti (2008), a mother tongue speaker of Dongolawi, has

- (2) aru man katre=gi boor-kir-edol-in Sh
 rain that wall=OBJ fall-CAUS-PROSP-3sg
 rain is about to cause that wall fall down

According to Satti (2008), there are two genitive constructions, i) type 1 with the possessor (marked by the clitic =*n*) preceding the possessed, ii) type 2 with the possessed preceding the possessor (marked by =*n*) plus the property marker (-*di*). The latter construction is illustrated in the language name *an-daa-n-di* above. Adjectives follow their head noun, whereas demonstratives precede it.

The morphological structure is generally agglutinative but inflectional morphemes on the verb are often fused. Verbal morphology is rich in derivational and inflectional morphemes. Verbs are obligatorily inflected for person and number of the subject. Person and number of the subject are often fused, i.e. syncretism occurs in this grammatical domain. Furthermore, the morphological contrasts between the 2nd and 3rd person singular as well as between the 1st and 2nd person plural are neutralized; they are marked by -*n* and -*u*, respectively.

There are several derivational suffixes that either raise or reduce transitivity, including a transitivizer (-*ir*), causative (-*kir*, -*kiddi*), benefactive (-*tir*, -*deen*), passive (-*katti*), stative/progressive (-*buu*), and inchoative morpheme (-*an*). Among the morphemes marking tense, aspect, and mood, there are two referring to events in the past. The choice between these suffixes, -*ko* (-*go*) and -*si* (glossed as PER and PST) depends on whether they occur in a main or subordinate clause.

A conspicuous feature of Dongolawi clauses are multiverb constructions composed of individual verbs which may also occur in monoverbal clauses. Compare *nog* in the multiverb constructions (3) and (4) to (12) where *nog* represents the only verb in the subordinate clause. In a multiverb construction, the final verb takes the inflectional morphemes whose values for person, number, tense, mood, negation have scope over the entire clause, as seen in (3) and (4). A series of individual verbs may be non-contiguous allowing other constituents to occur between the verbs, as illustrated by the locative noun phrase in (24) and by the object clause in (30). Furthermore, the individual verbs may have the same or different transitivity values. While in example (3) *nii-ed* 'drink' represents a transitive verb with *fay=gi* 'tea' as its syntactic object, the verbs *imbel* and *nog* are intransitive verbs.

Although the individual verbs in a multiverb construction share the inflectional values for person, number, tense, mood, and negation,

In contrast to a prototypically transitive event involving an initiating or instigating Agent and an affected Patient, both an attentive activity-oriented event and an uncontrolled spontaneous experience-oriented event lack prototypical transitivity. Rather, perceptual events are associated with the semantic roles of Experiencer (the perceiving entity) and Source/Phenomenon (the perceived entity). In some languages, the semantic roles of Experiencer and Phenomenon require special grammatical encodings. In English, for example, the Phenomenon is encoded by oblique case marking, as attested by the verbs *look at*, *listen to*, *take a sniff at*.

Languages differ according to the lexicalization patterns of perception verbs. In some languages active and spontaneous visual perception, for example, are realized by different verb roots, as illustrated by English *look* and *see*. In other languages, the same root is used as attested by *xuud* in Kambataa, a Cushitic language of Ethiopia (Treis 2010). Moreover, a perception verb root may cover more than one sense-modality. In Swahili, a Bantu language of East Africa, for example, *sikia* expresses both auditory activity 'listen to' as well as olfactory activity 'smell', 'take a sniff at'. In Setswana, a Bantu language of Botswana, there is one verb, *uthwa*, covering four sense-modalities, as it expresses experienced hearing, touching, tasting, and smelling. There are, however, hierarchical restrictions on the possible patterns of polysemy. According to the (simplified) sense-modality hierarchy (Viberg 2001: 1297), sight is at the top of this hierarchy. It is followed by hearing. The lowest ranking sense-modalities are smell, touch, and taste, and, therefore, they are often lexically expressed by the same perception verb. This hierarchy is correlated with markedness. It predicts that semantically unmarked verbs rank high and semantically marked verbs rank low in the hierarchy.

Apart from these cases of 'intrafield' polysemy within the domain of physical perception verbs there are also cases of 'transfield' polysemy. Visual and auditory perception verbs, which rank high in the sense-modality hierarchy, tend to acquire cognitive readings. English *see*, for instance, is semantically extended to 'understand', German *hören* 'hear' is also used to express *verstehen* 'understand'. Such semantic extensions of physical perception into the field of mental/cognitive perception appear to be influenced by cultural factors, as Evans and Wilkins (2000) assume.

This present paper will address the following questions. How are the five sense-modalities lexically expressed in Dongolawi? How are the role of Experiencer and Source/Phenomenon grammatically encoded in

Dongolawi? What are the lexicalization patterns of the perception verbs? Are there semantic extensions into other sense-modalities and into the semantic field of cognition?

3 PHYSICAL PERCEPTION VERBS

The following table accounts for the sense-modalities sight, hearing, smell, touch, and taste and for the basic verbs expressing activity-oriented, experience-oriented or phenomenon-oriented physical perception.

Table 8.1. Physical perception verbs

Sense-modality	Activity-oriented	Experience-oriented	Phenomenon-oriented
sight	<i>nal</i>	<i>nal</i>	<i>waandi</i>
hearing	<i>gijir</i>	<i>gijir</i>	<i>gijir-katti</i>
smell	<i>sunde</i>	<i>gijir</i>	<i>iris=ki ko, numme</i>
touch	<i>tabbe, jaabe</i>	<i>hissee (< Ar.)</i>	–
taste	<i>tance</i>	<i>tance</i>	–

We will discuss these physical perception verbs in turn starting with visual perception.

3.1 *Sight*

In Dongolawi, there is one basic verb, *nal*, expressing both controlled visual activity and uncontrolled visual experience. In both cases *nal* takes two arguments, i.e. it occurs in a formally transitive clause in which the Experiencer is encoded as unmarked subject and the Source/Phenomenon is marked by the clitic object marker =*gi*.

3.1.1 *Verbs Expressing Visual Activity*

Evidence of *nal* as expressing a controlled visual activity is provided by the fact that it may be used in imperative forms, as seen in (5). The verb *nal* has several shades of readings which range from attentive directed ‘looking’ and ‘watching’ to the semantic domains of cognitive perception and social behaviour. Controlled directed looking is attested in the following examples, where *nal* has the readings ‘look at’ as in (5) and (6), ‘look out for’ as in (7), ‘look for’ as in (5), and ‘watch’ as in (8) and (9).

- nal—'look at', 'look for' DL
 (5) tek=ki nal
 3sg=OBJ see.IMP.2sg
 look at/for him/her/it!
- nal—'look at' DL
 (6) ay bi nal-li
 1sg,SU FUT see-PRES.1sg
 I'll look at [it]
- nal—'look out for' DL
 (7) duul weer=ki nal
 large IDF=OBJ see.IMP.2sg
 look out for a large one!
- nal—'see', 'watch' Sh
 (8) booliis magas=ki dukkaan=do too-buu-n nal-ko-n
 police thief=OBJ shop=LOC enter-PROG-3sg see-PER-3sg
 the policeman saw/watched the thief enter the shop
- nal—'see', 'watch' DL
 (9) er ogij kiis=ir undur-si-n-gi nal-ko-naa
 2sg,SU man bag=LOC put_into-PST-3sg-OBJ see-PER-2sg.Q
 did you see (i.e. watch) the man put [it] into the bag?

The following examples (10) to (15) illustrate the readings of *nal* as 'greet', 'meet', 'visit', 'look after', 'guard', 'protect', which show that the semantics of *nal* extend into the domain of social interaction.

- nal—'greet' NS
 (10) ay=gi nal-os
 1sg=OBJ see-ASP1
 greet me! / say hello to me! / shake hands with me!
- nal—'see, meet' Sh
 (11) ay Esmaan=gi suug=ir nal-kori
 1sg,SU <name>=OBJ market=LOC see-PER1sg
 I have seen/met Osmaan in the market
- nal—'see, meet' Sh
 (12) er-on innowwi=gi shefi=ki nal-ki-n
 2sg,SU=EMPH? today=OBJ <name>=OBJ see-COND-2sg
 isikki intaad dungula=gaddi nog-buu-n-gi
 ask.IMP.2sg when Dongola=towards go_along-PROG-3sg-OBJ
 if you see/meet Shafie today ask him when he will go to Dongola
- nal—'see', 'meet', 'visit' Sh
 (13) in tannan ogij ay ju nal-s-i
 this s/he is man 1sg,SU go see-PST-1sg
 this is the man that I met/visited (lit. this is the man that I went to and saw)

- nal—'look after', 'guard' Sh
 (14) ay wide taa-ri bokkon in an
 1sg.SU return come-PRES.1sg until this my
 bitaan=gi nal
 child=OBJ see.IMP.2sg
 look after/guard my child until I come back

The following utterance is heard when someone had an accident but was not seriously injured. The basic AOV constituent order is reversed, most probably because of pragmatic reasons.

- nal—'protect' NS
 (15) ek=ki arti nal-ko-n
 2sg=OBJ God protect-PER-3sg
 God has protected you

The semantic extension of controlled visual activity into the domain of cognition is attested by the following examples (16) to (18), where *nal* has the readings 'examine', 'ascertain', 'think about'.

- nal—'examine' Sh
 (16) doktor koor=ki nal-ko-n
 doctor wound=OBJ see-PER-3sg
 the doctor examined the wound

- nal—'see, ascertain' DL
 (17) ten maktab=ki saa minkotteer=ro
 3sg.GEN office=OBJ hour how_many=LOC
 kus-in=gi nal
 open-3sg=OBJ see.IMP.2sg
 see (i.e. ascertain) at what time he opens his office

- nal—'think about' Sh
 (18) ay abaag=ked bi nal-li
 1sg.SU end=ABL FUT see-PRES.1sg
 I will think about it later

3.1.2 *Serial Verb Constructions With nal*

The verb *nal* often occurs in serial verb constructions, where it always occupies the final position ((V) + V + *nal*). The reversed position (*nal* + V + (V)) is not admitted. The verbs preceding *nal* may belong to the same or to a different semantic field. Thus *nal* is attested in combination with other physical perception verbs, as in (19) and (20), and with verbs of bodily (rather than mental) activity, including motion verbs, as attested in (21) to (25).

Perception verb + *nal*

- (19) *guupci nal* DL, Sh
 look_at see.IMP.2sg
 1) look at it carefully!/examine well!
 2) think about it!
- (20) *guupci nal ter=on juu-bu-ki-n* Sh
 look see.IMP.2sg s/he=EMPH go-PROG-COND-3sg
 check if s/he is coming⁵
- Bodily activity verb + *nal*
- (21) *shidar=ro darri nal* Sh
 tree=LOC climb see.IMP.2sg
 climb up the tree and look for [it]!
- (22) *mohatta=r nog ju nal* DL
 station=LOC go_along go see.IMP.2sg
 go along to the station and ascertain!
- (23) *tood tinn-essi=gi bokki nal-ko-n* Sh
 boy his-sister=OBJ hide see-PER-3sg
 the boy hid and looked at his sister/he looked at his sister secretly
- (24) *bood ju uru=r tebee nal* Sh
 run go river=LOC search see.IMP.2sg
 go quickly to the river and look for it [e.g. something lost there]!
- (25) *ur=ki undur nal* Sh
 head=OBJ put_in see.IMP.2sg
 think about it! (lit. put [your] head into it and see)

Table (8.2) provides some examples (in the unmarked 2nd person singular imperative form) of serial verb constructions in which *nal* always appears as the last verb. This list is by no means exhaustive. The first five examples show *nal* being preceded by other verbs expressing active perception. Depending on the context, in these constructions *nal* may adopt a cognitive meaning that may be rendered as ‘check’ or ‘find out’ or even ‘think about something’ when taking English as the metalanguage. The individual verbs preceding *nal* express events that may be considered as prerequisites for checking or finding out something. So these constructions often imply a sense of purpose. (Dongolawi has, however, yet other constructions for expressing purpose.)

⁵ In connection with the progressive marker *-bu* the motion verb *ju(u)* ‘go’ adopts the reading ‘come’.

Table 8.2. Examples of serial verb constructions with *nal*

guɯnci nal	look at to check/find out, think about it
gijir nal	listen to check/find out
sunde nal	smell to check/find out
tabbe nal	touch to check/find out
tance nal	taste to check/find out
tebee nal	search to check/find out
bokki nal	hide to check/find out
kutte teeb nal	get down, stand up and check/find out
teeg-os nal	sit down and check/find out
tubb-os nal	lie down and check/find out
nog ju nal	go along, go and ascertain

3.1.3 Other Activity-Oriented Perception Verbs

Apart from *nal*, there are other perception verbs expressing controlled visual activity. They appear to be semantically more specific than *nal*. They include *guɯnci* ‘look at, watch’,⁶ *jiindi* ‘stare at’, ‘stare at somebody in an intimidating or warning manner’ and *naaje* ‘peep’, ‘watch secretly’, as shown in example (26) to (30). These verbs are attested in serial verb constructions, too, as attested in (27), (29), and (30). Interestingly, the sequence of the visual perception verbs *jiindi* and *guɯnci* in (29) and *naaje* and *nal* in (30) may not be reversed. This finding is explainable in terms of the perception verb hierarchy which predicts that semantically less marked verbs rank higher and the more marked verbs rank lower in the hierarchy. The less marked visual perception verbs *guɯnci* in (29) and *nal* in (30) are always found in clause-final position.

guɯnci—‘watch’ Sh
 (26) tood tilifiziyoon=gi guɯnc-ed-aag-in
 boy TV=OBJ watch-ASP2-PROG-3sg
 the boy is watching TV

guɯnci—‘watch’ Sh
 (27) tokkon katre=n jer=ked bokki teeb
 NEG.IMP.2pl wall=GEN back=ABL hide stand
 guɯnci-men-we
 watch-NEG-IMP.2pl
 don’t stand hiding behind the wall and watch [him/her/it]

⁶ The verb *guɯnci* also has the reading ‘await, expect someone’.

- jiindi—‘stare at’ Sh
 (28) ay tek=ki jiindi-ri gaal
 1sg.SU 3sg=OBJ stare-PRES.1sg when
 sandi-go-n
 get_afraid-PER-3sg
 when I stared at him [intimidatingly] he got afraid
- jiindi guuŋci—‘stare at’ Sh
 (29) ay tek=ki jiindi guuŋci-gori
 1sg.SU 3sg=OBJ stare_at look-PER.1sg
 I looked at him/her staring intimidatingly
- naaje—‘peep’, ‘watch secretly’ Sh
 (30) ju man adem kaa=r toor-el=gi
 go that person house=LOC enter-PART.PER=OBJ
 naaje nal
 peep see.IMP.2sg
 go to the house and watch [secretly] that person who has entered

3.1.4 Experience-Oriented Visual Perception

Spontaneous/uncontrolled visual perception is expressed by *nal*, as attested by the following examples (31) and (32). Example (31) illustrates *nal* in a transitive clause, example (32) in an intransitive clause with an unmarked single argument.

- (31) er kannee=r-toon taa-n taad Sh
 2sg.SU north=LOC-from come-2sg when
 jaama wee=gi bi nal-in
 mosque IDF=OBJ FUT see-2sg
 when you come from the north, you will see a mosque [as a landmark]
- (32) adem dungur nal-mun Sh
 person blind see-NEG.3sg
 a blind person does not see / a blind person can't see

3.1.5 Source-Based Visual Perception

The verb *waandi* ‘appear, become visible, come in sight’ expresses source-based inchoative visual events, cf. (33) and (34), grammatically encoded in intransitive clauses with unmarked single arguments.

- waandi—‘come in sight’ DL
 (33) mufettif waand-os-ko-n
 inspector become_visible-ASP1-PER-3sg
 the inspector has come in sight

waandi—‘become visible’ MJ
 (34) essi shugur-ki-n kulu waandi-n
 water recede-COND-3sg stone become_visible-3sg
 if the water recedes the stone becomes visible

The moral of this proverb would be: Your weaknesses will soon become visible.

3.2 *Hearing and Smelling*

There is one verb, *gijir* ‘perceive with ear’ and ‘perceive with nose’, which semantically covers auditory activity, as in (35) and (36), auditory experience, as in (41), (42), (43), as well as olfactory experience, as in (44) and (45).

3.2.1 *Auditory Activity*

The imperative form in (35) attests that *gijir* is an activity-oriented verb. Similar to *nal*, *gijir* occurs in transitive clauses where the Experiencer is encoded as unmarked subject and the Phenomenon as marked object.

gijir—‘listen to’, ‘take advice’ DL
 (35) andi=gi *gijir*
 mine=OBJ hear/smell.IMP.2sg
 1) listen to me!, 2) listen to my advice/opinion! / take my advice!

gijir—‘listen’ Sh
 (36) tinn-aaw igid-i=gi iig-ki-n
 his-grandmother story-pl=OBJ narrate-COND-3sg
 tood *gijir*-in
 boy hear/smell-3sg
 when his grandmother narrates the stories, the boy listens

Gijir may also have the reading ‘take advice’, ‘obey’, as attested in (35) above and (37) below. That is, it extends into the semantic field of social behaviour.

gijir—‘listen’, ‘obey’ Sh
 (37) ek=ki wee-ran=gi *gijir*
 2sg=OBJ tell-PRES.3pl=OBJ hear/smell.IMP.2sg
 1) listen to what they tell you!, 2) obey to what they tell you!

As for the question whether *gijir* also has the reading ‘understand’ as in (38) below, we would like to point out that ‘understand’ here expresses

hearing, i.e. physical auditory perception rather than cognitive perception. Therefore we agree with Armbruster (1965: 79) who explicitly notes that *gijir* does not render ‘understand’ as a cognitive process, “(giğir does not=understand)”. Rather, cognitive understanding in the sense of ‘grasp’ is lexically expressed by *aar*, which is another polysemous verb with the basic meaning ‘seize’, as illustrated in (39). Dongolawi *aar* therefore presents another example of the close semantic association between prehension verbs like ‘take’ and ‘grasp’ and cognition which exists in many languages, e.g. German *be-greifen* ‘be-grasp’ (Vanhove 2008).

gijir—‘listen’, ‘hear’, ‘understand’ Sh
 (38) ay ek=ki wee-ri=gi er
 1sg.SU 2sg=OBJ tell-PRES.1sg=OBJ 2sg.SU
gijir-naa
 hear/smell-2sg.Q
 1) do you hear what I am telling you?, 2) do you understand what I am telling you?

aar—‘seize’, ‘understand’, ‘grasp’ Sh
 (39) ay ek=ki wee-ri=gi er
 1sg.SU 2sg=OBJ tell-PRES.1sg=OBJ 2sg.SU
aar-naa
 seize-2sg.Q
 do you grasp what I am telling you?

There is another semantically more restricted verb expressing auditory activity, *ulukkij* ‘eavesdrop’. This verb is morphologically composed of three parts, *uluk-k-ij*. The first part is *uluk* ‘ear’, the second part is difficult to identify. The final *-ij* is a derivational morpheme which marks verbs expressing intensive/repetitive (Armbruster 1960: § 2883) or distributive (Sokarno 1988: 117) events.

ulukkij—‘eavesdrop’ Sh
 (40) ay ulukkij-ed teeb-kori tin bajpid=ki
 1sg.SU eavesdrop-ASP2 stand-PER.1sg their talk=OBJ
addee-s-an bokkon
 finish-PST-3pl till
 I stayed eavesdropping till they finished their talk

3.2.2 Auditory and Olfactory Experience

When *gijir* expresses uncontrolled auditory and olfactory experience it takes two arguments, the Experiencer and Source/Phenomenon roles

being encoded as grammatical subject and object, respectively, as illustrated in (41) to (45).

- gijir—'hear' M/Sh
 (41) een his=ki gijir-os=gi war wide
 woman noise=OBJ hear/smell-ASP1=OBJ jump turn
 guujci-go-n
 look-PER-3sg
 upon hearing the noise the woman jerked round and looked back
- gijir—'hear' Sh
 (42) tood arabiyye=n harak=ki gijir-ko-n
 boy car=GEN sound_of_motion=OBJ hear/smell-PER-3sg
 the boy heard the sound of motion of a car
- gijir—'hear' DL
 (43) wel=n uukkid=ki gijir-kori
 dog=GEN barking=OBJ hear/smell-PER.1sg
 I heard the barking of the/a dog
- gijir—'perceive a smell' Sh
 (44) er in siyatti=gi gijir-naa
 2sg.SU this bad_smell=OBJ hear/smell-2sg.Q
 do you perceive this bad smell?
- gijir—'notice a smell' DL
 (45) jugiid=n iris=ki gijir-ri
 burning=GEN smell=OBJ hear/smell-PRES.1sg
 I notice a smell of burning

3.2.3 Source-Based Auditory Perception

Phenomenon-based or source-based hearing may be expressed by the passive form derived from the root *gijir*, as in (46.a) where the semantic Patient (*ten his*) is encoded as grammatical subject of an intransitive clause. However, there are other non-perception verbs that may be used to render the perception of a sound or noise coming from a source, as in (46.b) and (46.c).

- gijir-katti—'be heard' Sh
 (46.a) Ahmed oddi-n ten his
 <name> sick-3sg his voice
 gijir-katti-mun
 hear/smell-pass-NEG.3sg
 Ahmed is sick. His voice cannot be heard.

- (46.b) Ahmed oddi-n ten his bel-mun
 <name> sick-3sg his voice come_out-NEG.3sg
 Ahmed is sick. His voice cannot be heard. (lit. Ahmed is sick. His voice does not come out.)
- (46.c) Ahmed oddi-n ten his dii-buu-n
 <name> sick-PRES.3sg his voice die-STAT-3sg
 Ahmed is sick. His voice cannot be heard. (lit. Ahmed is sick. His voice is dead.)

3.2.4 *Olfactory Activity*

The smelling activity ‘smell’, ‘take a sniff at’ is not expressed by *gijir* but by a different verb, *sunde* (variant: *sunne*), as illustrated in (47) and (48). A special lexical root, *sumsum* ‘sniff’, is used for olfactory activity of animals, as shown in (49) and (50). Except for (49), in all examples the Experiencer is encoded as subject and the Source/Phenomenon as object.

- sunde—‘smell, take a sniff at’ DL
 (47) in=gi sunde
 this=OBJ smell.IMP.2sg
 smell this!
- sunde—‘smell, take a sniff at’ Sh
 (48) een iris=ki sunde-nal-ko-n
 woman perfume=OBJ smell-see-PER-3sg
 the woman smelled the perfume (to find out whether she liked it or not)
- sumsum—‘sniff (at)’ Sh
 (49) wel sumsum-in gon daa-n
 dog sniff-PRES.3sg while go-PRES.3sg
 the dog is going around sniffing here and there (lit. the dog is sniffing while going)
- sumsum—‘sniff (at)’ Sh
 (50) wel kiid=ki sumsum-ko-n
 dog bone=OBJ sniff-PER-3sg
 the dog sniffed at the bone

3.2.5 *Phenomenon-Oriented Olfactory Perception*

Phenomenon-oriented olfactory perception may be rendered either by the periphrastic expression *iris=ki ko*, literally ‘have a smell’, ‘emit a smell’, as in (51) and (52), or by the evaluative verb, *numme* ‘have a good smell’, as in (53) and (54). Apparently, there is no corresponding verb with the reading ‘have a bad smell’. Note that *iris* has a general reading ‘smell’ without specifying whether the smell is good or bad, as attested in (51) but in a more restricted sense *iris* means ‘perfume’, as in (53). According to Dimmendaal

and Schneider-Blum (this volume) such additional meanings are often expressed in languages in the area by adding ideophones to such verbs.

- iris=ki ko—'have a smell' DL
 (51) iris=ki koo-n
 smell=OBJ have-3sg
 he/she smells (lit. he/she has a smell [whether good or bad])
- iris=ki ko—'have a smell' DL
 (52) in kusu iris weer=ki koo-n
 this meat smell IDF=OBJ have-3sg
 this meat smells / this meat has a smell
- numme—'have a good smell' Sh
 (53) in iris=ki sokke misse numme
 this perfume=OBJ take spray have_a_good_smell.IMP.2sg
 take this perfume, spray it [on your body] to have a good smell!
- numme—'have a good smell' Sh
 (54) erkanekool=gi numme-gir-we
 bridegroom=OBJ have_a_good_smell-CAUS-IMP.2pl
 make the bridegroom smell good!

3.3 *Touch*

For controlled tactile activity there are three verbs, *tabbe*,⁷ *jaabe*, and *tabtab*. The last one is semantically restricted as it expresses palpating in a medical examination or feeling around for something that one cannot see, as illustrated in (59) and (60).

- tabbe—'touch' Sh
 (55) een wel=gi tabbe-go-n
 woman dog=OBJ touch-PER-3sg
 the woman touched the dog
- tabbe—'touch' Sh
 (56) een kal=gi tabbe nal-ko-n
 woman food=OBJ touch see-PER-3sg
 the woman touched the food (to find out whether it is hot)
- jaabe—'touch' Sh
 (57) tokkon in=gi jaabe-men
 NEG.IMP this=OBJ touch-NEG.IMP.2sg
 don't touch this!

⁷ Apart from 'touch', *tabbe* has the meaning 'dip in', 'make wet', 'moisten'.

jaabe—'touch' Sh
 (58) er-on eski-gi-n imbel ogoode ju man
 2sg.SU-EMPH can-COND-.3sg get_up stand go that
 gur=ki jaabe
 bull=OBJ touch.IMP.2sg
 if you can/dare, get up, go and touch that bull!

tabtab—'feel around for' Sh
 (59) ay doolaab=n jer=ked tabtab
 1sg.SU cupboard=GEN back=ABL feel_around_for
 nal-kori el-ko-mun
 see-PER.1sg find-PER-NEG.1sg
 I searched for it behind the cupboard, but I did not find it

tabtab—'feel around for' Sh
 (60) doktor bitaan=n ii=gi tabtab nal-os
 doctor child=GEN arm=OBJ feel_around_for see-ASPI
 asal=gi taa-we e-go-n
 tomorrow=OBJ come-IMP.2pl say-PER-3sg
 the doctor examined the child's arm and said come again tomorrow

Uncontrolled tactile experience is expressed by *hissee* 'feel', a loan word from Arabic, cf. (61) to (63). Note that *hissee* lexically covers two notions, feeling by direct contact, as in (61), and perceiving without direct contact. The latter is illustrated in (62) where the hen perceives/feels the imminent danger before the falcon has even touched and seized the hen. In (63), too, the heat of the iron is perceived/felt without even touching it.

hissee—'feel (direct contact)' Sh
 (61) een kulu kinna-tod weer=ki tenn ossi=n
 woman stone small-DIM IDF=OBJ her foot=GEN
 togoo=r hissee-go-n
 bottom=LOC feel-PER-3sg
 the woman felt a small stone under her foot

hissee—'feel (without direct contact)', 'perceive' M/Sh
 (62) dummade sirrij=ki hissee-ki-n tirti-nci
 hen falcon=OBJ feel-COND-3sg master-pl
 gijir-os-gi bood ju sirrij=ki tuur-ran
 hear-ASPI-OBJ run go falcon=OBJ chase_away-PRES.3pl
 when the hen feels/perceives the falcon and when the owners hear it [the hen] they go quickly to chase the falcon away

hissee = 'feel (without direct contact)', 'perceive' Sh
 (63) ay in jaarti jugrii e-n-gi hissee-ri
 1sg.SU this iron hot be-3sg-OBJ feel-PRES.1sg
 I feel/perceive that this iron is hot (even before touching it)

Apparently Dongolawi does not have a specific verb expressing a tactile phenomenon, such as ‘the cloth feels smooth’, ‘the body feels hot’ (German *sich anfühlen*).

3.4 Taste

The verb *tance* expresses both gustatory activity and experience. As an activity verb, *tance* can be used in the imperative form as attested in (64). Gustatory activity is also illustrated in (65). Moreover, *tance* expressing gustatory experience is attested in (66) and (67). There is no specific verb expressing a phenomenon-based gustatory event, however.

tance—‘taste’ MJ
 (64) in fuul in jen-di-n tance-we
 this bean this year-PROPERTY=GEN taste-IMP.pl
 these beans are of this year. Taste them. Lit. This bean is . . .

tance—‘taste’ Sh
 (65) een kusu nib-buu-l=gi tance-nal-ko-n
 woman meat roast-STAT-PART.PER=OBJ taste-see-PER-3sg
 the woman tasted the roasted meat (e.g. to find out whether it was soft or hard).

tance—‘taste’ DL
 (66) er marak=ki tance-go-naa
 2sg.SU broth=OBJ taste-PER-2sg.Q
 did you taste the broth?

tance—‘taste’ MJ
 (67) surre-el kus-in juude-el
 tie.a.garment-PART.PER open-3sg dissolve-PART.PER
 tance-n
 taste-3sg
 who has tied a garment will open it, who has dissolved [something in a liquid] will taste it

The moral of this proverb would be that you are responsible for your actions.

4 FINDINGS

This paper shows that the physical perception verbs discussed in this paper do not form a special subclass of verbs in the Dongolawi language. Their grammatical behaviour does not differ from agentive verbs. That is,

although activity- and experience-oriented perception verbs are not associated with proto-typical transitivity, the Experiencer role is encoded as unmarked nominative and the Phenomenon/Source role as marked accusative. This suggests that the subject position in Dongolawi may be associated with a variety of semantic roles, and that non-agentive roles are not necessarily expressed in non-subject position, contrary to languages like Beria (Saharan, Nilo-Saharan), where active alignment occurs. As shown by Jakobi (2007, 2010), Beria treats non-agentive subjects of verbs such as 'sleep', 'fall', 'grow' as syntactic objects, whereas agentive subjects of verbs such as, 'marry', 'run', 'climb' are treated as syntactic subjects.

Serial verb constructions are very frequent in Dongolawi. They may be composed of verbs belonging to different semantic fields, including perception verbs and bodily activity verbs. When the visual perception verb *nal* occurs in a serial verb construction it always takes the final position. In this context, the verbs preceding *nal* express events that appear to be necessary conditions for getting new insights. Thus, in this context, *nal* expresses cognitive activities such as checking, finding out, ascertaining, and thinking about. In other words, in Dongolawi gaining insight and knowledge is mainly dependent on sight, rather than on hearing as in the Australian languages studied by Evans and Wilkins (2000).

The 'intrafield' lexicalization patterns of the basic perception verbs are summarized in Table (8.2). There are three verbs, *nal*, *gijir*, and *tance*, each of which covers both active and experienced perception. Moreover, both experienced hearing and smelling are jointly lexicalized in one verb, *gijir*. According to Viberg (2001), this polysemous lexicalization pattern is also attested in several other languages in the world, like Russian, Persian and Yoruba.

Except for *gijir-katti-* which is the derived passive form of *gijir*, the other phenomenon-based verbs are not etymologically related to the activity- or experience-oriented perception verbs. The gaps in Table (8.3) are presumably due to the fact that there are no distinct verbs lexicalizing phenomenon-based touching and tasting events.

As for 'transfield' lexicalization, only the activity-oriented physical perception verbs *nal* and *gijir*, which rank high in the sense-modality hierarchy, semantically extend into the field of non-physical perception. The visual perception verb *nal* extends into two semantic fields, i) into the field of inquisitive cognition including events such as examining, checking, finding out, thinking about, and ii) into the field of social interaction as realized by greeting, meeting, visiting, guarding, protecting. The auditory

Table 8.3. Intrafield lexicalization patterns of basic perception verbs

Sense-modality	Activity-oriented	Experience-oriented	Phenomenon-oriented
sight	<i>nal</i>	<i>nal</i>	<i>waandi</i>
hearing	<i>gijir</i>	<i>gijir</i>	<i>gijir-katti-</i> (passive)
smell	<i>sunde</i>	<i>gijir</i>	<i>iris=ki ko, numme</i>
touch	<i>tabbe, jaabe</i>	<i>hissee</i> (< Ar.)	–
taste	<i>tance</i>	<i>tance</i>	–

Table 8.4. Verbs expressing cognitive and mental perception (all data from Armbruster)

<i>aaminee</i> (< Ar.)	believe in, trust
<i>aar</i>	understand, comprehend (< seize, grasp, catch)
<i>baal ko</i> (< Ar.)	pay attention, attend, take care, mind, heed, notice
<i>hemmee</i> (< Ar.)	be anxious, worried, concerned, troubled
<i>iiw</i>	forget
<i>jerribee</i> (< Ar.)	try
<i>jille</i>	remember, think, think about
<i>kuur</i>	learn
<i>saddigee</i> (< Ar.)	believe
<i>ujur</i>	know, know how to, understand, recognize

verb *gijir* extends into the domain of social behaviour, too, as attested by the readings ‘accept advice’ or ‘take advice’ and ‘obey’.

Neither *nal* nor *gijir* lexicalize cognitive events such as understanding, grasping, comprehending, knowing, remembering, thinking or learning. These events are rather rendered by distinct verbs that are obviously not etymologically related to *nal* and *gijir*, as attested in Table (8.4) (the list is probably not exhaustive). Note that several of these lexical items are borrowed from Arabic, thus showing the deep structural and conceptual influence of the latter on the Dongolawi language.

Finally, we notice that Dongolawi (a Nilo-Saharan language) shares a number of lexicalization patterns with Kambataa, a Cushitic language spoken in Ethiopia. According to Yvonne Treis (2010: 3279), “[t]here is no lexical differentiation of activities and experiences in the domain of vision and hearing [...]” If one compares Table (8.5) (which does not account for phenomenon-oriented perception verbs) with Table (8.3) above one realizes that ‘see’ and ‘hear’ share the same lexicalization patterns. It remains to be determined to what extent these patterns are more widespread in the area.

Table 8.5. Perception verbs in Kambaata (adapted to layout of Table 8.3)

Sense-modality	Activity	Experience
sight	SEE	SEE
hearing	HEAR	HEAR
smell	SMELL	SMELL
touch	SEE	HEAR-Pass
taste	SEE	HEAR-Pass

The comparison of Dongolawi perception verbs with those of the Ethiopian linguistic area (Treis 2010) reveals further shared lexicalization patterns. Similar to the serial verb constructions in which Dongolawi *nal* is combined with other perception verbs, in Kambaata (Cushitic) and Baskeet (Omotic), ‘see’ is attested in combination with verbs expressing active touching, tasting, feeling. However, in these languages the verbs preceding ‘see’ are marked as non-finite converbs and therefore differ from the unmarked serial verbs attested in Dongolawi.

Similar to Dongolawi *nal* which in serial verb constructions expresses cognitive activities such as ‘check’, ‘find out’, ‘ascertain’, Kambaata *xuud* ‘see’ heading converb constructions semantically extends to ‘check’, ‘examine’ and ‘consider’. Treis (2010) therefore draws the conclusion that *xuud* “is often used to express that knowledge is acquired actively or that evidence is requested or looked for by a controlling agent”. The semantic extension of ‘see’ to ‘check’ is also attested in Amharic and Sidama.

Furthermore, comparable to *numme* in Dongolawi, languages of the Ethiopian linguistic area are known to have a distinct evaluative olfactory verb expressing ‘have a good smell’. However, the opposite evaluative verb expressing ‘have a bad smell’ is not attested in these languages (Treis 2010). This is also true for Dongolawi.

Although we do not know how widely these lexicalization patterns are geographically distributed, we would like to point out that they provide additional support for Dimmendaal’s hypothesis of a former typological convergence zone stretching from Eritrea in the east to Tchad in the west. According to Dimmendaal (2007), in this zone, Nilo-Saharan languages (including Nubian) were in contact with genetically unrelated Afro-Asiatic languages of Ethiopia. Up to now this hypothesis has mainly been based on morphological and syntactic features. Shared lexicalization patterns may turn out to provide additional evidence for language contact in that area.

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