

# Constraints on Verbs in Series and the Coding of Syntactic Adjuncts

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## Introduction

Verbs in series continue to attract linguistic attention as a syntactic phenomenon (Foley and Olson 1985, Sebba 1987, Baker 1989, Watters 2000, Crowley 2002, Aikhenvald and Dixon 2006) and as one form of complex predicate (Amberber, Baker and Harvey 2014). Generally ignored in this discussion is the semantic nature of verbs in series and their related configurations. As a consequence, semantic restrictions governing serial verb constructions remain largely under-described and under-utilized.

For this paper, we consider both syntactic and semantic properties of verbs in series in order to highlight construction constraints. Our results are illustrated using southern Nigeria's Emai (Edoid/West Benue Congo, Williamson and Blench 2000). Relatively strict SVO, Emai exhibits lexical and grammatical tone, little segmental inflection and few prepositions. Our analysis incorporates data gathered as a result of text collection (Schaefer and Egbokhare 1999), dictionary construction (Schaefer and Egbokhare 2007) and reference grammar description (Schaefer and Egbokhare 2017).

Our illustrations are consistent with classic serial verb properties (Aikhenvald and Dixon 2006): a verb sequence sharing tense, aspect and polarity under a single intonation contour and a single predicate with no overt marking of syntactic dependency between verbs.

Emai manifests a robust system of serial verb constructions whose internal relations reveal restrictions on order and co-occurrence. To characterize these relations among intransitive verbs, we utilize semantic constructs articulated in association with Sorace's (2000, 2004) aspectual/thematic (AT) hierarchy. For transitive verbs, we rely on Levin and Rappaport Hovav's (1995, 2005, 2010) notion of manner/result complementarity. Both call attention to a basic distinction between two verb types: manner/process vs result/transition. Employing this distinction, we identify several basic constraints on Emai serial verb constructions. However, co-participant verbs in series fail to abide these constraints and thus any

alignment with manner or result. To address this issue, we compare co-participant verbs and the verb *za* in non-canonical constructions coding locative adjuncts. The resulting similarities suggest that co-participant verbs and locative adjunct verb *za* are neither manner nor result exponents. We propose, instead, that they represent a third verb type whose syntactic function is restricted to the coding of grammatical adjuncts.

Each of the following sections takes up one of the preceding themes. Intransitive verbs in series in Section 2; transitive verbs in series in 3; co-participant and locative adjunct verbs in Section 4; and conclusions in 5.

## 2 Constraints on Intransitive verbs

Sorace (2000, 2004) developed an aspectual thematic (AT) hierarchy to account for auxiliary variation (BE ~ HAVE) among perfective constructions in Standard Average European. She unified two hierarchic schemas. One is an aspectual or transition hierarchy reflecting degrees of telicity; it is illustrated by the increasing measure of telic status for the English verbs *be>remain>rot>arrive*. The second pertains to a thematic or process hierarchy characterizing degrees of agentivity; it is shown by the decreasing agentiveness of the verbs *work>run>shiver*. Linking these two are anti-transitive verbs like *melt* that share the agentive and telic properties of each hierarchy.

Sorace's unified AT hierarchy incorporates the process and transition sub-hierarchies into one, as indicated immediately below.

CNM	COM	UCA	ATSEXS	COS	CHS	CLO
work	run	shiver	melt	be	remain	rot arrive

CNM=controlled non-motion	ATS=antitransitive	EXS=existence state
COM=controlled motion		COS=continuative state
UCA=uncontrolled activity		CHS=change of state
		CLO=change of locative state

We now consider Emai intransitive verbs in series. Our aim is to assess how the AT hierarchy may enhance our understanding of constraints governing intransitive verbs that occur in serial verb constructions.

Relative to Sorace's AT hierarchy, Emai intransitive verbs in series exhibit several constraints. The principal class constraint is process verbs precede transition verbs. For example, controlled non-motion *gua* 'heap'

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precedes change of location *vade* 'come' (1), and controlled motion *la* 'run' precedes change of location *vare* 'come' (2).<sup>1</sup>

- (1) òjè ò ó gùà vádé.  
Oje SCC heap come  
'Oje is heaping (yams) and coming.'
- (2) òjè lá váré vbì iwè.  
Oje PRP.run come LOC house  
'Oje ran to the house. /Oje came running to the house.'

Verb transposition would be ungrammatical.

- (3) \*òjè vádé gùà.  
Oje coming heap  
'Oje is coming and heaping (yams).'

Second, process verbs regardless of order never co-occur in series. Controlled non-motion *ta* 'talk' and controlled motion *gbe* 'dance' are unacceptable in series (4). Similarly, a verb series consisting of controlled motion *la* 'run' and controlled non-motion *jé* 'laugh' is ungrammatical (5).

- (4) \*éíí ívbèkhàn ò ó tà gbé vbì òsíé'.  
the youths SCC talk dance LOC entertainment  
'The youths are talking and dancing at the event.'
- (5) \*òjè ò ó là jé.  
Oje SCC run laugh  
'Oje is running and laughing.'

A third constraint bears on the order of intransitive transition verbs. Some transition types co-occur. For instance, change of state *daa* 'raise' precedes existence state *muzan* 'stand.'

- (6) òjè dáá múzán.  
Oje PRP.raise stand  
'Oje stood up.'

<sup>1</sup>Orthographic conventions for Emai are consistent with those in Schaefer and Egbokhare (1999, 2007, 2017), where *o* represents a lax mid back vowel, *e* a lax mid front vowel, and *vb* a voiced bilabial approximant. With respect to tone, acute accent marks high, grave accent signals low, and acute accent followed by an apostrophe designates high downstep. Abbreviations for grammatical morphemes used throughout this paper include: C=continuous, F=factative, LOC=locative, PAP=past perfect, PRP=present perfect, SC=subject concord.

As well, co-occurrence is permissible for intransitive transition verbs denoting a change of location. The verb *o* 'enter' can precede verb *raale* 'leave.'

- (7) òjè ó vbì ékéín imè ráálè.  
Oje PRP.enter LOC inside farm move.away  
'Oje entered the farm and left.'

However, verbs of change of location never precede any other transition verb type. For example, change of location *re* 'arrive' fails to precede existence state *dia* 'sit.'

- (8) \*òjè ré díá vbì àgá.  
Oje PRP.arrive sit LOC chair  
'Oje arrived and sat in the chair.'

Summing up, we see that Sorace's AT hierarchy allows us to articulate three principal constraints for Emai intransitive verbs in series. They are: 1) process precedes transition; 2) process does not precede process; and 3) transition precedes transition with the caveat that change of location precedes only change of location.

### 3 Constraints on transitive verbs

Co-occurrence constraints of a like nature affect Emai transitive verbs in series. To characterize these, we employ the Levin and Rappaport Hovav (2010) constructs Manner and Result.

Result verbs characterize event change quite differently from Manner verbs (Beavers 2013). Result forms express scalar change. A scale is a set of degrees indicating values of measurement on a particular dimension along with an associated ordering relation for those values. Result verbs convey scalar change along a property or path, or of volume or existence. Examples include English *break*, *cool*, *enter*, *build*, *eat* and *drink*.

Manner verbs express non-scalar change. They convey complex changes with no privileged scale of change. Manner verbs represent a complex sequence of separate changes that collectively define an action. They do not add up to a single cumulative change along any single dimension. Examples include English *run*, *scrub*, and *sweep*.

These two verb types, Manner and Result, are frequent partners in a single serial verb construction. They are also found in other complex predicate types, such as resultative constructions that exist in some languages. English, for instance, shows the resultative complex predicates

*sweep clean* and *smash flat*, where *sweep* and *smash* represent Manner, while *clean* and *flat* characterize Result.

In Emai, serial constructions show sequences of transitive verbs. However, as exponents of Manner and Result, they are highly constrained. Transitive Manner *sua* 'push' in series can precede transitive Result *ye* 'move toward,' as in (9). But Result *ye* can never precede Manner *sua* (10).

- (9) òjè súá ìmátò yé èkó.  
Oje PRP.push car move.toward Lagos  
'Oje has pushed the car toward Lagos.'

- (10) \*òjè yé èkó súá ìmátò.  
Oje PRP.move.toward Lagos push car  
'Oje moved toward Lagos and pushed the car.'

Transitive Manner verbs in series are also highly constrained. A Manner verb like *laa* 'carry in turns, take turns carrying' followed by another Manner verb, e.g. *la* 'chew,' is unacceptable in a serial construction.

- (11) \*yàn á làà éánmí lù.  
they C carry.in.turn meat chew  
'They took turns carrying meat and chewing it.'

Result verbs, on the other hand, do co-occur in series. Such is the case with transitive verbs of location change. In (12), *shan* 'move through' and its direct object co-occur with *ye* 'move toward' and its object.

- (12) òjè shán égbóà yé ìwè.  
Oje PRP.move.through backyard move.toward house  
'Oje moved through the backyard toward the house.'

To sum up the preceding examples with transitive verbs in series, we have observed three basic constraints utilizing the constructs Manner and Result. First, Manner + Result exemplars co-occur in verb series (9); second, Manner + Manner exponents fail to combine (11); and third, Result + Result associate in a serial sequence (12).

#### 4 Discussion

We direct attention now to some problematic facets of other serial verb constructions vis-à-vis the constructs Manner and Result. In (13), Manner *de* 'buy' combines with Result *e* 'eat,' the latter a verb characterizing incremental change along a dimension of consumption. However, in 14 and 15,

respectively, we see that each of the Manner verbs *nwu* 'carry' and *lie* 'collect' fail to co-occur with *e* 'eat.'

- (13) òjè dé émà é.  
Oje PRP. buy yam eat  
'Oje bought yam and ate it.'

- (14) \*òjè nwú émà é.  
Oje PRP. carry yam eat  
'Oje carried yam and ate it.'

- (15) \*òjè líé ítùú é.  
Oje PRP. collect mushroom eat  
'Oje collected mushrooms and ate them.'

In response to proposed serial verb examples like (14) and (15), we consistently receive feedback that the subevents represented by the separate verbs are difficult to relate contextually. They lack a sufficiently close association, apparently one of purpose or intention. That is, buying something can be viewed as intentionally or purposively related to eating that something. But neither carrying nor collecting some entity can be so viewed relative to eating that entity. This lack of association would suggest that intentionality must play some role in selecting verbs for at least the type of verb series construction shown in (13).

Co-participant verbs in series present a different kind of problem. They are found in a serial construction where one verb phrase aligned with an event co-participant precedes another verb phrase that conveys the core of the complex predicate, its basic set of argument entailments. Co-participant verbs in series also manifest strict precedence.

In Emai there are three co-participant constructions. In (16), the verb complex *de baa* 'join' and its subject co-participant precede the verb *sua* 'push.' In (17), the verb *kpaye* 'accompany' and its subject co-participant precede *ta* 'speak.' And in (18), the verb *kpaye* 'replace, take up a place on behalf of someone' and its subject co-participant precede verb *e* 'eat.'

- (16) ólí ómòhè dé báá élí ívèkhan súá ìmátò.  
the man PRP. reach join the youths push car  
'The man joined the youths to push the car/pushed the car with the youths.'

- (17) ólí ómòhè ò ó kpayè ójé tà étà.  
the man SCC accompany Oje speak word  
'The man is speaking with Oje.'

- (18) *ólí ómòhè kpáyé òlòlò é ólí émàè.*  
 the man PRP.replace Ololo eat the food  
 'The man took Ololo's place and ate the food / ate the food on behalf of Ololo.'

How do the verbs in these constructions align with the categories Manner and Result? We take the first example with *de baa* 'join' and *sua* 'push' to develop an initial impression of the dilemma that arises. We could view *de baa* as a realization of Manner in construction with *sua*, which we previously saw in (9) behaved like a Manner verb. But this would violate the Manner + Manner constraint evident for serials comprised of verbs that are intransitive (5) or transitive (11).

Alternatively, we could view *de baa* as a Result verb in series with *sua*. Recall, however, that previously *sua* behaved as a Manner verb. Such a pairing would violate the prohibition on Result + Manner that characterized verb series combinations that were transitive (10) or intransitive (3). Assuming Result+Result or Manner+Result for this verb series is not feasible either, since both would require that *sua* exemplify Result. Examples like (9), which we reviewed prior, indicate that *sua* cannot be so identified.

None of the alternatives available to us seems able to characterize co-participant verbs as an exponent of Manner or Result. Perhaps something in the semantic function of co-participant constructions is being ignored. All identify a situation where the co-participant assumes a location associated with an argument of the core verb. Co-participant joiner co-locates with the joinee or assumes its place to complete an event.

This semantic function highlights a connection between the co-participant relation and locative relations more generally. Emai, like other languages, distinguishes between locative arguments and locative adjuncts, or between inner locatives and outer locatives. Syntactically coding this distinction in Emai is the verb *za* and its precedence relation relative to another verb in series. The difference between locative arguments and adjuncts becomes evident when we compare the syntactic shape of canonical locative constructions to their non-canonical counterparts. Exemplifying the latter, for example, are constructions for contrastive focus and content interrogatives (Schaefer and Egbokhare 2014).

In canonical constructions, both locative types, adjunct in (19a) vs argument in (19b), are syntactically marked by the postverbal preposition *vbi*.

- (19) a. *ólí ómòhè gbé ólí ófé vbi ímè.*  
 the man PRP.kill the rat LOC farm  
 'The man has killed the rat on the farm.'

- b. *ólí ómòhè ó vbi iwè.*  
 the man PRP.enter LOC house  
 'The man has entered the house.'

In non-canonical constructions, whether contrastive focus or content interrogative (20a-b), a locative adjunct requires that its predication include the verb *zain* series. In addition, *za* must precede the core verb found in the canonical predicate. Without *za*, a locative adjunct in either focus or interrogative position would be ungrammatical.

- (20) a. *ímè lí ólí ómòhé zá' gbéófè.*  
 farm PF the man PAP.be.loc kill rat  
 'It was on the farm that he killed a rat.'  
 b. *ébé' ólí ómòhé zá' gbéófè?*  
 where the man PAP.be.loc kill rat  
 'Where did the man kill a rat?'

By way of contrast, a locative argument in a non-canonical construction disallows the verb *za* in series.

- (21) a. *ólí íwé nà lí ólí ómòhé ó'-ì / \*zá' ò.*  
 the house this PF the man PAP.enter-F PAP.be.loc enter  
 'It was this house that the man entered.'  
 b. *ébé' ólí ómòhé ó'-ì? / \*zá' ò?*  
 where the man PAP.enter-F PAP.be.loc enter  
 'Where did the man enter?'

In other constructions, *za* designates a source argument relative to a goal argument (22a). Nonetheless, *za* never occurs as sole verb in a simple predication (22b).

- (22) a. *òjè zá vbi áfúzé' shánsé vbi òkè.*  
 Oje PRP.move.loc LOC Afuze walk move.as.far.as LOC Oke  
 'Oje walked from Afuze to Oke.'  
 b. *òjè zá vbi ímè ráálè / \*zá vbi ímè.*  
 Oje PRP.move.loc LOC farm move.away PRP.move.loc LOC farm  
 'Ojemoved away from the farm.'

It is the verb *za* in series and its precedence relation that appears pertinent to disentangling relations that underlie co-participant constructions. In both, we have a verb in a precedence relation relative to another verb in series. In neither instance, does the argument associated with the verb holding precedence serve as an argument of the core verb. Noun



phrases associated with co-participant verbs and the verb *za* are outliers; they are external to the core verb. In short, both are adjuncts. As such, co-participant verbs and *za* are not governed by the same constructs and constraints as those governing core verbs. We propose, therefore, that verbs coding co-participants are neither Manner nor Result exponents. Rather, they realize a third verb type, grammatical adjunct for the moment that has a syntactic function not unlike other adjunct marking verbs such as *za*. Neither a co-participant verb nor locative adjunct verb *za* introduces an event participant that serves as argument of a core verb.

## 5 Conclusion

In the preceding, we examined constraints affecting transitive and intransitive verbs in series in the Edoid language Emai. We identified verb combinations that were admissible as well as those that were not. The resulting constraints were framed in terms of the verb types Manner (process) and Result (transition). Verb series predications coding an event co-participant, however, challenged these constraints. Common to their use was a co-locate function for the co-participant relative to core verb participants. Based on this semantic function, we compared Emai locatives in canonical and non-canonical structures. In non-canonical constructions, Emai syntactically distinguished between locative adjuncts and locative arguments. Locative adjuncts were coded by verb *za* and its precedence relation relative to another verb in series. These syntactic conditions mirrored those of co-participant predications. As a consequence, we proposed that noun phrases associated with co-participant verbs were adjuncts and that the verbs themselves served a syntactic function related to the grammatical coding of adjuncts. We also noted that verbs marking co-participants were exponents of neither Manner nor Result. We suggested, therefore, that co-participant forms reflected a third verb type that, for the moment, we identified as grammatical adjunct. No verbs of this third type introduce an event participant that serves as a serial predication argument. We are thus hopeful that future attention to other serial predications may clarify this initial hypothesis and provide needed insight into the syntactic and semantic relations internal to serial verb constructions.

## References

- Aikhenvald, Alexandra Y. 2006. Serial verb constructions in typological perspective. In A.Y. Aikhenvald & R.M.W. Dixon (eds.), *Serial verb constructions: A cross-linguistic typology*. 1-68. New York: Oxford University Press.
- Amberber, Mangistu, Brett Baker & Mark Harvey. 2014. *Complex predicates: Cross-linguistic perspectives on event structure*. New York: Cambridge University Press.

- Baker, Mark. 1989. Object sharing and projection in serial verb constructions. *Linguistic Inquiry* 20.4.513-553.
- Beavers, John. 2013. Aspectual classes and scales of change. *Linguistics* 51.4.681-706.
- Crowley, Terry. 2002. *Serial verbs in Oceanic: A descriptive typology*. New York: Oxford University Press.
- Elugbe, Ben. 1989. *Comparative Edoid: Phonology and lexicon*. Port Harcourt: University of Port Harcourt Press.
- Foley, William A. & Mike Olson. 1985. Clausehood and verb serialization. In Johanna Nichols and Anthony Woodbury (eds.), *Grammar inside and outside the clause*. 17-60. New York: Cambridge University Press.
- Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge, MA: The MIT Press.
- Rappaport Hovav, Malka & Beth Levin. 2010. Reflections on manner/result complementarity. In Malka Rappaport Hovav, Edit Doron & Ivy Sichel (eds.), *Lexical semantics, syntax and event structure*. 21-38. New York: Oxford University Press.
- Schaefer, Ronald P. & Francis O. Egbokhare. 1999. *Oral tradition narratives of the Emai people, parts I and II*. Hamburg: LIT Verlag.
- Schaefer, Ronald P. & Francis O. Egbokhare. 2007. *A dictionary of Emai: An Edoid language of Nigeria*. Köln: Rüdiger Köppe Verlag.
- Schaefer, Ronald P. & Francis O. Egbokhare. 2014. Emai's variable coding of adjuncts. *Linguistic Discovery* [special issue on arguments and adjuncts cross-linguistically, ed. by Soren Weichmann] 12.2: 12-26.
- Schaefer, Ronald P. & Francis O. Egbokhare. 2017. *An Emai grammar*. [Mouton Grammar Library Series] Berlin: Mouton de Gruyter.
- Sebba, Mark. 1987. *The syntax of serial verbs*. Amsterdam: John Benjamins.
- Sorace, Antonella. 2000. Gradients in auxiliary selection with intransitive verbs. *Language* 7 (4): 859-890.
- Sorace, Antonella. 2004. Gradience at the lexicon-syntax interface: Evidence from auxiliary selection and implications for unaccusativity. In Artemis Alexiadou, Elena Anagnostopoulou & Martin Everaert (eds.), *The unaccusativity puzzle*. 243-268. New York: Oxford University Press.
- Watters, John R. 2000. Syntax. In Bernd Heine & Derek Nurse (eds.), *African languages: An introduction*. 194-230. New York: Cambridge University Press.
- Williamson, Kay & Roger Blench. 2000. Niger Congo. In Bernd Heine & Derek Nurse (eds.), *African languages: An introduction*. 11-42. New York: Cambridge University Press.

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