Serial Verbs in Ibibio

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1. Introduction

This paper investigates serial verb constructions (SVC) in Ibibio, a Niger-Congo language spoken in Nigeria[1][2]. Basic examples of SVCs in Ibibio are exemplified in (1) below:

(1) a. (ǹdùfò) è-má   é-**dí**   **wùó**[3]
       2PL.SUBJ 2PL.SUBJ-PST 2PL-go   come
       'You (PL) arrived.'

    b. Ekpe á-má   á-**tèm**   àdésì á-**díyá**
       Ekpe 3SG-PST 3SG-cook   rice   3SG-eat
       'Ekpe cooked and ate rice.'

Notice that there are two verbs in the constructions above. The first two verbs combine to form complex verb which means 'arrive' in English. The second example forms a complex predicate meaning 'cook and eat'. Both verbs share the same subject and same object. The constructions looked at in this paper typically surface as $V_1 V_2$ (Obj) or V_1 (Obj) V_2.

  The ultimate goal in this paper is to detail the morpho-syntactic and semantic properties of SVCs in Ibibio by using criteria for SVCs established for other languages. In section 2, I provide some background information on the typology and syntax of Ibibio that is relevant for the discussion of serial verbs. Section 3 defines and describes the property of light verbs in the literature. This includes discussion of SVCs in general, the syntactic properties, the semantic properties. The purpose of this section is to show that the constructions in Ibibio are truly SVCs across both syntactic and semantic grounds and also to fit Ibibio in with the typological literature on SVCs.

2. Ibibio background

Ibibio is a Lower Cross language of the East Benue-Congo branch in the Niger-Congo language phylum, which is spoken in the southern part of Nigeria by roughly 2 million speakers. The data in this section is primarily novel data, but was informed by prior descriptions of the language (Essien 1990; Kaufman 1968).

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[2] The data in this paper were collected via individual elicitation with a native speaker of Ibibio.
[3] Ibibio is a tonal language. The tone markers in this paper are as follows: á = high, a = mid, à = low, â = falling, and ǎ = rising. The glosses used in this paper are as follows: 1=1st person, 2=2nd person, 3=3rd person, SG=singular, PL=plural, OBJ=object, CONJ=conjunction, PST=past, PRS=present, FUT=future, HAB=habitual, NEG=negative, COMP=complementizer.

2.1 Syntax

2.1.1 Grammatical relations

Arguments in Ibibio are realized as DPs, independent pronouns, and argument markers. All three options are demonstrated in (2) below:

(2) **Ekpe á-**mà **á-ḿ-**má **(míén)**
Ekpe   3SG.SUBJ-PST   3SG-1SG.OBJ-like   1SG.OBJ
'Ekpe liked me.'

The proper name *Ekpe* is the subject, which is also encoded by the marker *á-* that precedes the tense marker (and on the verb in other cases). The 1SG object is encoded by both the full object pronoun *mien* and the 1SG object marker *m-*. The markers are sometimes variable depending on phonological considerations such as surrounding tones and vowel harmony, and also vary depending on whether the sentence was uttered carefully or naturally. The data in this paper are almost exclusively composed of careful speech. A summary of the pronouns and argument markers is shown in Table 1 below:

Table 1: Argument markers

Person/#	Full Pronoun (Subject)	Subject Marker	Full Pronoun (Object)	Object Marker
1SG	ámì	[+nasal]/a	mìén	[+nasal]
2SG	àfò	à	fíén	ú
3SG	ɛ́nyé	á	ɛ́nyé	á
1PL	nyìn	ì	nyìn	ì
2PL	ǹdùfò	è	ǹdùfò	è
3PL	àmmô	é	àmmô	é

The tones and vowels take slightly different forms throughout this paper, because the tonal transcriptions are based on surface tones. The examples in the table are what I assume to be underlying tones, but depending on their position in a sentence are subject to change on the surface and as a result, in the transcriptions.

2.1.2 Word order

Ibibio is predominantly an SVO language when full DPs are present ((3)a), but the argument markers yield the order SOV ((3)b):

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        S           V     O   ‾
(3) a. (àmì)  ḿ-mà    á-kòp    ìkùó
       1SG    1SG-PST  3SG-hear  song
       'I heard a song.'
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          S   O V
   b. **à**-mé   á-**ḿ**-má
      2SG.SUBJ-PRS   2SG-1SG.OBJ-like
      'You like/love me.'

(3) illustrates the word order of Ibibio, but also presents the organization of pronouns and argument markers in the language. The independent subject pronoun *ami* in ((3)a) is optional, while the subject marker is obligatory. In ((3)b), both subject and object markers are obligatory.

  In ditransitive constructions, if we only consider the overt nouns (ignoring subject/object markers), two possible orders surface: S V IO DO ((4)a) and S V DO IO ((4)b), shown below:

              S   V   IO   DO
   (4) a. Ekpe   á-mà   á-nò ¯ ǹtíγéyìn ndídíyá
          Ekpe   3SG-PST 3SG-give children food
          'Ekpe gave the children food.'

              S   V   DO   IO
    b. Ekpe   á-mà   á-dòt   ngwèt   ké òkpókóró
       Ekpe   3SG-PST 3SG-put   book   on table
       'Ekpe put the book on the table.'

   Subjects and/or objects appear as preverbal markers. The language also has rules against vowel hiatus, so often only one marker is able to surface[4]:

   (5) a. Ekpe   á-í-dìyòngò   (nyÌn)   Underlying Structure
          Ekpe   3SG.SUBJ-1PL.OBJ-know   1PL
          'Ekpe knows us.'

      b. Ekpe   **í**-dìyòngò   **(nyÌn)**   Object Marker
         Ekpe   **1PL.OBJ**-know   **1PL**
         'Ekpe knows us.'

      c. Ekpe   **á**-dìyòngò   *****(nyÌn)**   Subject Marker
         Ekpe   **3SG.SUBJ**-know   **1PL**
         'Ekpe knows us.'

The data in (5) show that one argument marker must prefix on to the verb, but if the markers are both vowels, only one may actually be realized. Either the subject or object marker is acceptable, but not both. ((5)b) shows that if the object is marked on the verb, the independent object pronoun *nyIn* '1PL.OBJ' is optional. However, if the subject is marked on the verb (not the object), the independent object pronoun becomes obligatory.

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[4] The 1SG.OBJ pronoun surfaces as a nasal. All other arguments are represented by vowels, and therefore clash in vowel hiatus resolution. As a result, 1SG objects always surface, but in all other cases a choice must be made as to whether the subject or object marker remain.

2.1.3 Tense/Aspect

The tense/aspect system in Ibibio is quite complex. This discussion is limited to those tense/aspect morphemes that appear in this paper. (6) shows the morphology that surfaces in the past tense (or possibly perfective/completive aspect):

(6) a. Ekpe á-**mà**   â-ng-ngwáná   (míèn)   Simple Past
         Ekpe 3SG-**PST** 3SG-1SG.OBJ-fight   1SG.OBJ
         'Ekpe fought me.'

    b. Ekpe á-**ké**   â-ng-ngwáná   (míèn)   Focus
        Ekpe 3SG-**PST** 3SG-1SG.OBJ-fight 1SG.OBJ
        'It was Ekpe that fought me.'

    c. Ekpe á-**má**   á-**sé**   á-ng-ngwáná   Habitual Past
        Ekpe 3SG-**PST** 3SG-**HAB** 3SG-1SG.OBJ-fight
        'Ekpe used to fight me.'

The simple past is shown in ((6)a) and is represented by the morpheme *mé*. In all cases of A-bar extraction (e.g. wh-questions, focus, negation), a different morpheme, *ké* surfaces ((6)b). Notice that the tense/aspect marker *ké* is also homophonous with the complementizer *ké* which immediately precedes it in ((6)b). Finally, the past tense marker *mà* may be combined with the habitual marker *sé* to form habitual past constructions.

The present tense morphology included in this paper is shown in (7):

(7) a. Ekpe á-ng-ngwana   (míèn)   Simple Present
        Ekpe 3SG-1SG.OBJ-fight 1SG.OBJ
        'Ekpe is fighting me.'

    b. Ekpe á-**sé**   á-ng-ngwáná   (míèn)   Present Habitual
        Ekpe 3SG-**HAB** 3SG-1SG.OBJ-fight 1SG.OBJ
        Ekpe fights me (habitual).

    c. Ekpe á-**m̀é**   m̀-má   Present
        Ekpe 3SG-**PRS** 1SG.OBJ-like
        'Ekpe likes me.'

((7)a) shows that the simple present is typically unmarked. In the present habitual, the habitual marker *se* appears ((7)b). However, some verbs show an overt present tense marker, such as ((7)c), where *me* is used.

The future (or possibly irrealis) markers in the language are shown in (8) below:

(8) a. Ekpe á-**yá**   á-ng- ngwáná   (míèn)   Simple Future
        Ekpe 3SG-**FUT** 3SG-1SG.OBJ-fight   1SG.OBJ
        'Ekpe will fight me.'

b. Ekpe   á-**dì**   í-ng- ngwáná   (míèn)   Focus Future
Ekpe   3SG-**FUT** 3SG-1SG.OBJ-fight 1PL.OBJ
   i. 'It is Ekpe who will fight me.'
   ii 'It is me that Ekpe will fight.'

((8)a) shows the simple future, which is marked by *yá*. There is also a future marker that appears in cases of focus, wh-questions, and other A' movement constructions, *di* (the counterpart to past tense *ke*), which is shown in ((8)b).

3. Serial verb constructions

SVCs span a wide semantic range and display different distributional properties cross-linguistically. This section establishes a working definition from the literature and outlines the cases where Ibibio behaves within the boundaries set by other languages and where it diverges.

3.1 Working definition of serial verb constructions

As mentioned in the introduction, there is little agreement on a clear set of characteristics that constitute serial verb constructions. SVCs are typically discussed within the literature on complex predicates, defined by Butt (2003) as follows:

Complex Predicate
(9) a. The argument structure is complex (two or more semantic heads contribute arguments as part of primary predication.
     b. The grammatical functional structure is that of a simple predicate: there is only a single subject and no embedding.
     c. Formed either morphologically or syntactically.

The definition above is meant to cover other syntactic constructions as well, such as light verbs and auxiliaries. The definition of complex predicates does provide a good starting point, however, as each of the properties shown in (9) are included in most definitions of serial verb constructions.

  Aikhenvald defines serial verb constructions as "a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort" (Aikhenvald 2006: 1). Bowern (2008) provides another similar (yet different) definition for SVCs:

(10) a.   The Clause contains two (or more) verbs under a single intonation contour.
      b.   The verbs must be full lexical verbs which can head simple predicates in their own right.
      c.   The verbs share at least one argument.
      d.   The verbs behave as a single unit for tense, aspect, and polarity marking.

  All examples of SVCs to follow, minimally: 1) also function as lexical verbs; 2) share a subject (and maximally all arguments); 3) behave as a single unit for tense, aspect, and polarity marking. An investigation of the prosody of these constructions is an area for future research.

3.2 Syntax of serial verbs

This section begins by showing that serial verb constructions are different from overt coordination. Furthermore, I apply the set of diagnostics used by Hiraiwa and Bodomo (2008) to further show that the constructions in Ibibio are truly SVCs. This includes the following four tests: single tense marking, the pronouns/empty category test, the negation test, and the extraction test.

3.2.1 Coordination versus serial verb constructions

One of the major issues addressed in Aikhenvald's definition is that SVCs do not contain overt conjunctions. Collins (1997) points out that covert coordination is also a concern when looking at SVCs in Ewe. The examples below, for instance, appear to be cases of coordination:

(11) a. Me *ƒ*o kaɖɛgbɛ   gba.
     1SG hit lamp   break
     'I hit the lamp and broke it.'

    b. Me *ƒ*o   kaɖɛgbɛ   gba   (yɛme) tsimini.
     1SG hit lamp   break its   glass
     'I hit the lamp and broke its glass.'

The case in ((11)b) appears to have two objects that correspond to different verbs, which strongly suggests that this is a case of covert coordination, and not an SVC.

  Ibibio displays clear differences between coordination and SVCs. Two simple coordination strategies in Ibibio are shown in (12):

(12) a. [Ekpe **ǹdò** Akpan] é-mà   é-díyá   àdésì   DP coordination
     Ekpe   and   Akpan   3PL-PST 3PL-eat   rice
     'Ekpe and Akpan ate rice.'

    b. Ima [á-kpón   **á-nyⱡng/*ǹdò** á-yàyá]   VP Coordination
     Ima 3SG-become.big 3SG-CONJ   3SG-become.beautiful
     'Ima grew and became beautiful.'

For the purposes of this paper, DP coordination is not used as a diagnostic, and the conjunction *ndò* in ((12)a) is not compatible with coordination of VPs or TPs. The conjunction *nyⱡng* is used for VPs and TPs, so *nyⱡng* is used when differentiating between SVCs and basic coordination in Ibibio.

  Now that I have provided data for basic conjunctions, it is possible to discuss the differences between SVCs and conjunctions. An overt conjunction may not be inserted between V_1 and V_2 in either the pre-object or post-object position, at least with the same interpretation:

(13) a. Ekpe á-mà   á-fɔ́p   ùnâm á-tá
     Ekpe 3SG-PST 3SG-roast meat   3SG-eat
     'Ekpe roasted meat and ate it.'

    b. *Ekpe   á-mà   á-fɔ́p   (*á-nyʌ̀ng) ùnâm (*á-nyʌ̀ng) á-tá
       Ekpe 3SG-PST 3SG-roast 3SG-and   meat   3SG-and   3SG-eat
       Intended: 'Ekpe roasted and ate meat.'

    c. Ekpe á-mà   á-fɔ́p   ùnâm á-nyʌ̀ng á-tá   *(ùnàm/ósòkóró)
       Ekpe 3SG-PST 3SG-roast meat   and   3SG-eat   meat/orange
       'Ekpe roasted meat and he ate (some other) meat/orange.'

((13)a) is a basic serial verb construction with the object *ùnâm* 'meat' shared between both V$_1$ and V$_2$. ((13)b) shows that an overt conjunction is not possible before or after the object. ((13)c) demonstrates that the object needs to be specified for the second verb in the coordinate structure, while it is implied that the object is shared between both verbs in typical serial verb constructions, like (13)a). Even if the object is *ùnâm* in both VPs, it is interpreted as though they are different meats.

  To demonstrate that this diagnostic is meaningful in Ibibio, consider the case below which looks like an SVC on the surface, but allows an overt conjunction without changing the structure or interpretation:

    (14) a. Ima [á-kpón   á-yàìyá]
           Ima   3SG-become.big 3SG-become.beautiful
           'Ima got big and became beautiful.'

       b. Ima [á-kpón   á-nyʌ̀ng/*ǹdò á-yàìyá]
          Ima 3SG-become.big 3SG-CONJ   3SG-become.beautiful
          'Ima got big and become beautiful.'

((14)a) does not contain an overt coordinator, the subject is shared between both verbs which are structured as V$_1$ V$_2$, and both verbs independently can function as main verbs. However, ((14)b) clearly illustrates that an overt conjunction is possible and the interpretive differences found in (13) do not occur when the conjunction is inserted.

3.2.2 Single tense marking test

The single tense marking test (Collins 1997; Hiraiwa & Bodomo 2008) establishes that tense-marking may occur only once in a serial verb construction, before V$_1$. In basic coordinate constructions, the tense marker may be repeated, as shown for Dàgáárè in (15):

    (15) a. ò   **dà** sɛ́   lá nɛ́nè (*dà) ɔ̀ɔ́
           3SG PST roast F meat PST   eat
           'He roasted the meat and ate it.' (Hiraiwa & Bodomo 2008: 800)

       b. ò   **dà** sɛ́   lá nɛ́nè à   (dà) ɔ̀ɔ́
          3SG PST roast F meat CONJ PST eat
          'He roasted the meat and then ate it.' (Hiraiwa & Bodomo 2008: 800)

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The Dàgáárè data above presents this basic difference between serial verb constructions and coordinate constructions. ((15)a) shows that repetition of the tense marker is not allowed in a serial verb construction. However, in a basic coordinate construction (created by insertion of the conjunction *à*), the tense marker may appear in both coordinated phrases.

The same fact holds true in Ibibio, although coordinate structures in the language are slightly different from Dàgáárè:

(16) a.　Ekpe　á-mà　á-dí　(*á-mà)　í-sé　úfôk　m̀mì
　　　　 Ekpe　3SG-PST 3SG-go　3SG-PST 3SG-see house　1SG.POSS
　　　　 'Ekpe came and saw my house.'

　　 b.　Ekpe　á-mà　á-dì　(á-mà)　á-nyʌ̀ng　á-sé　úfôk　m̀mì
　　　　 Ekpe　3SG-PST　3SG-go　3SG-PST 3SG-CONJ 3SG-see house　1SG.POSS
　　　　 'Ekpe came and (he) also saw my house.'

((16)a) shows that the tense marker can only occur before V$_1$ in a V$_1$　V$_2$　Obj serial verb construction. When the construction contains an overt conjunction, however, repetition of the tense marker immediately before the conjunction *nyÁng* is allowed. Furthermore, there is a difference in interpretation between the examples in (16). The verbs in ((16)b) are not understood as a fluid event, but rather two separate events. The first being 'Ekpe came' and the second is interpreted similar to a parenthetical in English (e.g. 'and by the way...he also saw my house'). In ((16)a), the events of 'coming' and 'seeing' occur simultaneously.

The same fact holds in the V$_1$ Obj V$_2$ construction in Ibibio, illustrated in (17) below:

(17) a.　Ekpe　á-mà　á-tóp　(*á-mà) ítíyát (*á-mà)　á-ń-tɔ́
　　　　 Ekpe　3SG-PST 3SG-throw 3SG-PST stone　3SG-PST　3SG-1SG.OBJ-hit
　　　　 'Ekpe threw a stone and hit me.'

　　 b.　Ekpe　á-mà　á-tóp　ítíyát (á-mà)　á- nyʌ̀ng á-ń-tɔ́
　　　　 Ekpe　3SG-PST 3SG-throw stone　3SG-PST 3SG-CONJ 3SG-1SG.OBJ-hit
　　　　 'Ekpe threw a stone and hit me (with something).'

In ((17)a), the serial verb construction does not allow repetition of the tense marker in either pre- or post-object position. Furthermore, the only possible interpretation is that 'Ekpe threw a stone and hit me (with the same stone)'. In ((17)b), the tense marker precedes the conjunction, but the interpretation is no longer that the 'hitting' event was the result of 'throwing a stone'. In this sentence, the 'hitting' could be done with a brick or a fist, which is completely separate from 'throwing the stone'.

The large variety of verbs that form serial verb constructions may give the impression that all verbs may form complex predicates or serial verb constructions, but this is not the case. For instance, a sentence composed of two unergative verbs, which optionally co-occur with cognate objects cannot form a serial verb construction:

(18) a.　Ekpe　á-yá　á-kwɔ́　(ìkwɔ̌)　á- nyʌ̀ng　á-nèk　(ùnèk)
　　　　 Ekpe　3SG-FUT 3SG-sing　song　　 3SG-CONJ　3SG-dance dance
　　　　 'Ekpe will sing and dance.'

b. Ekpe   á-mà   á-kwɔ́   (ìkwǒ) ìdáGá ami   anye   á-yá
   Ekpe   3SG-PST 3SG-sing song   now   this.time 3SG   3SG-FUT
   á-nèk   ùnèk
   3SG-dance dance
   'Ekpe sang and now he is going to dance.'

((18)a) shows that an overt conjunction is possible in a sentence that contains 'sing' and 'dance', while both verbs optionally display cognate objects. ((18)b) shows that different tense markers may be used, which indicate a progression or sequential events. The same is true when the object is not shared between intransitives, like ((17)b).

3.2.3 Pronoun/empty category test

The pronoun/empty category test provides evidence that the explicit object is truly shared between both verbs, and that neither selects nor co-occurs with a null object (Baker 1989). The sentences from Dàgáárè shown below indicate that the object may only be expressed once in a serial verb construction:

(19) a. ò   dà   sɛ́   lá   sìngkáà   ɔ̀ɔ̀   (*á).
        3SG PST roast F   groundnut.PL   eat them
        'He roasted groundnuts and ate them.' (Hiraiwa & Bodomo 2008: 800)

     b. ò   dà   sɛ́   lá   sìngkáà,   à   (dà) ɔ̀ɔ̀   á.
        3SG PST roast F   ground.nut.PL CNJ PST   eat them
        'He roasted groundnuts and then ate them.' (Hiraiwa & Bodomo 2008: 800)

((19)a) shows that the plural object *sìngkáà* 'groundnuts' is truly shared between both verbs, and that it cannot be expressed following the second verb, unlike in basic coordinate structures ((19)b), where an overt conjunction, optionally repetition of the tense marker, and resumption of the object is permitted.

   Ibibio does not allow the object to be expressed following the second verb in an SVC, but does in coordinate structures:

(20) a. bɔ̀ì   ngwét ádò (*nyʌ̀ng) nié *(òmmô)
        receive.PL book   DEM 2SG-CONJ own 3PL.OBJ
        'Take those books and keep them.'

     b. bɔí   ngwét ádò nyʌ̀ng   nié òmmô
        receive.PL book   DEM 2SG-CONJ own 3PL.OBJ
        'Take those books and keep them (other things).'

The serial construction ((20)a) does not allow an overt conjunction or expression of the object 'books' following the verb *nié* 'to own'. The coordinate structure ((20)b) allows expression of an object, but not necessarily co-referenced with *ngwet* 'book'. The SVC allows no other interpretation.

3.2.4 Single negation test

SVCs typically only allow negation of the entire verbal complex, and more specifically do not allow negation to surface between V_1 and V_2 (Hiraiwa & Bodomo 2008). This is shown for Dàgáárè below:

(21) a. ò   bá   sέ   nέnè   ɔ̀ɔ̀.
     3SG NEG roast meat   eat
     'He did not roast meat and eat it.'   (Hiraiwa & Bodomo 2008: 800)

  b.?*ò   sέ   nέnè bá   ɔ̀ɔ̀.
     3SG roast meat NEG   eat
     'He roasted meat and did not eat it.'(Hiraiwa & Bodomo 2008: 801)

  c.*ò   bá   sέ   nέnè bá   ɔ̀ɔ̀.
     3SG NEG   roast meat NEG   eat
     'He did not roast meat and not eat it.'   (Hiraiwa & Bodomo 2008: 801)

The data in (21) illustrate that the entire verbal complex may be negated ((21)a), but the verbs that make up the SVC may not be independently negated, as shown for the first verb ((21)b) and the second verb ((21)c).

The same pattern for negation is observed in Ibibio:

(22) a. bɔ̀ì   ngwét ádò   níé
     receive.PL book   DEM   own
     'Take those books and own them.'

  b. ké   ù-bɔ̀ì   ngwét ádò (*ké)   ú-níé
     NEG   2SG-receive.PL book   DEM   NEG 2SG-own
     'Don't take and own the books.'

((22)a) shows the base sentence leading into the negative in ((22)b). ((22)b) shows that the negative marker is only allowed before V_1, and cannot intervene between V_1 and V_2. The only possible interpretation of ((22)b) is 'don't collect and keep the book', where the entire verbal complex is negated. However, this cannot be interpreted in a way where the book is kept but not collected.

The case in (22) shows that the negative *ke* cannot intervene between V_1 and V_2, but this may be a problem with the form of negation. Negation surfaces in multiple forms in Ibibio, illustrated in (23)-(25) below:

(23) a. bén   òmmô
     take 3SG.OBJ
     'Take them!'

b. **ké   ù**-bén   òmmô
NEG   2SG.NEG-take   3PL.OBJ
'Don't take them!'

When comparing the imperative in ((23)a) to the negative imperative ((23)b), the subject marker changes from *à* to *ù* and the marker *ké* appears, which both occur in negative contexts.

In affirmative (non-imperative) contexts, the same change takes place between subject markers, *ké* still surfaces, but reduplication also surfaces on the right edge of the verb:

(24) a.   à-mà   á-fɔ́p
2SG-PST   2SG-burn
'You burned it.'

b.   ú-**ké**   **ú**-fɔ́p-**pɔ́**
2SG-NEG   2SG.NEG-burn-NEG
'You didn't burn it.'

It is unclear which of these changes actually indicates negation and which are epiphenomenal, but these are defining characteristics associated with negation in Ibibio.

Furthermore, a similar pattern is observed for 3SG subjects, as shown below:

(25) a.   Imà   á-dép
Ima   3SG-buy
'Ima bought it.'

b.   Imà   **í**-dép-**pé**
Ima   3SG.NEG-buy-NEG
'Ima didn't buy it.'

In this case, *ke* does not surface at all, but the subject marker changes from *á* to *í*, and the reduplication also remains.

Given the data in (23)-(25), negation tests are a little more complicated than simply inserting a marker between V$_1$ and V$_2$. Consider the data in (26):

(26) a.   Ekpe   á-mà   à-dùwɔ́ á-dʌ́k   àdùbè
Ekpe   3SG-PST   3SG-fall   3SG-enter pit
'Ekpe fell into a pit.'

b.   Ekpe   í-ké   í-dùwɔ́-Gɔ́   (*í-ké) í-dʌ́k-(*kɔ́)   àdùbè
Ekpe   3SG.NEG-NEG.PST   3SG.NEG-fall-NEG   3SG.NEG-fall-(NEG) pit
'Ekpe didn't fall into a pit.'

c.   Ekpe   í-ké   í-dùwɔ́-Gɔ́   **ádô**   á-mà   á-dʌ́k   àdùbè
Ekpe   3SG.NEG-NEG.PST 3SG.NEG-fall-NEG but   3SG-PST 3SG-enter pit
'Ekpe didn't fall, but he entered the hole.'

    d.   Ekpe   á-má   ádùwɔ́ **ádô** í-kí   í-dʌ́k-kɔ́   àdùbè
          Ekpe   3SG-PST 3SG-fall but   3SG.NEG-NEG 3SG.NEG-enter-NEG pit
          'Ekpe fell, but did not enter a pit.'

In the affirmative SVC ((26)a), the tense marker precedes both V$_1$ and V$_2$, the subject is shared, and both verbs denote a single event. The entire event can be negated ((26)b), which results in *ma* becoming *ké*, reduplication following the first verb (but not the second), while all of the 3SG subject markers take the negative form *í*. The data in ((26)c-d) were offered by a native speaker as the only way that V$_1$ or V$_2$ may be negated independently, which involves insertion of the subordinate conjunction *ádó* and results in the events of 'falling' and 'entering a pit' being interpreted as two independent events. In these cases, tense is marked by *ke* in the negative clause, and *ma* in the affirmative clause, the negative subject markers only surface across the negative clause, and reduplication only occurs in the negative clause. The speaker mentioned that it is impossible to do this in ((26)b) suggesting that it is an SVC, and that this diagnostic is useful in Ibibio for determining SVCs.

3.2.5 Extraction test

Extraction tests also distinguish between true SVCs and coordination. SVCs are free from the Coordinate Structure Constraint (Ross 1967), while coordinate structures are not. Therefore, this test can help in diagnosing SVCs (Baker 1989; Hale 1991). This is exemplified in (27):

   (27)a. bòng lá ká   ó   dà sɛ́ ɔ̀ɔ̀?
         what F   COMP 3SG PST roast eat
         'What did he roast and eat?' (Hiraiwa & Bodomo 2008: 801)

     b.*bòng lá ká   ó   dà sɛ́ à   (dà) ɔ̀ɔ̀ ó?
         what F   COMP 3SG PST roast CONJ PST   eat it
         'What did he roast and then eat?' (Hiraiwa & Bodomo 2008: 801)

     c.*bòng lá ká   ó   dà sɛ́ à   (dà) ɔ̀ɔ̀?
         what F   COMP 3SG PST roast CNJ PST   eat
         'What did he roast and then eat?' (Hiraiwa & Bodomo 2008: 801)

The SVC in ((27)a) allows for extraction of the object when it is shared by both verbs. In both of the coordinate structures shown in ((27)b-c), the object may not be extracted from either the first nor second conjunct.
  SVCs in Ibibio are also free from the Coordinate Structure Constraint, and allow extraction of a shared object:

   (28)a. Ekpe á-má   á-fɔ́p   únám á-tá.
         Ekpe 3SG-PST 3SG-roast meat   3SG-eat
         'Ekpe roasted and ate meat.'

     b. Ekpe á-ké   á-fɔ́p   nsó á-tá?
       Ekpe 3SG-PST 3SG-roast what 3SG-eat
       'What did Ekpe roast and eat?'

     c. ǹsó ké   Ekpe áké   áfɔ́p   á-tá?
       what COMP Ekpe 3SG-PST 3SG-roast 3SG-eat
       'What did Ekpe roast and eat?'

((28)a) serves as the base sentence. Ibibio allows for wh-in-situ and wh-movement. ((28)b) shows that the wh-expression *nso* 'what' may occur in-situ in the SVC. ((28)c) demonstrates that even overt extraction is permitted out of the SVC.

  In the case of coordination, the object can no longer be shared. Furthermore, a wh-question may not be formed for either object:

    (29) a. Ekpe ámá   á-fɔ́p   únám á-nyʌ́ng á-tá   únám
        Ekpe 3SG-PST 3SG-roast meat   3SG-CONJ 3SG-eat meat
        'Ekpe roasted meat and ate meat.'

      b.*ǹsó ké   Ekpe á-ké   á-fɔ́p   únám á-nyʌ́ng á-tá   __?
        what COMP Ekpe 3SG-PST 3SG-roast meat   3SG-CONJ 3SG-eat
        Intended: 'What did Ekpe roast meat and eat?'

      c.*ǹsó ké   Ekpe á-ké   á-fɔ́p   __ á-nyʌ́ng á-tá   únám?
        what COMP Ekpe 3SG-PST 3SG-roast   3SG-CONJ 3SG-eat meat
        Intended: 'What did you roast and eat meat?'

Extraction is not permitted out of the first conjunct ((29)b) or the second conjunct ((29)c). These facts provide further evidence that SVCs in Ibibio satisfy the criteria established in the literature.

3.3 Semantics of serial verb constructions

Serial verbs possess a variety of semantic properties and cover a vast semantic range cross-linguistically. The primary issue focused upon in this section is asymmetric and symmetric SVCs.

3.3.1 Asymmetric serial verb constructions

Asymmetric serial verb constructions as SVCs may consist one verb from a large, open, unrestricted class and another from a semantically or grammatically restricted (closed) class. Assymetrical SVCs denote a single event described by the verb from the non-restricted class. (Aikhenvald 1999a, 2006; Durie 1997). This is illustrated in the Cantonese example below:

    (30) lei lo   di saam   lai.
       you take PL clothing come
       'Bring some clothes.' (Aikhenvald 21: 2006)

In (30), the verb *lai* 'come' provides direction specification for the event of 'taking clothes'. These asymmetrical constructions are widely attested and cover a wide semantic range. The Cantonese example above is classified as a 'directional' or 'orientation' SVC.

Ibibio exhibits a wide variety of directional SVCs. The three constructions shown below combine the verb *di* 'come' with other verbs that denote directional subtleties:

(31) a. m̀-má   à-dì
        1PL.SUBJ-PST   1PL.SUBJ-come
        'We came.'

     b. m̀-má   à-dì   wùɔ́
        1SG.SUBJ-PST   1SG-come   arrive.at.destination
        'I arrived (at the destination).'

     c. m̀-má   à-dì   sʌ́m
        1SG.SUBJ-PST   1SG-come   meet
        'I arrived (at the agreed location).'

     d. m̀-má   à-dì   béGé
        1SG.SUBJ-PST   1SG-come   arrive.ceremoniously
        'I arrived (ceremoniously).'

When *di* is used as a main verb, the means by which the action of 'coming' is unspecified. In each of the cases in ((31)b-d), a specific motion verb combines with *di* to specify the means by which the subject goes. For instance, ((31)b) specifies that a particular destination was established, ((31)c) specifies that a meeting was planned, and ((31)d) implies that the arrival was highly anticipated or ceremonious.

Similarly, other motion verbs like *sàngá* 'walk' can combine with other verbs to form directional SVCs:

(32)   Ekpe   á-mà   á-sàngá   á-káná   ídʌ́ng
        Ekpe   3SG-PST 3SG-walk 3SG-circle   village
        'Ekpe perambulated around the village.'

(32) shows that 'walk' and 'circle' combine to mean 'walk around/wander around'.

Other constructions in Ibibio are structured almost identically to the Cantonese example in (30). In Ibibio, the verb *ben* 'lift' may form an SVC with *di* 'come' to form the equivalent to 'bring' in English:

(33)   Ekpe   â-yá   á-bén   ùdíyá   á-dí
        Ekpe   3SG-FUT 3SG-lift yam   3SG-come
        'Ekpe will bring a yam.'

It appears that *di* is commonly used to construct asymmetric SVCs in Ibibio. In (30), it provides directional information for the 'lifting' event.

Other types of directional information may also be encoded in Ibibio, such as direction to/from or up/down:

(34) a. tóp   dúɔ́k
         throw lose
         'Throw it away!'

    b. Ekpe á-mà   á-sùùk   íyírè á-sɨ́n   ké ìnyàn
        Ekpe 3SG-PST 3SG-lower   net   3SG-put   in river
        'Ekpe lowered the net into the river.'

    c. yít úsʌ́ng sɨ́n Okon ké ésít ùfɔ̀k
        lock door put Okon in heart house
        'Lock Okon inside the house!'

((34)a) shows a case where two verbs form an an idiomatic directional SVC, meaning 'throw it away', but literally 'throw it and lose it.' However, ((34)b) combines the stative verb *súk* 'be low' with *sɨ́n* 'put', which translates roughly as 'lower' in English. *sɨ́n* 'put' does not need to be combined with stative verbs, but can also combine with verbs like *yít* 'lock' to form a directional meaning.

Another tendency for languages that display asymmetric SVCs is that a subset of the closed-category verbs involved may increase valence. For instance, the verb *dá* 'give' functions this way in Saramaccan:

(35) Kófi bi   bái dí búku dá   dí muyé
     Kofi TENSE buy the book give the woman
     'Kofi had bought the woman the book.' (Aikhenvald 2006: 26)

dá in (35) introduced a benefactor to the sentence. In this case, 'the woman' follows the verb give and is the one who receives the book.

Ibibio also introduces benefactors with the verb give. In some cases, the benefactor receives an object, like the case above, but in others, a physical object is not received:

(36) a. á-mà   á-tèm   àdésì ú-nɔ̀
         3SG.SUBJ-PST 3SG-cook rice   2SG.OBJ-give
         'She cooked rice for you.'

    b. Ekpe á-mà   á-nék   únek í-nó   (ǹnyìn)
        Ekpe 3SG-PST 3SG-dance dance 1PL.OBJ-give 1PL.OBJ
        'Ekpe danced for us.'

In ((36)a), a benefactor *ú* 'you' is introduced by the verb *no* 'give'. In this case, the benefactor receives 'rice'. However, in ((36)b), the benefactor simply receives the benefit of watching Ekpe dance.

Another cross-linguistically common serial verb construction is used in comparatives, often containing the verb 'to surpass'. An example from Goemai is shown below:

   (37)   kuma f'yer   ma: ni
               also   become.big(SG) surpass 3SG
               'And (he) has grown bigger than him.' (Aikhenvald 2006: 27)

In (37), the verb *ma:* 'surpass' follows the stative verb *f'yer* 'become big' to form a comparative. The same construction is available in Ibibio, shown in (38):

   (38)   á-sɔ́ng   á-ǹg-kàn
               3SG-be.old 3SG-1SG.OBJ-surpass
               'He is older than me.'

The verb *kàn* 'surpass' follows *sɔ́ng* 'be old' to form the comparative in Ibibio. In the case above, both the subject and object of comparison are inflected on *kan*.

Some closed-class verbs combine with other open class verbs to denote inception/completion, such as *tɔ́ngɔ́* 'begin' and mâ 'finish':

   (39) a. sɔ́p   díá   mâ
              be.quick   eat   finish
              'Finish eating quickly!'

        b. tɔ́ngɔ́   díá
              begin   eat
              'Start eating!'

In ((39)a) the open class verb *díyá* 'eat' precedes the completive verb *mâ*, for which the completive describes the first event. In the second case, the opposite order is observed, and the closed-class verb *tɔ́ngɔ́* precedes and provides an inceptive meaning to the event represented by *díyá* 'eat'.

3.3.2 Symmetrical serial verb constructions

Unlike asymmetrical SVCs, symmetrical SVCs are composed of (at least) two open class verbs that carry equal weight in the semantics of the SVC. Symmetrical SVCs often denote a sequence of actions or related concomitant actions. An example from Ewe is shown below:

   (40) Áma â-ɖa   nú   ɖu
           Ama POT-cook   thing eat
           'Ama will cook and eat.'   (Aikhenvald 28: 2006)

Both verbs *ɖa* 'cook' and *ɖu* 'eat' play an equal role in the event of 'cooking' and 'eating' above. Furthermore, the object 'thing' is shared by both. The construction above does imply a sequence of actions, as it is implied that 'cooking' is done before 'eating.
This type of SVC has been shown for Ibibio throughout this paper. Many common SVCs in Ibibio imply a sequential complex event, as shown in (41) below:

(41) a. Ekpe   á-má   á-dùɔ́   á-dʌ́k   àdùbè
       Ekpe   3SG-PST 3SG-fall 3SG-enter pit
       'Ekpe fell into a pit.'

     b. Ekpe   á-mà   á-bén   ìkpáng á-kàmá áféré
        Ekpe   3SG-PST 3SG-lift spoon   3SG-stir soup
        'Ekpe took a spoon and stirred soup.'

((41)a-b) both show sequential SVCs in Ibibio. In both cases, the actions take place sequentially based on their linear order. In ((41)a), 'falling' occurs before 'entering a pit', and in ((41)b) the 'lifting of the spoon' occurs before 'stirring the soup'.

3.4 More serial verb constructions

Now that I have shown that SVCs in Ibibio fit in with the typological literature on SVCs on both syntactic and semantic grounds, I now provide a more exhaustive list of SVCs in Ibibio, that were not covered above.

3.4.1 Instrument serial verb constructions

Some serial verb constructions contain a DP that functions as the object for one verb and an instrument for another. This is not uncommon for languages with SVCs (Baker 1989; Aboh 2009). This construction is shown in (42):

(42) a. kámá   ùdʌ́ng   m̀mì   tɨ́m   fùfú
       hold   mortar 1SG.POSS pound fofoo
       'Use my mortar to pound fofoo.'

     b. Ekpe   á-má   á-tóp   ítíát   á-n-tɔ́
        Ekpe   3SG-PST 3SG-throw stone 3SG-1SG.OBJ-hit
        'Ekpe threw a stone and hit me.'

((42)a) shows an example where *ùdʌ́ng* 'mortar' functions as the theme of V$_1$ and instrument of the V$_2$. The same is true for *ítíyát* 'stone' in ((42)b).

3.4.2 Questionable serial verb constructions

Some SVCs in Ibibio do not easily fit in with the categories discussed above. These constructions provide modal information to the sentence, despite being open-class verbs (at least when used as main verbs).
   For instance, the verb *ngwana* may function as a main verb that means 'fight' or an abilitative:

(43) a. ḿ-mà   ńg-ǹgwáná   (yè)   Ekpe
       1SG.SUBJ-PST 1SG.SUBJ-fight with   Ekpe
       'I fought Ekpe.'

b. ḿ-mà   ńg-**ǹgwáná** àdí **kɨ̂p** sókòrò
1SG.SUBJ-PST 1SG-fight   ADI pick oranges
'I tried to pick oranges.'

((43)a) shows *ngwáná* used as a main verb. However, when it occurs as V$_1$ it denotes ability, not 'fight'. Problematically, the marker *adi* intervenes between the verbs and appears to be a tense/aspect marker. If this is the case, it violates the 'single tense/aspect marker' rule, and may eliminate this construction as an SVC.

   Another questionable construction involves the verb *keme* 'be able to', which must always co-occur with another verb:

(44)   ḿ-mé kémè àdí kɨ̂p sókòró
1SG-PST be.able ADI pick oranges
'I can pick oranges.'

Like the case in (43), constructions with *keme* also require *adi*, which may eliminate this as an SVC. Either way, the V$_1$ V$_2$ object sequence has appeared numerous times throughout this paper, but not with a marker intervening.

   Other interesting puzzles surface when a sequence of more than two verbs surface:

(45)   dì ìwúd ùnàm ì-tém ì-tà
come 1PL-kill animal 1PL-cook 1PL-chew
'Let's grab our knives, kill animals, and eat them.'

In constructions like (45), all of the criteria for serial verbs are met. Each verb in this sequence shares a subject and an object, all are in present tense, and this construction most definitely falls under the category of sequential, symmetric SVC. However, producing a syntactic analysis of this construction would be quite difficult, namely because of the distance between V$_3$ and the object ùnàm. Also of interest here, is the first verb *di* 'come' which is functioning as an imperative, while all verbs that follow include the speaker.

   Another similar construction involves two directional verbs *ké* 'go out' and *dì* 'come' and *bén* 'lift' in between:

(46)   ké   bén ùsɔ́ dì
go.out lift father come
'Go get our father and return.'

Once again, there is only one tense marker, the subject is shared for all verbs, but it becomes very difficult to determine whether all three verbs form an SVC or not.

   Because the examples in (45) and (46) are imperative, and present tense is unmarked, it is possible that multiple tense markers are present, however this is not the case for the past tense construction below:

(47)   Ekpe á-mà   á-sàngá (kèèd) yè   Okon á-nyɔ́ng á-dí
Ekpe 3SG-PST 3SG-walk one   with Okon 3SG-go   3SG-come
'Ekpe returned with Okon.'

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(47) shows a sentence that contains one tense marker and a 3SG subject marker throughout. This construction is much too complicated to evaluate as an SVC, but the main point here is that Ibibio exhibits constructions that appear to satisfy the criteria for SVCs that do not fall under a simple template. The examples in (45)-(47) need to be investigated carefully in the future.

4. Conclusions

I have shown that SVCs in Ibibio are truly SVCs by using syntactic diagnostics often used in the literature. Ibibio displays the same differences between standard coordination and serial verbs as many other languages. In SVCs, an overt conjunction is banned, only one tense/aspect marker is allowed, at least one argument is shared, and the verbs form a mono-clausal predicate. With regard to semantics, Ibibio displays many characteristics found in the typological literature, namely a number of different asymmetrical and symmetrical SVCs. Ibibio Within the realm of semantics, many common constructions in the literature were shown to exist in Ibibio, both symmetric and asymmetric.

In future investigations, other areas should be investigated. For instance, a comparison between predicate cleft constructions and serial verb constructions should be done. Hiraiwa and Bodomo (2008) construct an analysis that hinges upon this comparison. To this point, there has been no or limited work on predicate clefting in Ibibio, which must be done before the work in Ibibio can be placed within the theoretical literature.

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