STATIC LOCATION AND MOTION MARKING IN HAUSA AND ZARMA[1]

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Abstract:
Creissels (2006) proposes a typology of locative marking that sets up three main patterns (besides two minor logical ones). In one pattern, languages have three distinctive marking for their static locatives, source of motion locatives and destination of motion locatives. In a second pattern, languages use the same marking for static and destination locatives and use a distinctive marker for source locatives. Finally, in a third pattern, languages make no formal distinction between the types of locatives and rely on verb semantics for the appropriate interpretation. This paper contrasts the marking patterns in Hausa (Chadic) and Zarma (Songhay), two West-African languages that have been in contact for many centuries. Hausa generally uses the second pattern, merging the expression of static and destination locatives, but in some cases it also uses the first pattern with distinctive adpositions for the three types of locatives. Zarma, on the other hand, marks all three types of locatives with the same static location adpositions, but a few verbs partake in specialized constructions marking destination and source locatives.

Keywords: Hausa, Zarma, Locatives,

1. Introduction

Locative constructions have recently been studied under various angles, notably the semantics of their markers (see Herskovits 1985, Creissels 2006 and articles in same volume, Lestrade et al. 2011, Swarts 2010, Talmy 1985, 2000 and the numerous studies thereafter, Wälchli & Cysouw 2012) and their formal expression (Genetti & Hildebrandt 2017 and papers therein, Michaelis 2017, Nilsson 2013, Stolz et al. 2014, Creissels & Mounole 2011, etc.). This paper focuses on the uses of the markers for static location, source and destination of motion in two West-African languages, Hausa (Chadic) and Zarma (Songhay). A locative construction, as used in this paper, typically specifies the position or motion of a Figure (the located or moved object) vis-à-vis a Ground (the reference or landmark; for the definitions of basic locative constructions see Essegbey 2010:93 and references cited there, Grinevald 2006:32; for the notions of Figure and Ground see Talmy 1985, 2000). Typical examples of these constructions are given next for Hausa in (1) and Zarma in (2) (for (2a-c) see, respectively, Bernard & White-Kaba 1994:211, 134, and 30):

(1) a. **Yaa   kwantàa gà   haƙoo**.
       3ms.CPL lie   on   hard.ground
       'He lay on a hard ground.'

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b. **Sun   fìta   dàgà cikin gurbì-n-su**.
3P.CPL go.out from   in   hole-of-3p
'They moved out of their hole.'

c. **Sai ya taashì ya tàfì   (zuwàa)   goona-r-sà**.
then 3ms.RP rise 3ms.RP   go   to   farm-of-3ms
'Then he stood up and went to his farm.'

(2) a. **À   gà   kani làabŏo   raa**.
3s   IMP lie   ground.DF   in
'He lies on the ground.'

b. **Ì   ganà ngèy   gùrbŏo raa**.
3p   move 3p   hole   in
'They moved out of their hole.'

c. **Bǐi   ày   koy habu,   nì   binde**?
yesterday 1s   go market   2s   about
'Yesterday I went to the market, how about you?'

Hausa uses prepositions, as can be seen with *gà* 'at, on' in (1a) or *dàgà* 'from' in (1b). By contrast, the locative markers are postpositions in Zarma, as can be seen with *raa* 'in' in (2a-b). The use of postpositions is a feature of most Songhay languages where prepositions are few (cf. Heath 1999:135-140 for Koyraboro Senni). One can also notice a few other differences between the two languages. For example, Zarma has a particular use of the postposition *raa* 'in' in (2a) where it seems to apply to a flat non delimited surface (compare with the more prototypical use of *raa* 'in' in (2b)). By contrast, in similar utterance contexts, Hausa would resort to a different preposition, notably *gà* 'at, on' as seen in (1a), where *gà* can also be felicitously replaced with *à* 'at' or *bisà* 'on'. So, it may be the case that postposition *raa* 'in' in Zarma encroaches on the domain of postposition *bòŋ* 'on'. Another difference between the two languages is that Hausa seems to use a distinctive marker *dàgà* 'from' for the source of motion, as seen in (1b) and, only sometimes, *zuwàa* 'to (< 'going')' for the goal of motion as well, as seen in (1c). By contrast, Zarma seems to use no distinctive markers for source or destination of motion, as seen in (2c-b). Heath (1999:136-140) describes a similar situation in closely related Koyraboro Senni.

The aim of this paper is to describe in more details the marking patterns of static, source and destination locatives in Hausa and Zarma. For this purpose, the paper adopts the typology of locative marking proposed in Creissels (2006). According to Creissels, languages differ depending on whether or not they lump the expression of the three distinct meanings of static location, source of motion and destination of motion and, if they do, which meanings are lumped together and expressed with the same marker. He proposes the following 5 patterns of expression (cf. Creissels 2006:19; see also Stolz et al. 2010:212):

- Pattern 1: Static location, destination and source all marked distinctively
- Pattern 2: Static location and destination marked the same, source marked differently
- Pattern 3: Static location marked distinctively, destination and source marked the same
- Pattern 4: Static location and source marked the same, destination marked differently
- Pattern 5: Static location, destination and source all marked the same

Creissels (2006:21) states that these patterns should be understood as tendencies since a language can mix the patterns for particular usages or for particular adpositions or case markers. Otherwise, according to Creissels, the first two patterns are common in Europe with, for example, English, Spanish, and Basque having Pattern 1 and French, Catalan, and Bulgarian having Pattern 2. Pattern 3 seems to be unattested, while Pattern 4 is very rare, seen only in Dinka and other languages of North East Africa such as Iraqw. By contrast, Pattern 5 seems to be dominant in sub-Saharan Africa, in particular among the Niger-Congo languages (cf. Creissels 2006:23). As may be clear from the discussion of (1-2), Pattern 2 seems to dominate in Hausa, however with a distinctive marking for the destination of motion in some cases. In Zarma, Pattern 5 seems to be dominant since static location, source and destination of motion are not marked by distinctive elements belonging to the class of adpositions.

For Creissels (2006), overall, the marking of locative complements is distributed among adpositions (or case markers) and verb semantics. So, in the course of describing the marking patterns, the paper will also try to elucidate the meaning or uses of the main adpositions in Hausa and Zarma. Zwarts (2010:987), while referencing a number of other studies (Levinson 2000, Levinson & Meira 2003, Zwarts 2008), cautions that comparable adpositions in different languages may not exactly have the same usages, especially when the languages do not have the same inventory of the adpositions (for example, presence or absence of an adposition with the general meaning "AT"). In this paper, we will indeed see that the adpositions in Zarma have a wider meaning or uses and that, as predicted by Creissels, the language relies heavily on verbs to mark the locative semantics to the point of an incipient specialization of the verb *fŭn* 'leave, originate from' for marking source locatives and the verbs *koy* 'go' and *kà* 'come' for marking destination locatives.

As for the data, the paper will essentially rely on already published texts in both languages. For Hausa I have looked mainly at two sources (Imam 1937, Yahaya 1979), while for Zarma I mostly use examples from Bernard & White-Kaba (1994). Data cited are normally adapted, for example to mark tone and vowel length, even if these are not marked in the original text. Also, to illustrate particular points in the discussion, the paper cites occasional examples from informants or examples constructed by the author and checked with informants. Such data, not attributed to sources, are from the dialect of Niamey (for Zarma) and from the author's native Katsinanci dialect of Hausa (a central dialect on the East-West dialects continuum, cf. Newman 2000:1). Except for some cursory discussion, the paper will not deal with the non spatial uses of the adpositions, nor with locative nouns expressed as direct or applied objects of verbs, or that are part of a possessive or participial constructions, etc.

The paper has two main sections, Section 1 and Section 2, devoted to each of the two languages. Inside each section, the paper explores, in turn, the marking of static location, source of motion and destination of motion.

2. Marking locative, source, and destination of motion in Hausa

Comparable adpositions (like case markers, see Haspelmath 2006:509f) in different languages would naturally have varying ranges of use (cf. Zwarts 2010:986). In Hausa the preposition *à* can be roughly translated as 'at', *gà* as 'on', *bisà* or *kân* as 'on (horizontal surface)', *cikin* as 'in', and *dàgà* as 'from', etc., though, as we will see below, they have a more complex pattern of use than these simple translations suggest. Unsurprisingly, some of the prepositions in Hausa may be true or basic prepositions, i.e., their source is not easily traceable in the language, while others are clearly derived through grammaticalization from extent relational nouns in possessive constructions. This section shows that in Creissels' (2006) typology, Hausa uses the Pattern 2 but can also distinctively mark the destination of motion in some cases, so that the language can be said to mix Pattern 1 and Pattern 2. It should be noted that

since static location can combine with motion (cf. Haspelmath 2006, Zwarts 2010, etc.), some examples may be discussed in more than one subsection.

2.1 Expression of static location in Hausa

The main prepositions marking static location in Hausa are: *à* 'at, on, to, for, etc.', *gà* 'on, for, in, to, etc.', *cikin* 'in, among, etc.', *bisà* 'on (horizontal surface)', *kân* 'on (horizontal surface), because', *ta* 'via, through', etc.' (for details on all Hausa prepositions, see Newman 2000:466-472, Jaggar 2001:667-677, Wolff 1993: 439-447). The paper will deal only with the first three of these prepositions.

The simplest and most general locative preposition in Hausa is probably *à* 'at', which is phonetically [ʔà], i.e., a syllable made up of a glottal stop (not marked in the orthography when in initial position, cf. note 1) and a short low-toned vowel. Some examples of its locative uses are given in the following (examples (3a-c) adapted, respectively, from Imam 1970-v2:97, v1:1, Yahaya 1979:60, examples (3e-f) from Imam 1970-v2:97, 96, respectively, and example (3h) from Yahaya 1979:55):

(3) a. **Yâu   bâa mu dà koo ƙwàaraa   à   gida-n   nàn**.
today   NEG 2p have   even grain   at   house-DF this
'Today we don't have a single grain in this house.'

  b. **à   wani gàrii   à   ƙasàashe-n   gabàs**
at   some town   at   countries-of   east
'in a certain town, in the middle-eastern countries'

  c. **Ɗan ƙurjii à gwiiwàa, ìn   ga ƙwainaa à duuniyàa**.
little   rashat knee 1s.SUB see   egg.of.1s   at   world
'A little rash on my knee, so that I see my offspring in the world.'

  d. **Bà-n   sooìn   bar tà à   màràice   à   hannu-n**
NEG.CPL-1s   want 1s.SUB   leave 3fs at orphaned at hand-of
duuniyàa ba.
world   NEG
'I did not want to leave her orphaned in/ to the world.'

  e. **A-nàa   sallamàa à ƙoofà-r   gidaa**.
one-IMP   salamalekat   door-of   house
'Someone is knocking at the door.'

  f. **Ta   îskee shi yaa mimmìiƙee   à   gado**.
3fs.RP find   3ms 3ms.CPL   stretch   at   on.bed
'She found him well spread on the bed.'

  g. **A-nàa jirà-n   wutaa à   maƙeeraa   sai   ta   taashì**
One-IMP wait-of   fire at   smith-place   then   3fs.RP rise
à   masaaƙaa.
At   weave-place
'(a proverb to describe an unexpected occurrence)'

  h. **Sai   râ-n   nan ya cèe   à   râ-n-sà**...
then day-DF that 3ms.RP   say   at   heart-of-3ms
'Then that day he said to himself...'

Although the preposition *à* has a clear static meaning, that meaning is not specific, i.e., the preposition has no precise configurational meaning. It can be understood as marking a general locative relation between a Figure and a Ground, maybe not unlike the English preposition *at* (cf. Zwarts 2010:987). In (3a-b, g), the sentences describe a containment relation (cf. 'in this house'). In (3c) the first instance of preposition *à* expresses a surface contact relation (a lonely man wishes that a rash appear on his knee). More clearly, the horizontal support relation is described in sentence (3f). Because of this general usage, the preposition *à* is frequently combined with other more precise static prepositions, as seen in the following (examples (4a-b) adapted from Mischlich 1911:53 and Imam 1970-v2:97, respectively):

(4) a. **Naa   rubùutà   suuna-n-sà   à   bisà   littaafii**.
         1.CPL   write   name-of-3ms   at   on   book
         'I wrote his name on the book.'

     b. **Arzìƙii   yà   zoo yàsàamee   shì   à   bisà   kân**
         wealth   3ms.SUB   come 3ms.SUB   find   3ms   at   on   on
         gado-n-sà.
         bed-of-3ms
         'That wealth comes to him (while he is lying) on his bed.'

     c. **ɗaakì-n   dà   mu-kà ga   kaayâ-n   à   ciki**
         room-DF   that   1p-RP see   wares-DF   at   in
         'the room inside which we saw the wares'

     d. **À   gàree shì   suu   duk   mutàane-n   banzaa   nèe**.
         at   on   3s   3p all   people-of   zero   cop.
         'To him, they are all worthless people.'

In (4a), preposition *à* combines with preposition *bisà* 'on' and in (4b) with two near synonymous prepositions *bisà kân* 'on top-of' (note that *kân* 'on (< 'head')' is a preposition, and not the relational noun, since the relevant Ground location is still the whole bed, not a part of it, i.e., not, say, the head rest area). Example (4c) shows that *à* can combine with *ciki(n)* 'in', here stranded at the end of the sentence. Generally, the only semantic contribution of preposition *à* in these combinations is some greater emphasis than would be the case with a simple preposition. It seems that preposition *à* can combine with all static location markers, as seen in: *à samàn* 'at above, at on', *à ƙàrƙashin* 'at under', *à baayan/ à gàban* 'at behind/ at front', *à geefèn* 'at side', but also *à keewayèn X* 'at around X', *à tsakiyàr* 'at the middle of', *à tsàkaanin* 'in between' (though *keewayèe*, 'surroundings', *tsakiyàa* 'middle', and *tsàkaanii* 'between' are not prepositions but relational nouns). In all these constructions, preposition *à* is optional. The only major prepositions that can't combine with *à* are *ta* 'via' and *gà* 'at, on', though even here, *à* can combine with the pre-pronominal form of preposition *gà*, i.e., *gàree*, as illustrated in (4d). The general meaning of the preposition *à* also may explain its propensity to appear in a few other contexts where sometimes the locative relation can only be abstract. Some cases are given in the following (example (5a) adapted from Imam 1970-v2:99):

(5) a. **Mutàanee su-kèe   wahal dà   kaawunà-n-sù   à   banzaa**.
         people   3p-RI   tire.CAUS   selves-of-3p   at   zero
         '[So that] people give themselves trouble for nothing.'

b. **àbu-n   dà   mu-kà   yi   zancee   à   kâi**
   thing-DF that   1p-RPdo talk at   on
   'what we talked about'

c. **À   nân   fa   bâ ka dà   gaskiyaa**.
   at   here   indeed   NEG 2ms have   truth
   'Here/ on this point, you are wrong.'

d. **Koo   à   gùje,   bà zaa kà   iyà   kaamoo   sù   ba**.
   even at   running   NEG FUT 2ms   can   catch   3p   NEG
   'Even if you run [at running], you will not be able to catch up with them.'

Examples (5a-b) illustrate an abstract use of preposition *à*. Example (5c) illustrates the preposition marking the locative adverb *nân* in a discursive use. Finally, in example (5d) the preposition marks an adverb-like formation describing states of being (*gùje* 'running' derives from the verb *gudù* 'run'). These formations were argued in Abdoulaye (2006:1155) to have many affinities with typical locative nouns. This use was apparently so frequent in the past centuries that Mischlich (1911:50) claims that these adverbs are derived with a "prefix *a-*" (cf. *falka* 'wake up' > "*afalke*" 'awake'). Today, preposition *à* optionally marks only some stative forms, under poorly understood conditions.

Another very frequent static location marker is *gà* (or *gàree* with a pronominal locative complement) that is usually glossed as 'on, at, against'. Compared to other prepositions, *gà* not only implies some contact between the Figure and the Ground, but the relation must somehow be tighter, more integrative. This is illustrated in the following, contrasting *gà* with a preposition very close to it in meaning, i.e., *bisà* 'on top of':

(6) a. **Mìi   kèe   gàree shì *bisà*   kâi**?
        What   be on 3ms   on   head
        'What is (he carrying) on his head?'

     b. **Mìi   kèe   gàree shì *gà* kâi**?
        What   be on 3ms   on   head
        'What is (he carrying) on his head?'/ 'What happened to his head?'

(7) a. **Yâara   sun   *sâa/ azà*   hòotoo   *bisà*   teebùr**.
        children 3p.CPL   put/ set   picture on   table
        'The children laid the picture on the table.'

     b. **Yâara   sun   sâa hòotoo   *gà*   teebùr**.
        children 3p.CPL   put picture   on   table
        'The children stuck the picture to the table (to embellish it)'.

Both prepositions *bisà* and *gà* can mark the horizontal support relation, as seen in (6a-b). However, only (6b) with *gà* can express the more integrative relation between the Figure and the Ground. Similarly, in (7a) we can see that *bisà* expresses the simple contact relation, while *gà* in (7b) implies a more permanent contact between the Figure and the Ground. *Gà* is also the only simple preposition in Hausa that can directly take human referents as complements (cf. *gàree shì* 'on him' in both sentences in (6), cf. also *gà Abdù* 'on Abdu'). By contrast, the prepositions *à* 'at', *cikin* 'in', *bisà* 'on', *zuwàa* 'to' can only take places, objects, or body areas as complements. Otherwise, the meaning of *gà* is general enough and allows a variety of usages and a variety of translation into other languages. For example, unlike *bisà* 'on

top of', *gà* is not limited to cases of contact on a horizontal surface and can be used to describe contact (on the surface or otherwise) between the Figure and Ground referents along any plan. Some of these usages are illustrated in the following (examples (8c-d) adapted from Imam 1970-v1:12 and (8f-g) from Imam 1970-v1:11, Yahaya 1979:64):

(8) a. **Yâara   sun   ɗeeboo ruwaa gà   pampòo**.
          children   3p.CPL take water   on   faucet
          'The children took some water at the faucet.'

    b. **Yâara   sun   ɗeeboo ruwaa gà   buutàa**.
          children   3p.CPL take water   on   jug
          'The children took some water in a jug.'

    c. **Àbu-n   dà   ya àuku   gà màata-r-sà   zâ-i**
          thing-DF that 3ms.RP happen on wife-of-ms   FUT-3ms
          àuku   gàree shì.
          happen   on   3ms
          'What happened to his wife will happen to him.'

    d. **Àbu-n   dà   a-kèe sôo   kèe nan gà   ɗan kirkìi**.
          thing-DF that one-RI want cop.   on   nice person
          'This is what one would expect from/with a nice person.'

    e. **Sun   ajìyè tuulunà-n-sù gà   haƙoo**.
          3p.CPL set   jugs-of-3p   on   hard.ground
          'They put down their jugs on a hard ground.'

    f. **Yànzu duk hankàli-n-sà   ya-nàa   gà   Màhmuudù**.
          now   all attention-of-3ms   3ms-cop. on   M.
          'Right now his attention is all set on Mahmudu.'

    g. **Sai   gòodiyaa gà   Allàh**!
          then   thank   on   God
          'Thanks be to God!'

The examples in (8) show various translations for the preposition *gà*, including 'at' in (8a), 'in' in (8b), 'to' in (8c, f-g), 'from/ with' in (8d), and 'on' in (8e). In all these sentences, *gà* can be replaced with other prepositions (for example *à* 'at' in (8a-b), *cikin* 'in' in (8b), *dà* 'with' in (8d), and *bisà* 'on' in (8e). Sometimes though, the meaning or implications will not be the same. For example, in (8e) *gà* emphasizes the fact that the pots were recklessly set on the hard ground, and it cannot be used if cushions were placed under the pots. By contrast, *bisà* 'on' can be used in sentence (8e) with or without cushions under the pots. Diachronically, *gà* seems to have had a more expansive usage. Indeed, Schoen (1862:143, 147) gives many examples with *gà* that today would be odd or ungrammatical (cf. *yaa tàfi gà wani gàri* 'he went to another town', where *gà* must today be replaced with *à*, for example, or the locative be zero-marked).

    Cikin 'in' is the preposition that specifically marks a containment relation between the Figure and the Ground. Indeed, its basic locative usage always implies the Figure be located in the bounds (real or conceived) of a larger Ground referent. Some illustrative usages are given next (examples (9a-e) adapted from Imam 1970-v1:5, v2:100, 101, 102, v1:2, respectively):

(9) a. **Sai gàa wani Bàlaarabèe ɗauke dà àku cikin keejìi**.
then here.is some Arab.m carrying with parrot in cage
'Then came along an Arab man carrying a parrot in a cage.'

b. **bàbban àbu-n màamaakìi cikin àddiinì-n-sù**
big thing-of astonishment in religion-of-3p
'the most surprising thing in their religion'

c. **kiifàayee dà kwàaɗii na cikin ruwaa**
fish with frogs those.of in water
'the fish and frogs in the water'

d. **Sai gàa wanidàgà cikin 'yaa'ya-n-sà**.
then here.is one from in children-of-3ms
'And here comes one from among his children.'

e. **Bâa shi yìiyu-waa à bayyànaa shi cikin**
NEG.IMP 3ms do-VN one.SUB reveal 3ms in
wannàn littaafìi.
This book
'It is not possible to reveal it in this book.'

All examples in (9) imply some kind of boundedness for the Ground referent. The boundary is sometimes physical, such as in (9a, c, e). In other cases the boundary must be mentally constructed, such in (9b, d). Also, the Figure can be contained in the interior of the Ground, as in (9a), or be enveloped in the midst of the Ground, as in (9c). Unlike *à* and *gà*, *cikin* has a complex morphology and derives from the relational noun *cikii* 'inside' in a nominal possessive construction "*ciki-n* + locative NP", literally 'inside-of NP' (cf. the expression *ciki dà bâi* 'inside and out, completely'; for a general account of this process, see, amongst others, Heine & Reh 1984:101, Hopper & Traugott 2003:110). However, the original and the derived constructions now have different morphosyntactic properties, as seen in the following:

(10) a. **Mun ga *ciki-n ɗaakì-n* (ya-nàa dà kyâu)**.
1p.CPL see inside-of room-DF 3ms-have beauty
'We saw the interior of the room (it is fine).'

b. **Mun sâa kaayaa *cikin ɗaakì-n***.
1p.CPL put wares in room-DF
'We put the wares in the room.'

In (10a) the relational noun *cikii* 'interior' is the direct object of the verb *ga* 'see', and appears in a possessive construction with *ɗaakìi* 'room'. Sentence (10b) expresses localization where the verb's direct object *kaayaa* 'wares' is the Figure and *ɗaakìi* 'room' the Ground, marked by the preposition *cikin* 'in'. Despite the surface similarity, the prepositional phrase has undergone a process of grammaticalization and no longer has the properties of typical possessive constructions, as shown in the following (example (12c) adapted from Yahaya 1979:57):

(11) a. **Mun gyaarà ciki-nɗaakì-n Hàbii dà na Bàlki**.
1p.CPL arrange inside-of room-of Habi and that.of Balki
'We readied the interior of Habi's room and that of Balki's room.'

b. **Mun   sâa   kaayaa   cikin   ɗaakì-n   Hàbii   da   kuma**
1p.CPL   put   wares   in   room-of   Habi   and   also
cikin   ɗaakì-n   Bàlki/ cikin   na   Bàlki.
in   room-of   Balki   in   that.of Balki
'We put the wares in Habi's room and in Balki's room.'

(12) a. **Wannàn   ɗaakì-n   nee   mu-kà   ga   ciki-n-shì**
this   room-DF   cop. 1p-RP   see   inside-of-3ms
(ya-nàa dakyâu).
3ms-have beauty
'It is this room that we saw its interior (is fine).'

b. **Wannàn   ɗaakì-n   nee   mu-kà   sâa   kaayaa   cikii**.
this   room-DF   cop. 1p-RP   put   wares   in
'It is this room that we put the wares in.'

c. **Ƙoofoofi-n gida-n dà ta-kè cikii   goomà   shâa   biyu   nèe**.
doors-of   house-DF that 3fs-cop. in   ten   till   two   cop.
'The house where she lives has twelve doors.'

In (11a), since *cikin ɗaakìi* 'interior of room' is an NP, it can be pronominalized in the second part of the coordination. By contrast, in (11b) *cikin ɗaakìi* is a prepositional phrase and while the noun *ɗaakìi* 'room' may be pronominalized in the second part of the coordination, the preposition *cikin* 'in' must be repeated in any case. In (12a), since a true possessive construction cannot be broken apart, the focus-fronted possessor noun *wannàn ɗaakìn* 'this room' must have a copy pronoun in the original possessive construction (cf. *ciki-n-shì* 'interior-of-3ms). By contrast, when the locative noun is focus-fronted or topicalized out of a prepositional phrase, the preposition *cikii* (losing its possessive marker *-n*) and can be left stranded, as seen in (12b) and (12c), respectively (see Newman 2000:471 for preposition stranding in Hausa). Besides *cikin* 'in', there are many other prepositions in Hausa that are similarly derived from locational nouns in possessive constructions: *kâi-n* 'head-of' > *kân* 'on, top of', *bisà-n* 'top of' > *bisà(n)* 'on', *baayaa-n* 'back-of' > *baayan* 'after, behind', etc. (see Newman 2000:470).

To conclude, Hausa marks static location with one very general preposition *à* 'at', a semi general preposition *gà/ gàree* 'on, at', and other prepositions with a more precise meaning such as *cikin* 'in' or *bisà* 'on'.

2.2 Expression of source of motion in Hausa

In Hausa there is a distinctive marker for source of motion locatives, i.e., the preposition *dàgà* 'from, after, from then on, etc.' It also has a fringe usage as static preposition with locative adverbs such as in: *dàgà baaya* 'after, at the back', *dàgà hagu* 'on the left (sits Mr...)', *tsàyaa dàgà nân* 'stay here' (cf. Caron 1991:185), or *dàgà wàje* 'outside, from outside' (cf. Wolff 1993:441). These static uses are very restricted and will not be dealt with further in this section. As marker of source of motion locatives, *dàgà* can appear alone or in combination with one of the other static location prepositions. Some example of usages are given next (examples (13a-c) and (13e) adapted, respectively, from Imam 1970-v1:4, Yahaya 1979:61, Musa-Aghali 200:27, Imam 1970-v2:97):

(13) a. **Ya   fizgè   takàrdaa dàgà   hannu-n   magàatakàrdaa**.
3ms.RP   snatch   paper from hand-of   secretary
'He snatched the paper from the secretary's hand.'

b. **Dà   ya tàfi dàgà wannàn   gàrii, sai   ya   ìsa**
when   3ms.RP go from this   town   then   3ms.RP   arrive
wani   gàrii.
some   town
'When he left that town, he arrived to another town.'

c. **Dà   daitaa fiddà   hankàli-n-tà   dàgà   gàree nì**...
when   indeed 3fs.CPL take.out attention-of-3fs from   on   1s
'As soon as she takes her attention off from me...'

d. **Kù   fita-r dà yâarâ-n   nan   dàgà cikin**
2p.SUB   go.out-CAUS children-DF those from   in
raamè-n   nan.
pit-DF   that
'Get those children out of that pit.'

e. **Baabù   wan-dà ya ìsa   yà   fitoo dà nii**
NEG.exist one-that 3ms.RP   can   3ms.SUB go.out CAUS 1s
dàgà   kân gado-n   nàn.
from   on   bed-DF   this
'Nobody can get me out of this bed.'

In all sentences in (13), the preposition *dàgà* marks the provenience of the Figure referent. The simple prepositional phrase is illustrated in (13a-b), while the preposition *dàgà* combines with the preposition *gà/ gàree* in (13c) and *cikin* 'in' in (13d). The use of preposition *dàgà* in Hausa grammar seems to be robust, since it is obligatory in all sentences of (13). If it is removed, oddness or ungrammaticality would ensue (as in (13a, c, d-e)) or the sentence would have another meaning (as in (13b)). Nonetheless, there are cases, too, where the source of motion can remain unmarked, as seen in the following (examples (14a-b) and (15a-b) adapted, respectively, from Imam 1970-v2:103, 101, Abraham 1959:23, Yahaya 1979:64):

(14) a. **Ɓàràayi-n nàn   bà sù   fìta   gàrii ba   tùkùna.**
thieves-DF these   NEG.CPL 3p go.out   town NEG   yet
'These thieves have not yet gotten out of the town.'

b. **Shii dà fìtaa   bukkà-r-sà   sai baayan yaa   zama**
3ms and go.out   hut-of-3ms   till after   3ms.CPL   become
wàliyyìi.
saint
'He will leave his hut only after becoming a saint.'

c. **Yaa   fìta   hanyàa.**
3ms.CPL go.out   pathway
'He careened out of the road (while driving).' 'He went morally ashtray.'

d. **Yaa   fìta   hayyàci-n-sà/   hankàli-n-sà.**
3ms.CPL go.out   consciousness-of-3ms/ attention-of-3ms
'He is unconscious.'

(15) a. **Yaa   faaɗì   à   dookìi**.
3ms.CPL fall   at   horse
'He fell off a horse.'

b. **gidâ-n   nan   dà   a-kà   saatoo nì   à   cikin-sà**
house-DF that   that   one-RP steal   1s   at   in-3ms
'that house from which I was stolen (i.e., kidnapped)'

In all three source texts for Hausa, sentences (14a-b) and (15a-b) are the only ones where the preposition *dàgà* seems to be omitted. This omission may specifically have to do with the verb *fìta* 'go out' (a morphologically intransitive verb) and the nature of the complement. In (14c-d), the omission, besides the role of the verb *fìta* 'go out', may also be due to the fact that the sentences are really fixed expressions. It may be noted that sentence (14a) is in fact ambiguous and can mean 'the thieves have not yet left home for the town'. This ambiguity would of course disappear if *dàgà* is supplied back in (14a). In sentence (15a-b) the omission may only be apparent since (15a) can simply report a horse accident (maybe the horse fell, too) and (15b) may describe a static location, i.e., it may just specify where the action of stealing took place. All these issues will be dealt with more in a future paper on the omissibility of prepositions in Hausa in general (cf. note 1).

To conclude, Hausa seems to have a distinctive marker *dàgà* 'from' for NPs that are source of motion. The origin of the preposition is unclear, although some have proposed that it derives from the accretion of *dà* 'with' and *gà* 'on, to', but this is speculative (for example, *dàgà* can still combine with the pre-pronominal form of the preposition, i.e., *dàgà gàree*, lit. 'from on', as seen in (13c)). Also, its use seems to date back at least a couple centuries. For example, Schoen (1862:102) states that "[t]he *Ablative* is indicated by the prepositions *daga* and *gare*", though the usage may have since been extended.

2.3 Expression of destination of motion in Hausa

While the distinctive marking of source locatives is well-entrenched, as seen in the previous subsection, the marking of destination locatives does not appear to be that strong in Hausa. Indeed, in the majority of cases, destination locatives are unmarked or appear with one of the static location markers seen in Section 2.1, but in some cases, the distinctive marker *zuwàa* 'to' can be used. The unmarked cases are illustrated next (examples (16a-d) adapted, respectively, from Imam 1970-v2:97, 101, 98, v1:3 and (16f) from Imam 1970-v2:97):

(16) a. **Sambo   ya   zoo gidâ-n   ya   yi   sallamàa**.
Sambo   3ms.RP arrive house-DF 3ms.RP do   salamalek
'Sambo came to the house and knocked on the door.'

b. **Sai   ya   taashì   ya   tàfi   goona-r-sà   ya   shigèe**
then 3ms.RP rise 3ms.RP   go   farm-of-3ms   3ms.RP   enter
bukkàa.
hut
'He then rose and went to his farm and went into the hut.'

c. **Su-kà   tàfi dà   shii wuri-n   sarkii**.
3p-RP   go CAUS   3ms place-of   emir
'Then they took him to the emir.'

d. **Sai   Màhmuudù ya   koomàa   gida-n-sù**.
then   Mahmudu 3ms.RP return   house-of-3p
'Then Mahmudu returned home.'

e. **Mun   kai   kaayaacikin   ɗaakìi**.
1p.CPL   take   wares in room
'We took the wares into the room.'

f. **Ya   yii ta ɗiibàr   kuɗî-n   ya-nàa   zubàa-waa**
3ms.RP do repeat take.out money-DF 3ms-IMP   pour-VN
à   mangalaa.
at   bag
'He repeatedly took the money and poured it into the bag.'

g. **Zâa   mu kàasuwaa**.
go   1p market
'We are going to the market.'

One notices in (16a-d, g) some intransitive motion verbs with destination locative complements that are unmarked. Sentences (16e-f) have transitive motion verbs with the destination locative nouns marked with a static location preposition. It may be noted that using the destination marker *zuwàa* would be unnecessary in sentences (16b, c), or odd in sentence (16d), or even ungrammatical in sentences (16a, e-g). This clearly shows that destination marking in Hausa is not a robust phenomenon. Nonetheless, sentence (16b) can felicitously take the destination marker before the noun *goonaʳsà* 'his farm' (*zuwàa* is not possible in the last proposition, i.e., before *bukkàa* 'hut'). Other examples with a felicitous *zuwàa* 'to' preposition are as follows (examples (17b-c) and (17d) adapted, respectively, from Imam 1970-v2:99, v1:5, 4):

(17) a. **Mun   tàfi   zuwàa kàasuwaa**.
1p.CPL   go   to market
'We are going to the market.'

b. **Ya   nufoo   wàjedà gudùu zuwàa   waje-n**
3ms.RP go.toward out   with   running to   place-of
turkè-n   jaakunàa.
tether-of   donkeys
'He bolted out and run to the donkeys tethering place.'

c. **Sai   ya   ʳubùutà takàrdaa   zuwàa waje-n   Sarki-n Siinaarì**.
then 3ms.RP write letter to   place-of emir-of   Sinari
'Then he wrote a letter to the emir of Sinari.'

d. **Takàrdaa taa   fitoo dàgà Sarki-n   Mùmmùnai**
letter   3fs.CPL go.out   from emir-of faithful
zuwàa gà Sarkii   Àbdùràhmân
to   on Emir A.
'Letter from the Emir of the Faithful to Emir Abdurahman'

e. **Dàgà nân Yàmâi zuwàa Tìlabèeri kìlôo 105   nèe**.
from   here Niamey to   Tillaberi kilo   105   cop.
'The distance from Niamey to Tillaberi is 105 km.'

In sentence (17a) the destination marker *zuwàa* is optional. However, in examples (17b-e) the marker *zuwàa* is obligatory. In fact (17d) is the standard way of addressing letters in Hausa (see further examples in Caron 1991:112, Newman 2000:469, etc.). It may be noted that Creissels (2006:24) suggests that sentences like (17e) do not appear in languages that do not distinctively marks source and destination of motion. So, in Hausa one ends up with a situation where some destination motion sentences disallow the marker *zuwàa*, some allow it optionally, while some require it. Given the fact that *zuwàa* 'to' clearly derives from the verbal noun *zuwàa* 'going' (from the verb *jee* 'go'), one may consider that it is not really a preposition but some kind of emphatic destination marker. The problem with this idea is that *zuwàa* adds no particular emphasis to sentences where it can appear optionally. There also are other uses suggesting that it is not an emphatic marker, as seen in the following (data (18a) adapted from Imam 1970-v2:97):

(18) a. **Arzìƙii yà zoo har bisà gadoonaa**.
     wealth 3ms.SUB come till on bed.of.1s
     'That wealth come right up to my bed.'

   b. **Mun kai kaayaa har zuwàa kàasuwaa**.
     1p.CPL take wares till to market
     'We took the wares right up to the market.'

In Hausa, the emphatic "terminative" marker (cf. Zwarts 2010:986 for this term) is the particle *har* 'till, up to', as seen in (18a), or *shâa* '(race) up to (goal post), up to (teen numbers)', (cf. example (12c)). Sentence (18b) shows that *zuwàa* can combine with the terminative particle. In my judgment, *zuwàa* has no emphatic effect and is very likely a simple preposition that grammaticalized from the verbal noun *zuwàa* 'going' (cf. also Jaggar 2001:670, Newman 2000:446, 469, Wolff 1993:442-443). The base verb *jee* 'go' being a generic motion verb, it is not surprising that its verbal noun takes on a grammatical use. Some examples that show the weakening of the lexical meaning of *zuwàa*, and its use as the destination marker 'to', are given in the following (for data (19b) also see Jaggar & Buba 1994:398):

(19) a. **Mù jee zuwàa**!
     1p.SUB go to
     'Let's go on!/ Let's get going!/ Go ahead!'

   b. **Ìnaa zuwàa**?
     where going/ to
     'Where are you off to?'

   c. **zuwàa makarantaa**
     going/ to school
     'going to school' / 'to school'

   d. **har (zuwàa) bàɗi**
     till to next.year
     'till next year (and only then)'

   e. **nân dà zuwàa bàɗi**
     here with to next.year
     'between now and next year (i.e., in the next 12 months)'

Sentence (19a) is a fixed expression (used to exhort people to start moving or as a warning to somebody intent on doing something), where the meaning 'go' is naturally expressed by the verb *jee* 'go' and, in my view, the particle *zuwàa* is simply the proposition 'to', with an unspecified locative complement. Sentence (19b) is a quick way of asking someone where they are going, and here *zuwàa* may be indeterminate between the verbal noun (lit. 'where going?') and the preposition (lit. 'where to?'). However, the utterance in (19c) is simply ambiguous. Indeed, in appropriate contexts *zuwàa* can be the verbal noun 'going' (say, as an answer to a question *mìi kèe dà wùyaa?* 'what is difficult?' *zuwàa makaɍantaa!* 'going to school!'). *Zuwàa* in (19c) can also be the preposition 'to' if the utterance is used as the answer (cf. 'to school!') to the question in (19b). In (19d-e) both *haɍ* 'till, up to' and *zuwàa* have a temporal usage. In (19d) with *haɍ*, the situation cannot change before 12 months have elapsed (as in 'leave it till next year'). In (19e) by contrast, the situation can change before the 12 months run out. This incomplete (abstract) motion shows that *zuwàa* is somehow weaker than the "motion over complete path" implication of verb *jee* 'go' which, contrary to its English equivalent, indeed implies reaching the destination (for example, *jee* 'go' cannot be used in the equivalent of English *we were going to school when...*, which refers to a point before the school; see Abdoulaye 2001:6). In both sentences (19d-e), *zuwàa* can simply be translated as 'to'.

So, clearly *zuwàa* may not be dismissed as an emphatic or terminative marker and, as an alternative analysis, one can consider it to be the preposition 'to' marking destination of motion. In this perspective, the fact that it does not appear in many destination sentences may be explained, in some cases at least, by a deletion or omission process that concerns other locative prepositions. Indeed, it may be the case that *zuwàa*, like other prepositions, can or even must be omitted in certain contexts, i.e., for particular verbs (such the generic motion verbs in (16)), particular locative complements, or a combination of these. It may be more sensitive to the deletion process than *dàgà* 'from' for a variety of reasons. First, it seems that there are more references to destinations of motion in discourse than references to sources of motion (cf. Luraghi et al. 2017). Secondly, and as a consequence, source locatives are in general more distinctively marked than static or destination locatives (cf. the fact that Pattern 3 and Pattern 4, where source marking is merged with destination or static location marking, respectively, are rare; cf. Stolz et al. 2017:213). In the same vein, in my judgment at least, *zuwàa* 'to' seems to be most natural with strong manner of motion verbs such as *yunkùraa* 'spring', *miikàa* 'stretch', *gangàraa* 'roll', *lallàɓaa* 'walk slowly', *mammàtsaa* 'approach a bit', *aɍcèe* 'pass', *gudù* 'eascape', *rarràfaa* 'crawl', etc. Finally, it may also be noted that *zuwàa* as preposition 'to' appears in texts recorded early, as shown in example (20), adapted from Schoen (1862:102):

(20) **Kwàanàkii   shiddà   dàgà nân   zuwàa   gà   Bàrno**.
     days   six   from here   to   on   Barno
     '(It is) six days (journey) from there to Borno.'

In sentence (20), *zuwàa* is combined with *gà* in a construction that today only applies to destination nouns referring to humans (cf. (17d) above). Given the discussion above, one may then consider Hausa to be either a Pattern 1 language (if one considers *zuwàa* as a grammaticalized, distinctive motion to destination marker), or a Pattern 2 language (if one takes *zuwàa* as an emphatic or terminative-like marker still connected to the verb *jee* 'go'). However, Creissels (2006:21) has suggested that most languages would mix the patterns depending on particular contexts or prepositions. So, one can also simply consider Hausa to have both Pattern 1 and Pattern 2 for marking locative nouns. As one would expect from a language using Pattern 1 or Pattern 2 (cf. Creissels 2006:24), in Hausa it is easy to combine source and destination locative NPs with a single verb, as seen in the following:

(21) a. **Sun   taashì   dàgà Tìlabèeri   zuwàa   Àyyòru**.
     3p.CPL   rise   from   T.   to   A.
     'They moved from Tillaberi to Ayoru.'

   b. **Sun   gusàa   (zuwàa) bàaki-n   ruwaa**.
      3p.CPL   move   to   bank-of   river
      'They moved to the river bank.'

   c. **Sun   gusàa   dàgà tùddai   *(zuwàa) bàaki-n   ruwaa**.
      3p.CPL   move   from   heights   to   bank-of   river
      'They moved from the heights to the river bank.'

   d. **Sun   bar   Tìlabèeri** *sun   koomàa/   ??zuwàa* **Àyyòru**.
      3p.CPL   leave   T.3p.CPL   resettle/ to   A.
      'They left Tillaberi to go to Ayoru.'

(22) a. **Naa   îskè   sun zoo gidaa   dàgà   goonaa**.
     1s.CPL   find   3p.CPL come home   from   farm
     'I found them having come home from the farm.'

   b. **Yâara   sun   daawoo   gidaa   dàgà   makarantaa**.
      children 3p.CPL return   home   from   school
      'The children returned home from school.'

In example (21a), the verb *taashì* 'rise, leave, move' requires that both NPs be explicitly and distinctively marked, the source NP with *dàgà* 'from' and the destination NP with *zuwàa* 'to'. Although lexically *taashì* is a departure verb, it can take either a marked source locative alone, a marked destination locative alone, or a combination of both in any order, but the most natural order is "source + destination". These characteristics seem to be true of other "strong" departure verbs such as *fitoo/ fìta* in the sense of 'originate, depart from' (for example, talking of an airplane or a traveler) or *mootsàa* 'set self in motion (cf. Fr. *bouger*)', *kwàasaa* 'gather things up and move', etc. But other departure verbs, such as *gusàa* 'move a short distance, shift, move up a bit' in sentence (21b), can optionally mark a lone destination NP. But if both source and destination NPs are present, then both must be explicitly marked, as seen in (21c). In (21d), the primary verb for 'leave', *baɾ/ barìi*, seems to allow only the specification of a source location (as direct object), and another verb, such as *koomàa* 'resettle, return', is needed to express a destination NP. Sentences (22) show that "arrival" verbs tend to take an unmarked destination NP even if both source and destination NPs are present. Otherwise, the arrival verbs can take either NP, but the source NP would always be marked with *dàgà* 'from'. With "arrival" verbs, the order "destination + source" is nearly obligatory.

        To conclude, this section reviewed the marking in Hausa of static location, motion from source and motion to destination. We have seen that Hausa uses many prepositions to mark static location, the preposition *dàgà* to mark source of motion and, only sometimes, the preposition *zuwàa* to mark the destination of motion. Hausa thus mixes Pattern 1 and Pattern 2 in Creissels' (2006) typology.

3. Marking locative, source, and destination of motion in Zarma

As alluded to in the introduction, Zarma locative postpositions seem to have a much wider range of uses than corresponding adpositions in other languages, say English or neighboring Hausa. As suggested in Zwarts (2010:987), one reason for the heavier workload of individual adpositions in a language is the absence of an adposition with the general meaning "AT" in the language's inventory. This is indeed the case for

Zarma. Just like in Hausa, a few of these markers are true adpositions, with no easily traceable source in the language, while others are derived through grammaticalization from extent relational nouns in a possessive ("possessor + possessed") construction. This section shows that in Creissels' (2006) typology, Zarma uses the Pattern 5 where static location, motion from source and motion to destination are not distinctively marked with adpositions. In this pattern, verbal semantics is crucial for the correct interpretation of the locative nominals. It should be noted that since static location can combine with motion (cf. Haspelmath 2006, Zwarts 2010, etc.), some examples may be discussed in more than one subsection.

3.1 Expression of static location in Zarma

The main static location adpositions in Zarma are (with their approximate meaning): *raa* 'in', *ga* 'on, against', *bòŋ* 'on', *gandà* 'under', *jìnè* 'before', *banda* 'behind', etc. (cf. Sibomana 2008:54, citing Oumarou Yaro 1993:232 and Hamani 1981:61). The most recurring among them is probably *raa* 'in'. Most uses of *raa* express a containment relation between a Figure and a Ground with an identifiable contour. This is illustrated in the following (examples (23a-f) adapted, respectively, from Bernard & White-Kaba 1994:102, 25, 92, 1, 25, 52):

(23) a. **Dungurì gà kaanù mêe raa, àmmaa gundàa raa fìtinà**.
bean IMP be.good mouth in but belly.DF in problem
'Bean is good in the mouth but wrecks havoc in the stomach.'

b. **Ì ga dàŋ sundù battàa raa**.
one IMP put tobacco box.DF in
'One puts tobacco in the tobacco box.'

c **Àlfàri gà far waynàa raa, àmmaa bǐi raa nòo**
farmer IMP farm sun.DF in but shade in cop.
à ga ŋwà.
3s IMP eat
'The farmer labors in the sun, but it is in the shade that he eats.'

d. **àndunnyǎa mêe à mêe raa**
world.DF entirety in
'in the whole world, everywhere'

e. **Ì ga hàynǒo kar bàtàmàa raa**.
3p IMP millet.DF hit thresh.place.DF in
'They thresh the milled on the thresh-place.'

f. **Ì nà tubo fay càrèe gamè raa**.
one CPL.LNK heritage.DF share each.other amongst in
'They shared the heritage between themselves.'

Examples (23a-b, d) illustrate the typical containment relation, while in (23c) the Figure is immersed in the Ground. In (23e) the thresh-place is typically a flat surface but one that can easily be delimited (i.e., one can clearly step in or out of it). In (23f) the delimitation must be mentally constructed. The postposition is also used in cases where the containment relation is not clearly evident, though sometimes still conceivable. This is illustrated next (data (24a-f) adapted, respectively, from Bernard & White-Kaba 1994:211, 54, 71, 38, 97, 20):

(24) a. **À gà kani làabòo raa**.
3s IMP lie ground.DF in
'He lies on the ground'.

b. **À mànà bâa cèe dágú nangǒo raa**.
3s NEG.CPL even foot take.off place.DF in
'He stayed still on the place.'

c. **Tandǎa goo gà daaru làabòo raa**.
calabash.DF PROG spread ground.DF in
'The calabash plant spreads on the ground.'

d. **À nà zòobu kàa bòŋǒo raa**.
3s CPL.LNK hair take.off head.DF in
'He shaved his head'

e. **Ì gòo ga Fàati hìijǎa fee àràajêy ra**a.
one PROG Fati marriage.DF announce radio in
'The marriage of Fati is being announced on the radio.'

f. **Bànɲàtàray yàayi bìsa irì zàamaanǒo raa**.
slavery time pass 1p time.DF in
'Slavery time is long gone.'

In examples (24a-c) the Ground is a flat surface, but contrary to the Ground in example (23e), here there is no delimitation, i.e., one cannot step in or out of the relevant area. Yet, the postposition *raa* is used while, as the translation indicates, other languages might use adpositions not marking containment (for example, in Hausa one cannot use the preposition *cikin* 'in' in the equivalent sentence and would rather use the postposition *gà* 'on' or *à* 'at, on'; cf. a similar issue reported in Essegbey 2010:107 for the Tutrugbu language). In fact, even in Zarma, too, the postposition *ga* 'on' can felicitously replace *raa* in (24a-c). While the Ground is well delimited in (24d), still one would expect an adposition like *ga* 'on' in this example (since the hair is taken from the surface of the head), and indeed some speakers prefer this option. Similarly, speakers vary on the postposition to be used in sentences like (24e) for events heard or seen on the radio or television. As for example (24f), some languages would probably have the locative NP as a direct object. However, in Zarma, the verb *bìsa* 'overtake, pass over' can be transitive or intransitive, in which case the locative NP can be marked with *raa*, as in (24f) or, specially for humans, with *ga* 'on' (cf. examples (26c-d) below). In any case, it could be said that Zarma *raa*, usually translated as 'in' (see also the characterization of *raa/ laa* 'in' in related Koyraboro Senni in Heath 1999:136), obviously needs further investigation, given the fact that many languages would not use their adposition marking containment in any of the examples in (24).

The second most ubiquitous locative postposition in Zarma is *ga* 'on, against'[2]. Despite the deep historical contact between Zarma and Hausa speakers, there is probably no relation between Hausa *gà* 'on, against' and Zarma *ga* 'on, against'. Indeed, Zarma *ga* is nearly pan-Songhay, essentially spanning the East and West ends of the phylum (see Heath 1998:106, 1999:140, who suggests that *ga* derives probably from *gaa(hâm)* 'body'). Just like *raa* 'in', Zarma *ga* 'on, against' seems to have a

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[2]	Just like source and destination locatives, route locatives ('via, through') also have no special adposition and the verb (such as *kabay* 'go through', *ganà* 'follow') must be used with a bare or a *ga*-marked locative noun (cf. *à furò fèneetìrǒo ga* 'he went in through the window', an example checked with native speakers in Niamey).

much wider usage than its equivalent in Hausa. First, *ga* basically expresses a general contact (surface or otherwise) between the Figure and the Ground. However, contrary to Hausa *gà*, Zarma *ga* usages do not include the horizontal surface support, which is specifically expressed by *bòŋ* 'on top of'. This is illustrated next (data (25a-f) adapted, respectively, from Bernard & White-Kaba 1994:38, 52, 101, 72, 72, 111):

(25) a. **Bòrò ga fùulǎa dàŋ bòŋǒo ga**.
man IMP cap.DF put head.DF on
'One puts the cap on one's head.'

b. **À nà ì haw càrèe ga**.
3s CPL.LNK 3p tie each.other on
'He tied them one to the other.'

c. **Fita-fitayzè bòobò fǔn bòrò gaahamǒo ga**.
rashes many appear man body.DF on
'Rashes have appeared on the person's body.'

d. **Hìncìnǒo gòo ga deebè daaray kàmbàa ga**.
goat.DF PROG stand.on.toes (tree type) branch.DF on
'The goat stands on 2 legs leaning against the tree branch.'

e. **Gaasu goo dèegàràa ga**.
calabash cop. hanger.DF on
'A calabash hangs from the ceiling (i.e., is on a hanger).'

f. **Ày di gaasu fùrànte fondàa ga**.
1s see calabash abandoned pathway.DF on
'I saw a calabash abandoned in the street/ on the path.'

In examples (25a-e), *ga* marks a locative relation that implies a contact without horizontal support. Even in the case of (25a), one is really talking about wearing a hat. Zarma native speakers however can also conceive the relation in (25a) as a horizontal support and so accept *bòŋ* 'on top of' instead of *ga* in (25a).[3] Later, we will see that in unambiguous horizontal support contexts, *ga* 'on' cannot replace *bòŋ* 'on top of'. Example (25f) illustrates another ambiguous context. With the postposition *ga*, the sentence stresses the presence of the calabash in the street, more likely on the sides or corners of the street, so it is not really the 'on top of' relation (for example, *fondàa bòŋ,* 'on (top of) the road' would be fine for traveling people or cars and lorries standing or moving on the central pavement; these remarks carry over to Hausa as well). Other usages of *ga* however do not always imply a real contact, but some loose association between the Figure and the Ground, as seen next (examples (26a-f) adapted, respectively, from Bernard & White-Kaba 1994:72, 54, 112, 34, 73, 74):

(26) a. **Zànkǎa gà deebè-deebè kwàariizè ga**.
child.DF IMP walk cornstalk on
'The child walks with a cornstalk.'

b. **Cèe ga nòo à koy**.
foot on cop. 3s go
'He went on/ by foot.'

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[3] This is contrary to Hausa speakers who apparently have a strict "wearing" perspective and would only accept *gà* 'on' in this context and not *bisà* 'on top of'.

c. **Ì   bìsa à ga**.
3p   pass 3s   on
'They overtook him.'

d. **Mootèy   ga   bìsa   càrèe   ga**.
cars.DF   IMP   pass   each.other   on
'The cars are overtaking one another (alternatively).'

e. **À   nà   hàngâw deedandì   jeeròo   ga**.
3s   CPL.LNK   arrow   aim   gazelle.DF   on
'He aimed an arrow on the gazelle.'

f. **Mà   sì deenì   ày izòo ga**.
SUB   NEG   scold1s child.DF   on
'Do not scold my child.'

In (26a-b), although there is contact, there seems to be a size reversal in that the Figure referent (the person) is bigger than the referent of the Ground (the cornstalk or leg). Many languages would certainly resort to other strategies to express the relation (in Hausa the cornstalk would require instrumental *dà* 'with' and the leg the instrumental *dà* 'with' or the postposition *à* 'at'). Examples (26c-f) imply no contact at all. In (26c-d) the Ground (the person or any one car overtaken) simply serves as reference for the motion of the Figure. In (26e-f) there is an abstract contact through the alignment of the weapon on the target or the directing of the scold toward the child.

Another frequent static locative postposition in Zarma is *bòŋ* 'on top of', which is more restricted than *ga* 'on'. Indeed, in most of the examples I have culled from the sources, *bòŋ* expresses the situation where the Figure is supported on the upper horizontal surface of the Ground, or some understandable variation of this relation. Some illustrative cases are given next (examples (26a-e) adapted, respectively, from Bernard & White-Kaba 1994:82, 67, 40, 98, 117):

(27) a. **Àrwàsey ndà   wòndìyey goo gà   faakaray dubǒo   bòŋ**.
boys.DF   and   girls.DF PROG   chat   tree.trunk.DF on
'Young people are dating on a tree trunk.'

b. **Hìyǒo   gòo ga   dàndi   haroo   bòŋ**.
canoe.DF   PROG   go.south   water.DF   on
'The canoe is going down the (south-flowing) river.'

c. **Sì   kàaru   tuurǒo   bòŋ**.
NEG.IMP climb   tree.DF   on
'Don't climb on the tree.'

d. **Kùsu   goo   feemǎa   bòŋ**.
pot   cop.   fire.place.DF on
'A pot is on the fire-place.'

e. **Gànjì haamìizey kulù nà   càrèe   margu   bòngu bòŋ**.
bush   animals.DF all CPL.LNK   each.other gather   pond   on
'The wild animals all gathered at a pond.'

Examples (27a-b) are typical horizontal support context, while sentences (27c-d) are very close to the typical cases (for example one assume the climber would end up sitting on or hanging from a branch). Example (27e) is a fringe case, where the animals are probably just in and around the pond and some languages might not use their 'on' adposition in this context. This usage may in fact have to do with the grammaticalization path of *bòŋ*, which derives from *bôŋ* 'head'. For example, in Hausa, if it is any indication, the preposition *bisà* 'on' derives from *bisà* 'above' and is restricted to expressing a horizontal support relation, while *kân* 'on', derived from *kâi* 'head', admits usages similar to the one in (27e); cf. *yaa tsayàa kân-tà* 'he stood uncomfortably close to her (while she was sitting)'.

To conclude, Zarma has some high frequency static location postpositions that have a core meaning but admit extended usages. This is probably due to the lack of a general "AT" adposition in the language. There are other configurational postpositions, cited at the beginning of this subsection, which are derived from body parts and which have more predictable usages and will not be discussed in this paper. The next section explores the expression of source and destination of motion.

3.2 Expression of source and destination of motion in Zarma

Creissels (2006:23) claims that many languages in sub-Saharan Africa use the Pattern 5 of locative expression: i.e., they do not mark source or destination locative NPs in a distinctive way from static location NPs. Zarma is one such language. For example, in their dictionary, Bernard & White-Kaba gloss the postposition *ga* as 'against, on, relating to, from, further from' (cf. Bernard & White-Kaba 1994:112), with relevant examples clearly showing that (the normally static location marker) *ga* can alone mark the locative NP in motion from source events. Nonetheless, the adposition *raa* 'in', given its high frequency and its basic containment semantics, is the most remarkable when it is used alone in motion from source contexts, as seen in the following (examples (26a-h) adapted, respectively, from Bernard & White-Kaba 1994:38, 24, 92, 247, 107, 96, 103, 20):

(28) a. **À   nà   zòobu kàa   bòŋŏo   raa**.
       3s   CPL.LNK hair take.off   head.DF   in
       'He shaved his head'

   b. **Ì   ga   hàyni   basu kà kàa   bàrmăa   raa**.
       3p   IMP   millet   pull INF   take.out   granary.DF   in
       'They took millet out of the granary (pulled it to remove).'

   c. **À   si   fŭn   fàrŏo   raa**.
       3s   NEG.IMP   leave   farm.DF   in
       'He doesn't leave the farm.'

   d. **À   zùmbù   mootàa   raa**.
       3s   descend   car.DF   in
       'He got out of the car.'

   e. **kăa   fùulàa   raa**
       take.out   cap [chiefdom] in
       'to force (a chief) out of chiefdom'

   f. **Wà   zànkèy fatt-andì   guusoo   dìn   raa**.
       IMPER.p   children.DF   get.out-CAUS   hole.DF   that   in
       'Get the children out of that hole.'

g. **À   nà   zàamà foobù kàkàa   ɲaaŋǒo   raa**.
3s   CPL.LNK   knife pull   INF take.out   cover.DF   in
'She took (pull to take) a knife out of its sheath.'

h. **Bàɲɲàtàray yàayi bìsa irì   zàmaanǒo   raa**.
slavery   time   pass 1p   time.DF   in
'Slavery time is long gone.'

In all examples (28a-h), the locative NPs are the source of motion (removal of the Figure, movement away, disembarkment, etc.). Nonetheless, they are all marked only with the static location adposition *raa* 'in'. Heath (1999:136-140) describes a similar situation in related Koyraboro Senni. The indication that the locative NPs are the source of motion is then left to the verb's semantics (cf. Creissels 2006:23, see also Heath 1999:136, 140, discussing Koyraboro Senni). For Creissels, the verbs in (28), as far as locatives NPs are concerned, would assign only the source locative role to the locative NP, so that there is no systematic ambiguity in the interpretation of the sentences (i.e., the NPs cannot be interpreted as static locations or destinations). The same marking pattern can be observed with the postposition *ga* 'on', as seen in the next data (examples (26b-d) adapted, respectively, from Bernard & White-Kaba 1994:34, 30, 54):

(29) a. **Mà   si moorù fuwòo   ga**.
SUB   NEG   go.far   house.DF   on
'Don't go far away from the house!'

b. **Mootèy   ga   bìsa   càrèe   ga**.
cars.DF   IMP   pass   each.other   on
'The cars are overtaking one another (alternatively).'

c. **Ày bìnaafǔn   à ga**.
1s   heart.DF   leave   3s   on
'I no longer have interest in it (my heart left it).'

d. **Àrwàsu   nà   cèe dìi   wàndìyàa   ga**.
young.man CPL.LNK   foot keep   young.woman.DF   on
'A young man stopped visiting (kept his feet away from) the young woman.'

In all sentences in (29), the *ga*-marked nominals are the source of motion. Sentences (29a-b) describe concrete motion events. In (29b), each car is at one point the reference Ground the other car moves away from. Sentence (29c) describes an abstract motion event. In (29d), though there is no real motion, still the Ground can be easily conceived as a reference vis-à-vis the Figure. What is clear is that there is no postposition marking the locative NPs as source of motion and the verbs must be relied upon for proper interpretation, as we have seen in the discussion of sentences (28) above. In fact, the verb *fǔn* 'leave', which appears in sentence (29c), is the default verb for marking source of motion NPs.

According to Creissels (2006:23) languages using Pattern 5 also rely on the verbs to properly interpret locative NPs as destination of motion. So, just as the verbs in (28-29) assign a source role to the locative NP, there are verbs in Zarma that assign only the destination role to a following locative NP, which then remains unmarked or marked with one the static location adpositions. This is illustrated in the following (examples (26a-h) adapted, respectively, from Bernard & White-Kaba 1994:247, 176, 25, 42, 93, 91, 60, 19):

(30) a. **À   kâŋ   làabòo   raa**.
3s   fall   ground.DF   in
'He fell to the ground.'

b. **Bòrò nà nòoru ŋwà kàla   à   furòkàmbè**.
man CPL.LNK money embezzle till   3s enter hand
'Someone embezzled so much money and got caught.'

c. **Ì   ga dàŋ   sundù   battàa raa**.
3p   IMP put   tobacco   box.DF in
'One puts tobacco in the tobacco box.'

d. **Zànkèy koy bàngòo raa   kà   bòtòkolò**.
children.DF   go pond.DF   in   INF   fish
'The children went to the pond to fish.'

e. **Jeemaagè fàrap   kà   furò   fuwǒo   raa**.
bat   flap   INF enter   house.DF   in
'A bat flapped into the house.'

f. **Sùboo   dàndì, à   kà   kà   fandi   jàbǒo   ga**.
grass.DF   float   3s come INF come.at.shore bank.DF on
'The grass floated and came to the shore.'

g. **Curèy   koy beene kà   zùmbù   tuurǒo bòŋ**.
Birds.DF go   high INF descend   tree.DF on
'The birds flew up and landed on the tree:' (a proverb for "useless action")

h. **Hawey   gòo ga   dòo bàngǒo   mêe**.
cows.DF   PROG   descend   pond.DF   mouth
'The cows are descending to the river bank.'

All sentences in (30) describe motion to destination events, where the destination NPs are either unmarked (cf. (30b)) or marked with static location adpositions. Nonetheless, the correct interpretation obtains because the verbs implicated, i.e., *kâŋ* 'fall', *furò* 'enter', *dàŋ* 'put', *koy* 'go', *kà* 'come', *zùmbù* 'descend, land, disembark', and *dòo* 'descend, roll down a path', would solely have a destination role to assign to any nearby locative NP.

The basic idea here is that in languages of Pattern 1 or Pattern 2, one finds motion verbs (like Eng. *fall, descend, climb, go, come, run*, etc.) that are able to take a source of motion NP (*run from the store*) or a destination of motion NP (*run to the post-office*) or their combination (*run from the store to the post-office*). According to Creissels (2006:23), languages using Pattern 5 do not work like this. In these languages, any one motion verb can assign only one role: the source or destination role. This is essentially born out for Zarma where the verbs in (28-29) would assign the source role to any following locative NP, marked or unmarked. By contrast, the verbs in (30) would assign the destination role. Nonetheless, allowance probably must be made for certain verbs, like *zùmbù* 'descend, land, disembark', to alternatively assign a source role (as in (28d)) or a destination role to its locative NP (as in (30g)). Creissels therefore shows that in Pattern 5 languages, a motion verb, by itself, cannot simultaneously take a source and a destination of motion NPs, since it is restricted to assigning only one role. This is also verified for Zarma, where, as Creissels suggests for Pattern 5 languages, two or more verbs are necessary to translate sentences such as *run from the post-office to the store*. This is illustrated in the following:

(31) a. **Ì fŭn Tǐlbeerì kà koy Ayyoru**.
3P leave T. INF go A.
'They moved from Tillaberi to Ayoru.'

b. **Zànkèy kà fûu gà fŭn làkkwâl**.
Children.DF come home INF leave school
'The children came home from school.'

c. **Zànkèy yêe-kà fûu gà fŭn làkkwâl**.
children.DF returnhome INF leave school
'The children returned home from school.'

d. **Zànkèy zùrù gà kà fûu gà fŭn làkkwâl**.
children.DF run INF come home INF leave school
'The children run home from school.'

In sentences (31a-b) two verbs *fŭn* 'leave' and *koy* 'go' or *kà* 'come' are necessary to render single English verb *move* and the locative NPs. In sentences (31c-d), given the more complex semantics of the sentences, three verbs are necessary, in particular in (31d) with the literal meaning 'run come home leave school'. It is as if Zarma *zùru* 'run' in fact cannot take a directional locative NP. This may be true for other activity verbs such *dìra* 'walk'. It should be noted that the sentences in (31) do have the simple meaning indicated in the translations and speakers do not necessarily view them as a series of distinct actions (so, (31a) can only optionally mean 'they left Tillaberi to go (of all places) to Ayoru'). According to Creissels (2006:24), languages using Pattern 5 are not necessarily serializing languages. Indeed, in sentences (31) Zarma simply strings the verbs with the help of an infinitive marker *kà* (or *gà* in some cases) before the marked verb (sometimes this marker is dropped in strongly lexicalized constructions such as *yêe-kà* 'return' in (31c)). Nonetheless, there are signs that the verbs *koy* 'go' and *kà* 'come' on the one hand, and *fŭn* 'leave, originate from' on the other hand, are being specialized as markers for destination and source locatives, respectively. This is illustrated in the following (data (32a) adapted from Bernard & White-Kaba 1994:98) :

(32) a. **Fàrì koyò nà bôŋ fèeni kà fŭn fari**.
farm owner.DF CPL.LNK head sway INF leave farm
'The farmer came from the field empty-handed (w/ nothing on his head).'

b. **(sambu) Tǐlbeerì kà koy Ayyoru**
take T. INF go A.
'from Tilaberi to Ayoru'

Example (32a) refers to the harvest season when farmers would typically come home carrying produce samples on their head (so that if a farmer returns home "balancing" his head free of any load, he would come "empty-handed"). In this example, the focus is clearly on the event of arriving home, not on the event of leaving the farm. So in the example, *fŭn* would not really describe an event at all but it marks the farm as the source of motion, as would an adposition in other languages. The same comment applies to sentences (31b-d) above. Similarly, in example (32b) verb *koy* 'go' no longer refers to a real event of going and fulfills the function of a destination locative marker. The same comment also applies to sentence (31a) above.

To conclude, Zarma uses the Pattern 5 for marking its locative nouns. In this pattern, there are no distinctive adpositional markers for source and destination locatives. This role is taken over by verbs that uniquely assign either a source or a

destination role to the following locative NP. However, as alluded to in the discussion of (32), the verbs *koy* 'go' and *kà* 'come' on the one hand, and *fǔn* 'leave, originate from' on the other hand, are in some contexts emptied of their lexical semantics and used as simple markers for destination and source locatives, respectively.

5. Conclusion

Despite being in contact for many centuries, Hausa and Zarma operate different patterns for marking their locative NPs. Hausa operates Pattern 2 where the source locative is marked distinctively with *dàgà* 'from' while static locatives and destination locatives are marked the same. In some cases however, Hausa also uses the Pattern 1 where all three locatives are marked distinctively, notably using *zuwàa* 'to' to mark the destination locative. By contrast, Zarma uses the Pattern 5 and so marks the three types of locatives with the same adpositions. However, most motions verbs would assign only the source or the destination role to locative NPs and this ensures the correct interpretation. Furthermore, there is a nascent specialization of the verbs *koy* 'go' and *kà* 'come' to mark destination locatives and the verb *fǔn* 'leave' to mark the source locatives. Besides the difference in the marking patterns, locative prepositions in Hausa seems to have a more restricted semantics and so would admit less variability or interchangeability than is observed in Zarma. In fact, the uses of the Zarma preposition *raa* 'in' seem to be poorly understood. Finally, at many places in this paper, the issue of the marking patterns links with the independent process whereby locative adpositions are omitted under certain circumstances.

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