Secondary concepts and internal dynamics of Emai Serial Verb Constructions

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Abstract

We examine verbs in series as they relate to Dixon's (1991, 2010) notion of secondary concepts. Our verb samples and their structures derive from an Edoid language of southern Nigeria. Emai shows asymmetrical and symmetrical serial verb constructions. However, our analytic concern is the differential realization of secondary concepts according to form class. Most verbs that realize secondary concepts appear in A-SVCs as a minor component. Some verbs that code secondary concepts shun serialization and generally take complements that are clausal, truncated, or obliquely marked gerundives. Other form classes expressing secondary concepts are preverb and particle. Members reveal a verb heritage that is either lexical or phrasal. Even a few nouns convey secondary concepts. Auxiliaries, while referencing secondary concepts, do not disclose a verb heritage. Secondary concepts in A-SVCs reveal an asymmetry as occupants of positions V1 or V2 in series. V1 manifests event and participant qualifiers, whereas V2 exhibits primarily event qualifiers. Both positions also evidence serial-within-serial structures. Overall, secondary concepts only partially align with Emai verbs in series. Since a significant number of preverbs and particles actualize secondary concepts and have a verb heritage, we assume they have grammaticalized from earlier verb-in-series structures. Furthermore, we hypothesize that the pre-verbstem position in the canonical simplex clause of Emai has had a privileged role in the emergence of secondary concepts as preverbs from verbs in series and in the continual development of serialization as an expressive means for event and participant qualifiers.

Keywords: Emai; Edoid; serial verb constructions; secondary concepts; preverbs

1.   Introduction

Serial verb constructions anchor a historical phenomenon toward which and from which other linguistic categories and structures can be identified. Direct evidence articulating the diachronic range of this phenomenon is scarce (Aikhenvald 2018). Consequently, linguists rely on a variety of comparative and typological strategies to discern its nature. One such strategy is presented by R.M.W. Dixon's (1991; 2010) analysis of conceptual types. Primary concept types tend to actualize as verbs cross-linguistically. Secondary concepts are less restricted in their realization. In some languages they occur as affixes or grammatical morphemes, in others as verbs. Giving only slight attention to the primary type in this paper, we examine the encoding of secondary concepts in Emai, a language of south-central Nigeria.

Emai is a minor language in the Edoid group (Elugbe 1989). It is spoken in over 10 villages with approximately 20-25,000 speakers. A tonal language, Emai shows lexical and grammatical tones high (´), low (`), and downstep high (˝). Its morphological template for the basic verb is X-stem-Y. X identifies a persistive qualifier prefix and Y encompasses contrasting perfective/ imperfective toneme suffixes. Tones from these suffixes spread onto lexically toneless verbs. The imperfective suffix is a floating low tone. Traces of perfective suffix *-i* and its high tone are evident in simple clauses with an intransitive verb or a monotransitive verb whose direct object has left dislocated. Generalizing beyond this template to the syntactic predicate, a similar templatic arrangement emerges with X-predicate-Y, where X refers to pre-predicate classes of auxiliaries and preverbs and Y to a post-predicate class of particles, which can then be followed by adverbs or prepositional phrases. Predicates in Emai can be simple intransitive, transitive, or ditransitive verbs as well as complex verb plus particle constructions or serial verb constructions (SVCs).

The evolution of component verbs from SVCs into non-serial, non-verb word classes has been often discussed as has their grammaticalization into semantic markers of various sorts (Heine and Kuteva 2002; Kuteva et al. 2019). Verbs of different semantic profiles have evolved into auxiliary forms or bound morphemes for tense, aspect, modality (Ameka 2006; Hellwig 2006; Killian-Hatz 2006; Lichtenberk 2006; McWhorter 1997; Meakins 2010), adpositions or bound morphemes for clause-level semantic roles and valency changers (Lichtenberk 1985; Lord 1993; Killian-Hatz 2006; McWhorter 1997), particles for direction (Lichtenberk 2006), and complementizers for clausal mood (Lawal 1991). Less attention has been directed to specific clausal positions that verbs occupy in SVCs and the associated word classes that they might hold concurrent with verb status. In Emai the positional character of verb or verb-related forms that express secondary concepts is uneven. Some event and participant qualifiers occur in pre-predicate X position, while others appear in post-predicate Y position. Ultimately, we view this asymmetry as having its semantic origin in the basic morphological template characterizing the Emai verb. Pre-predicate position favors preverbs, whereas post-predicate position privileges particles.

2.   Background serial verb types in Emai

As a prelude to examining secondary concepts and their grammatical realization we illustrate SVCs that do not manifest secondary concepts. Emai SVCs are either asymmetrical (A-SVC) or

symmetrical (S-SVC) with verbs in a V1 slot and a V2 slot, as discussed by Aikhenvald (2006; 2018). Regardless of type, verbs in series trend largely toward non-contiguous, concordantly marked, and multi-word structures. In addition, minor components in A-SVCs often exist in a condition of concurrent grammaticalization since simultaneously they occur as independent verbs in non-SVCs and as forms with grammatical meanings in SVCs.

2.1   Symmetrical serial verb constructions

A symmetrical serial verb construction consists of two or more component verbs, each of which derives from a large open and unrestricted class. One subtype in Emai is cause-effect. Exemplars convey a change of material state expressed by the verb in the V2 slot. The construction argument that undergoes change appears as direct object of V1 and as logical subject of V2, a relation of switch function. Verbs that appear as V1 include transitive *h<u>o</u>o úkpùn* 'wash a cloth.' As V2, we find intransitives such as *fuan* 'become clean.'

(1)   *òjè h<u>óó</u>   <u>ó</u>lí úkpùn   fúán.*
        Oje NPST.wash\PFV   the cloth   become.clean\PFV
        "Oje washed the cloth clean."

A second S-SVC type reflects a temporal relation of sequence between verb events. Order of the two verbs in sequence is iconic with respect to pragmatic real-world conditions. The verbs share subject and direct object arguments (1). Both construction slots in the SVC filled with verbs from large open classes. In a simple clause each component verb occurs as a transitive form *d<u>e</u> émà* 'buy yam,' *e émà* 'eat yam,' *sa áfìánmì* 'sting bird,' *gbe áfìánmì* 'kill bird.'

(2)   a. *òjè d<u>é</u>   émà é.*
           Oje NPST.buy\PFV   yam eat\PFV
           "Oje bought yam and ate it."
        b. *ìsàmìsákóì sá   <u>ó</u>lí áfìánmì gbé.*
           soldier.ant   NPST.sting\PFV   the   bird   kill\PFV
           "The soldier ant stung the bird and killed it."

S-SVCs of a resultative subtype have unrestricted, open class transitive verbs in V1 and V2 slots. In combination they articulate repositioning an entity to a maximum extent. V1 is filled by a verb of handling ('carry', 'throw', 'take') that expresses a causative function relative to its immediately following nominal, which is displaced to a maximum extent. However, V1 does not take the displaced nominal as a subcategorized direct object in a simple clause (**fì óràn* 'project/throw a tree', **r<u>e</u> úkpùn* 'take a wrapper'). In contrast, V2 as monotransitive in a simple clause does (*gbe óràn* 'fell a tree' and *ruan úkpùn* 'tie a wrapper').

(3)   a. *òjè fí   <u>ó</u>lí óràn   gbé.*
           Oje NPST.project\PFV the tree   fell\PFV
           "Oje felled the tree flat out. / Oje got the tree completely down."
        b. *àlèkè r<u>é</u>   úkpùn   rúán.*
           Aleke NPST.take\PFV   wrapper tie\PFV
           "Aleke_i tied her_i wrapper way around herself_i. / Aleke got the wrapper around."

In most resultative SVCs, it is the nominal following V1 that is maximally repositioned. When the displaced nominal is a locative noun and V2 accepts it as direct object, e.g. *heen ùdékèn* 'climb wall,' it is SVC subject that undergoes maximum displacement.

(4)   * òjè   nwú   ùdékèn   héén.*
       Oje   NPST.take.hold\PFV   wall   climb\PFV
       "Oje climbed up top the wall. / Oje got to the top of the wall."

2.2   Asymmetrical serial verb constructions

An asymmetrical serial verb construction consists of component verbs that contrast in their grammatical status. A minor component is from a restricted verb class, its major partner from an unrestricted, open class. Semantically, minor verb forms tend to convey grammatical meanings in SVCs, whereas in non-SVCs they express their lexical meaning.

One A-SVC type increases verb valency with minor verb *gbe* 'hit' in the V2 slot. When a major component occupies the V1 slot, *gbe* conveys the meaning 'against.' Transitive verbs that realize the major component express movement of their direct object. The resulting SVCs exhibit a switch function relation since the direct object of V1 is also the logical subject of V2 *gbe*. In a simple clause *gbe* exhibits a range of senses related to hitting, as in *gbe ìbè* 'hit drum,' *gbe ábò* 'clap hands,' or *gbe óvbèkhàn* 'beat a youth.'

(5)   a. *òjè gbúlú   ólí ókò   gbé   ìmátò.*
          Oje NPST.roll\PFV the mortar hit\PFV car
          "Oje rolled the mortar against the car."
       b. *ólì òkpòsò fí   úkpóràn gbé   ùdékèn.*
          the woman NPST.throw\PFV   stick   hit\PFV wall
          "The woman threw a stick against the wall."

Another A-SVC of the valency increasing type specifies an instrument or means for the action of a major component verb in V2 position. V1 *re* 'take' serves as a minor component. Major component verbs include *kpiakpia óràn* 'trim a tree' or *dia vbì àgá* 'sit in a chair.' A switch function relation among construction arguments appears to vary according to whether *re* direct object serves as event instrument or means, since cutlass in (1a) directly causes the tree to be trimmed but pillow in (1b) does not directly cause the chair to be sat in. Rather, the pillow allowed the chair to be sat in.

(6)   a. *òjè ré   ópìà kpíákpíá óràn.*
          Oje NPST.take\PFV   cutlass trim\PFV   tree
          "Oje trimmed a tree (bark) with a cutlass / took a cutlass and trimmed a tree."
       b. *òjè   ré   ùkpènùhùnmì díá   vbì   àgá.*
          Oje   NPST.take\PFV pillow   sit\PFV   LOC   chair
          "Oje sat in the chair on a pillow. / Oje took a pillow and sat in the chair."

Minor verb *re̱* never occurs as simple predicate in a clause. It is limited to complex predicates, either SVCs with a change of state verb such as *chian* 'become' (74a) or postverbal particle constructions with applicative *li/ni* that add an argument (74b).

(7)   a. *ólì òkpòsò ré̱*   *ògèdè chián   ísì   òí.*
         the woman NPST.take\PFV banana become\PFV ASS   her
         "The woman made the banana hers."
      b. *òjè ré̱*   *ìkhùnmì lí   òhí.*
         Oje NPST.take\PFV   medicine APP Ohi
         "Oje gave / provided medicine to Ohi."

3.   Secondary concepts in SVCs

As noted in §1, Dixon assigns verb forms in English to primary and secondary conceptual types. Assignments depend on verb grammatical properties, thus leading to a principled relation between semantic conceptual structure and grammatical form. Verbs identified as primary can form a sentence with noun phrases as subject and direct object. In contrast, verbs recognized as secondary often modify another verb and its arguments.

	Secondary A classes
1	NEGATORS
2	MODALS & SEMI-MODALS
3	PHASAL (BEGINNING-ENDING)
4	TRYING
5	HURRYING
6	DARING
	Secondary B classes
1	WANTING
2	POSTPONING
	Secondary C classes
1	MAKING
2	HELPING
	Secondary D classes
1	SEEM
2	HAPPEN / MATTER

Table 1: Secondary concept classes from Dixon (1991; 2010)

Crosslinguistically, secondary concepts show variable coding as lexical verbs or non-lexical, grammatical forms. Verbs fall into four secondary classes: A, B, C, and D. Secondary (SEC)-A members like *start* have the same subject or object as the action they modify (*She started eating the turkey.*). A SEC-B exponent of the *want* type adds an additional argument to an action, although its subject may also be coreferential with the subject of a complement clause (*He wants Mary to eat turkey.*). SEC-C forms, e.g. *help*, introduce an argument that becomes part of the subject of the main action (*John helped Mary eat the turkey.*). And SEC-D verbs like *appear* may introduce an argument into an action with "to" (*It appeared to John that Mary ate the wrong drumstick.*). Each secondary conceptual class exhibits further division. Table 1 arranges secondary concepts according to class and subclass.

Secondary concepts represent one of eight recurring semantic groupings of A-SVCs according to Aikhenvald (2006; 2018). The others include direction/orientation, aspect/extent, valency increasing, valency decreasing, complement clause, comparative/superlative, and event argument. Aikhenvald makes several observations regarding the serialization of secondary concepts. Verbs expressing secondary concepts appear in the minor slot of A-SVCs. SEC-A concepts do not add an argument to the main action of a clause. SEC-B concepts, which may add an argument, occur as a minor component in SVCs more often than SEC-A concepts. Negators under SEC-A are expressed as a verb in the minor slot only occasionally, as in Dravidian languages. SEC-A and SEC-B concepts in A-SVCs differ in the linear order of their components, as happens in Tariana (Arawakan) where SEC-B has the order minor major while SEC-A displays the order major minor. Verb classes containing secondary concepts in the minor slot of A-SVCs may be large or small. Lastly, it is semantic dependency that verbs encoding secondary concepts have in common. They do not occur on their own without an additional verb for which they provide modification.

In the conclusion we come back to these observations of Aikhenvald. Before that we examine SVCs and Non-SVCs in Emai that articulate Dixon's secondary concepts. We commence with Class D, moving from there to Classes C, B, and A. Example serial verb constructions from all four secondary concept classes are assessed.

3.1   Secondary D class

Emai verbs that reflect the SEC-D-2 HAPPEN class are *u* and *ruan*. The latter appears in a serial verb construction; the former does not. Verb *u* appears as transitive or intransitive in highly constrained syntactic patterns. Its transitive constructions are syntactically and lexically rigid. As subject, it requires nominal *émì* 'things' and permits only animate nouns as direct object (8a). In addition, transitive *u* is limited to negative structures; it has no corresponding affirmative that is grammatical. In contrast intransitive *u* occurs in affirmative main clauses (*ò ú wèé* 'It happened a bit later') as well as in subordinate clauses marked by temporal Anterior *ke* 'after' (8b).

(8)   a. *émí   ósò   í   ì   ù   ólí   ómòhè.*
           thing certain SC   NEG happen.to ART   man
           "Nothing happened to the man."
       b. *ò   kéè   ú   wèé,   ólí   ókpósó ó'   vbì   ìwè.*
           it   NPST.ANT   happen\PFV   short.time ART   woman   RPST.enter\PFV LOC   house
           "After a bit of time happened, the woman entered the house."

The HAPPEN verb *ruan* is limited to intransitive structures. In addition to simple clauses (9a), *ruan* appears as major component in the V1 slot of an A-SVC (9b). In the V2 slot is minor verb *ye* 'move toward' in its allative function.

(9)   a. *émí   lì   òbè   rúán-ì.*
           thing R   bad   NPST.happen-PFV
           "Something bad happened."

   b. *émí lì ò̩bè rúán*   *yé*   *íyàìn.*
       thing R bad   NPST.happen\PFV   move.toward\PFV   them
       "Something bad happened to them."

Emai verbs related to Dixon's SEC-D-2 HAPPEN class differ in the event types to which they associate. Pertinent are responses to information questions framed by each HAPPEN verb. Consider *émé'* 'what' questions with *ruan* and *u* in (10) and the responses deemed acceptable and unacceptable. Verb *ruan* limits responses to non-reversible changes of state (*u* 'die'), whereas *u* permits reversible changes (*kho̩nme̩* 'become sick').

(10)   *émé' ó̩ rúán'*   *yé*   *ó̩lí ó̩vbèkhàn?*
        what   3SG RPST.happen\PFV   move.to\PFV ART   youth
        "What happened to the youth?"
        ó̩   ú'-ì.   /   **ó̩   ò̩   khò̩nmé̩.*
        3SG   RPST.die-PFV   3SG   H   become.sick
        "He died."   "He is / got sick."

(11)   *émé' ó̩ ò̩ ù*   *ó̩lí ó̩vbèkhàn?*
        what   3SG H happen.to   ART   youth
        "What happens to the youth? / What affects the youth?"
        ó̩   ò̩   khò̩nmé̩.   / **ó̩   ò̩   ù.*
        3SG   H   be.sick   3SG   H   die
        "He is sick."   "He dies."

Secondary concepts from the Sec-D-1 SEEM class occur as verbs in Emai. They include forms *ree* and *vbie̩e̩*, each of which appears as a minor component in SVCs expressing information exchange.

Verb *ree* 'take after' occurs as minor component in the V2 slot of an A-SVC. It combines with major component *ye* 'send' in the V1 slot. SVCs with *ye ree* expect a response from the addressee. Direct object of *ree* designates addressee. Direct object of *ye* is a messenger or message nominal *úhùnmì* (also meaning 'head'); either exhibits a switch function relation, serving as direct object of *ye* and logical subject of *ree*.

(12) a. *ò̩jè yé*   *ó̩vbèkhàn ré̩é̩*   *ó̩lì ò̩kpò̩sò̩.*
       Oje   NPST.send\PFV   youth   take.after\PFV ART   woman
       "Oje sent a youth after the woman."
   b. *ò̩jè yé*   *úhùnmì ré̩é̩*   *ó̩lì ò̩kpò̩sò̩.*
       Oje NPST.send\PFV   message   take.after\PFV ART   woman
       "Oje sent a message after the woman."

In a simple clause, *ree* has the sense 'physically take after/resemble someone.' It occurs as an intransitive in construction with an obligatory *bi* phrase conveying a similitive standard (*ò̩jè ré̩è̩ bí érá ó̩ì* 'Oje physically resembles/takes after his father').

SVCs of *ye ree* stand in contrast to *ye ye* SVCs. The latter do not expect a response from the addressee. As major component in an A-SVC, verb *ye* 'send' occupies the V1 slot relative to minor component *ye* 'move toward' in slot V2. Direct object nominal of the major verb is either a human messenger or message nominal *úhùnmì*. SVCs with either manifest a switch function relation since the direct object of V1 also functions as logical subject of V2.

(13)   a. *òjè   yé   óvbèkhàn yé   àlèkè.*
            Oje   NPST.send\PFV youth   move.toward\PFV Aleke
            "Oje sent a youth to Aleke."
        b. *òjè   yé   úhùnmì   yé   àlèkè.*
            Oje   NPST.send\PFV message   move.toward\PFV Aleke
            "Oje sent a message to Aleke."

Verb *ye* 'send,' which is a primary verb of Class A, manifests an unusual property in some SVCs of information exchange. In a simple clause *ye* 'send' is transitive and takes a human noun direct object (*ye óvbèkhàn* 'send a youth'), not a message nominal (*ye úhùnmì 'send a message'). The verb *ye* 'send' also occurs as a ditransitive with two following arguments (*òjè yé òhí úhùnmì* 'Oje sent Ohi on an errand / with a message'). Rather unusual for Emai ditransitives, *ye* and its two arguments can occupy the V1 slot in A-SVCs while *ye* 'move toward' in its allative function fills the V2 slot (14).

(14)   *òjè   yé   òhí   úhùnmì yé   àlèkè.*
        Oje   NPST.send\PFV Ohi   message move.toward\PFV Aleke
        "Oje sent Ohi with a message to Aleke."

Another information exchange expression employs a verb whose meaning associates with a secondary concept from the SEEM class. Verb *vbiee* 'become apparent, visible, show' occurs as minor component in relevant A-SVCs. It occupies the V2 slot and designates the addressee argument. Various communication verbs can occupy slot V1. However, *vbiee* SVCs carry no expectation of a verbal response from the addressee.

(15)   *ólì   òkpòsò zé   èin   vbíéé   ólí   ómòhè.*
        ART woman NPST.disclose\PFV secret become.apparent.to\PFV ART man
        "The woman disclosed a secret to the man."

In A-SVCs *vbiee* displays meanings related to events of direct causation. Verb *vbiee* occurs as major component in slot V2. In slot V1 we find the minor component *re* 'take.' Its direct object is here limited to the body-part nominal *égbè* 'body.' SVC meaning relates to causing the body to become apparent or visible to someone.

(16)   *àlèkè ré   égbè vbíéé   ívbíá   óì.*
        Aleke NPST.take\PFV body show\PFV children her
        "Aleke appeared to her children. / Aleke showed herself to her children."

Verb *vbiee*, again as major component of an A-SVC, occurs in another construction whose form is partially similar but whose meaning is not limited to an inalienable relation between subject

and direct object of verb *re̩*. Minor component *re̩* 'take' requires a non-body-part nominal as direct object; construction sense is 'show.'

(17) *ò̩jè   ré̩   úháóbì   vbíé̩é̩   àlèkè.*
      Oje   NPST.take\PFV   poison.arrow   show\PFV   Aleke
      "Oje made a poison arrow apparent to Aleke. / Oje showed a poison arrow to Aleke."

There is still a third A-SVC with minor component *re̩* and major component *vbie̩e̩*. In this instance *re̩* in the V1 slot does not permit a direct object. Verb *vbie̩e̩* in the V2 slot takes a marked (*khi*) sentence complement characterized by a BE verb. Construction sense is 'cause to become apparent / evident.'

(18) *úé̩én   ísì   ò̩jè   ré̩   vbíé̩é̩   khí   ó̩ì   ó̩ò̩.*
      behavior ASS   Oje   NPST.take\PFV   show\PFV   IND   thief   be
      "Oje's behavior proved /made evident that he was a thief."

In a simple clause *vbie̩e̩* appears as a ditransitive verb with meanings related to making something apparent or teaching something to someone. Compared to *ye* and its ditransitive shape, *vbie̩e̩* ditransitives and their double object complement do not participate in serial constructions.

(19) *ò̩jè   vbíé̩é̩   áléké   ó̩lí   ébè.*
      Oje   NPST.make.become.apparent.to\PFV   Aleke   ART   book
      "Oje taught Aleke the book."

3.2   Secondary C class

Some Emai verbs reflect secondary concepts of the SEC-C-1 MAKING class. They appear in A-SVCs. As a minor component in slot V1, we find a class of verbs that express the handling of physical objects. They include *re̩* 'take' and *nwu* in its 'take hold' sense (*ò̩jè   nwú   ákpó̩zèvà* [Oje NPST\take.hold\ PFV second.position] 'Oje took second position / Oje came in second'). The major V2 slot is occupied by a verb in simple clauses that conveys change of state (*ó̩lì   ùrùkpà   rún-ì* [the lantern PRP.light-PFV] 'The lantern got lit / is lit' and *ó̩lì   ìmátò̩   múzán-ì* [the car halt-PFV] 'The car halted'). SVCs of this type show the subject argument as direct cause of the associated change of state. They can also exhibit a switch function relation given that the direct object of V1 serves as the logical subject of V2 (20b).

(20) a. *ò̩jè   ré̩   ùrùkpà   rún.*
         Oje   NPST.take\PFV   lantern   light\PFV
         "Oje got the lantern lit."
      b. *ò̩jè   nwú   ó̩lì   ìmátò̩   múzán.*
         Oje   NPST.take hold\PFV   ART   car   halt\PFV
         "Oje made the car stop. / Oje hailed down the car."

A second exponent of the MAKING class is *ee* 'inveigle, entice, trick, urge.' It occupies V1 slot as a minor component. In the V2 slot, major components include movement verbs such as *o* 'enter,

move into' and *hua* 'carry a plurality.' A-SVCs of this nature express indirect causation. In addition, they display a relation of switch function since the direct object of V1 *ee* is also the logical subject of V2.

(21) a. *òjè   éé   ólí éwè ó   vbì ìwè.*
      Oje   NPST.entice\PFV   ART goat enter\PFV   LOC house
      "Oje enticed the goat into the house."
   b. *òjè   éé   ólí óvbèkhàn húa   éràn.*
      Oje   NPST.entice\PFV   ART youth   carry\PFV   wood
      "Oje nudged the youth into carrying wood."

An A-SVC consisting of minor verb *ee* and major verb *o* 'enter' together can occupy the V2 slot in a serial-within-serial structure that is itself an A-SVC. Slot nesting of this type, illustrated in (22), shows verb *re* 'take' as minor component in the V1 slot. It adds a non-core argument to the enticing event.

(22)   *ò   ré   ókà   éé   ólí éwè ó   vbì ìwè.*
      SG   NPST.take\PFV   maize entice\PFV   ART goat enter\PFV   LOC house
      "He used maize to entice the goat into the house."

The form *ee* does not occur synchronically as a main verb in a simple clause with sense 'entice, inveigle, trick.' It has the meaning 'ruffle, tire someone,' which seems to relate semantically as a condition on state of mind for direct object of *ee*.

(23)   *ólì òbìà éé   òjè.*
      ART work NPST.ruffle\PFV   Oje
      "The work tired out Oje. / The work ruffled Oje."

Serial verb constructions in Emai articulate concepts of the SEC-C-2 HELPING class. Verb *kpaye* 'help' appears as minor component in the V1 slot of an A-SVC. It adds a non-core argument leading to construction meanings such as 'accompany, replace.' V2 consists of activity verbs such as *hian óràn* 'cut wood' and *ta étà* 'speak words.' Under the 'replace' interpretation, it is V1 subject, not V1 direct object, that serves as subject of V2. For the 'accompany' meaning, V1 subject and direct object together serve as subject of V2.

(24) a. *ójé kpáyé'   òlólò hián   ólí óràn.*
      Oje   RPST.replace\PFV   Ololo cut\PFV   ART wood
      "Oje cut the wood in place of / instead of Ololo. / Oje helped Ololo cut the wood."
   b. *òjè ò ó   kpàyè   ójé tà   étà.*
      Oje   SC PROG accompany\IPFV   Oje speak   word
      "Oje is speaking with Oje."

In simple transitive clauses *kpaye* has the sense 'help someone, give a helping hand to.' Its direct object is restricted to body-part nominal *óbò* 'hand' as possessum preceded by an external possessor. It appears that verb *kpaye* is related to form *kpaa/kpa*, which has a meaning related to repositioning an object (*òjè kpá émà ó vbi ìtásà* [Oje reposition yam CL LOC bowl] 'Oje

repositioned/apportioned yam into the bowl.' Helping someone is thus expressed as repositioning someone's hand.

(25)   *òjè   kpáyé̱   áléké   óbò̱.*
        Oje   NPST.help\PFV   Aleke   hand
        "Oje helped Aleke / gave Aleke a helping hand."

An additional exponent of the SEC-C-2 HELPING class is *de baa*. As a minor component in the V1 slot of an A-SVC, *de baa* conveys social accompaniment. It adds a non-core argument that associates with logical subject of the action represented by the major component in slot V2. Verbs in the V2 slot include transitive *sua ìmátò* 'push car' or intransitive *sie* 'play.'

(26) a. *òjè   dé   báá   élí   ívbèkhàn   súá   ìmátò.*
         Oje   NPST.reach\PFV   add.to\PFV   ART   youths   push   car
         "Oje joined the youths and pushed the car / Oje pushed the car with the youths."
     b. *ó̱lí   ó̱mó̱   dé'   báá   ínyó̱   ò̱ì   síé.*
         ART   child   RPST.reach\PFV   add.to\PFV   mother   his   play\PFV
         "The child played with his mother."

The *de baa* complex consists of two verb elements that are contiguous. It seems to be a multi-word form in which *de* has an anti-causative or inchoative effect on *baa* meaning, thereby reducing argument profile, and changing the meaning of *baa*. A similar situation obtains with the relation between *nwu go̱n* (*òjè nwú óràn gó̱n vbì ùdékè̱n* [Oje NPST.take\PFV pole lean\PFV LOC wall] 'Oje leaned the pole against the wall') and *de go̱n* (*ó̱lí óràn dé gó̱n vbì ùdékè̱n* [the pole NPST.reach\PFV lean LOC wall] 'The pole leaned against the wall') as well as *nwu khuan* (*òjè nwú è̱kpà khúán vbí óràn* [Oje NPST.take\PFV bag suspend\PFV LOC the tree] 'Oje hung a bag on the tree') and *de khuan* (*ó̱lì è̱kpà dé khúán' vbí óràn* [the bag NPST.reach\PFV suspend\PFV LOC tree] 'The bag got hung / suspended in the tree').

Both *de* and *baa* occur as verbs in a non-SVC clause. Form *baa* occurs in a postverbal particle construction with change of location particle *o̱* (33). It does not occur in a simple monotransitive clause. Verb *de* as a transitive has the sense 'reach' a location on the horizontal plane (*de áfízé'* 'reach Afuze'), while intransitive *de* expresses the sense 'fall' (*òjè gbó dé* 'Oje also fell').

(27)   *òjè   báá   ìshé   ó̱   vbì   òtò̱ì.*
        Oje   NPST.add.to\PFV   nail   CL   LOC   ground
        "Oje inserted a nail into the ground."

Verbs not participating in Emai SVCs also reflect Dixon's SEC-C-1 MAKING class. They include form *ze̱* with meanings 'cause' and 'allow.' It takes either a clausal complement or a truncated clause as subjunctive complement, both leading to biclausal constructions.

(28) a. *òjè   lí   ó̱   zé̱-í   khí   ó̱lì   òkpòsò   gbé   ó̱lí   ófè.*
         Oje   PF   3SG   RPST.cause-PFV   IND   ART   woman   PRP.kill\PFV   ART   rat
         "It was Oje who was the cause that the woman killed the rat."

b. *àlèkè zé   ójé   mùzàn.*
    Aleke NPST.allow\PFV   Oje   stand\IPFV
    "Aleke allowed Oje to stand."

An additional Emai form associated with the MAKING class is *àsé*. It is a noun meaning authority. It occurs in simple clauses as direct object of a transitive verb (*moe àsé* 'have authority'). It also occurs as direct object in postverbal particle predicates with applicative *li/ni*. However, *àsé* is not found as direct object in a SVC.

(29)   *óbá' ré   àsé   ní   áìn.*
       Oba   NPST.take\PFV   authority APP   him
       "The Oba has authorized him / given him authority / assigned authority to him."

3.3   Secondary B classes

Several Emai verbs display meanings related to the SEC-B-2 POSTPONING class. They occur in A-SVCs. The verb *khee* 'wait' appears as the minor component in the V2 slot. As the major component in the V1 slot, verb *muzan* 'halt' occurs.

(30)   *òjè ò ó   mùzán khèè   ólí   ómòhè.*
       Oje   SC PROG halt   wait.for ART   man
       "Oje is stopping and waiting for the man."

Verb *khee* also occurs as major component in the V2 slot of an A-SVC. Its minor component in the V1 slot consists of verbs that add non-core arguments such as *re* 'take' and *kpen* 'be next to.' In a simple clause, *khee* occurs as transitive and displays meanings related to waiting (*khee íkòíkò* 'wait for gorilla') and guarding (*khee ìwè* 'guard house').

(31) a. *ò   ré   émàè khéé   òjè.*
          3SG NPST.take\PFV   food   wait.for\PFV Oje
          "He reserved food for Oje. / He waited for Oje with food."
      b. *ólì òlógbò kpén   òtòì khéé   óì.*
          the cat   NPST.be.next\PFV ground wait.for\PFV him
          "The cat ambushed him. / The cat waited for him on the ground."

There are other verbs associated with SEC-B-2 POSTPONING. They occur in A-SVCs, as a minor component in the V2 slot. As major component, verb *si* 'shift' occurs in the V1 slot (32). In the V2 slot either of two minor component verbs appear: *ye* 'move toward' or *kee* 'happen near/close to.' In these constructions the direct object of V1 and the logical subject of V2 exist in a switch function relation.

(32) a. *yàn sí   ólí ékùèè yé   ísàò.*
          3PL NPST.shift\PFV ART   meeting move.toward\PFV front
          "They deferred the meeting. / They shifted the meeting forward."

b. *à   sí   ólì   èzón kéé   ísàò.*
   ID   NPST.shift\PFV   ART   case happen.near\PFV   front
   "The case was postponed. / The case was shifted toward the front (of the list)."

In a simple clause, the verb *kee* does not code a spatial relation. Instead, it refers to a temporal relation specific to event timeliness.

(33) *óshàn   ó   ò   kèè   ívbíá   òjè.*
      walking SC   H   happen.timely   children Oje
      "Walking happens quickly /in a timely manner for Oje's children."

One Emai verb associated with the SEC-B-1 WANTING class is *hoo* 'want.' It takes a complement clause marked as subjunctive by *li* and the initial low tone of complement verb phrase. Verb *hoo* disallows a noun phrase as complement.

(34) *òjè   ò   ó   hòó   lí   ólí   ókpósó dà   ényò.*
      Oje   SC   PROG want SUBJ ART   woman   drink wine
      "The man wants the woman to drink wine."

Another Emai form related to the WANTING class is *ìkà*. A noun, it occurs in SVCs and non-SVCs. With meaning 'pretense,' *ìkà* occurs as direct object in a simple clause (*ze ìkà* [select pretense] 'pretend'). It also appears as direct object of verb *re* 'take,' which serves as minor component in the V1 slot of an A-SVC (35). In the V2 slot, the major component can be ditransitive (*fi* 'hit someone with something') or intransitive. When intransitive, the V2 slot itself may consist of an SVC. For instance, *u* 'die' as major component in an A-SVC accepts minor component *fee ghoo* [attenuate look] 'feign,' as in (*ójé ló ù féé ghòò* [Oje   RFUT   die\PFV Attenuate.look] 'Oje will feign death'). Since V2 here is itself an A-SVC, the V2 slot with V1 *re* manifests a serial-within-serial construction.

(35) a. *ò   ré   ìkà   fí   ójé   émì.*
         3SG NPST.take\PFV   pretense hit\PFV Oje   thing
         "He pretended to hit Oje with something."
      b. *òjè   ré   ìkà   ú   féé ghòò.*
         3SG NPST.take\PFV   pretense die\PFV try\PFV
         "Oje pretended to be dead. / Oje used pretense to feign death"

3.4   Secondary A class

Throughout various facets of Emai grammar secondary concepts assume forms that are lexical verbs, grammatical morphemes, or both. Many grammatical morphemes that are synchronic preverbs or postverbal particles reveal a verb lineage that remains transparent despite the effect of grammaticalization on word class, meaning, and tone. Auxiliaries, on the other hand, do not manifest a verb heritage. Rather, they align better with forms identified in Nurse (2003; 2008), Nurse and Philippson (2006), and Nurse et al. (2016) for Proto-Bantu and perhaps the earliest forms of Benue-Congo. The same can be said for postverbal particle *lé* 'already,' which appears derived from Proto-Bantu perfective suffix *-ile*.

Assignment to auxiliary, preverb, or postverbal particle category is based primarily on distributional constraints, tonal contour, and semantics. Although both auxiliary and preverb forms manifest tonal melodies impacted by clause-level tense values, most notably past and future, polysyllabic exponents of each form category exhibit a tonal contour, whereas monosyllabic forms manifest a lexical low tone. Tonal contour configurations stand in contrast to non-contour, level tones (high or low) on polysyllabic verbs due to aspect inflection. Postverbal particles, on the other hand, show lexical tone patterns altered by the tone associated with perfective/imperfective aspect.

In the following sections we examine grammatical coding of concepts associated with Dixon's SEC-A type. In many instances their affiliation with the category verb can still be discerned, especially in simple clauses. Concurrently, many of these verbs have grammaticalized partially or completely to achieve preverb or postverbal particle status. We take their lineage to suggest that preverbs and postverbal particles derive from a serial verb template that allowed (and sometimes still allows) a diachronic stage in which preverb and postverbal ancestors occurred in construction with a main verb. In this earlier stage, ancestor forms would have assumed a position that preceded or followed the main verb in an A-SVC configuration. Preverbs and postverbal particles that retain some reflex of their verbal heritage pertain to the classes SEC-A-2 SEMI-MODAL, SEC-A-3 PHASAL, SEC-A-4 TRYING, SEC-A-5 HURRYING, and SEC-A-6 DARING.

3.4.1   DARING class

Secondary concepts that appear broadly related to the SEC-A-6 DARING class have lexicalized as preverbs. All have their origin in a collocational structure defined by a verb and its direct object noun. Over time, this structure has lexicalized through a process of univerbation (two words becoming one) and subjectivization (conveying speaker attitude toward grammatical subject). Preverb meanings reflect a speaker judgment that ascribes a trait to the grammatical subject.

One class of preverbs that reflect the SEC-A-6 DARING class (and perhaps the SEC-A-2 SEMI-MODAL class) displays meanings pertaining to intentionality and dynamic modality, as discussed by Nuyts (2005; 2016). Members reveal a verbal heritage that has a collocational character. Synchronically, each preverb occurs as a prosodic word unit. A common feature of their different preverb meanings (deliberately, mistakenly, ability, defiantly) is its exclusive ascription to the grammatical subject.

(36) a. *ójé   dá'bò̱   fí   ó̱lì   è̱kpà   fí   à.*
      Oje   RPST.deliberately threw\PFV ART bag   leave\PFV IT
      "Oje deliberately threw the bag away."
    b. *ójé   dó'bò̱   é   ó̱lí   émàè̱.*
      Oje   RPST.mistakenly eat\PFV ART food
      "Oje mistakenly/accidentally ate the food."
    c. *ójé   mí'tì   gbé   ó̱lí   éwè̱.*
      Oje   RPST.able kill\PFV ART goat
      "Oje was able to kill the goat."

d. *ójé   dú'dà   é   ólí   émàè.*
   Oje   RPST.defiantly   eat\PFV   ART   food
   "Oje defiantly ate the food / dared to eat the food."

Verb-noun collocational phrases from which the preverbs above derive historically include: *dábo* 'deliberately' from *daa ábò* 'prop hands;' *dóbo* 'mistakenly' from *dee óbò* 'lower hand;' *miti* 'able' from *moe étìn* 'have breath / spirit;' and *dúdà* from *de ùdà* 'reach defiance.' Most of these collocations exist synchronically as a non-literal, figurative expression.

A second class of preverbs associated with the SEC-A-6 DARING class evince meanings of attitude and dynamic modality (Nuyts 2005; 2016). As synchronic preverbs, they occur as prosodic word units that are lexicalized by English *carefully*, *courageously*, *intensely*, and *perseveringly*. Common to their meanings is a speaker judgment that ascribes a trait or characteristic to the grammatical subject. Exponents again show evidence of a verbal heritage that is collocational.

(37) a. *òjè   ò   ó   dègbé   è   ólí   émàè.*
      Oje   SC   PROG   carefully   eat   ART   food
      "Oje is carefully eating the food."
    b. *òjè   gbúdù   é   ólí   émàè.*
      Oje   NPST.courageously   eat\PFV   ART   food
      "Oje has courageously eaten the food."
    c. *ójé   tótó'bò   nwú   ólì   èkpà móé.*
      Oje   RPST.intensely   take\PFV   ART   bag   have
      "Oje held the bag with great intensity."
    d. *ójé   káké'gbè   ón   ólì   àgbó.*
      Oje   RPST.by.persevering   drink\PFV   ART   potion
      "Oje drank the malaria potion with perseverance."

Verb-noun collocational phrases that relate diachronically to these preverbs include the following: *dègbè* 'carefully' from *dee égbè* 'lower body, duck down;' *gbùdù* 'courageously' from *gbe ùdù* 'spread heart;' *tòtóbò* 'intensely' from *toto óbò* 'strengthen hand;' and *kàkégbè* 'perseveringly' from *kaka égbè* 'stiffen body.' As with intention bearing preverbs, attitudinal collocations still occur synchronically in figurative expressions.

3.4.2 HURRYING class

Secondary concepts of a different nature relate broadly to the temporal character of the SEC-A-5 HURRYING class. They, too, have been lexicalized as preverbs. Most but not all have their origin in a collocational structure of the verb-noun type. Over time, these structures have also lexicalized through a process of univerbation. Their meanings reflect a speaker-ascribed temporal character for the predicate event.

Synchronic preverbs that reflect the HURRYING class retain evidence of their heritage directly or indirectly, since they appear synchronically as verbs or in some cases as adverbs (which presumably derived from verbs). Individual members convey notions of a broader character than

simply temporal rate. Their meanings relate to equivalents for English *hurriedly*, *promptly*, *earlier*, *hastily*, and *unexpectedly*. Unlike the DARING class, the meanings of these preverbs are ascribed by the speaker exclusively to the temporal character of an event.

(38) a. *ójé   túá'   é   ólí   émàè.*
         Oje   RPST.hurriedly eat\PFV ART food
         "Oje ate the food hurriedly."
     b. *ójé   kpá'ò   é   vbí ólí émàè.*
         Oje   RPST.earlier eat\PFV LOC ART food
         "Oje ate from the food earlier on."
     c. *ójé   bó'bò   é   ólí   émàè.*
         Oje   RPST.promptly eat\PFV ART food
         "Oje ate the food promptly."
     d. *ójé   gúá'   shòò   ré.*
         Oje   RPST.hastily arise\PFV   arrive
         "Oje arose suddenly / hastily."
     e. *òjè   ò   ó   gúé   è   ólí   émàè.*
         Oje   SC PROG unexpectedly eat ART food
         "Oje was eating the food sooner than expected."

Each temporal preverb occurs as a prosodic word unit. Some derive from a verb-noun collocation (*kpàò* 'earlier' from *kpen àó* 'next to front;' *bòbò* 'promptly' from *bi óbò* 'move hand aside'), while others derive from a verb (*tùà* 'hurriedly' from *tua* 'hurry'), or relate to a synchronic adverb presumably derived from a verb (*gùè* 'unexpectedly' from base morpheme *gùè* in *gùèké* 'suddenly;' and *gùà* 'suddenly' from base morpheme *gùà* in *gùàghó* 'jerky fashion' and *gúáhí* 'lerching fashion'). In the adverb cases, verbal lineage is less transparent synchronically, although more extensive investigation of adverbial forms should prove illuminating.

3.4.3   TRYING class

Secondary concepts that appear related to the SEC-4 TRYING class exhibit concurrent grammatical standing as postverbal particle and verb-verb sequence. Over time, one can assume that the bi-verbal sequence of some particles will lexicalize further through a process of univerbation. Each verb-verb unit appears as a configuration of major and minor components in an A-SVC. As postverbal forms they occupy the same position as particles that mark either an event argument (recipient/benefactive *li/ni*, locative goal *o*) or event aspectual relation. The canonical example of the latter is temporal *lé* and its iambitive function (*òjè é ólí émàè léé* [Oje NPST.eat\PFV ART food TEMP] 'Oje has already eaten the food' and *òjè ò ó è ólí émáé lèè* [Oje 3PSC PROG eat the food TEMP] 'Oje is already eating the food'). Aspectual forms in postverbal position that attend to event onset, termination, or both, as *lé* does, bear a semantic relation to the SEC-A-3 PHASAL class but not a syntactic relation, since phasal forms are limited to pre-predicate position.

One particle that relates to Dixon's TRYING class is *fee ghoo*. It serves as minor component in the V2 slot of an A-SVC. Construction meaning has its near equivalent in English 'try,' as it pertains

to attempts to activate an event. In the V1 slot combining with *fee ghoo* is a major component verb such as *khuae* 'raise.'

(39)   òjè   khúáé   ólì   ùkòdò   féé ghòò.
       Oje   NPST.raise\PFV   ART   pot   try\PFV
       "Oje tried / attempted to raise the pot (but did not)."

In an A-SVC, *fee ghoo* and its arguments convey meanings related to an attenuated, minimally exercised, visual or gustatory event. The V1 slot is occupied by *fee* and the V2 slot by *ghoo*.

(40)   a.   òjè   féé   ólí   óvbèkhàn   ghóó.
            Oje   NPST.attenuate\PFV   the   youth   look.at\PFV
            "Oje inspected / examined the youth."
       b.   òjè   féé   òmì   ghóó.
            Oje   NPST.attenuate\PFV   soup   look.at\PFV
            "Oje tasted the soup. / Oje tried the soup."

Within the structure of *fee ghoo* is major component *ghoo*. Synchronically, *ghoo* serves as a transitive verb of perception and attention (*ghoo òkpòsò* 'look at woman'). As for minor component *fee*, it displays meanings related to attenuation or weakening the condition of a nominal or the relation between nominals. It no longer functions as a synchronic verb. Rather, the form *fee* or its presumed historical antecedent (*fele*) is synchronically restricted to qualifier functions in positions that are adjectival (*éráín féé* 'fire (that) weak;' *úkpún lì féléfélé* 'cloth which very fine;' *u féléfélé* 'be very fine') or adverbial (*féléfélé* 'very, very close'). The combined meaning of *fee* and *ghoo* manifest a resultative character in which the perceptual event of V2 is engaged to a minimal rather than maximal extent. Recall that in §2 we identified resultatives of maximal extent.

A second particle that relates to the TRYING class is the form *ba kun*. In A-SVCs it recognizes event activation but stipulates non-achievement of a desired end state. Completion of the event is thus unsuccessful. Near equivalents in English are 'in vain' or 'unsucccessfully,' as they pertain to event achievement. In an A-SVC *ba kun* occurs as minor component in the V2 slot and verbs such as *hoo* 'wash' or *hoo* 'search for' appear as major component in the V1 slot.

(41)   a.   òjè   hóó   ólí   úkpùn   bá kùn.
            Oje   NPST.wash\PFV   ART   cloth   in.vain\PFV
            "Oje washed the cloth without success."
       b.   òjè   hóó   ólí   ómòhè   bá kùn.
            Oje   NPST.search.for\PFV   ART   man   in.vain\PFV
            "Oje searched for the man in vain."

The complex form *ba kun* and its arguments appear in an A-SVC. It expresses meanings related to hunting or stalking an animate entity without success. The major component of this A-SVC is form *ba* 'stalk, pursue,' which otherwise appears as a verb that is monotransitive (*bá ínì* 'stalk elephant') or intransitive (*ba* 'stalk'). Its corresponding minor component is form *kun*. In a simple clause, *kun* is no longer synchronically active as a main verb, although it may be related to forms in neighboring languages such as Bìní *ku* 'depreciate in value' (Melzian 1937) or

Yoruba *kùnà* 'fail/miss/come short of' (Church Missionary Society 1950). Regardless of the exact meaning of *kun*, SVCs with *ba kun* seem less resultative-like than does *fee ghoo*. Rather, *kun* appears to specify the extent, more precisely the lack thereof, of the motion event denoted by *ba*.

(42)   *ólí   áwà   bá   ólí   ófè   kún.*
        ART   dog   NPST.stalk\PFV   the   rat   in.vain\PFV
        "The dog stalked the rat in vain."

A third form related to the TRYING class is *delo*. In an A-SVC it refers to a secondary concept that denotes a redoing of a previous action. In an SVC, minor component *delo* 'rearrange' in the V1 slot precedes its major component in the V2 slot. Forms occurring as V2 such as *ma* 'create, mold' or *hoo* 'wash' refer to a change of state. The nominal undergoing change also precedes rather than follows V2. A-SVCs with *delo* show the syntax of a maximum extent resultative since the nominal that undergoes change always appears in simple clauses as direct object of V2 but not necessarily of V1. Each major verb takes as its direct object in a simple clause the direct object of the resultative SVC, as in *ma àgbòn* 'create world' and *hoo úkpùn* 'wash cloth.' Major verbs in resultatives tend not to express an irrecoverable change of state.

(43)   a. *òìsèlébùá   délò'   àgbòn   má.*
        God   RPST.rearrange\PFV   world   create\PFV
        "God recreated the world."
    b. *òjè   ló   dèlò   ólí   úkpùn   hóó.*
        Oje   FUT   rearrange\PFV   ART   cloth   wash\PFV
        "Oje is about to rewash the clothes."

In a simple clause, minor verb *delo* has senses related to rearranging clothes (*délò úkpùn* 'turn over / rearrange clothes') and stirring soup (*delo òmì* 'turn over / stir / rearrange soup) but not rearranging the world.

A fourth element of the TRYING class is verb *don*. It serves as minor component in the V2 slot of an A-SVC. With respect to a desired end state, *don* conveys non-achievement. It expresses meanings related to straying or stretching from an unspecified target referent. Its near equivalent in English is 'miss.' In an A-SVC V2 *don* appears with major components like *fî* 'project, throw, shoot.' In SVCs the direct object of V1 and the logical subject of V2 exhibit a switch function relation. In (20), the nominal *ùhàì* as grammatical object of V1 is also the logical subject of V2. SVCs with *don* seem less resultative-like and more cause-effect-like in their meaning.

(44)   *òjè   fî   ùhàì   dón.*
        Oje   NPST.project\PFV   arrow   stray\PFV
        "Oje missed with the arrow. / Oje shot the arrow and missed."

In a simple clause *don* appears as an intransitive verb. It has sense 'become stretched, engaged, set' as in *ìkpàkúté' dón-ì* 'A trap is set / engaged / in a stretched position.'

3.4.4 PHASAL class

Most secondary concepts related to the SEC-A-3 PHASAL class manifest concurrent grammatical standing as preverb and verb. They code aspectual features, seemingly of the Aspect-3 type briefly referenced by Declés and Guentchéva (2012) and earlier by Comrie (1976). Under synchronic analysis their verbal heritage is not uniformly transparent.

Several synchronic preverbs that associate with the PHASAL class also occur as a verb form. Form *ya* has two preverb functions: ingressive/proximative and past absolute. Respectively, these meanings align with event onset relative to the deictic present ('almost began/started') or event occurrence in the past as it relates to the present 'used to but does not now.' Although the segmental and tonal form of *ya* is constant, the respective meanings just mentioned co-vary with the tonal character of the grammatical subject: Near past low tone with 'almost began' and remote past high tone with 'used to.'

(45) a. *òjè   yà   é   ólì   émàè.*
        Oje   NPST.IG   eat\PFV   ART   food
        "Oje almost started eating the food (but didn't get started)."
    b. *ójé   yà   móé   éghó'   ìghééghé.*
        Oje   RPST.PA have\PFV   money   generation.ago
        "Oje used to have money long ago (but doesn't have it now)."

Form *ya* also serves as a synchronic verb with sense 'commence, start' (46a). It does not have a meaning directly related to 'used to.' There is a form *ya* expressing predicate negation in the past that has the sense 'never' (46b).

(46) a. *óshàn   yá-ì.*
        journey   NPST.commence-PFV
        "The journey is set to commence. The journey is due to start."
    b. *òjè   í   yà   shèn úkpùn.*
        Oje   SC   PST.NEG sell   cloth
        "Oje never sells cloth."

To put the functions of *ya* in a broader context we briefly consider aspectual preverb *mo*. It has an egressive/avertive function relative to event termination ('nearly completed') as well as a past absolute function ('at one time') that does not bear on the present. Its grammaticalization history is far less transparent with respect to any prior stage as a verb.

(47) a. *ólì   ùbèlè móò   vòòn.*
        ART   gourd NPST.EG become.full\PFV
        "The gourd has nearly / almost become full."
    b. *àmágó mó   vóón   ólì   ùbèlè.*
        mango   RPST.PA fill\PFV   ART   gourd
        "Mangoes filled the gourd at one time."

Another aspectual preverb displays a form and meaning related to a synchronic verb. As a preverb *che* 'again' denotes event repetition across situations that maintain event argument identity.

(48)   *ójé ché'   hián   óli   óràn.*
        Oje   RPST.REP   strike\PFV   ART   tree
        "Oje again struck the tree."

A related verb is *chie/che* (*òjè chíé-ì* [Oje turn.back-PFV] 'Oje has turned back'). It denotes a turn around action and by implication a retracing of one's initial path. The latter inference is explicitly coded by minor component *re* in an A-SVC.

(49)   *òjè chíé   ré'.*
        Oje   NPST.turn.back\PFV   arrive\PFV
        "Oje returned (to the deictic center)."

A third preverb has concurrent status as a verb of motion. In SVCs with a main verb in slot V2, *se* in slot V1 exhibits a durative function 'continue to do.'

(50)   *òjè séè   é   vbí óli émàè.*
        Oje   NPST.DUR   eat\PFV   LOC   ART   food
        "Oje has continued to eat from the food."

Preverb *se* appears to have grammaticalized from verb *se*, which denotes a path/direction of motion with sense 'move as far as, move up to, reach.' Verb *se* takes an oblique object marked as locative.

(51)   *òjè sé   vbí édà.*
        Oje   NPST.move.as.far.as\PFV   LOC   river
        "Oje has moved as far as the river."

A final aspectual preverb does not have concurrent standing as a verb. Form *gbo* as a preverb has an additive 'also, too' function.

(52)   *ójé gbó'   é   óli émàè.*
        Oje   RPST.ADD   eat\PFV   the   food
        "Oje also ate the food / ate the food too."

Secondary concepts related to the SEC-A-3 PHASAL class can be coded exclusively by lexical verbs. Most do not partake of serial constructions, despite their verb status. In simple clauses, many allow an oblique locative phrase which consists of a gerundive or activity nominal. The meaning of these forms pertains to event initiation or termination.

(53) a. *òjè béé   vbí émáé úèmí.*
        Oje   NPST.start\PFV   LOC   food   eating
        "Oje started eating food."

    b. *òjè   hẹ́ná-í   vbí   ẹ́nyọ́ údàmí.*
       Oje   NPST.cease-PFV   LOC   wine drinking
       "Oje ceased drinking wine."
    c. *ókhọ̀ìn   hẹ́ná-ì.*
       war   NPST.cease-PFV
       "The war ceased."

One Emai verb associated with the PHASAL class exhibits a more complex syntax. Verb *roo* requires a direct object that contains body-part nominal *óbọ̀* 'hand,' either alone or in an external possessor phrase where possessor precedes possessum *óbọ̀*.

(54) a. *òjè   róó   óbọ́ vbí   ẹ́nyọ́ údàmí.*
         Oje   NPST.release\PFV hand LOC   wine drinking
         "Oje has ceased drinking wine.'
         Lit. 'Oje has released his hand from wine drinking."
     b. *òjè   róó   òhí   óbọ̀.*
         Oje   NPST.release\PFV Ohi   hand
         "Oje has left Ohi alone / released Ohi / released Ohi's hand."

Another verb is associated with secondary concepts of the PHASAL class. Verb *foo* 'finish' does not occur as a preverb. Instead, it appears in a simple clause as transitive or intransitive. It does not permit a direct object that has a gerundive form.

(55) a. *ọ́lí   ívàn   fóó   ójé   ìbọ̀bọ̀dí.*
         ART grass.cutter NPST.finish\PFV Oje   cassava
         "The grasscutter finished / destroyed Oje's cassava."
     b. *ìbọ̀bọ̀dí ísì   òjè   fóó-ì.*
         cassava ASS   Oje   NPST.finish-PFV
         "Oje's cassava got finished off / destroyed."

3.4.5   SEMI-MODAL class

Secondary concepts that relate to the SEC-A-2 SEMI-MODAL class in Emai tend to express aspectual features of different semantic types. One type pertains to quantificational aspect and the other to a quantificational aspect of achievement/extent. Both concern event end state. Formally, exponents belong to a preverb or postverbal particle class. Members of each formal class have concurrent standing as verb or verb-noun collocation.

3.4.5.1 SEMI-MODAL preverb

Preverbs that encode quantificational aspect have concurrent standing as a verb or verb-noun collocation. As preverbs they make formally explicit a quantitative value inherent in an event or an event argument. They thus bear on the quantitative nature of construction subject or direct object.

Preverb *gbà* has a collective 'together' function. It codes a quantificational value ascribed to its grammatical subject, which must be plural. It co-occurs with transitive or intransitive verbs (56).

(56) a. *élí   ímọ́hé gbá'   hián   ólí   óràn.*
ART   men   RPST.COL   cut\PFV   ART   wood
"The men together cut the wood."

b. *élí   ímọ́hé gbá'   rì   vbì   ìwè.*
ART   men   RPST.COL   be\PFV   LOC   house
"The men were together in the house."

In simple clauses, the form *gba* occurs as a verb. It appears as either monotransitive with a single object (*gba ọ́lí ọ́mọ̀hè* 'tie the man') or ditransitive with a double object (57). Regardless of transitivity value, *gba* has sense 'tie, bind.'

(57)   *è   gbá   ọ́lí   ọ́mọ́hé   îì.*
3PL   NPST.tie\PFV   ART   man   ropes
"They bound the man with ropes."

Preverb forms *zemi* and *zeze* express a different type of quantificational aspect. These forms externalize a scalar value of quantification inherent to construction verb and specify whether its culturally normative boundary has been achieved. Form *zemi* 'a lot, very' indicates that the boundary has been exceeded. In contrast *zeze* 'not quite' stipulates near-attainment of the boundary.

(58) a. *ólì   òkpòsò zémì   dá.*
ART   woman NPST.ABSI be.tall\PFV
"The woman is very tall."

b. *ólì   òkpòsò zẹ́zè   dá.*
ART   woman NPST.NABI   be.tall\PFV
"The woman is not quite tall."

Both *zemi* and *zeze* manifest a syntactically irregular feature relative to other preverbs. Each serves as response to an information question of extent framed by 'how' (*ébé'…i*) and an A-SVC incorporating verb of extent *sẹ* 'reach, move as far as.' No other preverbs behave this way.

(59)   *ébé' ọ́lí ọ́mọ́hé í'   dà   sẹ́?*
how   the   man   RPST.MAN   be.tall\PFV   reach\PFV
"How tall is the man?"
ò   zémì   dá.   /   *ò   zẹ́zè   dá.*
3SG   NPST.ABSI   be.tall\PFV.   3SG   NPST.NABI   be.tall\PFV
"He is very tall."   "He is not quite tall."

Each of *zemi* and *zeze* has a verbal heritage. They are related to verb *zẹ* 'select, choose' through verb-noun collocation or reduplication. Form *zemi* has lexicalized a verb-noun collocation consisting of *zẹ émì* 'select things;' it thus reflects historical univerbation. Form *zeze* is a derivational form resulting from a doubling of the same verb *zẹ*. In this instance the semantic

effect of reduplication declares that the upperbound of the quantificational value was not achieved.

(60) a. *òjè zé́   úkpún lí óbín'.*
          Oje   NPST.choose\PFV cloth   R   dark
          "Oje chose /selected the dark cloth."
      b. *òjè zé́-ì.*
          Oje   NPST.choose-PFV
          "Oje chose / selected."

3.4.5.2 SEMI-MODAL particle

Secondary concepts related to the SEC-A-2 SEMI-MODAL class manifest concurrent grammatical standing as postverbal particle and verb. They express meanings related to quantificational aspect. They occur in the V2 slot of an A-SVC as minor verb. Semantically they encode notions of extent or frequency as it relates to V1. In the V2 slot these forms manifest significant grammaticalization vis-à-vis selectional restrictions and syntactic subcategorization, particularly when assessed relative to their behavior as sole verb of a clause.

(61) a. *òjè héén   ólí óràn só.*
          Oje NPST.climb\PFV   the tree end\PFV
          "Oje climbed to the top of the tree."
      b. *òjè gbé   òlólò gbé.*
          Oje NPST.beat\PFV   Ololo   excessive\PFV
          "Oje beat Ololo too much."
      c. *òjè dá   ényò̀ sé́.*
          Oje NPST.drink\PFV wine   sufficient\PFV
          "Oje drank enough / sufficient wine."
      d. *òjè é   émà khóón.*
          Oje NPST.eat\PFV   yam satisfy\PFV
          "Oje ate yam to satisfaction."

In non-SVCs each form in the V2 slot above occurs as sole verb of a clause. As transitive in a simple clause, verb *so* expresses meanings related to contact and joining. These meanings include getting to the end of a matter, setting bones, shaking hands, sewing cloth, and colliding with a wall. Each separate meaning arises from a specific collocation of verb and direct object.

(62) a. *òjè ré́   ólì èmò̀i só.*
          Oje NPST.take\PFV   the matter to.end\PFV
          "Oje took the matter to its end / final stages."
      b. *ójé só'   ùdékèn.*
          Oje   RPST.join\PFV wall
          "Oje collided with a wall / crashed into a wall."
      c. *òjè só   áléké óbò̀.*
          Oje NPST.join\PFV   Aleke hands
          "Oje shook Aleke's hand / shook hands with Aleke."

d. *ójé   ó   ò   sò   úgùà.*
   Oje   SC   H   join   bone.joint
   "Oje joins bones / sets bones."

e. *àlèkè   ò   ó   sò   úkpùn.*
   Aleke   SC   PROG   join   cloth
   "Aleke is sewing cloth."

As transitive or ditransitive in a simple clause, *gbe* has sense 'become overwhelmed with' (63a) or 'accumulate to high degree' (63b-c), depending on the semantic nature of its direct object.

(63) a. *èkhòì   gbé   ólí   éékhò.*
         maggots   NPST.accumulate\PFV   the   garden.egg
         "Maggots infested the garden egg."

      b. *ólí   úkpùn   gbé   ínwà.*
         the cloth   NPST.accumulate\PFV   filth
         "The cloth became filthy. / The cloth accumulated filth."

      c. *òjè   gbé   ólí   úkpún   ínwà.*
         Oje   NPST.accumulate\PFV   ART   cloth   filth
         "Oje amassed filth on the cloth / made the cloth filthy."

Verb *se* manifests quantitative semantics that are internal to an experiencer argument. As intransitive or transitive in a simple clause, *se* has the sense 'sufficient, enough.'

(64) a. *ólí   ényò   sé-ì.*
         the wine   NPST.be.sufficient-PFV
         "The wine is sufficient/ enough."

      b. *ólí   ókà   sé   ní   émè.*
         ART   maize   NPST.be.sufficient\PFV   APP   me
         "The maize is sufficient for me."

Verb *khoon* also expresses a quantitative value internal to an experiencer argument. As intransitive or transitive in a simple clause, *khoon* conveys the meaning 'satisfy.'

(65) a. *òjè   khóón-ì.*
         Oje   NPST.be.satisfied-PFV
         "Oje is satisfied."

      b. *ólí   émà   khóón   òjè.*
         the yam   NPST.satisfy\PFV   Oje
         "The yam satisfied / pleased Oje."

3.4.6   Negator

Although there is evidence that many preverbs have a lexical or phrasal heritage related to verb status, not all preverbs do. This is particularly true of Emai preverbs that fit the SEC-A-1 NEGATOR class (where *wo* in [66] signifies "without"). Relative to a given action, each conveys

speaker judgment about event activation: without reason, without failure to meet an end state, or without due consideration of a preferred course of action.

(66) a. *òjè*   *dúù*   *gbé*   *ólí*   *ófè.*
      Oje   NPST.wo.reason   kill\PFV   ART   rat
      "Oje has killed the rat for no reason."

    b. *òjè*   *kúkù*   *é*   *ólí*   *émàè*   *lé.*
      Oje   NPST.wo.fail   eat\PFV   ART   food   TEMP
      "Oje has finished eating the food without fail/after all."

    c. *òjè*   *ò*   *ó*   *wóó*   *è*   *ólí*   *émàè.*
      Oje   SC   C   wo.preference   eat   ART   food
      "Oje is eating the food without considering preferences."
      "It would be preferable / better if Oje were eating the food."

3.4.7 Auxiliaries

A final subset of pre-stem forms that exhibit no synchronic evidence of a verbal heritage consists exclusively of auxiliaries. They express modality, both epistemic (concessive *re*, hypothetical *khà*, deductive *za*, certaintive *ma*, dubitatives *bia* and *vba*) and deontic (hortative *í*), as well as relative tense (anterior *ke*, subsequent *kpe*, and simultaneous *ghe*). Unlike preverbs they do not occur in imperatives, but like preverbs they display contour tonal patterns distinct from the level tones on verbs.

4.   Conclusions

In the preceding sections, we have attempted to outline key elements of serial verb constructions in the Edoid language Emai. Although Emai constructions reflect both A-SVCs and S-SVCs, we have directed attention to the coding of secondary concepts (Dixon 1991; 2006; 2010). Notable about linguistic coding of secondary concepts is their concurrent standing as lexical verbs and grammatical preverbs or particles. There are some preverb and particle forms that do not co-exist as synchronic verbs and some lexical verbs that have grammaticalized more or less than others. In many instances, though, we have been able to identify the historical antecedent of a synchronic preverb or particle as a verb or verb-noun collocation. There are even two secondary concepts that are realized as noun forms.

Table 2 and Table 3 present summary information about secondary concept classes A-D and their realization as Emai linguistic forms. Overall, we analyzed 46 forms that code secondary concepts. There are 34 in Table 2 and 12 in Table 3. Although most of Aikhenvald's (2018) observations about secondary concept serialization in §3 concern classes A and B, we frame our conclusions about secondary concept serialization in Emai by considering class A as well as classes B, C, and D.

Emai forms that code secondary concepts overwhelmingly occur in the minor slot of A-SVCs, congruent with Aikhenvald's (2018) observation. With three exceptions (*ruan* 'happen,' *vbiee* 'show,' *khee* 'wait'), secondary concepts do not occur in SVCs as major components. As well, no secondary concept appears as a linguistic form in S-SVCs. We now consider Table 2, where

secondary concepts belonging to the SEC-A class are presented according to their behavior in SVCs and Non-SVCs (i.e. simple clauses).

In Table 2 there is one secondary concept class for SEC-A and six subclasses. Within subclasses, forms vary in number. Negator totals 3, Semi-modals 7, Phasal 5, Trying 4, Hurrying 5, and Daring 8. The behavior of forms aligned with these subclasses is largely consistent with the observations in §3 by Aikhenvald.

Under the SLOT column, most SEC-A exponents are V1, seven are V2. As can be seen, linear order of major and minor components in A-SVCs is not uniform. Preverbs as a minor component precede a major component verb. In contrast, postverbal particles as a minor component follow a major component verb.

Information in the WC column is suggestive of two Aikhenvald observations. SEC-A forms rarely add an argument to main event action. This is obviously true of SEC-A NEGATORS. They do not negate the assertion of a predication, as do Emai forms identified as past negative, present negative and future negative. Instead, they call into question or neutralize a discourse assumption or an assumption of an addressee. Another negator type, although not identified as such in Table 2, is form *ba kun*, a postverbal particle with sense 'in vain, unsuccessful.' As a negator, *ba kun* asserts that an event was not successful in reaching its goal. Also relative to the WC column, SEC-A concepts seldom appear as verbs in SVCs. Instead, they appear as preverbs and postverbal particles. And as we will see in Table 3, SEC-A concepts appear less often as verbs than secondary B-D concepts do.

The relationship between portions of Table 2 allotted to SVC and Non-SVC are suggestive of historical relationships affecting SEC-A forms. The great majority of forms in Table 2 manifest a verb heritage; four do not (Negators *kùkù* and *wòò*; Phasal *mọ̀* and *gbò*). Of those with a verb heritage, the majority (11) are prosodic words that derive from verb+noun collocations. The remainder (18) are associated with a single synchronic verb. Three exhibit formal relations to adverbs (*dudu*, *gùàghó, gùèké*), which presumably derived from verbs at some point in the past. For two preverbs of the NEGATOR subclass, absolutely no verbal heritage could be discerned. They evinced no formal or functional relation to an adverb or any other part of speech. Further comparative Edoid studies will be needed to clarify their lineage.

SEC CON		SVC			NON-SVC		
	SLOT	FORM	SENSE	WC	FORM	SENSE	WC
SEC A							
NEGATOR	V1	*dùù*	'wt reason'	PRE	*dudu*	'be opaque'	ADV
	V1	*kùkù*	'wt fail'	PRE			
	V1	*wòò*	'wt preference'	PRE			
SEMI-MODAL	V1	*gbà*	'together'	PRE	*gba*	'tie'	V
	V1	*zèmì*	'a lot, very'	PRE	*ze émì*	'select things'	V-N
	V1	*zèzè*	'not quite'	PRE	*ze*	'select'	V
	V2	*só*	'end'	PRT	*so*	'move to end'	V
	V2	*gbé*	'too much'	PRT	*gbe*	'overwhelm'	V
	V2	*sé*	'enough'	PRT	*se*	'reach'	V
	V2	*khóón*	'satisfy'	PRT	*khoon*	'satisfy'	V
PHASAL	V1	*yà*	'nearly start'	PRE	*ya*	'commence'	V
	V1	*yà*	'used to'	PRE			
	V1	*mò*	'nearly complete'	PRE			
	V1	*mò*	'at one time'	PRE			
	V1	*chè*	'again'	PRE	*che*	'return'	V
	V1	*sè*	'continue to'	PRE	*se*	'move as far as'	V
	V1	*gbò*	'also, too'	PRE			
					bee	'start'	V
					hena	'start'	V
					roo	'release'	V
					foo	'finish'	V
TRYING	V2	*féé ghòò*	'try'	PRT	*fee ghoo*	'attenuated look'	V
	V2	*bá kùn*	'in vain'	PRT	*ba kun*	'stalk in vain'	V
	V1	*delo*	'redo'	PRT	*delo*	'rearrange'	V
	V2	*don*	'stray'	PRT	*don*	'stretch'	V
HURRYING	V1	*tùà*	'hurriedly'	PRE	*tua*	'hurry'	V
	V1	*kpàò*	'earlier'	PRE	*kpen àó*	'next to front'	V-N
	V1	*bòbò*	'promptly'	PRE	*bi óbò*	'move hand'	V-N
	V1	*gùà*	'suddenly'	PRE	*gùàghó*	'jerkily'	ADV
	V1	*gùè*	'unexpectedly'	PRE	*gùèké*	'unexpectedly'	ADV
DARING	V1	*dàbò*	'deliberately'	PRE	*daa ábò*	'prop hands'	V-N
	V1	*dòbò*	'mistakenly'	PRE	*dee óbò*	'lower hand'	V-N
	V1	*mìtì*	'ability'	PRE	*moe étìn*	'have spirit'	V-N
	V1	*dùdà*	'defiantly'	PRE	*de ùdà*	'reach defiance'	V-N
	V1	*dègbè*	'courageously'	PRE	*dee égbè*	'lower body'	V-N
	V1	*gbùdù*	'carefully'	PRE	*gbe ùdù*	'spread heart'	V-N
	V1	*tòtóbò*	'intensely'	PRE	*tòtó óbò*	'strengthen hand'	V-N
	V1	*kàkégbè*	'perseveringly'	PRE	*kàka égbè*	'stiffen body'	V-N

Table 2: Secondary concepts of class A encoded by verbs, preverbs, particles, nouns, adverbs, and presented according to their occurrence in SVCs and Non-SVCs (PRT=particle, PRE=preverb, WC=word class, V=verb, N=noun, ADV=adverb)

Although SEC-A concepts lexicalized as preverbs do not uniformly occur as synchronic predicates, postverbal particle forms do. Preverbs in large measure have their diachronic origin in verb-noun collocations. Most have lexicalized from a verb-noun constituent via a historical process of univerbation (two words becoming one) and subjectivization (forms conveying speaker attitude), especially for those in the HURRYING and DARING subclasses. Preverbs that derive from a single verb have meanings that reflect aspectual qualification and quantification of

the type associated with Aspect-3 (Declés and Guentchéva 2012). Postverbal particles have apparently arisen through other avenues of grammaticalization. Their meanings, too, reflect aspectual qualification and quantification. Since postverbal particle forms appear as synchronic verbs, it cannot be claimed, contrary to Aikhenvald's observation, that SEC-A concepts, in a uniform fashion, are semantically dependent and do not occur on their own as a predicate. We now turn to Table 3.

SEC CON	SLOT	SVC			NON-SVC		
		FORM	SENSE	WC	FORM	SENSE	WC
SEC B							
POSTPONE	V2	*khee*	'wait for'	VC	*khee*	'wait for'	V
		khee	'reserve for'				
		khee	'ambush'				
	V2	*ye*	'toward'	VC	*ye*	'move toward'	V
	V2	*kee*	'near'	VC	*kee*	'happen timely'	V
WANT					*hoo*	'want'	V
					ìkà	'pretense'	N
SEC C							
MAKING	V1	*re*	'get'	VC	*re*	'take'	V
	V1	*nwu*	'make'	VC	*nwu*	'take hold'	V
	V1	*ee*	'entice'	VC	*ee*	'ruffle, tire'	V
HELPING	V1	*kpaye*	'replace/help'	VC	*kpaye*	'help'	V
	V1	*de baa*	'join'	VC	*de*	'reach'	V
					baa	'add to'	V
					ze	'cause / allow'	V
					àsé	'authority'	N
SEC D							
HAPPEN					*u*	'happen'	V
					ruan	'happen'	V
SEEM	V2	*ree*	'to/after'	VC	*ree*	'resemble'	V
	V2	*ye*	'to/toward'	VC	*ye*	'move toward'	V
	V2	*vbiee*	'to'	VC	*vbiee*	'teach to'	V
		re vbiee	'show'	V			

Table 3: Secondary concepts of classes B, C, and D encoded by verbs, preverbs, particles, and nouns relative to their occurrence in SVC and Non-SVC constructions (PRT=particle, PRE=preverb, WC=word class, V=verb, N=noun, ADV=adverb, VC= valency changing)

In Table 3 secondary concept classes consist of B, C, and D. Each has two subclasses. Forms that express secondary concepts relative to these classes occur in the minor slot of A-SVCs in nearly every instance. The only exceptions are verbs *vbiee* from the SEEM class, *khee* from the POSTPONE class, and *ruan* from the HAPPEN class. In SVCs *vbiee* and *khee* appear as a major component with verb *re* as minor component, while major component *ruan* occurs with verb *ye* as minor component. Nonetheless, exponents of secondary B-D classes never occur in S-SVCs.

The SLOT column in Table 3 undergirds two observations about secondary serialization in Emai. SEC-B exponents appear exclusively as a verb component with a valency changing function in an SVC, more so than did those of SEC-A. SEC-A members were predominantly non-verbs synchronically. It should be noted, however, that members of both SEC-A and SEC-B occur in SVCs as minor component (if not verbs) in a comparable fashion. It is also true that secondary

C-D exponents appear almost exclusively as a minor component verb in SVCs. This contrasts with the non-verb status evident among forms that code secondary concepts of the SEC-A class.

A further observation from the SLOT column concerns linear order of major and minor components. SEC-B-D concepts manifest a split regarding linear order of major and minor components. Some show major-minor order, others minor-major. Those showing major-minor order are SEC-B and SEC-D, while SEC-C shows minor-major order. In addition, forms that code SEC-B-D consistently occur on their own as predicates without an additional verb. They are not semantically dependent, contrary to what Aikhenvald has observed. A point of note about classes B-D is that some of their secondary concepts are coded as nouns. They tend to occur as direct object for a verb in the minor slot of an A-SVC.

The WC column in Table 3 provides synchronic and diachronic information that is both definitive and yet problematic. Nearly all exponents of the various verb classes serve a valency changing (VC) function. From this one can conclude that Table 3 secondary concepts without exception add an argument to a main action, although only in one instance, that of *vbiee*, does a SEC-D concept add a core argument. However, the VC function is not associated with a particular word class. One could assume that these VC forms are prepositions for example. But they do not behave like existing Emai prepositions, of which there are very few. For instance, under a process of left dislocation, the locative preposition *vbi* appears neither stranded after a preceding verb nor included in the dislocated position marked by the grammatical morpheme *li/ni* (*ìwè mè̱ lí ójé lá' sé̱ ákhò̱* [dwelling my PF Oje RPST.run\PFV move.as.far.as\PFV yesterday] 'It was my dwelling that Oje ran to yesterday'). Compare this structure to the corresponding canonical non-dislocated construction where *vbi* follows the final verb in series (*ójé lá' sé̱ vbí íwé mé̱ ákhò̱* [Oje RPST\run\PFV move.as.far.as\PFV dwelling my yesterday] 'Oje ran as far as my dwelling yesterday'). In contrast, VC forms in Table 3 are always stranded in constructions showing left dislocation. As one alternative to the preposition hypothesis, might the VC forms identified in Table 3 represent a hybrid word class that is neither verb nor preposition? If so, what would it be? Some, for instance, have suggested "coverbs" (Mathews 2006) or "verbids" (Ansre 1966). Following such a strategy would appear to obscure further the relations between serial verb constructions and simple non-serial constructions. For now, it may be better to explore more fine-grained analyses of grammatical properties that might undergo a change during any grammaticalization process from verb to preposition.

Overall, our review indicates that secondary concepts only partially align with Emai verbs in SVCs. A significant number of synchronic preverbs realize secondary concepts of the SEC-A class and have a verb heritage. They have grammaticalized, as judged by their syntactic and tonal behavior, from diachronically earlier verb-in-series structures. They are no longer marked by the high or low tone spread of perfective and imperfective aspect. They show a tonal melody that is defined by contour tonal structure, in contrast to non-contour, level tone of the verb proper. It seems reasonable to hypothesize that pre-stem position vis-à-vis a canonical monotransitive verb has had a privileged role in the evolution of preverbs expressing secondary concepts from SVCs. It also appears that this privileged role has continued to affect the course of serialization for event and participant qualifiers. Postverbal particles, on the other hand, are synchronically less distinct from their verb sources since they exhibit a fixed rather than variable tone for instance. An even less distinct coding relation obtains between valency changing forms and their potential

identification as prepositions. If such a historical scenario were the case, one might hypothesize that the diachronic trajectory of SVCs would be constrained by word class: beginning with preverbs and continuing through postverbal particles and then prepositions. For now, however, this historical trajectory remains highly speculative.

Our assessment of secondary concepts does not pretend to be exhaustive or comprehensive. It has simply emerged from our attempt to characterize Emai verbs in serial verb constructions. Clearly, however, there is much more about serial verbs in Emai and West Africa to be gained by scrutinizing their possible associations with secondary concepts in a systematic fashion.

Abbreviations

Orthographic conventions reflect those in Schaefer and Egbokhare (1999; 2007; 2017), where **o̱** represents a half open back vowel, **e̱** a half open front vowel, and **vb** a voiced bilabial approximant. For tone, acute accent marks high, grave accent signals low, and acute accent followed by an apostrophe designates high downstep. Abbreviations for grammatical morphemes are: ABQ=absolute quantification, ANT=anterior, APP=applicative, ART=article, ASS=associative, CL=change of location, COL=collective, CS=change of state, DUR=durative, EG=eggresive, FUT=future, HAB=habitual, ID=indefinite, IG=ingressive, IMPF=imperfective aspect, IND=indicative, LOC=locative, NABQ=non-absolute quantification, NEG=negation, PA=past absolute, PAP=past perfective, PF=positive focus, PFV=perfective aspect, PL=plural, PST= past tense, R=relator, REP=repetitive, SC=subject concord, SG=singular, SUBJ=subjunctive, TEMP=temporal perspective.

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References

Aikhenvald, Alexandra Y. 2006. Serial verb constructions in typological perspective. In A. Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-linguistic Typology*. New York: Oxford University Press. pp. 1-68. https://doi.org/10.1093/oso/9780198791263.003.0010

Aikhenvald, Alexandra Y. 2018. *Serial Verbs*. New York: Oxford University Press.

Ameka, Felix. 2006. Ewe serial verb constructions in their grammatical context. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-Linguistic Typology*. New York: Oxford University Press. pp. 124-143. https://doi.org/10.1515/lingty-2017-0008

Ansre, Gilbert. 1966. The verbid: A caveat to serial verbs. *Journal of West African Languages* 3(1): 29-32.

Church Missionary Society.1950. *A Dictionary of the Yoruba Language*. Oxford: Oxford University Press.

Comrie, Bernard. 1976. *Aspect*. New York: Cambridge University Press.

Declés, Jean-Pierre and Zlatka Guentchéva. 2012. Universals and typology. In Robert I. Binnik (ed.) *The Oxford Handbook of Tense and Aspect*. New York: Oxford University Press. pp. 123-154.

Dixon, R. M. W. 1991. *A New Approach to English Grammar, on Semantic Principles*. Oxford: Clarendon Press.

Dixon. R. M. W. 2006. Serial verb constructions: Conspectus and coda. In A. Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-linguistic Typology*. New York: Oxford University Press. pp. 338-350. https://doi.org/10.1515/lingty-2017-0008

Dixon, R. M. W. 2010. *Basic Linguistic Theory: Volume 2 Grammatical Topics*. New York: Oxford University Press.

Elugbe, Ben. 1989. *A Comparative Edoid: Phonology and Lexicon*. Port Harcourt Series. 6. University of Port Harcourt: University of Port Harcourt Press.

Heine, Bernd and Tania Kuteva. 2002. *World Lexicon of Grammaticalization*. New York: Cambridge University Press.

Hellwig, Birgit. 2006. Serial verb constructions in Goemai. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-Linguistic Typology*. New York: Oxford University Press. pp. 88-107. https://doi.org/10.1515/lingty-2017-0008

Kilian-Hatz, Christa. 2006. Serial verb constructions in Khwe (Central Khoisan). In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-Linguistic Typology*. New York: Oxford University Press. pp. 108-123. https://doi.org/10.1515/lingty-2017-0008

Kuteva, Tania, Bernd Heine, Bo Hong, Haiping Long, Heiko Narrong and Seongha Rhee. 2019. *World Lexicon of Grammaticalization.* 2nd ed. New York: Cambridge University Press.

Lawal, Adenike S. 1991. Yoruba *pé* and *kí*: Verbs or complementizers. *Studies in African Linguistics* 22(1): 73-84. https://doi.org/10.32473/sal.v22i1.107427

Lichtenberk, Frantisek. 1985. Syntactic-category change in Oceanic Languages. *Oceanic Linguistics* 24: 1-84. https://doi.org/10.2307/3623063

Lichtenberk, Frantisek. 2006. Serial verb constructions in Toqabaqita. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-Linguistic Typology*. New York: Oxford University Press. pp. 254-272. https://doi.org/10.1093/oso/9780198791263.003.0010

Lord, Carol. 1993. *Historical Change in Serial Verb Constructions*. Amsterdam: Benjamins.

Matthews, Stephen. 2006. On serial verb constructions in Cantonese. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.) *Serial Verb Constructions: A Cross-Linguistic Typology*. New York: Oxford University Press. 69-87. https://doi.org/10.1007/s11049-006-0005-3

McWhorter, John. 1997. *Towards a New Model of Creole Genesis*. New York: Peter Lang.

Meakins, Felicity. 2010. The development of asymmetrical serial verb constructions in an Australian mixed language. *Linguistic Typology* 14(1): 1-38. https://doi.org/10.1515/lity.2010.001

Melzian, Hans. 1937. *A Concise Dictionary of the Bini Language of Southern Nigeria*. London: Kegan Paul.

Nurse, Derek. 2003. Aspect and tense in Bantu languages. In Derek Nurse and Gérard Philippson (eds.) *The Bantu Languages*. London: Routledge. pp. 90-102. https://doi.org/10.1017/s0041977x05490278

Nurse, Derek. 2008. *Tense and Aspect in Bantu*. New York: Oxford University Press.

Nurse, Derek and Gérard Philippson. 2006. Common tense-aspect markers in Bantu. *Journal of African Languages and Linguistics* 27: 155-196. https://doi.org/10.1515/jall.2006.009

Nurse, Derek, Sarah Rose and John Hewson. 2016. *Tense and Aspect in Niger-Congo*. Tervuren: Royal Museum for Africa.

Nuyts, Jan. 2005. The modal confusion: On terminology and the concepts behind them. In Alex Klinge and Henrik Høeg Müller (eds.) *Modality: Studies in Form and Function*. London: Equinox. pp. 5-38.

Nuyts, Jan. 2016. Analyses of modal meanings. In Jan Nuyts and Johan van der Auwera (eds.) *The Oxford Handbook of Modality and Mood*. New York: Oxford University Press. pp. 31-49. https://doi.org/10.31857/s0373658x0007551-5

Nuyts, Jan and Johan van der Auwera (eds.). 2016. *The Oxford Handbook of Modality and Mood*. New York: Oxford University Press.

Schaefer, Ronald P. and Francis O. Egbokhare (eds.). 1999. *Oral Tradition Narratives of the Emai People, Part I and Part II*. Hamburg: LIT Verlag.

Schaefer, Ronald P. and Francis O. Egbokhare. 2007. *A Dictionary of Emai: An Edoid Language of Nigeria*. Köln: Rüdiger Köppe Verlag.

Schaefer, Ronald P. and Francis O. Egbokhare. 2017. *A Grammar of Emai*. [Mouton Grammar Library Series]. Berlin: Mouton de Gruyter.