FROM PREPOSITION TO COPULA
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1. INTRODUCTION
1.1. Justification of research
If we dismiss every case of polysemy as accidental we deprive ourselves of the possibility of ever finding out whether the two functions are in fact related or not. If, in contrast, we try to discover a relationship, in the worst case we may find that none exists. But in an optimal case we may find out that a connection exists, and the explanation of this connection may shed some light on the nature of language structure and of language change.
1.2. Purpose and scope of the paper
The development of prepositions from verbs and of copulas from demonstratives has been postulated for many languages (Lord 1973, Li and Thompson 1977). There has not yet, however, been a documented case of grammaticization from preposition to copula (cf. Lehmann 1985).

The first purpose of the present paper is to show that grammaticization from preposition to copula has occurred in several Chadic languages. The second purpose is to show the possible motivation for this process. Note that although many cases of grammaticization have been described, the motivation for the grammaticization process is still poorly understood.

In the present paper I will be concerned mainly with two types: copulas in locative clauses, equivalents of *be* in the clauses of the type "X is at Y," and copulas in equational clauses, equivalents of *be* in "X is Y" as in "John is a soldier" and "Mary is tall." I will not deal with copulas that constrain time. It appears that the motivations for the process PREPOSITION---COPULA were different for the locative copula and for the equational copula. In Section 2, I will discuss the possible direction of the change involving prepositions and locative copulas. In Section 3, I will discuss the possible sources for equational copula.

2. LOCATIVE COPULA
2.1. Existence of locative copula
Locative copulas have been claimed to exist only in the Ron subgroup of West Chadic (Jungraithmayer 1970), represented in the chart by Fyer. In my own work I have found that the locative copula *a* exists also in
Bolewa. The evidence that Bolewa must have had a preposition a comes from comparative study of marking locative in Chadic (Frajzyngier a.).

Whenever a claim is made about the similarity between a copula and a preposition, and when both occupy the same syntactic position, one has to show that the differentiation between the two is a fact of language and not merely an artifact of the linguist’s analysis. Since the description of the syntax of Fyer in Jungraithmayr 1970 is rather sketchy, the following discussion will be based mainly on data from Bolewa. The evidence that a is indeed a copula rather than a preposition comes from contrasting sentences of the type (I) “X is in/at Y” with sentences of the type (II) “X VERB Z in/at Y.” If the equivalent of ‘is’ in (I) is a copula rather than a preposition we would not expect it to occur in sentences of the type (II). On the other hand, if there is no differentiation between preposition and copula, we would expect the same morpheme to occur in both types of sentences. Sentences of the type (I) in Bolewa have the form:

Subject à Prep NP, e.g.:

1. a. kóun à gá àmá 'a buffalo is in the water'
   buffalo in water

b. kóun à gá àmá sàNeg 'the buffalo is not in the water'

c. sùbá-nò à kò réwè 'my shirt is on the tree'
   shirt-1sg on tree

d. sùbá-nò à ném-gè réwè 'my shirt is near the tree'
   near-with?

e. kòłbá àmá à wètè réwè 'that bottle is under the tree'
   bottle Dem under tree

Sentences 1a-e are ungrammatical if either à or the preposition following it is deleted. Although the above examples alone could be accepted intuitively as evidence for the copular status of à, there may be another possibility, viz., that they in fact represent two prepositions in a sequence. The necessary evidence is provided by sentences of the type (II) in which, as stated above, we should not find à.

2. a. zëti sùbá gá kò réwè 'put the shirt on a tree'
   put shirt in on tree

b. ísin zòu sùbá-nì gá gà ngírki 'he put his shirt into a bag'
   3sg put shirt-3sg in in bag

c. ísin fòdú sùbá-nì kà ngírki 'he took his shirt out of a bag'
   take-out out in bag
d. mèmú àmà gà kólba gà gà sàrá-nì
   person Dem with bottle in in hand-3m
   'that man has a bottle in his hand'

Sentences 2a–d are ungrammatical if à is inserted before the
prepositions or if it replaces the prepositions. These sentences are also
ungrammatical if the prepositions are deleted. There is thus evidence
that à is a locative copula in Bolewa.

Jungraithmayr 1970 gives the following examples as containing
copula in Fyer:

3 a. ma-a-na       he-is-here
   'he is here'
   b. ma-a-ti
   'he is there' (Jungraithmayr 1970:78)
4 a. yis-a-a-táá he
   'he is there'
b. yit-a-n táá
   she
   'she is there'
c. són-a-n-táá
   they
   'they are there' (ibid.)

My argument that a in 4 a,b,c is indeed a copula rather than a
preposition runs as follows: There exist in Chadic languages, including
Fyer, constructions consisting of two prepositions. In such
constructions, the second preposition has a spatial function, indicating
spatial relationship between objects, (cf. Frajzyngier a.) e.g.:

5 'á díkín ti
   in between with
   'between, under'
   (ibid.)

In 4 a,b, and c, however, the second preposition n or à does not
indicate spatial relationship, but has a most general meaning 'at, in,
toward'. Since two prepositions marking just the locative case do not
coopcurr, the first instance of a may be analyzed as a copula. There
are thus enough arguments to postulate the existence of a locative
copula in Fyer as well.

2.2. Direction of change

If we assume that there exists a connection between the locative
copula and the preposition, we are faced with two possibilities. The
first is that prepositions derive from copulas. The other is that
locative copulas derive from prepositions. I am not going to explore the third possibility, that both forms derive from some other morpheme, because I do not see what this other morpheme might have been.

Assuming that the possibility of prepositions deriving from copulas is true for Chadic would force us to accept the following scenario: Most Chadic languages had a locative copula a; this morpheme became a locative preposition in many languages; subsequently it ceased to function as a copula in most of the languages, and moreover, its function was not replaced by another morpheme. In effect this scenario postulates two processes: grammaticization, viz., introduction of a new grammatical category (preposition), and degrammaticization, i.e., elimination of a grammatical category (locative copula). Although theoretically possible, this scenario involves at least two unmotivated changes, which makes it unlikely. The first is the change from copula to preposition. Although such changes have been postulated for Kwa languages and for Chinese, the motivation for this change in those languages is not clear. The second is elimination of the locative copula. Change from copula to preposition may cause the elimination of a copula, but one would expect the copular function to be assumed by some other morpheme. This, however, did not happen. Most of the languages simply do not have a locative copula. The other problem in accepting the copula to preposition change is the independent recurrence of the same unmotivated change in a number of languages, many not in contact with each other.

If we assume the other possibility, viz., that in one branch the locative preposition became a locative copula, we do not have to deal with the problem of degrammaticization.

Since the possibility that a few languages developed copulas from prepositions is more likely than the possibility that the majority of languages developed prepositions from copulas, subsequently lost the copulas and retained only the prepositions, I consider the change from preposition to locative copula as more likely than the change from locative copula to preposition. The only question to be resolved here is the question of motivation of this change.

2.3. Scenario and motivation for Preposition---Locative copula

The main motivation for the emergence of the locative copula in Bolewa must be sought in the following sequence of changes: first, emergence of new prepositions indicating spatial relationships; second, emergence of new prepositions marking locative case, ga in Bolewa and n in Fyer. The evidence that ga is a locative case marker in Bolewa is
provided by examples 2a,b,d, where *a precedes spatial specifiers 'on', 'in', i.e., behaves like locative case markers in other languages. The evidence that it is an innovation comes from the comparative data on the enclosed chart.

After the new prepositions, and especially the general locative marker, are developed, the old marker *a and the new marker can co-occur as a sequence of morphemes, producing the pattern:

6. NP a Prep NP (examples 2a-e and 4a-c)

Since the "new" marker usually replaces old markers, (compare the spread of '-s' as plural marker in English), the function of the old marker *a becomes unclear, or even nonexistent. The form that served as preposition becomes free to assume some other function, or it can be deleted. One may ask why, out of many possibilities, the new function of a should be that of locative copula. Although I am not sure that anyone will be ever able to give a definite answer to such a question, I would like to propose that in Bolewa the locative copula made possible a better differentiation between locative prepositional phrases as (examples 2a-d), locative clauses, and equational sentences that have the form NP [+DEF] NP/ADJ, e.g.:

7a. mɛmù émɛ nɛsɛrɛrɛ
   person Dem European
   'this man is European'

b. lɛwɔ yɛ gɛdɛdɛtɛ
   child Def tall
   'the child is tall'

c. iɛm mɔndu-nɔ
   3f woman-1sg
   'she is my wife'

d. yusufu mɔy
   'Yusufu is a chief'

Note that insertion of a between subject and predicate in 7a–d would produce ungrammatical sentences, e.g.:

7e *lɛwɔ émɛ a gɛdɛdɛtɛ

3. EQUATIONAL COPULA
3.1. Two types of equational copulas

Equational copulas have been observed in all branches of Chadic. In most of the languages, equational copulas are related to demonstrative pronouns, and for some languages they have actually been claimed to be
derived from one or another kind of demonstrative (cf. Schuh 1983),
thus adding to the data presented in Li and Thompson 1977. However, in
the Ron and Angas groups of West Chadic, the equational copula is
similar to the reconstructed (Frajzyngier a.) preposition marking
locative case rather than to a demonstrative, e.g.:

8 a. yis-a ma doáhà 'he is your father'
    he-COP father (Fyer, Jungraithmayr 1970:76)
b. wàré wí 'who is she?' (Mopun)
    she who

3.2. Arguments for direction Preposition---Equational copula
Evidence that Mopun once had a preposition a is provided not only by
comparative data but also by archaic constructions in this language.
Thus a has the function of preposition in the expressions:

9 a. a yìl 'on the farm, to the farm'
cf. n-yìl 'on the ground'
b. ndirìt kièn kiè sìwà ám á kùwóìr
    a bird benefit chicken drinks water Prep feeder
    'The ndirit bird benefits when chicken drinks from a feeder'

Example 9b. is a proverb, and it has a in prepositional rather than
copular function. The same meaning in everyday language has a
different form, e.g.:

10 às sìwà ám kì kùwóìr 'a dog drinks from the feeder'
    dog        with

The question to be answered is again whether the direction of change
was from equational copula to locative preposition or from preposition
to equational copula. In deciding this question, I would like to use
again the same criteria that I used with respect to the locative copula
in the previous section. The copula-to-preposition change would
involve first the loss of copula *a in most of the languages and the
subsequent emergence in a few languages of a new copula derived from a
demonstrative. Since the probability of a change occurring in a few
languages is higher than the probability of a change occurring in many
languages and producing the same results, I will assume the direction
preposition to copula. Whatever direction one chooses, the motivation
for the change is not obvious. There are two issues involved in the
change from preposition to locative copula: The first is the motivation for the existence of the equational copula, and the second, once such motivation was found, is the question why the preposition rather than some other morpheme was chosen to serve as copula.

3.3. Motivation for the existence of equational copula

Normally a question about the reasons for the existence of a given grammatical category does not arise. When, however, we find that within the same family, and for the same semantic function, some languages have a grammatical category that others do not, the question about the reasons for the existence or nonexistence of a category has to be posed and ultimately resolved.

In Mopun the copula ə is used only in two functions: one as a contrastive focus marker, and the other in the equational function in constructions of the type "(X) is Y," where Y may be only a nominal predicate, e.g.:

11 a. miskóom á nāāt  'the chief is a white man'  
    chief white man
b. nāāt ni á miskóom ni  'the white man is the chief'  
    Def Def

c. miskóom ni á mòpün  'the chief is a Mopun man'  
    child

d. miskóom ni á láā  'the chief is a child'  
    child

e. mbī-sē á lūā ık  'the food is goat's meat'  
    thing-eat meat goat

The presence of the copula in Mopun allowed for better differentiation among several structures involving two NPs. The structure NP NP has a part-whole, or possessive function, e.g.:

12 a. flòk láā  'a boy's liver'
    liver boy
b. pā ciân  'a blade of the hoe'
    blade hoe
c. miskóom mòpün  'a chief of Mopun' (cf. 11c)
    d. láā miskóom  'a child of the chief' (cf. 11d)
    e. mbī-sē ık  'goat's food' (cf. 11e)

Copula is the only element in Mopun that distinguishes between an equational construction, which has the copula, and a part-whole construction, which does not. Additional evidence for the functional
justification of equational copula comes from the fact that the copula cannot occur in sentences with adjectival predicates, i.e., when there is no possibility of semantic ambiguity, e.g.:

13 a. wùr *a báì/kát  'he is strong/small'
   3sg,m  strong/small
b. wàr *a rét  'she is beautiful'
   3sg,f  beaiful
c. wàr *a bís  'she is ugly'

In fact, the presence or absence of copula may determine whether the following polysemic item is to be interpreted as a noun or an adjective, e.g.:

14 a. wùr ráp  'he is dirty'
   b. wùr à ráp  'he is garbage' (an obvious insult)

Another piece of evidence for the functional justification comes from the fact that copula usually does not occur in existential sentences with prepositional predicates, i.e., once again, when there is no possibility of any ambiguity, e.g.:

15 a. wùr kí siwól  'he has money'
   3sg with money
b. dò án n-tül  'yesterday I was at home'
   yesterday 1sg Prep-home
c. mùn gétkí wàr  'we were with her'
   1pl Past with 3f

The only case when a occurs with a prepositional phrase predicate is in an interrogative sentence, e.g.:

15 d. wàrákí wi  'with whom is she?'
   she with who

The equational construction in Mopun may have the form of a NP, i.e., it may be lacking the first NP. This is the case when the first element of the equation is known or has been mentioned before, e.g.:

16 a. dësì à mwèṣ óŋ?  'is this wine?'
   Dem wine Interr
b. í, á mwés 'yes, it is wine'

The form a NP is typically used in response to the equivalent of the question 'What is this' accompanied by a hand or head gesture, e.g.:  
17 à jép fén mó '[these] are my children'  
children 1sg Pl

The fact that the existence of a morpheme is functionally justified does not imply that it must emerge, and moreover, in our case, it does not imply that a copula must emerge from a preposition rather than from some other source.  
3.4 Role of contrastive focus  
In many languages, the same construction that is used in an equational sentence is used as well in a contrastive focus marking, often in association with a relative clause as in example 18.

18 a. It is the cat that killed the bird, not the dog.  
b. C'est le chat qui a tué l'oiseau, ce n'est pas le chien.

I do not think that one can discuss the relationship between the preposition and the equational sentence and neglect the presence of contrastive focus constructions. In Mopun, contrastive focus marking has the form a NP, i.e., the same form as the equational sentence without the first element of equation. Unlike in I. E. languages, the focused element does not have to be fronted, and in fact an NP in any position in the sentences can be preceded by a. Moreover, in contrast with equational sentences, the focused element can be a prepositional phrase, not only a noun phrase, e.g.:  
19 a. à D. amerika bá à N. káś Neg  
   Neg  
   'It is D. who is in America, not N.'  
b. n- kwatà sii siiwól bá à sii ik káś  
   1SG-pay with money Neg with goat Neg  
   'It is with money that I paid, not with a goat'  
c. à dím à n-tülu bá a mákárántá káś  
   1sg,m go Prep-home Neg school Neg  
   'go home, not to school'  
d. n-täl à tibà bá à súgà káś  
   1sg-ask tobacco Neg sugar Neg
I asked for tobacco, and not for sugar

\[ n\text{-tâl tîbà à pì wûr bá ákà kàs } \]
\[ \text{Prep 3sg 2sg,m} \]
\[ 'I asked him for money, not you' \]

Assuming that preposition is an initial element in derivation, and that copula occurs in both equational and contrastive focus constructions, we have three possibilities:

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
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<tbody>
<tr>
<td>a. Preposition---(\rightarrow) Equational---(\rightarrow) Contrastive focus</td>
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<tr>
<td>b. Preposition---(\rightarrow) Contrastive focus---(\rightarrow) Equational</td>
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<tr>
<td>c. Preposition</td>
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<td></td>
<td>(\rightarrow) Equational</td>
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<td>(\rightarrow) Contrastive focus</td>
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</table>

In order to reconstruct the Stage 1 process, we may look at the Stage 2 process to find out whether it will provide some relevant information. Harries-Delisle 1978 claimed that all contrastive focus constructions have an underlying equational sentence. As evidence to support her claim she showed that in a number of languages contrastive focus constructions share many elements with equational sentences. Behind the claim concerning the direction of derivation is the intuitive assumption that equational sentences are more basic and historically precede contrastive focus constructions. Note, however, that there are contrastive focus constructions that differ from equational sentences in not having a copula. Thus in Margi, a Central Chadic language, 3 p. m. sg. pronoun \(nàjá\) may rarely and optionally occur in equational constructions in the function of copula, e.g.:

21 \(hýà kù nàjá mələ\) 'this dog is a bitch' (Hoffmann 1963:73)
\[ \text{dog Dem 3sg.m. bitch} \]

The contrastive focus construction in Margi is formed with a demonstrative pronoun \(nù\) or \(ŋ\), e.g.:

22 \(nì ŋ zàmìŋ\) 'I am your brother'
\[ 1 \text{ brother} \] (Hoffmann 1963:89)
In order to explain the relationship between the equational sentence and contrastive focus construction in Mopun, I propose a functional analysis. The aim of such an analysis is to find a common semantic feature that would explain their syntactic similarity. It is possible to claim that the entailment of the construction "X is Y" is that X cannot be any other thing but Y. The contrastive focus construction has a similar function in Mopun, for in most of the cases it also has the same entailment, viz., the construction "it is X that Verb" entails "and not any other thing but X." An implication of this analysis is that the equational sentence is actually a contrastive focus construction. If one assumes that construction X is Y in Mopun is a contrastive focus, then the element that is marked as contrastive focus is the one that is preceded by a, hence it must be Y. Notice now that in equational sentences in English one can mark either of the arguments as contrastive focus, e.g.:

23 a. John is a soldier.
    b. It is John, who is a soldier, (not Peter).
    c. John is a soldier, not a student.

In the equational sentence in Mopun one can put in contrastive focus the first element, i.e., the subject but not the predicate, e.g.:

24 à náát à miskóom ní 'It is a white man who is the chief' (cf. 11b)

Thus the constructions are similar and we are back to the question of derivation. In favor of the direction contrastive focus --> copula one can bring out the fact that in the texts that I have collected, including a lengthy conversation among three speakers, equational sentences are exceedingly rare. On the other hand, the contrastive focus constructions are very frequent. In favor of the derivation equational --> contrastive focus one may bring out only the intuitive judgment that equational sentences are somehow more basic. In any case, there is no definite solution to the direction of derivation at Stage 2.

We have to go back to Stage 1. The question then is which is more likely, that the preposition became first a copula or a contrastive focus marker?

Let us consider a scenario in which a loses its prepositional function in favor of n, the modern locative case marker. We know from the comparative evidence and from the archaic constructions illustrated in 9 that this must have happened. When n became the new locative case
marker, we had the following construction:

25 NP a n NP

The old locative case marker a did not have a clear interpretation. At this stage it might have become reinterpreted as an emphatic or a contrastive focus marker. At present this scenario appears to me to be the most likely. Note that there is really no possibility for a in 25 to become an equational copula because it is followed by a prepositional phrase. At best it can become a locative copula, but that did not happen. Locative sentences in Mopun have the form NP Prep NP, i.e., they do not have a copula. Thus for Stage 1 we have the derivation: **preposition---->contrastive focus**. Hence for Stage 2 we have to accept the counterintuitive **contrastive focus---->equational**.

It appears that in Margi, which was shown to have contrastive focus construction different from equational sentence, there are constructions that have the same form as contrastive focus, but that started to acquire the function of equational sentence, e.g.:

26 tátáŋ mɔnãgù 'that one is good'
    that  good         (Hoffmann 1963: 69)

4. CONCLUSIONS

In Fyer, both locative and equational copulas seem to be derived from the preposition. Locative prepositions served as the source for the locative copula in Bolewa and for the equational copula in Mopun. For a certain stage in Proto-West Chadic there might have existed the following set of constructions involving two NPs:

27 Constructions containing two NPs in Proto-(West) Chadic

<table>
<thead>
<tr>
<th>Form</th>
<th>Function</th>
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<tbody>
<tr>
<td>NP NP</td>
<td>Equational</td>
</tr>
<tr>
<td>NP NP</td>
<td>Possessive (Schuh 1981)</td>
</tr>
<tr>
<td>NP a (prep) NP</td>
<td>Locative (sentence and phrase)</td>
</tr>
</tbody>
</table>

A series of syntactic changes resulted in the following constructions involving two NPs in Bolewa and Mopun:
Although in both languages discussed in the paper copulas were derived from the same source, the locative copula was derived directly from the preposition while the equational copula was derived from the contrastive focus construction. Thus the study indicates not only that a language may have a copula derived from prepositions, but also that a contrastive focus construction may also be derived from a preposition. Moreover, it has been shown that the equational copula may be derived from the contrastive focus construction.

An additional implication of the study points to the fact that the grammaticization process and in particular the direction of the process and the result of the process do not depend uniquely on the semantic properties of the source (contrary to claims in Bybee and Pagliuca 1985) of the grammatical morpheme, but rather are a result of a number of factors. Only the extension from contrastive focus to include also equational sentence was possible because of the semantic extension. The change from preposition to locative copula and to contrastive focus marker was in no way dependent on semantic properties of the source.

This paper points to a factor that has been totally neglected in the current studies of grammaticization, viz., the properties of the system into which the new grammatical form is incorporated. The fact that a became a locative copula in Bolewa but an equational copula in Mopun can be explained only by the grammatical systems involving two NPs that the two languages had before the copulas emerged. If we consider that the needs of communication include more than just realization of any single semantic category, then we may clearly see that the emergence of copulas in the two languages contributed to the differentiation between constructions having different functions, hence improved the system used in communication. This may well have been the main motivation by which a, rather than being deleted, acquired a new function.
<table>
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<tr>
<th>Language</th>
<th>Preposition</th>
<th>Locative</th>
<th>Equational</th>
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<td>Hausa</td>
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<td>i</td>
<td>?</td>
<td>--</td>
</tr>
<tr>
<td>Gude</td>
<td>a, dà</td>
<td>--</td>
<td>n∂</td>
</tr>
<tr>
<td>Logone</td>
<td>na</td>
<td>?</td>
<td>--</td>
</tr>
<tr>
<td>Buduma</td>
<td>a</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Munjuk</td>
<td>a</td>
<td>?</td>
<td>na</td>
</tr>
<tr>
<td>Kera</td>
<td>a...a</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Mesme</td>
<td>à</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Masa</td>
<td>tá</td>
<td>?</td>
<td>ti, mi, si (DEM)</td>
</tr>
</tbody>
</table>

**FOOTNOTES**

1. Work on this paper was supported by an NSF Grant BNF-8418923 and by the Center for Applied Humanities, University of Colorado. Data on Mopun, Cibak, Pero, Hona, Bolanci, and Mandara are from my own fieldnotes. I am grateful to Daniel Barreteau, Beat Haller, Theda Schumann, and Henry Tourneux for the data on Mofu, Zulgo, Masa, and Mulwi. Data on other languages were taken from sources listed in references. I am grateful to Darap Dawurung, Wesley Kumtong Damar, and Wartung Lukden, all speakers of Mopun, and to Samuel Bulus Gadaka,
speaker of Bolewa, for patience and help in my work.

2. Jungraiithmayr 1970:57 attributes the difference between a and n
in 4 a and b, to the gender distinction.

3. I am using 'may' rather than 'is' because the description of Fyer in
Jungraiithmayr 1970 is not, and doesn't pretend to be a full grammar, and
there may still be some other sources for a in 4 a, b, c.

4. The emergence of other prepositions is linked with changes
involving serial verb constructions, locative deictics, and verbal
extensions, (cf. Frajzyngier a. and b.)

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