Encoding the distinction between location, source and direction: a typological study

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Abbreviations: ABL = ablative, ALL = allative, APPL = applicative, AUX = auxiliary, DEF = definite, ESS = essive, F = feminine, LOC = locative, M = masculine, O3PL = object marker, 3rd person plural, PFT = perfect, PL = plural, S1SG = subject marker, 1st person singular, S2SG = subject marker, 2d person singular, etc., S3:1 = subject marker, 3rd person, class 1, S3:2 = subject marker, 3rd person, class 2, etc., SEQ = sequential; in the glosses of the Tswana examples, numbers indicate the noun classes to which the nominal forms belong.

1. Introduction

All languages must encode in some way or another the distinction between localization, the source of motion, and the direction of motion, but they differ in the way spatial adpositions or case affixes participate in the encoding of this distinction. The most recent reference on this question is *Shay & Seibert 2003*, which includes a series of case studies on a variety of languages. This articles proposes a typological approach of the contribution of verbs and adpositions to the encoding of this distinction.

Logically, five different patterns can be imagined:

–Pattern 1: each of the three meanings essive, ablative and allative appears without any ambiguity in the choice of adpositions or case affixes;

–Patterns 2a-c: locative adpositions or case affixes express without ambiguity one of these three types of meanings only, and conflate the other two, with three logical possibilities: (a) ablative vs essive-allative, (b) allative vs essive-ablative, and (c) essive vs allative-ablative;

–Pattern 5: the use of locative adpositions or case affixes is not sensitive to the distinction between localization, the source of motion, and the direction of motion.

2. The situation in the languages of Europe

In the languages of Europe, from the five logically possible patterns, only two are commonly found: Pattern 1, in which each meaning is encoded by means of specialized adpositions or case affixes –ex. (1) & (2), and Pattern 2a, in which essive and allative conflate, and ablative only is expressed by means of specialized adpositions or case affixes –ex. (3) & (4).

(1) *Spanish*[i]

    a. *Los   niños   están   en   la   playa*
       DEF.M.PL   child.PL be.S3PL ESS DEF.F.SG beach
       'The children are on the beach'

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[i] Examples without indication of a source have been obtained from informants.

b. *Voy   a   la   playa*
go.S1SG   ALL   DEF.F.SG   beach
'I am going to the beach'

c. *Vengo   de   la   playa*
come.S1SG   ABL   DEF.F.SG   beach
'I am coming from the beach'

(2) *Basque*

a. *Bilbo-n   bizi   naiz*
Bilbao-ESS living   be.S1SG
'I live in Bilbao'

b. *Autobus   hau   Bilbo-ra   doa*
bus   this   Bilbao-ALL go.S3SG
'This bus is going to Bilbao'

c. *Autobus hau   Bilbo-tik   Donostia-ra   doa*
bus   this   Bilbao-ABL San+Sebastian-ALL   go.S3SG
'This bus is going from Bilbao to San Sebastian'

(3) *Catalan*

a. *Els   hem   trobat   a   la   botiga*
O3PL   AUX.S1PL   find   ESS/ALL   DEF.F.SG shop
'We found them at the shop'

b. *Els   hem   enviat   a   la   botiga*
O3PL   AUX.S1PL   send   ESS/ALL   DEF.F.SG shop
'We sent them to the shop'

c. *Vénen   de   la   botiga*
come.S3PL   ABL   DEF.F.SG shop
'They are coming from the shop'

(4) *Bulgarian*

a. *Majka-ta   na   Nikola   raboti   v   bolnica-ta*
mother-DEF.F.SG of   Nikola   work.S3SG   ESS/ALL   hospital-DEF.F.SG
'Nikola's mother works in the hospital'

b. *Tja   vliza   v   bolnica-ta*
she   enter.S3SG   ESS/ALL   hospital-DEF.F.SG
'She is going into the hospital'

c. *Tja   izliza   ot   bolnica-ta*
she   go/come+out.S3SG   ABL   hospital-DEF.F.SG
'She is going out of the hospital'

This does not mean that every European language should be easy to classify as a language following Pattern 1 or as a language following Pattern 2a. In general, in each individual European languages, one of these two patterns clearly predominates, at least regarding the uses of the most basic spatial adpositions (i.e. those that provide a minimal specification of the spatial configuration to which they refer). But the predominance of one type in a language does not exclude the presence of the other. In fact, the general rule in the languages of Europe is the coexistence of the two types, and the uses of a given adposition or case affix do not necessarily conform to the same type in all contexts. For example, in most contexts, the Spanish preposition *en* unambiguously expresses an essive meaning, in opposition to the allative preposition *a*; but, with verbs expressing penetration, *en* is compatible with an allative meaning (as in *Entró en la habitación* '(S)he came/went into the room'), and the same is true of the essive case ending of Basque.

In other words, there is considerable variation, among the languages of Europe, and even within the limits of each individual language, regarding the sensitivity of adpositions and case affixes to the distinction between localization and direction of a motion. By contrast, in the languages of Europe, ablative is almost always obligatorily encoded by means of adpositions or case affixes that do not occur in contexts implying an essive or allative meaning. The Italian preposition *da* –ex. (5)– is an exception to this rule, but such exceptions are not common in European languages, and French –ex. (6)– illustrates a more common situation, in which the spatial preposition expressing the meaning carried by It. *da* in ex. (5) cannot occur in an ablative context without combining with a specialized ablative adposition.

(5) *Italian*

   a. *Abito   da   mio   zio*
      live.s1SG   DA   my   uncle
      'I live at my uncle's'

   b. *Vado   da   mio   zio*
      go.s1SG DA   my   uncle
      'I am going to my uncle's'

   c. *Vengo   da   mio   zio*
      come.s1SG DA   my   uncle
      'I am coming from my uncle's'

(6) *French*

   a. *J'habite   chez mon oncle*
      s1SG-live   CHEZ my   uncle
      'I live at my uncle's'

   b. *Je   vais chez mon oncle*
      s1SG go   CHEZ my   uncle
      'I am going to my uncle's'

   c. *Je   viens   de   chez mon oncle*
      s1SG come   ABL CHEZ my   uncle
      'I am coming from my uncle's'

3. The question of typological generalizations

The question we must examine now is whether the overwhelming predominance of Patterns 1 and 2a observed in the languages of Europe extends to the languages of the world. In fact, of the three remaining types, only Types 2b & 2c seem to be really exceptional.

A fairly obvious typological generalization is that, if adpositions or case affixes conflate two of the meanings essive / allative / ablative and provide a distinct expression for the third one, the meanings that conflate are almost always essive and allative: the pattern 'allative vs essive-ablative' (Pattern 2b), illustrated by Dinka –ex. (7), seems to be extremely rare[ii], and I know of no attestation of the pattern 'essive vs allative-ablative'.

(7) *Dinka*[1] (Andersen 2002)

    a. *tὲ̰ik   à̰-tɔ̰̀ok   mà̰ac*
       woman DECL-make+fire fire.ABS
       'The woman is making a fire'

    b. *kὺ   jɔ̰̀ol   ṯá̰a   mḛ̂ɛɛc*
       and do+then.3SG press.CF.NF fire.ALL
       'and then he pressed it into the fire'

    c. *myὲ̰ḛṯ à̰-tɔ̀   mɛ̰́ɛɛc*
       food   DECL-be+present fire.ESS/ABL
       'The food is on the fire'

    d. *rɛ̰́ɛc à̰-mὶul   bὲ̰y   mɛ̰́ɛɛc*
       fish   DECL-crawl.CP out.ALL fire.ESS/ABL
       'The fish is crawling out from the fire'

By contrast, Pattern 3, exceptional in the languages of Europe and of many other areas, is common and event predominant in some areas, in particular in Subsaharan Africa.

4. Systems of spatial adpositions or case affixes that do not mark the distinction between localization, source, and direction

Languages in which spatial adpositions or case affixes never participate in the encoding of the distinction between localization, the source of motion, and the direction of motion, are extremely common in Subsaharan Africa, in particular within the Niger-Congo phylum.

In such languages, locative expressions (adposition phrases, case-marked noun phrases or locative adverbs) by themselves provide no clue to the choice between the roles of localization, source or direction. Localization is the default interpretation, and the roles of source or direction can be assigned by verbs only. The general rule is that each verb of motion has at most one locative argument to which it unambiguously assigns, either the role of source, or that of direction. For example, the verbs commonly glossed as 'come' in bilingual dictionaries have the same deictic implications as English *come* (motion towards the deictic center), but the only role they can assign to their locative argument is that of direction; consequently, their locative argument necessarily refers to the deictic center, and it is absolutely impossible to refer to the source of the motion by simply combining them with an adposition phrase or locative adverb; in order to express 'come

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[ii] The only attestations I know of concern languages spoken in North East Africa –see for example *Mous 1993:105* on Iraqw.

from', another verb, commonly glossed as 'leave' (and by itself devoid of any deictic implication) must be used, alone or in combination with the deictic verb 'come'.

More generally, in the languages of Subsaharan Africa that follow this pattern, constructions in which a single motion verb combines with two locative expressions referring resp. to the source and the direction of motion are impossible: the meaning expressed in English by a sentence such as *The man went from the village to the river* necessitates the combination of two verbs in a construction whose literal meaning is something like *The man left the village and went to the river* or *The man, after leaving the village, went to the river* –ex. (8).

(8) *Tswana*

   a. *Monna o   dule   motse-ng*
      1man   s3:1 leave.PFT   3village-LOC
      'The man left the village'

   b. *Monna o   ile   noke-ng*
      1man   s3:1 go.PFT   9river-LOC
      'The man went to the river'

   c. *Monna o   dule   motse-ng   a   ya   noke-ng*
      1man   s3:1 leave.PFT   3village-LOC s3:1.SEQ go   9river-LOC
      'The man went from the village to the river'

An interesting observation is that, in the languages of Subsaharan Africa, this kind of formulation, in the particular case of motion verbs, does not necessarily imply a more general tendency to encode events treated as single events in most languages by means of sequences of verbs. It is not limited to so-called serializing languages, since it is independently motivated by the impossibility to encode the distinction allative vs ablative by means of adpositions or case affixes.

In many West-African languages, the role of source can be assigned by a very limited set of verbs of motion, in some languages by one verb only. The other verbs of motion,

–either assign the role of direction (and consequently must be combined with a verb glossed as 'leave' to encode the source of the motion),

–or can assign neither the role of source nor the role of direction (and consequently must be combined with a verb glossed as 'leave' to encode the source of the motion, and with a verb glossed as 'go' to encode the direction of the motion).

For example, in many West-African languages, even among those that have no marked tendency to serialization, the equivalent of the English construction *run from A to B* necessarily involves three verbs, something like *leave A run go B*. But the 'exoticism' of this construction should not conceal the fact that it would not be correct to characterize it as more 'analytical' than its English equivalent: the real contrast is that the words that act as role assigners in this construction are grammatically verbs, and not adpositions.

It may be interesting to observe that, in African languages, the properties of the verbs of motion as role assigners are often different from those suggested by their commonest English equivalent. For example, the Baule verb *wandi* 'run' cannot assign the role of direction (and must combine with *kɔ* 'go' or *ba* 'come' to express the direction of the motion), but can directly combine with a locative expression to which it assigns the role of source –ex. (9).

(9) *Baule*

   a. *wàndí kɔ̀ bé bò*
      run   go   they LOC
      'Run towards them!'

   b. *wàndí bé bò*
      run   they LOC
      'Run away from them!'

    In the African languages that strictly follow this pattern and that have an applicative derivation, a frequent use of the applicative suffix is to derive verbs assigning the role of goal to a locative complement from verbs that, in their non-derived form, either don't have any locative argument, or have a locative argument to which they assign the role of source[iii].

    For example, Tswana has an applicative suffix whose canonical use can be defined as licensing the presence of a direct object representing a participant that cannot be encoded as a core argument of the same verb in its non-derived form. The same applicative suffix can license the addition of direct objects with a variety of semantic roles, as can be seen from ex. (10) & (11).

(10) *Tswana*

   a. *Ke   bereka thata*
      S1S work   hard
      'I am working hard'

   b. *Ke   berekela   bana*
      S1S work.APPL 2child
      'I am working for the children'

   c. *Ke   berekela   tiego*
      S1S work.APPL 9delay
      'I am working because of the delay'

(11) *Tswana*

   a. *Kgosi e   ne   ya   atlhola   monna*
      9king   S3:9 AUX S3:9.SEQ condemn.PFT 1man
      'The king condemned the man'

   b. *Kgosi e   ne   ya   atlholela   monna bogodu*
      9king   S3:9 AUX S3:9.SEQ condemn.APPL.PFT 1man   14theft
      'The king condemned the man for theft'

   c. *Kgosi e   ne   ya   atlholela   monna loso*
      9king   S3:9 AUX S3:9.SEQ condemn.APPL.PFT 1man   11death
      'The king condemned the man to death'

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iii Some sources attest also the use of applicative derivation for indicating that a locative complement is assigned the semantic role of source –see for example *Mous 2003* on Mbugu.

The non-canonical uses of the applicative have in common with the canonical use that they imply a modification of the valency of the verb that leaves unchanged the semantic role assigned to the subject, but that cannot be described as the introduction of an additional direct object. In particular, with verbs of motion that, in their non-derived form, imply a locative argument to which they assign the role of source, the applicative form has the same formal valency as the non-derived form (it governs a locative expression with the syntactic status of oblique argument), but assigns to its locative argument the role of direction, as illustrated in ex. (12a-b) by the Tswana verb *huduga* 'change one's residence'. Note that, in order to express 'move from A to B', Tswana combines the non-derived form of *huduga* introducing the locative expression referring to the source of the motion, and the applicative form of the same verb introducing the locative expression referring to the direction – ex. (12c).

(12) *Tswana*

   a. *Ke   tlaa huduga ko   Kanye*
      S1S   FUT   move   LOC   Kanye
      'I am going to move from Kanye'

   b. *Ke   tlaa hudugela   ko   Gaborone*
      S1S   FUT   move.APPL LOC   Gaborone
      'I am going to move to Gaborone'

   b. *Ke   tlaa huduga ko   Kanye ke   hudugele   ko   Gaborone*
      S1S   FUT   move   LOC   Kanye S1S   move.APPL.SEQ LOC   Gaborone
      'I am going to move from Kanye to Gaborone'

Another particularity of the African languages that follow this pattern is that place names used as locative arguments or adjuncts generally do not combine with the locative case affixes or adpositions that are obligatory for common nouns fulfilling the same functions.

For example, in Tswana, place names in locative function may combine with locative prepositions that carry some precisions regarding the configuration, as in ex. (12), but locative prepositions are always optional, and place names can occur in locative function devoid of any locative marking –ex. (13a-b). Common nouns combine with locative prepositions in the same conditions as place names, but most of them, when used in locative function, must take a locative affix, irrespective of the presence or absence of a locative preposition – ex. (13c-f).

(13) *Tswana*

   a. *Ke   tlaa huduga ko   Kanye*
      S1S   FUT   move   LOC   Kanye
      'I am going to move from Kanye'

   b. *Ke   tlaa huduga Kanye*
      S1S   FUT   move   Kanye
      id.

   c. *Ke   tlaa huduga ko   motse-ng*
      S1S   FUT   move   LOC   village-LOC
      'I am going to move from the village'

d. *Ke   tlaa   huduga motse-ng*
   s1s   FUT   move   village-LOC
   id.

e. **Ke   tlaa   huduga   ko motse*

f. **Ke   tlaa   huduga   motse*

A possible explanation is that, generally speaking, locative markers may carry three types of information:
   –the indication that an entity is viewed as a locative landmark,
   –the indication that a locative landmark marks the localization of an entity, the source of a motion or the direction of a motion,
   –precisions regarding a spatial configuration,
and consequently, in languages whose locative markers never participate in the encoding of the distinction between localization, the source of motion, and the direction of motion, the addition of locative markers to place names in locative function is really motivated only if there is some need to specify a particular configuration, since their very meaning predisposes them to be interpreted as referring to a locative landmark.

5. Conclusion

As indicated above, Subsaharan Africa shows a particular concentration of languages in which locative adpositions or case affixes never participate in the encoding of the distinction between localization, the source of motion, and the direction of motion. This does not mean that this particularity is restricted to African languages. A similar situation has been signaled for example in Nahuatl.[2] However, the absence of any distinction between localization, the source of motion, and the direction of motion at the level of adpositions or case affixes does not necessarily imply an organization of the valency of verbs of motion identical to that found in African languages. Other strategies can be used to retrieve the distinction between source and direction of motion, as illustrated by Nahuatl.

It has been mentioned in Section 4 that, in African languages whose locative adpositions or case affixes give no clue to the distinction between source and direction of motion, each verb of motion unambiguously assigns to its locative argument, either the role of source, or that of direction; in particular, the deictic verbs glossed as 'come' in bilingual dictionaries unambiguously assign the role of direction to the locative expressions they combine with. By contrast, in Nahuatl, the verbs of motion may leave open the interpretation of their locative argument as source or direction of the motion. This is in particular true of the verb *huītz* 'come', and the only way of avoiding the ambiguity is to add a deictic adverb to the locative expression – ex. (14).

(14) *Nahuatl* (Launey 1981)

a. *Ōmpa   câ*
   there   be.s3s
   'He is there'

b. *Nicān   câ*
   here   be.s3s
   'He is here'

c. *Ōmpa   Mexìco huītz*

    there   Mexico come.s3s

    'He is coming from Mexico'

d. *Nicān   Mexìco huītz*

    here   Mexico come.s3s

    'He is coming to Mexico'

Moreover, Nahuatl has applicative verb forms whose canonical uses are very similar to those of Bantu applicatives, but, contrary to what is observed in Tswana (see ex. (12) above), Nahuatl applicative derivation is not used to modify the roles assigned by verbs of motion to their locative arguments.

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Abstract: *This article analyses the contribution of adpositions or case affixes to the encoding of the distinction between localization, the source of motion, and the direction of motion. It proposes a typology, and examines the case of languages in which locative adpositions or case affixes are not sensitive to these distinctions. The attention is drawn to a stretegy particularly common among the languages of Subsaharan Africa, whereby the valency properties of motion verbs are organized in such a way that the distinction is always unambiguously encoded at the level of the verb.*

Key-words: *verbs of motion, adpositions, case, valency*