The grammar of space of Gawwada

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1. The language and the people[1]

Gawwada (/kawwaɗa/; Ethnologue code: GWD)[2] is a language of South-West Ethiopia and a member of the so-called Dullay dialect cluster of East Cushitic.

"Gawwada" is used here for the dialect spoken in the town of Gawwada (approximately at 5°25' N, 37°14' E) and in the neighbouring villages. The town lies approximately 40 km.s westwards of Konso town, a dozen kilometers North of the main road leading from Konso to Jinka and the Omo valley.

The Dullay-speakers have no overall ethnonym. The label "Dullay" was originally proposed by AMBORN, MINKER and SASSE (1980) and is the name of the river known in Amharic as Weyt'o; this is perhaps the most salient geographic feature of the area (actually, the river divides the westernmost group, the Ts'amakko, from all the other Dullay-speaking peoples).

In Ethiopia, "Gawwada" is officially used nowadays as a cover term for all the Dullay-speaking groups except the Ts'amakko, who live on the western bank of the Weyt'o river. The practice of labelling all the Dullay-speakers except the Ts'amakko as "Gawwada" is reflected, e.g., in the 1994 Ethiopian Census, according to which there were 32,636 "Gawwada". The census further counted 8,621 speakers of Ts'amakko, bringing the total number of the Dullay-speakers at that time to approximately 42,000.

The Dullay varieties are not endangered. Bi- and multilingualism involves Konso and other Konsoid varieties, as well as, most of all, Amharic, the former official language of Ethiopia and still nowadays the working language of the federal and regional governments.

2. The Gawwada frame of reference

Gawwada (and the other Dullay varieties, with the exception of Ts'amakko) is spoken in a mountainous area about 1,600-1,700 meters upon the sea level. In Gawwada country, houses, or better compounds, are located upon the slopes of rugged hills, and are surrounded by fields; most daily activities involve climbing up and down the hills. This landscape has momentous consequences on the semantics of the language insofar as the linguistic expression of position and movement is concerned, because it provides the basic framework according to which the position of elements is described.

In order to analyze the spatial language it is convenient to use the model developed by Levinson and associates at the Max Planck Institute for Psycholinguistics in Nijmegen. In LEVINSON's (2003) framework there are just three possible frames of reference (or various combinations thereof) in the expression of location and movement on the horizontal plane:[3]

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[2] The transcription is phonological and follows I.P.A. conventions, except for <š> = IPA /ʃ/, <c> = IPA /ʧ/, and <y> = IPA /j/. <´> marks phonological stress, and </> and <//> the boundaries of minor and major intonation units, respectively.

[3] On the vertical plane, all languages use an absolute frame of reference, because in general the vertical dimension is unproblematic and determined by universal factors such as the gravitational field (cf. LEVINSON

- *relative,* or viewer-centred (based on the viewer's perspective); e.g., 'he is to the left of the house'; it is the framework of reference most widely used in the world's languages, and for a long time it was considered the only possible one;

- *intrinsic,* or object-centred (based on the object's intrinsic axes); e.g., 'he is in front of the house'. The "inherent" and "intrinsic" features of the object are often functionally-determined; e.g., to take LEVINSON's (2003:41) example, "the front of a TV" is the side one watches, while the front of a car is determined by the direction of motion). As studies in grammaticalization have abundantly shown, it is often the case that human or animal anatomy provide the prototype. No language actually uses an intrinsic frame of reference alone (although many languages use it predominantly); still, an intrinsic frame of reference is often use in combination with a relative one, as in many European languages.

- *absolute,* or environment-centred, in which objects are represented with reference to fixed bearings; these can be either absolute points (such as the cardinal points ; e.g., 'he is north of the house'; LEVINSON 2003:40), or some locally salient feature of the environment, such as a range of mountains, the direction of dominant winds, river drainages, etc. No reference is made in this frame of reference to the viewer.

Gawwada operates on an absolute frame of reference based upon a vertical opposition between uphill and downhill, with a third element bisecting the plane at the horizontal level. 'Uphill' corresponds to a general Northeast direction, and 'downhill', correspondingly, is centered around the Southwest.

The scheme below is taken, with modifications, from BROWN's (2006) study of the grammar of space of Tzeltal, a Mayan language of Chiapas which shows remarkable similarities with Gawwada in this respect:
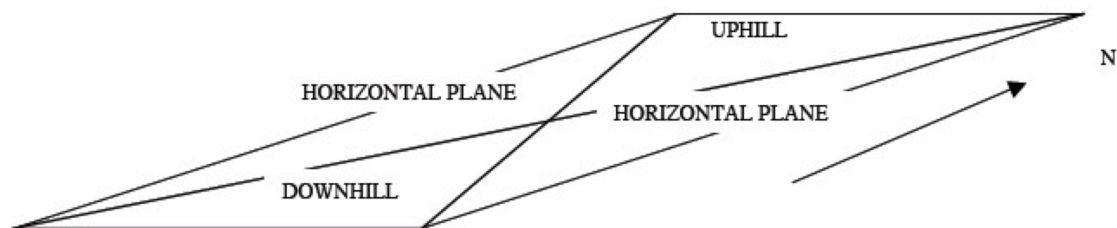
The Gawwada natural frame of reference for space

(from Brown 2006: 265, with modifications)

This means, *inter alia,* that neither 'front, back', nor 'right, left' play any role as deictic elements. Body parts, such as *konn-att-o* 'back' (i.e., the back of a human being or an animal). The only exception seems to be *miin-e* 'front side' (and, more rarely, its frozen Singulative form *miin-t-e* 'forehead'). *min-t-e* is actually used in an intrinsic frame of reference to refer to the front side of an object. This can be an object whose front is determined functionally (such as a house, which, although circular, is construed as having its front side in the area where the entrance is found); but also any other object whose front will be the one facing the speaker:

1. *ʔikah-k-o*   *kaar-k-ito*   *miin-atte*
    stone-SING-M   tree-SING-M   front-ASSOC.F
    'the stone is in front of the tree'

Likewise, *misk-itt-e* 'right' and *pih-att-e* 'left' are used exclusively to indicate the right/left arm/hand (and, as noun modifiers, the right/left of other binary body parts). In other words, a possible grammatical sentence like 2. is utterly incomprehensible in Gawwada, and its place will be taken by a sentence such as 8. or 9. below:

2. **ʔano*   *hola*   *misk-itt-atte*
    IDP.1SG   OBL.2SG.M   right-SING-ASSOC.F
    'I am on your right'

In order to express position, Gawwada uses instead what I will call *Cardinals* – i.e., terms referring to absolute points in space, irrespective of the location of the speaker or subject.[4]

The Cardinals of Gawwada are:

- *kut-e*[5] 'uphill' (schematically: ↑)
- *kor-e* 'straight' (i.e., moving on the horizontal plane along an axis orthogonal to the uphill and downhill directions; schematically: ↪)
- *kal-e* 'downhill' (schematically: ↓)

These terms refer to points in the physical world and are further used to describe the location of things, either with respect to each other or the participants. It is important to stress that they are used *locally*, i.e., to refer to the location of entities irrespective of their physical position on the vertical plane. They are therefore fundamentally different from such well-known couples as English 'uphill/downhill,' 'windward/leeward', etc. and their correspondents in many languages.

The Cardinals are morphologically nouns: as any noun they have a gender (Feminine) and appear, in certain syntactic configurations, in an Associative case-form.[6] But unlike common nouns, they never act as heads of noun phrases, nor have they number derivation (either Singulative ot Plurative[7] forms). They are probably better classified as a subclass of nouns – the relational nouns – together with other elements which code further spatial relations ('above', 'within', etc.) and which limitations of space do not allow us to fully treat here.

A further complication – and a further reason to classify them within a special subclass of nouns – is given by the fact that the Cardinals are almost never used in their basic form; they are rather generally supplemented by either one of the two deictic markers of the language: *-á* (glossed OUT, expressing a centrifugal direction away from the speaker or subject) and *-ú* (glossed IN, and expressing a centripetal direction towards the speaker or subject). As anticipated, these forms are further followed in specific syntactic configurations by the Associative case-marker (the postvocalic allomorph *-y* being used in this case).

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[4] In LEVINSON's (2003) framework, Gawwada makes use of an absolute landmark system, and 'cardinal' is reserved for systems using the cardinal points (as certain Aboriginal Australian languages do). The use of the term 'Cardinal' points here to the value of these elements as representing abstract points (and directions), rather than partitions of the space, as discussed in section 4. Below.

[5] Voice opposition is not phonological for plain stops, and voiceless */p, t, k/* are used throughout in the transcription. This is an areal feature encompassing Dullay, Konsoid, and possibly other varieties, as shown by SASSE (1986).

[6] Broadly speaking, the Associative case covers both the locative and genitive functions.

[7] In our analysis of Gawwada, Plural is rather a gender (in opposition to Masculine and Feminine), and Plurative

The full range of the Cardinals' morphological variation is given in the next table:

-F[8]	-OUT	-OUT-ASSOC	-IN	-IN-ASSOC	
kut-e	kut-á	kut-á-y	kut-ú	kut-ú-y	↑
kor-e	kor-á	kor-á-y	kor-ú	kor-ú-y	↔
kal-e	kal-á	kal-á-y	kal-ú	kal-ú-y	↓

The stem may be further extended through the reduplication of the last stem consonant; this yields an Intensive stem. A case could in principle be made for the Intensive as a Pluralized form: reduplication of the last stem consonant is a standard pluralizing device in the language (with further connexions in the verbal domain, where it is used in order to yield a Semelfactive derivation; for an analysis of the intricacies of the category of number in Gawwada, in both nouns and verbs, cf. TOSCO 2010).

The Intensive stem is apparently never used as a noun (i.e., followed by the Feminine gender marker -e), but only with the IN or the OUT deictic, to which, again, the Associative case-form is added in specific configurations:

~INT[9]	~INT-OUT	~INT-OUT-ASSOC	~INT-IN	~INT-IN-ASSOC	
kut~t-	kut~t-á	kut~t-á-y	kut~t-ú	kut~t-ú-y	↑
kor~r-	kor~r-á	kor~r-á-y	kor~r-ú	kor~r-ú-y	↔
kal-~l-	kal~l-á	kal~l-á-y	kal~l-ú	kal~l-ú-y	↓

The derivational system of the Cardinals may be roughly formalized as follows:

$$\text{STEM} \pm (\sim\text{INT}) + \{\text{-F, -GEN, -SPEC}\} + \{\text{-ASSOC}\}$$

In other words, the stem may be extended through reduplication and form an Intensive stem, and must be obligatorily followed by the Feminine gender marker -e, or by either the Centrifugal (-á, OUT) or the Centripetal (-ú, IN) affix, which may in their turn be followed by the Associative case-form.

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8   The following abbreviations are used in the glosses:

ASSOC	associative	OBJ	object
CONS	consecutive	OBL	oblique
DEICT	deictic	OUT	centrifugal
DEM	demonstrative	PASS	passive
DIFF	diffusive	PFV	perfective
F	feminine	PL	plural
GEN	generic	PLUR	plurative
IDP	independent	POSS	possessive
IMP	imperative	SEM	semelfactive
IN	centripetal	SG	singular
INT	intensive	SING	singulative
LINK	linker	SPEC	specific
M	masculine	1, 2, 3	1st, 2nd, 3rd person
MOV	mover		

3. The use of the Cardinals

In their bare form, the Cardinals are apparently only found with a following postposition, as in:

3. *minn-e*   *kal-e=ma*   *hul-li*
    house-PL   downhill-F=DIFF   go_in\IMP.2SG
    'enter down there in the house!' (speaker is with the addressee out of the house)

4. *lokk-o*   *kaar-k-o=s-í*   *kels-akk-o*
    slowlyness-M   tree-SING-M=DEICT=SPEC   monkey-SING-M
    n-a=ʕak-i   *kale-e=ma*   *ʔit'uy-ú=pa*
    MOV-OUT=exist-PFV.3M   downhill-F=DIFF   across=CONS.3M=LINK
    '[the lion] slowly went under the tree the monkey was sitting upon' (from the folktale "The Lion and the Monkey")

Much more frequently, Cardinals are followed by the centrifugal -*á* (OUT) or, less commonly, by centripetal -*ú* (IN):

5. *kor-á*   *ʔašš-a*
    straight-OUT   go-IMP.2SG
    'walk there (across, to that side)!'

6. *kat-á*   *ʔašš-a*
    downhill-OUT   go-IMP.2SG
    'go down!' (away from here in the downhill direction)

In 7. the Cardinal is used adverbially in order to express the direction of movement; the goal is further specified by the nominal phrases *piy-atte* 'to the ground' and *karm-ito pak-o=ma* 'into the lion's mouth':

7. *kal-á*   *piy-atte*   *karm-ito*   *pak-o=ma*   *puʕ~ʕ-i*
    downhill-OUT   ground-ASSOC.F   lion-ASSOC.M   mouth-M=DIFF   fall~SEM-PFV.3M
    '(the monkey) fell down to the ground into the lion's mouth' (from the folktale "The Lion and the Monkey")

The opposition between centrifugal and centripetal is evident in the following sentences: with the addressee facing (i.e., towards) the speaker, centripetal -*ú* will be used; the use of centrifugal -*á* involves instead the

8. *ʔato*   *yela*   *kor-ú*
    IDP.2SG   OBL.1SG   straight-IN
    'you are in front of me' (: I am facing you)

9. *ʔato*   *yela*   *kor-á*
    IDP.2SG   OBL.1SG   straight-OUT
    'you are ahead of me' (: I am behind you)

In order to insert a ground object (the *relatum*), the Associative case-form -*y* (ASSOC) must be added to the Cardinal, forming a genitival phrase headed by the ground:

10. *minn-e*   *kup-ito*   *kal-á-y*
     house-PL   mountain-ASSOC.M   downhill-OUT-ASSOC
     'the house is downhill, behind the mountain'

11. *ʔorhan-k-o*   *konn-att-o*   *h-aayu=n-á*   *kor-á-y*
     spear-SING-M   back-SING-M   M-1SG.POSS=MOV-OUT   straight-OUT-ASSOC
     'the spear is across /on the same level of my back'

In the following example the same ground (*konn-att-o h-aayu* 'my back') is a known entity, and is referred to by a bare preposition cliticized to the Cardinal:[10]

12. *ʔorhan-k-o*   *n-á=kor-á-y*
     spear-SING-M   MOV-OUT=straight-OUT-ASSOC

'the spear is across /on the same level of it'

Confirming the data in 8. and 9. above, in the following sentence the objects are roughly lined from either the West to the East or from the East to the West, in the relative order: speaker → Chabo → house; in 14. the order is the opposite order: speaker → house → Chabo is expressed:

13. *capo*   *minn-e*   *kuna-y=n-á*   *kor-ú-y*
    Ch.   house-PL   G.-ASSOC=MOV-OUT   straight-IN-ASSOC
    'Chabo is in front of Guna's house'

14. *capo*   *minn-e*   *kuna-y=n-á*   *kor-á-y*
    Ch.   house-PL   G.-ASSOC=MOV-OUT   straight-OUT-ASSOC
   'Chabo is behind Guna's house'

The Intensive form is used, together with the Associative case-form, in order to express an increased distance from the speaker. The use of the Intensive form is particularly common when coupled with accompanying finger or hand pointing. One can compare sentences 5. and 6. with sentence 16. below:

16. *kut~t-ú*   *ʔašš-a*
    uphill~INT-IN   go-IMP.2SG
    'go up right over there!' ("move uphills to that point") (generally accompanied by pointing)

17. *minn-ete*   *kal~l-á*   *lik*
    house-ASSOC.PL   downhill~INT-OUT   go_out\IMP.2SG
    'go away, out of the house!' (somehow rude)

18. *loʔ-ú*   *kut~t-ú*
    cow-M\M   uphill~INT-IN
    'the cow up there far away' (answering: "which cow?")

19. *minn-aɗɗ-í=s-a*   *kor~r-ú=s-a*   *ʔašš-a*
    house-PLUR-PL\PL=DEICT-GEN   straight~INT-IN=DEICT-GEN   go-IMP.2SG
    'go to those houses far away there!'

20. *xoqn-ú=s-a*   *kut~t-ú*   *minn-e*   *h-ayyu*
    hole-M\M=DEICT-GEN   uphill~INT-M.DEF   house-PL   M-POSS.1SG
    ye=n-a=kitt-e=ma   *ɓaɗ~ɗ-am*
    OBL.1SG=MOV-OUT=interior-F=DIFF   hide~SEM-PASS\IMP.2SG
    'hide by me in that hole up there in my house!' (from the folktale "The Francolin and the Squirrel")

4.   The Locatives

The Cardinals are basically, as their name implies, *points* in space. Their use denotes, therefore, *directions*. They may be represented graphically in an ideal compass:[11]

[11] This and the next graphical representations are derived from DAUDEY and HELLENTHAL's (2004) insightful
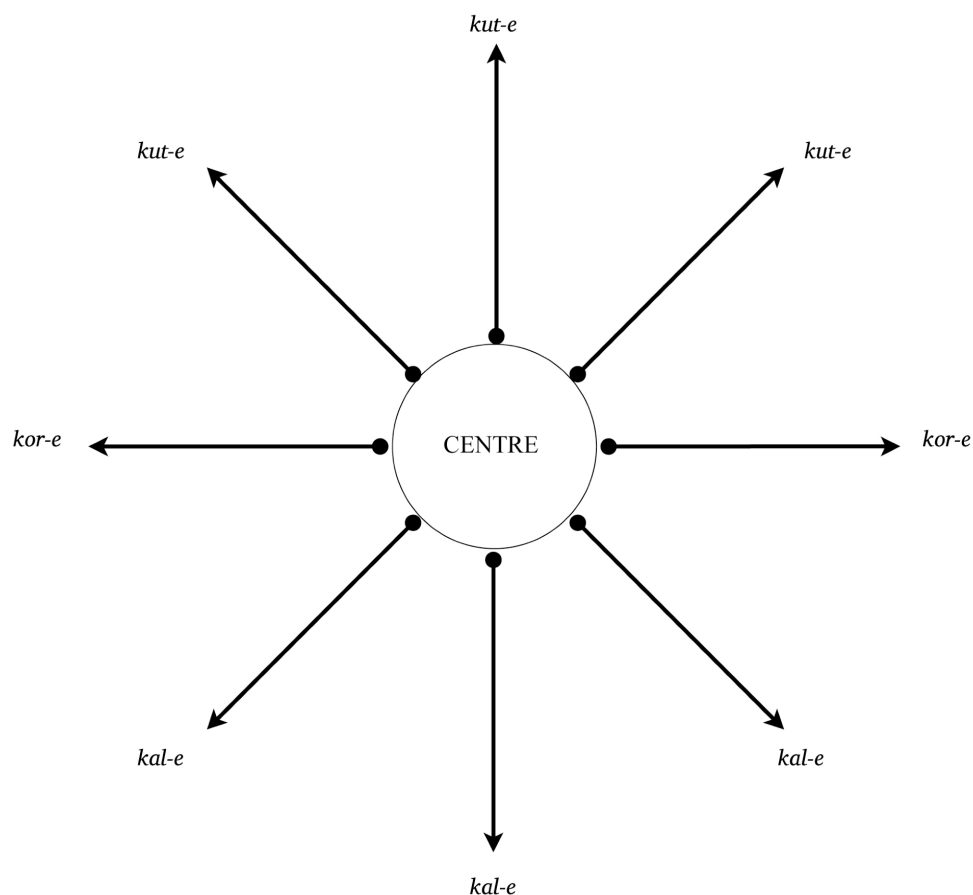
The *areas* delimited by the cardinals are instead expressed by another triplet of nouns, which will be called, for want of a better name, Locatives.[12] Each Locative covers the area of a Cardinal point, as in the following table:

CARDINAL	GLOSS		LOCATIVE	GLOSS
kut-e	uphill	⟷	*ʕil-o*	up
↕			↕	
kor-e	straight	⟷	*ʔit'-o*	across
↕			↕	
kal-e	downhill	⟷	*kat-o*	down

In the following graphic representation the headless and dotted arrows are meant to represent the lack of a precise target:

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[12] DAUDEY and HELLENTHAL (2004), in their description of the deictics of Konso, refer to our Cardinals and Locatives as 'directional and 'elevational adverbs,' respectively. The problem with these labels is twofold: first, these elements are, morphologically, nominals in Gawwada; second, the 'elevational adverbs' do not refer, at
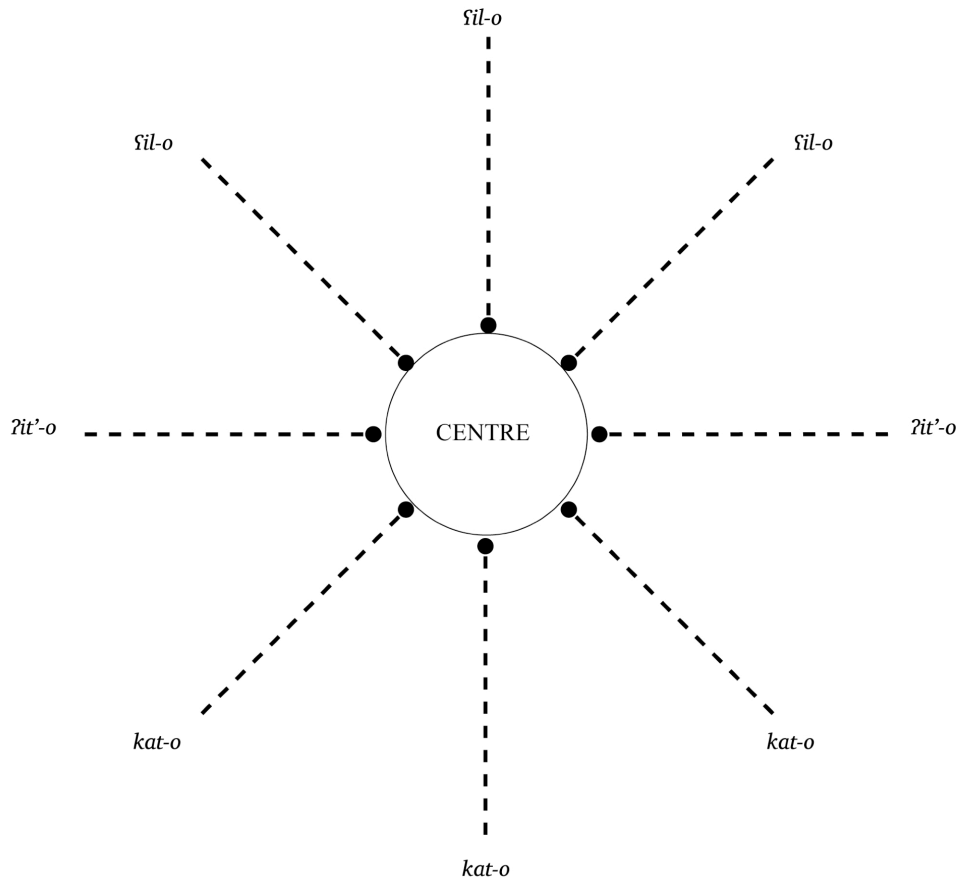
Again, the Locatives, which are Masculine nouns, mainly occur with a following Centrifugal or Centripetal affix. On the other hand, an Intensive (reduplicated) stem is not in use:

-M	-OUT	-OUT-ASSOC	-IN	-IN-ASSOC	
ʕil-o	ʕil-á	ʕil-á-y	ʕil-ú	ʕil-ú-y	↑
ʔit'-o	ʔit'-á	ʔit'-á-y	ʔit'-ú	ʔit'-ú-y	↔
kat-o	kat-á	kat-á-y	kat-ú	kat-ú-y	↓

21. and 22. are similar to 13. and 14., respectively, but with a Locative being used to indicate the position of the elements. The implication is here that the subject, though still in the same relative position with respect to the house, is now in the general area in front or behind it, rather than immediately opposite it:

21. *capo   minn-e   kuna-y = n-á   ʔit'-ú-y*
    Ch.   house-PL   G.-ASSOC = MOV-OUT   across-IN-ASSOC
    'Chabo is in the direction of (: towards) Guna's house'

22. *capo   minn-e   kuna-y = n-á   ʔit'-á-y*
    Ch.   house-PL   G.-ASSOC = MOV-OUT   across-OUT-ASSOC
    'Chabo is in the direction (: past) Guna's house'

In the following excerpt from a folktale all three Locatives are used. It will be noted how the Locative *ʕil-á* is used here with reference to the vertical plane (and it is neatly translated by English 'up'), while immediately afterwards *kut-á* 'down' refers to the horizontal plane: the Frog, having climbed through the Elephant's nose up to its brain, does not come down; rather, it enters the brain

moving in a general downhill (Southwest) direction, where the Elephant is imagined to be with respect to the Frog:

23. *mukuʕ-itt-e /*   *lokk-o*   *ʕanɗ-e*   *ʔit'-á-y*
    frog-SING-F   slowlyness-M   water-PL   across-OUT-ASSOC
    n-á=taah-ti=pa   *sint-e*   *ʕil-á=n-á*
    MOV-OUT=swim-PF.3F=LINK   nose-F   up-OUT=MOV-OUT
    hul-í=pa //   *ʔašš-ú*   *kut-á*   *non-o=n-ú*
    enter-CONS.3F=LINK   go-CONS.3F   down-OUT   brain-M=MOV-IN
    'the Frog slowly swam across the water, and entered up through the nose. She went
    down into its brain' (from the folktale 'The Frog and the Elephant')

5.   Conclusions

To the best of my knowledge, this is the first study which describes along LEVINSON's (2003) theoretical framework this variety of an absolute frame of reference in an African language. Still, the grammar of space of Gawwada is not isolated. Already in 1986, Sasse had mentioned a deictic system based upon the landscape as an areal feature of the Southwest Ethiopia linguistic area (SASSE 1986). In the same general area of Southwest Ethiopia, a system apparently starkly similar to the Gawwada one has been discovered in at least a few genetically unrelated languages, both Cushitic and Omotic. Konso, a neighbouring East Cushitic language belonging to a different subgroup (Oromoid) seems indeed very similar (DAUDEY & HELLENTHAL 2004). Konso is also the best described language in this regard; the following table shows the Cardinals and Locatives of Gawwada and Konso:

GAWWADA		KONSO		
CARDINALS	LOCATIVES	CARDINALS	LOCATIVES	
kute	*ʕilo*	*dela*	*illi*	↑
kore	*ʔit'o*	*desa*	*disi*	↔
kale	*kato*	*xata*	*xati*	↓

More to the North, the Omotic languages Dawuro (HIRUT 2001), Gamo (HIRUT 2007), and Maale (AZEB 2001) – all belonging to the Ometo subgroup – as well as South Omotic Dime (MULUGETA 2008) have been reported to have similar systems. The following table lists the cardinals of Gamo and Maale. The similarity in phonological shape between the elements for 'across' is striking:

Gamo	Maale	
killi	*lékkéi*	↑
seekki	*sékkéi*	↔
hirki	*líkkéi*	↓

Many details on the morphosyntax and, crucially, the semantics of the "grammar of space" of these languages are still missing; in particular, one would like to know whether a distinction similar to the Cardinals vs. Locatives of Gawwada – probably the most interesting one in this regard – applies in these languages too. But many other questions spring to mind: are the Cardinals of all these languages used locally, too? In other words, do all these languages qualify as languages with an absolute frame of reference? Are their fixed bearings geared to the same general direction (with 'uphill' pointing to the Northeast)? Is the presence of such a system really limited to a mountain environment, or it extends further to the West, beyond the last slopes of the Ethiopian highlands and into the Omo valley?

Ars longa, vita brevis…

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