Compound Verbs and Modalities of Process in Yulu (Central Sudanic)

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1. Introduction

Yulu is a Central Sudanic language (Bongo-Bagirmi group) which is spoken by small communities traditionally settled both in the Central African Republic (Préfecture de la Vakaga) and the Republic of the Sudan (Bahr-el Ghazal and Southern Darfur Provinces).

Yulu discourse exhibits a fair number of verb clusters which constitute a striking feature of the language and raise some questions concerning their syntactic status. Such a grouping is illustrated in example (1) below. (The illustration is taken from an animal story: the mud wasp and the hare go for a walk, the rain comes, the mud wasp hides in hare's nose and now in order to check whether the rain has stopped...)

(1) ằmằadɔ́   ìyɔ̄.lítɔ̀.láayɔ́   jằa-ngè dɔ̀ sāamɔ̀
     mud wasp bends.brings out.lets come   head-its of nose
     gōomɔ̄
     hare
     'the mud wasp bends its head out of hare's nose'

The cluster is made up of the three following verbs: *ìyɔ̄* 'bend (head)', *lítɔ̀* 'let go/come out', which does not exist as an isolated verb but looks like a transitive regularly-derived verb from *ìtɔ̀* 'go/come out', and *láayɔ́* 'let come' which again, although never isolated, looks like a derived transitive from *àayɔ̄* 'come'.

As will be argued below, such clusters do not allow insertion of any morpheme and act as single, although structurally complex, predicates with respect to the arguments they share as a whole. They are usually composed of two, three or even four verbs and are rather common in the texts (about three clusters for every four single verbs) as the following table shows:

(counts from the tale [Tumengeer and the frog])

| single verbs | clusters of | | | total |
	2 verbs	3 verbs	4 verbs	
117	65	20	3	117 // 88

The aim of this paper is twofold:

(i) I will expound the main morphosyntactic features of these complex forms, which I call compound verbs, and situate them within a more general typology of serial verbs;[1]

(ii) I will show that within this common formal pattern, certain component verbs tend to behave in specific ways which clearly indicate trends toward lexicalization and grammaticalization.

2. The structure of verbs

Apart from a very few monosyllabic exceptions, Yulu verb stems have a (C)V(:)Cə pattern. The main patterns are illustrated in (2):[2]

(2) VCə   *àlə̄*   'swallow'
     V:Cə   *ūuɓə̀*   'get, find'
     CVCə   *rùsə́*   'pound'
     CV:Cə   *ndéɛdə̂*   'hide'

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1. I am very grateful to Roger Blench, Matthew Dryer, Orin Gensler and Mechthild Reh for drawing my attention to the situation of Kalam (Pawley, 1993) and a more general view of serial verbs (Foley and Van Valin, 1984). Matthew Dryer very kindly provided me with several references on this topic.
2. Yulu is a tone language with four relevant levels: high (*á*), mid (*ā*), low (*à*) and extra-low (*ä̀*).

The usual structure of the verb word is made up of the following morphemes:

(i) segmental subject person marker (e.g. *m-/mə̄* 'I', *j-/jə̀* 'we', *n-/nə̄* 'Logophoric'), which may be null (*ø* 'thou/you', '(s)he/they' and nominal subject);

(ii) (OPTIONAL) verbal dependency marker (e.g. *g-/gə* 'Conditional', *k-/kə* 'Relativizer', *t-/tə* 'Dependent');

(iii) verb stem (some marked by two alternating tone patterns according to the subject);[3]

(iv) (OPTIONAL) verbal plural marker (*-kē*)

This common pattern is illustrated by examples in (3) below: [4]

(3) *m-úuɓə̀*   'I find'
     I-find

     ūuɓə̀   '(s)he finds'
     (s)he/they+find

     ūuɓə̀-kē   'they find'
     (s)he/they+find-PL

     ...nə̄-t-ūuɓə̀   '[...says that] ...himself/herself finds'
     ...LOG-DEP-find

     ...nə̄-t-ūuɓə̀-kē '[...say that] ...themselves find'
     ...LOG-DEP-find-PL

No other morpheme of any kind can appear within this frame, i.e., between the personal marker or the dependency marker and the verb stem, or between the verb stem and the plural marker. The

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3. This is a typical feature of Bongo-Bagirmi languages. It allows differentiation between 2d and 3d person for which the segmental marker is null, e.g., *m-úuɓə̀* {I-find} 'I find', *úuɓə̀* {thou/you+find} 'you find', *ūuɓə̀* {(s)he/they+find} '(s)he finds', *lə̀agə́ ūuɓə̀* {somebody find} 'somebody finds'.

4. The following abbreviations are used throughout the examples: COMPL Completed, DEP Dependent, IMMSUCC Immediate Successive, INTENS Intensive, Intrans. Intransitive, LOG Logophoric, NEG Negation, PL Plural, PL.SUBJ. plural subject, PROGR Progressive, RESULT Resultative, Trans. Transitive.

Negative *cɔ̄* and the Resultative (near/far) *´tè/´tà* appear after the Plural, if any, as in (4):

(4) *ūuɓə̀-kē*   *cɔ̄*   'they didn't find'
     (s)he/they+find-PL   NEG

     ūuɓə̀-kē   *´tà*   *njàʔə́*
     (s)he/they+find-PL   RESULT   rope
     'they have found the rope'

3. Compound verbs

In case of compounding, the two (or more) verb stems are tightly bound together. If the second component is a consonant-initial stem, each component keeps its segmental identity. As a notational convention, the stems are separated by a dot in such a case, as in (5):

(5) *njàamə́* + *láʔə̀*   =   *njàamə́.láʔə̀*
     'sit'   'cool'   'rest (one's body)'

If the second component is a vowel-initial verb, neighboring vowels overlap: only the tone of the first component's last vowel and the quality of the second component's first vowel are preserved. In this case, the compound is written as a single word, as in (6):

(6) *njàamə́* + *àʔɔ̄*   =   *njàamáʔɔ̄*
     'sit'   'breathe'   'rest, take a rest'

In every case, only the tonal alternation –if any– of the first verb is preserved, while the tone pattern of the following verb(s), which may be partly lost, becomes invariable. Example (7) illustrates the tonal behavior of different kinds of compounds; single and compound verbs are indicated with their two alternating patterns (tone 1/tone 2):

(7) *ə̀zɔ̄/āzɔ̄* + *nzìgə̀/nzīgə̀*   =   *ə̀zɔ̄.nzìgə̀/āzɔ̄.nzìgə̀*
     'sweep'   'be clean'   'sweep clean'

     njàamə́/njáamə́ + *láʔə̀/láʔə̀*   =   *njàamə́.láʔə̀/njáamə́.láʔə̀*
     'sit'   'cool'   'rest (one's body)'

njàamə́/njáamə́ + *àʔə̄/āʔə̄* = *njàamáʔə̄/njáamáʔə̄*
'sit' 'breathe' 'rest, take a rest'

Beside possible segmental overlapping and tonal invariance, the strong cohesion of the compound verb is shown by the facts that it does not allow insertion of any morpheme, and it behaves as a single unit relative to the morphemes (i), (ii) and (iv) introduced in Section 2, which appear only once with the compound cluster, as shown in example (8):[5]

(8) *...nə̄-tə̀-njàamə́.láʔə̀-kē   cə̄   yáà-tè*
     ...LOG-DEP-sit.cool-PL   NEG   body-their
     '[...say that] ...themselves do not rest (their body)'

     ...nə̄-tə̀-njàamə́.láʔə̀-kē   ´tà   yáà-tè
     ...LOG-DEP-sit.cool-PL   RESULT   body-their
     '[...say that] ...themselves have rested (their body)'

Though structurally complex, the compound verb also behaves as a single predicate relative to the arguments of the clause, which the compound governs as a whole. Thus in (1) above, not only the subject *ə̀màadə́* 'mud wasp' but also the object *jə̀a-ngè* 'its head' and even the circumstantial *də̀ sāamə̀ gōomə̄* 'out of hare's nose' have to be viewed as arguments of the whole predicate *ìyə̄.lítə̀.láayə́* 'bends out' (lit. 'bends.brings out.lets come') ; there is no reason to consider that there is a preferential link between any argument and any single component of the compound verb. A decisive point in this respect is that compound verbs tend to observe concord of the transitive/intransitive nature of their components. Specific derivates are possibly built for that purpose, as in example (1) where *.lítə̀* 'let go/come out' and *.láayə́* 'let come' are derived from *ìtə̀* 'go/come out' and *àayə̄* 'come', respectively, in order to conform to the transitivity of *ìyə̄* 'bend

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5. Yulu infinitives are derived by prefixing *l-* to vowel-initial verbs only, e.g. *ūumə̀* 'penetrate' > *l-ūumə̀* 'to penetrate', *àayə̄* 'come' > *l-àayə̄* 'to come'. In case of compounding, the infinitive prefix likewise appears on the first verb only, e.g. *ūumàayə̄* 'penetrate towards' > *l-ūumàayə̄* 'to penetrate towards'.

(head)'.[6] Such a concord rule has already been observed for serial verbs in other languages (e.g. in Paamese for nuclear serial verbs (Crowley, 1987:63) and in Nêlêmwa (Bril, n.d.), both Oceanic languages).

In a chapter dedicated to *Juncture and operators*, Foley and Van Valin (1984:187-197) establish a distinction between *core serial verbs*, where several verbs share no more than one of the *core arguments* (subject or object), and *nuclear serial verbs*, where verbs share all the same arguments (both *core* and *peripheral*, like benefactive, comitative, circumstantial, etc.), thus constituting a single *nucleus*. In that sense, Yulu compound verbs clearly belong to the second type, i.e. nuclear serial verbs.[7]

Why, then, speak of *compound verbs* in Yulu? Originally I spontaneously made that choice by contrast with the general situation of serial verbs in West African languages, which seem to be most frequently of the *core juncture* type.[8] Now it has to be justified relative to other languages where scholars make a distinction between *nuclear serial verbs* and *verb compounding*.

Such a distinction is made by Crowley (1987) for Paamese, an Oceanic language. Crowley argues that besides core serial verbs and nuclear serial verbs, Paamese also has some instances of compound verbs. These differ from nuclear serial verbs by the fact that they behave like single words and do not follow the phonological boundary rules for stress, vowel reduction and desyllabification (Crowley, 1987:60). But in fact he does not give

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6. Transitivity concord is not absolute however. In *njàamɔ́.láʔɔ̀ yáà-ngè* 'he rests (his body)' for instance (cf. (7) and (8)), *yáà-ngè* 'his body' can definitely be seen as an argument (object) of the transitive *láʔɔ̀* 'cool' but one could hardly view it as an argument of *njàamɔ́* 'sit'. It seems that the concord principle affects mainly the non-initial components (see section 4 and the Appendix).
7. Interestingly, Foley and Van Valin (1984:193) emphasize the strong correlation between nuclear serial verbs and languages of the SOV type (see also Crowley, 1987:42), which is not the case of Yulu.
8. See Bonvini (1992) for a general discussion of serial verbs in African languages.

any example of compounding and rather insists on the similarities (semantic unpredictability of the whole, functional restriction of the second member) between the two types of constructions, so that it is not entirely clear whether compound verbs could not be considered as a peculiar instance of nuclear serial verbs.

A similar kind of distinction is made by Aikhenvald (1999) concerning Tariana, a North Arawak language of Amazonia. Aikhenvald refers to the typology of Durie (1997) who distinguishes four types of verb sequencing according to the features ± *contiguous* (i.e. arguments may/may not appear within the verb sequence) and ± *incorporating* (i.e. the verb sequence forms/does not form a single phonological word). Thus Tariana has sequences of the contiguous, non-incorporating type, which the author labels serial verbs, and sequences of the contiguous, incorporating type, which she considers as compound verbs.[9]

The test of phonological unity (one vs. several words) seems, then, to be the ultimate criterion for recognizing compound verbs; but this is not easy to apply in Yulu. Beside the fact that Yulu does not seem to have any kind of stress or prosodic feature that clearly marks word boundaries, verb clusters behave differently according to their component phonological structures, as has been mentioned: verbs preserve their phonological identity if the second component is consonant-initial but undergo overlapping of vowel quality and tone if the second component is vowel-initial. The difference is clearly not of a syntactic/semantic nature and it would be nonsense to differentiate two types of structures according to these behaviors, the more so because both of them may occur in the same cluster. For example, (9) shows groupings of three components (square brackets indicate phonological overlapping):

(9) *èɛŋɔ̀.ndēkāayɔ̄*   'come back'
     rise.[turn.come]

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9. This is a rather quick and partial account of Crowley's and Aikhenvald's papers, which both present many more and deeper insights into the structure and semantics of the relevant languages.

ɔ̀nɛ̀ɛbā̄.ndēkā̄   'go behind somewhere for flirting'
[go for flirt.pass away].turn

Maybe there is another way to approach the problem. Serial verbs are usually defined as «refer[ring] to subparts of a single overall event» (Crowley, 1987:38). In an article about Kalam, a language of Papua New Guinea which commonly combines several verbs (up to nine) in series, Pawley (1993:111) speaks of «sub-events that are routine components of an event». In some sense it seems to me that Yulu verb clusters do not refer so much to sub-events as to simultaneous aspects or modalities of a single process which therefore are not necessarily iconically ordered. Durie (1997:304, 310) suggests a likely universal constraint for motion verbs to come first in verb series. But this is not the case in Yulu where *specialized components*, including motion verbs, always appear in non-initial position, as will be argued below (see also example (1) above).[10] This could be taken as evidence for viewing Yulu verb clusters as compound verbs rather than serial verbs.

Whatever the labelling, it should be emphasized that verb compounding in Yulu is a living and productive process and that it apparently constitutes the only means of combining verbs in the same clause.

Now despite its morphological unity, verb compounding exhibits various kinds of functional statuses according to the nature and behaviour of its components. These different aspects are the topic of the next section.

4. Trends in verb compounding

Whereas initial components of compound verbs are always of the same nature, non-initial ones exhibit features which authorize a distinction between what I will call *non-specialized* and *specialized*

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10. Santandrea (1970:76) speaks of «reversed association» in such Yulu cases.

final components.[11] The division is not of a clear-cut nature but is rather a matter of degree ; some components clearly belong to the second set, while others have a less clear position.[12]

In the case of non-specialized final components, each verb in the compound form is chosen out of what seems to be the whole range of verbal units. Such final components clearly exist elsewhere as single verbs and do not exhibit any higher frequency in compoundings. Examples of such «free» compounding are given in (10) below:

(10)   *àacə̀*   +   *àaŋə̀*   =   *àacàaŋə̀*
       'smell   'be nice   'smell good'
       (good or bad)' (to any sense)'

       séɛlə̀   +   *bāɓā*   =   *séɛlə̀.bāɓā*
       'touch'   'go in the dark'   'feel with the fingers
                                               without seeing'

       èedā   +   *ɲābā*   =   *èedā.ɲābā*
       'see, look at'   'watch for,   'look at with a bad
                      spy upon'   purpose'

       ndòodə̀ +   *ùlə̀*   =   *ndòodûlə̀*
       'lie'   'die'   'sleep (soundly)'

       jə̀ŋə̀   +   *rénjə̀*   =   *jə̀ŋə̀.rénjə̀*
       'bite'   'break'   'crunch, eat and grind'

In the specialized type of compounding, the final components exhibit a somewhat higher frequency in compounds and therefore seem to be chosen out of a restricted range of verbs. I have identified about forty verbs –some of them appearing in transitive/ intransitive pairs– which play a specific role in verb compounding

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11. For convenience, I will from now on speak of final (rather than non-initial) components. Specialized final components are not necessarily final *stricto sensu* but if they are not, then they are always followed by another specialized final component (see example (1) again, where both *.lítə̀* 'let go/come out' and *.láayə́* 'let come' are considered as «specialized final components»).

12. My corpus is rather narrow, consisting of verb lists and a few dozen pages of texts. A wider collection of discourse would certainly throw more light on the nature of these final components.

and may be grouped under the main semantic headings of «orientation/motion», «aspect/duration/aktionsart» and «quality/quantity» (see Appendix). Furthermore, these specialized members may share one or all of the features in (i) through (iii) below.

(i) They may not be attested as single verbs elsewhere, or at least not in one of the two transitive/intransitive paired forms. The latter is the case of *àayə̄* 'come' which appears as a specialized final component under the two forms *.aayə̄/°.láayə́*[13] 'coming/letting come' (see example (1) above) while **láayə́* does not exist as a single verb.[14] Other final components occur exclusively in compounds, in which case their semantic characterization may be problematic ; see illustrations in (11):

(11) *ɲɛ̀ɛtə́* + *°.jōodə̄* = *ɲɛ̀ɛtə́.jōodə̄*
      'work'   'doing again'   '(do a) work again'

      ǎadə̄ + *°.rɔ́ɔdə̀* = *ǎadə̄.rɔ́ɔdə̀*
      'say'   'doing well, properly'   'say/explain properly'

      ìʔə̄ + *°.líi* = *ìʔə̄.líi*
      'give'   'doing for, towards (?)'   'give, bring'

      èekə̀ + *°.ecə̄* = *èekècə̄*
      'take, seize'   'keeping (?)'   'take with oneself (?)'

      ècə̄ + *°.ebə̀* = *ècēbə̀*
      'close, shut'   '?'   'close, shut'

      ǐgə̄ + *°.əmbə̄* = *ǐgə̄mbə̄*
      'dig, drive in earth'   '?'   'dig, drive in earth'

Indeed, at least four of these components (*°.ebə̀*, *°.ecə̄*, *°.edə̀* and *°.əmbə̄*) recursively appear in compounding with only slight –if

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13. The exponent in *°.láayə́* indicates that this form is not attested as a single verb but only occurs as a final specialized component in compounding.

14. Even if they do not occur as single verbs, transitive/intransitive derivates are built on patterns which are regularly attested for single verbs. These derivational structures are mainly of two types : (i) prefixing *l-* to form transitive verbs (e.g. *ènjə̄* 'be finished' > *lénjə́* 'finish') and (ii) alternating C-/NC- initial consonants with a loss of valence (e.g. *kómə́* 'bring together' > *ngōmə̄* 'meet (each other)', *tálə̀* 'teach (2 objects)' > *ndálə̀* 'learn (1 object)').

any– differences of meaning. They act as more or less desemantized frozen derivates and thus constitute evidence for lexicalization. Let us consider some other illustrations of °.*ebə̀* in (12):

(12)   *ăgə̀*   and   *ăgə̀bə̀*
      'bar up, fence up'   'bar, forbid'

       āgə̀   and   *āgə̀bə̀*
      'not allow, not want to give'   idem

       èedə̄   and   *èedə̄bə̀*
      'look at, see'   'look at, watch for, take care of'

       èekə̀   and   *èekə̀bə̀*
      'take, seize'   'take and keep (?)'

       ēlə̀   and   *ēlə̀bə̀*
      '(trans)plant; stop, shut up'   'stop, shut up'

       sōɓə̄   and   *sōɓə̀bə̀*
      'pinch, wedge'   idem

       ūudə̀   and   *ūudə̀bə̀*
      'leave, abandon'   'put'

   (ii) They may undergo certain phonemic alterations, like loss of internal or even initial consonant, or shortening of long vowel:

(13)   *è?ə̄*   >   *.ɛ?ə̄/°.lé?ə́~°.lɛ́ɛ~°.lɛ́*
      'go, depart, walk'   'going/letting go'

       ìtə̀/lítə̀   >   *.itə̀/.lítə̀~°.ítə̀*
      'go out/let go out'   'going out/letting go out'

       ūuɓə̀   >   *°.uuɓə̀~°.uɓə̀*
      'get, find'   'getting, finding'

       èezə̀   >   *.eezə̀~°.ezə̀/°.léezə̀~°.léè~°.lê*
      'move, change place'   'changing/letting change place,
                                 state (Completed)'

   (iii) They may undergo semantic shift from "process" values to values which are more of an aspectual or qualitative nature. Correlatively, they tend to be combinable with large ranges of verbs and act, in fact, as verbal markers of aspect or quality. This is the case with the following three verbs:

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a) *èezə̀* 'move, change place' occurs as a specialized final component under the forms *.e(e)zə̀/°.léezə̀~°.lé(è)* with a value that may refer to motion ('changing place/letting change place'), but most frequently it refers to 'completed action/ changing of state':

(14) *èʔēzə̀*   'he has gone'
      (s)he/they+go.COMPL

      ngēcēzə̀   'it is (has) coagulated'
      it+coagulate.COMPL

      dɔ̄ɔŋèzə̀   'it is (has become) hard'
      it+become hard.COMPL

      bīisə́ ōosə̀.léè   èjə́   'the dog (completely) ate the meat'
      dog   eat.COMPL   meat

      óofə̀.léè   vūkə́
      thou/you+kill.COMPL   fire
      'put the fire out! (in a complete, definitive manner)'

b) *ɔ̀ʔə̀* 'suffer, feel pain' acts as an Intensive with the meaning of 'being/doing a lot, extremely', under the forms *.ɔʔə̀/°.lɔ́ʔə̀* :

(15) *àapɔ̄ʔə̀*   '(s)he cries a lot'
      (s)he/they+cry.INTENS

      lìilɔ́ʔə̀   'it is very sweet'
      it+be sweet.INTENS

      njàá.bǎnɔ̀ʔə́   də́   ráajə́
      (s)he/they+sit.spend time.INTENS   in   Raga
      '(s)he stayed/lived a long time in Raga'

      kēɛmə̄.lɔ́ʔə̀   'fear a lot'
      fear.INTENS

      túuwə́.lɔ́ʔə̀   'make suffer a lot'
      make suffer.INTENS

It even can be combined with itself (*ɔ̀ʔə̀* 'suffer' + *.ɔʔə̀* 'Intensive'), as shown in (16):

(16) *ɔ̀ʔɔ̀ʔèzə̀*   'he suffered a lot'
      (s)he/they+suffer.INTENS.COMPL

c) The specialized form °.lɔ̄ɔkə̄, which does not appear as a single verb, occurs in compounds after different (action?) verbs with the general meaning of an Immediate Successive ('do simply, directly, without delay, without warning, etc.'). See examples in (17):

(17) èɛŋə̀.lɔ̄ɔkāayə̄   'he immediately comes'
     (s)he/they+rise.IMMSUCC.come

     ...jóodə̀.lɔ̄ɔkə̄...   '...(and) asks all of a sudden...'
     (s)he/they+ask.IMMSUCC

     èekə̀.lɔ̄ɔkə̄   mɔ́tə̀   àabə́-nà   àbə̀-kàaɲə́-cé
     he+take.IMMSUCC   horse father-his the-white-this
     ɲɔ̀ɔngə́.lɔ̄ɔkə̄   àarə̀.lɔ̄ɔkə̄...
     he+climb.IMMSUCC   he+sing.IMMSUCC...
     'he take's his father's horse, the white one, (immediately) climbs on it and (immediately) sings...'

These three verbs clearly indicate an advanced degree of grammaticalization since they tend to operate as markers which may, potentially at least, be combined with every verb in the language. A last case has to be mentioned here which clearly represents the highest degree of grammaticalization. The Progressive -à, which appears suffixed to the verb *before* the Plural -kē, most probably must be identified with the Attributive à/ā 'be' that may be considered as a defective or irregular verb. Illustrations of the Attributive and Progressive are given in examples (18) and (19), respectively:

(18) Attributive:
     m-ā kànj   {I-be small}   'I am small'
     à kànj   {(s)he/they+be small}   '(s)he is small'
     à-kē kànj   {(s)he/they+be-PL small} 'they are small'
     à-kē də̀gíit   {(s)he/they+be-PL here} 'they are here'

     à-kē   kə́   bōorə́   'they have a goat'
     (s)he/they+be-PL   with   goat

(19) Progressive:
     òolə̄   {(s)he/they+live}   '(s)he lives'
     òolā̀   {(s)he/they+live+PROGR}   '(s)he is living'

òolə̄-kē {(s)he/they+live-PL} 'they live'
òolā̀-kē {(s)he/they+live+PROGR-PL} 'they are living'

It thus appears that Yulu, which has a relatively small set of «pure» dependency markers (Conditional, Relativizer and Dependent, see above section 2), in fact takes advantage of the verb compounding frame to select new units of an aspectual or qualitative value. These new units potentially, if not already, act as grammatical morphemes and contribute to organizing the verb system as a whole.

5. Conclusion

A striking feature of Yulu consists of sequencing verbs in a tight structure that I labelled «compound verbs» in preference to «(nuclear) serial verbs». Within this structure a few dozen non-initial verbs act as specialized components and exhibit tendencies toward lexicalization and grammaticalization, thus leading to a potential reinterpretation of their syntactic status.

However, Yulu is not the only language showing verb sequencing in this part of the world. Indeed, two related languages from the Bongo-Bagirmi group, Gula (northern Central African Republic) and Modo (southwestern Sudan), exhibit similar, though not identical, structures.

Gula has two types of «suites verbales» (Nougayrol, 1999:130-133). In the first type, person markers appear before each verb, as in (20):[15]

(20) mə́-tódò m-ɔ́w̄ vé 'I live far away'
I-sleep I-be far indeed

In the second, more frequent type, verbs are more tightly bound and the person marker appears only once. See example (21):

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15. I have made some readjustments in my presentation of Nougayrol's examples.

(21) z-ūndā.ùɲà-gē   dēɓ́   kédē   ɖò   kèlé
we-put.leave-PL   person   one   on   encampment
'let's leave somebody on the encampment!'

In the latter type, Gula behaves rather like Yulu (aside from other characteristics which I will not discuss in detail here; briefly, Gula requires verbo-nominal (i.e. infinitive) prefixes before each verb, while Yulu does not; see note 5).

Modo has verbs of the VCV, VCVCV and VCVCVCV type (Andersen, 1981; Persson and Persson, 1991). Persson and Persson (1991:9) give illustrations of what they call transitive and plural VC- derivational prefixes, shown in (22):

(22) intransitive > transitive
èyí   'be cool'   >   ìyéyì   'make cool'
àpà   'be sharp'   >   ìkápà   'make sharp'

singular subject > plural subject
àkpà   'be long'   >   ìdákpá   idem (PL.SUBJ)
òɓò   'be wide'   >   ùdòɓò   idem (PL.SUBJ)

But several examples selected from the Perssons' dictionary show that other semantic similarities can also be detected in the long member of such verb pairs. Compare, for instance, similar *final* portions in each pair in (23):

(23) árá   'have the consistency of thin liquid'
ítàrà   'clarify water, filter through cloth or basket'

áwʊ́   'breathe'
ìndàwʊ́   'rest, relax'

ɔ̀rɔ̀   'stop, stand'
ùdɔ́rɔ̀   'be straight, correct, cause to stop or stand'

as well as similar *initial* portions in each pair in (24):

(24) ʊ́lʊ́má   'sit, live, be accustomed to, do habitually'
ùlɔ́ɓɔ̀   'sit and wait for'

ùpí   'twist, unlock, drive a car'
ùpìrì   'twist'

15

> úpépí   'peel, shell'
> ùpépέ   'peel, take the last bit of'

Most probably a fair number of the VCVCV and VCVCVCV type Modo verbs result from lexicalization of an earlier verb serializing or compounding structure applied to former VCV type verbs.

Yulu, Gula and Modo should obviously be compared with respect to the history of the Bongo-Bagirmi languages. They bear witness of the existence of verb sequencing in the languages of central Africa, a fact which apparently has not been mentioned before.

Appendix: Main specialized final components

(Components not attested as single verbs are marked with the exponent °. In cases of strong semantic shift, the meaning of the single verb is indicated in square brackets)

«ORIENTATION/MOTION»

.aayə̄/°.láayə́	'coming, arriving (towards the place of action, the speaker...) (Intrans./Trans.)'
.ɛʔə̄/°.léʔə́~°.lé(ɛ)	'departing, going away, from (here/there) (Intrans./Trans.)'
.aamə̀/°.láamə̀	'coming from (Intrans./Trans.)'
.uumə̀/.lúumə̀	'entering, penetrating (Intrans./Trans.)'
.itə̀/.lítə̀~°.ítə̀	'going, coming out (Intrans./Trans.)'
.júkə̀	['cut, break' >] 'crossing, going over'
°.tíŋə̀	'rising, bringing up'
.kómə́/.ngōmə̄	'bringing together, collecting (Trans./Intrans.)'
.tíiyə́	'scattering, dividing'
°.líi	'coming from (?), from far away (?), for the sake of (?), towards (?)'
.e(e)zə̀/°.léezə̀~°.lé(è)	['move, change place' >] 'changing place, with changing of state, *Completed* (Intrans./Trans.)'

«ASPECT/DURATION/AKTIONSART»

°.tóowə́/°.ndóowə́	'do/be partially, halfway, in an incomplete manner (Trans./Intrans.)'
°.jōodə̄	'do again, repeat'
°.túubə̀	'do again, remake, go on doing (something insufficient, incomplete)'

.e(e)kə̀	['take, seize' >] 'seizing, perceiving, *Perfective (?)*'
.lɔ́ɔrə̀	['stay, remain, stop' >] 'temporarily, for a while, in the meantime'
°.lòowá	['be daylight' >] 'until sunrise, all the night long'
°.lócá	['fall' >] 'letting fall down, until sunset, all the day long'
.tékə́/°.ndēkə̄	['turn' >] 'again, at one's turn, by return, at the reverse (Trans./Intrans.)'
°.tíi	'succeeding to each other (?)'
.túmə̀	'finishing, achieving, doing until end'
.anə̀	['stay, remain' >] 'in a permanent way, for good, leaving in the state (?)'
.u(u)ɓə̀	'finding, getting'
°.tíibə̀	'going on (?)'
.tɔ́nə́	['start, begin' >] '(do) as first, being the first (to do)'
°.tīcə̄/°.ndīcə̄	'(do) the last, at the end, for the last time, late, too late (Trans./Intrans. ?)'
°.lɔ̄ɔkə̄	'simply, directly, without delay, *Immediate Successive*'

Not strictly verbal:

-à	[Attributive 'be' >] '*Progressive*'

«QUALITY/QUANTITY»

°.lɛ́ɛpə̀	['be good, nice' >] 'well, correctly, nicely'
°.rɔ́ɔdə̀	'well, correctly, properly'
°.dɔ́ɔŋə̀	['be strong, firm' >] '(do something) firmly'
.ɔʔə̀/°.lɔ́ʔə̀	['suffer, feel pain' >] 'a lot, extremely, excessively, *Intensive* (Intrans./Trans.)'

OTHER VALUES (?)

°.gǎayə́	'know (how to)'
.igə̀/.lígə̀	'disappearing, getting lost (Intrans./Trans.)'
.ndèká	'playing, for fun'
.yòopə́	'slandering, despising'
.mbóozə̀	'boring, piercing (?)'
.njàamə́	'sitting down (?)'
.njɔ̀ɔjə́	'offering the first-fruits, inaugurating'

UNIDENTIFIED FINAL COMPONENTS

°.ebə̀	'?' (Perfection of process ?)
°.ecə̄	'?' ('keeping' ?)
°.edə̀	'?'
°.əmbə̄	'?' (Making transitive ?)

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