

Towards a geometry of adpositional systems: A preliminary investigation of Gawwada

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1. The framework

Over the years, I have had the opportunity and pleasure to exchange with the dedicatee of this volume many informal discussions on the subject of the prepositional systems. More accurately, I have learned a lot, and given very little.

Since the seventies of the past century, Pennacchietti has been developing a framework for the analysis and formal representation of prepositions, and has applied it to a number of languages: Semitic (both ancient and modern; Pennacchietti 1974, 1981, 2005, among others), Esperanto (1976), and various Modern European languages (forthcoming). Pennacchietti’s model, while inspired and sustained by such classical works as Brøndal (1940),¹ but also Fillmore (1968 and much later works) and many others, is nevertheless of great originality. It is also safe to say that it has not so far received the attention it deserves.

Pennacchietti’s framework is a *geometry*: it defines and delimits an abstract (conceptual) space, that of the adpositional relations. However, different from much recent development in phonological and syntactic theory, such as the Geometry of Pronominal Features (cf. Harley-Ritter 2002), it does not operate in terms of primitive *features* which combine in the formation of the actual adpositions.

In Tosco (forthcoming.a) I made use of Pennacchietti’s geometry in a preliminary analysis of the Locative/Genitive case and of the postposition =*ma* in Gawwada (an East Cushitic language of Southwest Ethiopia and a member of the Dullay cluster).² I also tried to reinterpret Pennacchietti’s model in terms of Langacker’s Cognitive Grammar. As noted by Pennacchietti (2005: 292), Cognitive Grammar has been the theoretical framework which mostly contributed over the years to the study of the semantics of adpositions; yet, it is by nature wary of the very concept of “system”. In Cognitive Linguistics adpositions (a cover term for pre-, post-, and circumpositions) are relational atemporal words (cf. Langacker 1991b: 78). As argued by

¹ Cf. Pennacchietti (forthcoming) for a concise introduction.

² An overview of the language can be found in Tosco (forthcoming.b); Amborn-Minker-Sasse (1980) is an overview of the Dullay language cluster, with a focus on the Eastern dialects Harso and Dobaze.

Evans-Tyler (2005), adpositions by themselves do not imply motion. Motion is rather, typically, the prerogative of another class of relational words: verbs, which designate processes.

Relations are normally asymmetrical: “one of the entities is singled out and construed as the one whose nature or location is being assessed” (Langacker 1991b: 76; cf. also Langacker 1987: 217): this element is the figure of the predication, or *trajector* (tr), with respect to which the other entities are the ground, or *landmark* (lm). In Figure 1. (adapted from Pennacchiotti 2005), the landmark is represented by the external circle, while the trajector is the inner arc.

The relation between trajector and landmark may be construed from the vantage point of any of the two elements. A relation in which the vantage point is the trajector is conceived of as starting from the trajector, around which the landmark is built; this perspective defines, in Pennacchiotti’s terms, an *application*, because the figure is applied onto the ground. Its contrary is called by Pennacchiotti a *retroapplication*, and it is the construal of the scene from the perspective of the landmark: the ground is here projected onto the figure. The fundamental opposition between applications and retroapplications is most clearly seen in the case of the expression of movements and states: an application implies contact and movement towards, as well as temporal anteriority (*at, to, in, on*), a retroapplication denotes origin and separation, as well as temporal posteriority (*from, by, since*). At a more abstract level, a retroapplication is the transformation of a simpler mental operation, be it a temporal (i.e., verbal) predication, or an a-temporal one (an application, in Pennacchiotti’s terms): a retroapplication implies and further construes the scene starting from the result of another predication. Thus, a genitive marker not only derives often from the grammaticalization of a locative element (cf. Heine 1997: 41 foll.): it further is a secondary operation. Thus, *Tom’s bicycle* implies *Tom has a bicycle* (cf. Langacker 1991a: 169 foll. on “abstract possession” and Langacker 1991b: 139 foll. with reference to the different uses of English *by*). Or, to take another example, *Tom painted the fence with varnish* is the result of the transformation of *Tom applied varnish on the fence*: *on* is an applicative preposition, *with* a retroapplicative one. In Figure 1. the domain of the applications is represented with heavy lines on the trajector (the inner arc), while retroapplications are indicated with heavy lines/dots on the landmark (the external circle).

The landmark itself may be actual, referential, pluri-dimensional and/or within the same spatio-temporal dimension of the trajector, or it can be virtual, generic, a-dimensional, or conceived of as *not* within the same spatio-temporal dimension of the trajector. In short, it can be [+ dimension] or [- dimension]. In Figure 1. the area covered by [+ dimension] landmarks is represented in the right half as a continuous line, while the domain of [- dimension] landmarks is shown as a dotted line in the left half of the circle.

Further, certain adpositions are neutral in respect to the applications vs. retroapplications opposition. E.g., the French preposition *à* may mark an application (as in *aller à Paris*) as well as a retroapplication (e.g., a *machine à laver* is a special

kind of machine, whose purpose is immanent to its actual use: a *machine à laver* is still a *washing* machine even when it is not operating, and even if it cannot operate). In any case, *à* is [- dimension]: Paris, which is the target of the action expressed by the verb *aller*, is conceived of as a point. If the target is a country the [+ dimension] preposition *en* will instead generally be used: *aller en Italie* (although numerous exceptions do occur: e.g., *aller au Sénégal*). An adposition may likewise be neutral in respect to the [\pm dimension] feature; e.g., the Arabic prepositions ‘*alā* ‘(up)on, above, on top of, over’ and ‘*an* ‘off, away from’ (the former being an application, the latter a retroapplication) may be used both with a dimensional or with a punctual, adimensional object (Pennacchiotti 2005).

The opposition: application (trajector \rightarrow landmark) vs. retroapplication (trajector \leftarrow landmark), and the [\pm dimension] value of the landmark cross-cut Figure 1. into four quadrants: in the upper half of the circle the vantage point is the trajector (the inner arc is in heavy lines), while in the lower half the relation is construed from the perspective of the landmark (which is shown in heavy lines/dots). Moreover, in the two quadrants to the right the landmark is dimensional (continuous line), while it has no dimensions in the left half (dotted line).

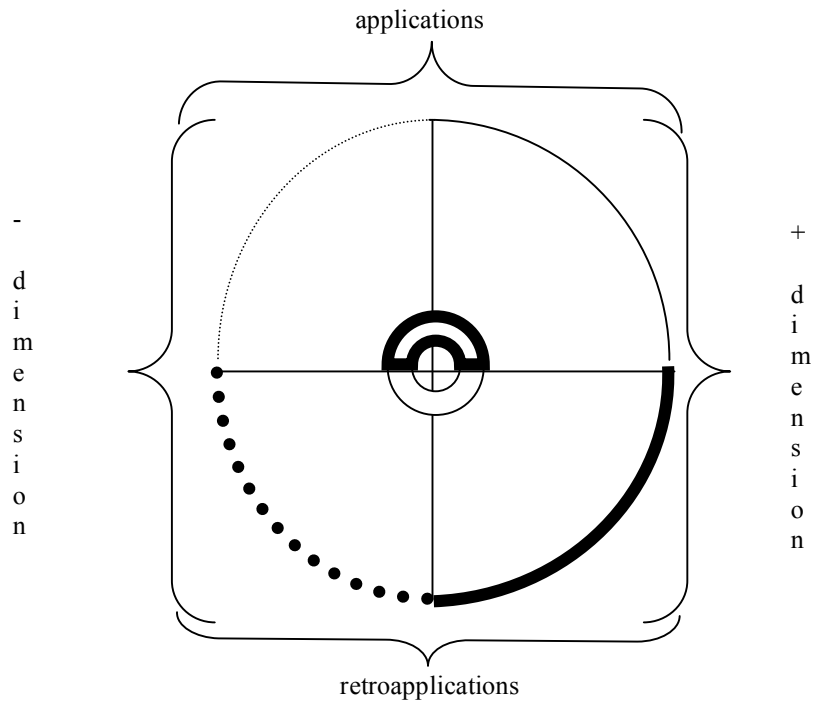


Figure 1. The semantic space of the adpositions

2. Adpositional relations in Gawwada

Gawwada has a limited number of clitic postpositions, plus a locative case which is also used as a genitive marker; as is common in East Cushitic (cf. Hayward 2002), further expressions are built through a number of “relational” nouns (“upper surface”, “central position”, “lateral direction”, but also “cause, reason”, etc.). These enter into a genitival relation with the noun they refer to. For example in Gawwada:

1. *gáarkito* *goráh*³ ‘in front of the tree (over there)’
tree:LOC.M same-direction:DIST

2. *mínnete* *kittatte* ‘inside the house’
house:LOC.P⁴ interior:LOC.F

The latter means literally “in the interior of the house”; while in *mínnete* the Locative case has a genitival meaning (‘of the house’; cf. also *gáarkito* ‘of the tree’ in 1.), in *kittatte* (which is the Locative form of the noun *kitte* ‘interior; the inside’) has its primary (applicative) meaning (“in the interior”).

In Tosco (forthcoming.a) I discussed the Locative case (LOC) and the postposition =*ma*. The former was defined as an a-dimensional applicative case, which gets retroapplied in its use as a genitive. =*ma* (left untagged in Tosco forthcoming.a) was defined as a dimensional applicative adposition of state and movement. It will be tagged SIT (for “situative”) here.

Limitations of space compel us to forgo an analysis of the INSTR(umental) postposition =*ttay*, as well as of the relational nouns. Two postpositions only, both belonging to the general semantic field of state and movement, will be discussed: =*nu* and =*na*.

2.1. =nu: both a benefactive and an ablative

The postposition =*nu* has a double (and apparently opposite) meaning: benefactive and ablative. The former value is found with animate (generally human) entities:

3. *qáw=sa=nu* *ló’o* *an=pítami*
man=DEF:DIST=*nu* cow 1.SUBJ=buy:PF:1S
‘I bought a cow for that man’

³ The Gawwada data have been collected in Arba Minch and in Gawwada town since 2000. I gratefully acknowledge the financial support of the Università di Napoli “L’Orientale”, and the help of the Institute of Ethiopian Studies at Addis Ababa University for the permission to carry on my fieldwork. The transcription is phonological; «d’» and «g’» stand for implosives; «c’» for a palatal ejective; «’» and «’» are a glottal stop and a voiced pharyngeal, respectively. «⇒» marks a clitic boundary. «/» represents a pause.

⁴ *mínne* ‘house’ is morphologically plural.

4. *nu*=‘úg ‘drink for him (in his place, instead of him)!’⁵
nu=drink:IMPV:S⁶

The ablative meaning is found with an inanimate object, such as in:

5. *sigte=nu=kka* ‘and’e *an=yúgi*
 container=*nu*=EMPH water 1.SUBJ=take-out:PF:1S
 ‘I took the water out of the container’

As one would expect with an ablative, =*nu* is also used in comparisons:

6. *an=ho=hááša=pa* *pi’atte lánkay pi’atte*
 1.SUBJ=2.S.M.OBJ=ask:IMPF:1S=LINK sleep two:LOC sleep
to’onto=nu i=g’úlay/ áno yáha / farte
 first=*nu* 3.SUBJ=exceed:IMPF:3F I what death
 ‘I ask you: “The second sleep is greater than the first sleep. What am I?” —
 “The death.”’ (a riddle)

The two values may get combined within one and the same sentence, as in:

7. *c’apo=nu sigte=nu=kka* ‘and’e *an=nu=yúgi*
 Ch.=*nu* container=*nu*=EMPH water 1.SUBJ=*nu*=take-out:PF:1S
 ‘I took the water out of the container for Ch’abo’ (lit.: “for Ch’abo, from
 the container, the water, I took it for him”)

2.2. =*na*: partitive and concomitant

The postposition =*na* is much more straightforward in its basic use. Consider the following sentences:

8. *lé’e xáyyu=na to’okko i=fári* ‘one of my cows died’
 cows P:my=*na* one:M 3.SUBJ=die:PF:3M

⁵ No object pronoun of third person is found in Gawwada. The presence of the bare postposition, cliticized to a following verbal form, implies a third person object.

⁶ The following abbreviations are used in glosses:

CONS	Consecutive	LINK	Linker	S	Singular
DEF	Definite	LOC	Locative	SIT	Situative
DIST	Distal deictic	M	Masculine	SUBJ	Subject
EMPH	Emphatic	OBJ	Object	1	First person
F	Feminine	P	Plural	2	Second person
IMPF	Imperfective	PART	Partitive	3	Third person
IMPV	Imperative	PF	Perfect	:	separates morphemes

9. *sigte=nu* *k=an=na=yúgi*
 container=*nu* EMPH=1.SUBJ=*na*=take-out:PF:1S
 ‘I took part of it from the container’ (cf. 5. above)’
10. *na=’úg* ‘drink (a part, some) of it!’ (cf. 4. above)
na=drink:IMPV:S
11. *qáw=sa=na* *ló’o* *an= pítami*
 man=DEF:DIST=*na* cow 1.SUBJ=buy:PF:1S
 ‘I bought a cow from that man’ (cf. 3. above)

Like the other postpositions of Gawwada (with the apparent exception of *=nu*), *=na* may be used after a clause. This implies that the sentence to which *=na* is affixed takes place within the time frame of the following clause:⁷

12. *géeray* *kónso=sá* *an=ášša=na* *gármó*
 yesterday K.=DEF:DIST 1.SUBJ=go:IMPF:1S=*na* lion
an=hi’i
 1.SUBJ=see:PF:1S
 ‘yesterday, while going to Konso, I saw a lion’

12. can be contrasted in form and meaning with 13., in which the linking element *=pa* (LINK) is used:

13. *géeray* *kónso=sá* *an=ášši=pa* *gármó*
 yesterday K.=DEF:DIST 1.SUBJ=go:PF:1S=LINK lion
an=hi’á
 1.SUBJ=see:CONS:1S
 ‘yesterday I went to Konso and saw a lion’

The concomitant value of *=na* when used with a clause does not conflict with its partitive meaning: in 12. a part of the time frame during which the action of going to Konso takes place is “sliced out” and selected.

⁷ We cannot address here the complex question of which clause is the main and which the dependent one. There is conflicting evidence. As 13. shows, the verb of the second clause may appear (under certain conditions) in a special Consecutive paradigm, which is never found in one-clause sentences and which seems to point to the second clause as being dependent on the first. On the other hand, also the presence of a postposition on the verb of the first clause seems to imply that this clause is dependent.

3. Conclusions

On the basis of these few data it becomes apparent that *=nu* marks an a-dimensional landmark: its object is simply the point in respect to which the predication takes place. *Per se* *=nu* is neutral as to the applicative or retroapplicative character of the relation: it is both a benefactive (an applicative operation: to give something to, for somebody) and an ablative (a retroapplication: to take something from somewhere and move it somewhere else). *=nu* will be tagged DIR (for “Directional”).

=na appears instead to be a typical retroapplicative postposition. The whole is first apprehended, and then one of its parts is selected as the ground and projected onto the figure. *=na* will be tagged PART (for “Partitive”).

Figure 2. shows the position of the Gawwada markers of state and movement. The arrows mark iconically that with applicative postpositions the predication is applied onto the external circle (the landmark), while in retroapplications the predication operates from the landmark toward the trajector (the inner arc).

Much further work is needed before arriving at a full understanding of the adpositional systems. Which other features are relevant? (e.g., Evans-Tyler 2005 operate with the concepts of orientation, trajectory, path, and goal). What is the role, if any, of symmetry within the system between applicative vs. retroapplicative, and dimensional vs. a-dimensional adpositions? How to take care of the opposition between primary and secondary adpositions, or of the relational nouns of Cushitic? All this, and much more, remains to be answered. But within a component of grammar for which linguists often still resort to... alphabetical lists, Pennacchietti’s framework brings back the very concept of system. No little merit indeed.

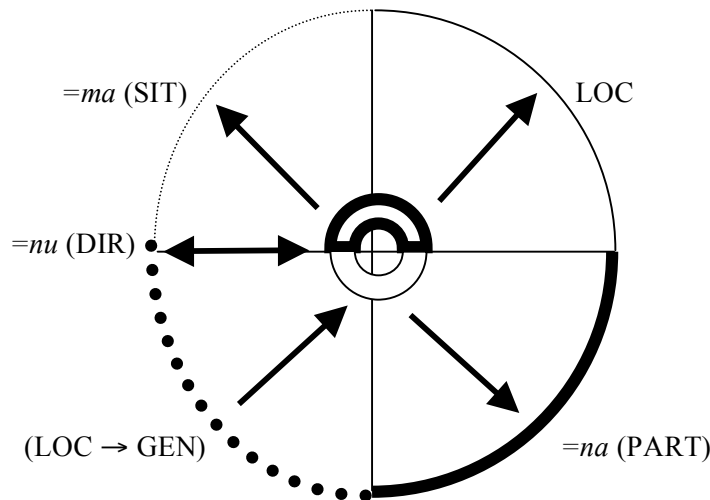


Figure 2. LOC, SIT, DIR, and PART in Gawwada

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