

# **ABOUT MULTI-VERB CONSTRUCTIONS IN EDO**

**Multi-verb construction, past tense suffixation and syntactic representation in Edo<sup>1</sup>**

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## 1.0 Introduction

In multi-verb constructions in Edo<sup>2</sup>, two or more verbs in series may constitute either separate non-overlapping events or overlapping events. Below are examples:

(1) Íràn kòkórò dé ímótò (overlapping)  
They gather together+Rv buy car  
*They bought the car together*

(2a) Òzó lé ízè ré (non-overlapping)  
Ozo cook rice eat  
*Ozo cooked rice and ate*

(2b) \*Ízè òré Òzó léré ré  
Rice FM Ozo cook+Rv eat  
*It is rice Ozo cooked and ate*

In (1), V1 expresses the event of togetherness and V2 expresses the event of buying with the two events occurring simultaneously.

In (2), the relationship between the event of cooking and the event of eating on the other hand is sequential and non-overlapping with a time lapse between them. In (1), tense is represented by a Rv suffix attached to V1 while in constructions like (2) the suffix is never licensed, as shown in (2b).

The organization of this paper is as follows: Section one is a brief discussion of tense in Edo. In section two I introduce 14 multi verb constructions. In section three, I discuss the temporal relationships depicted by the events in series.

In section four, I will show that events, expressing overlapping relations tend to occur in sequences where V1 is followed by a reanalyzed verb or a subordinate infinitival clause while those expressing non-overlapping events tend to be lexicalized as V(P)+V(P)\* constructions. Lastly in section five, I will show that there is a pattern in the interaction of temporal event structure with syntactic structure and –Rv suffixation.

## 1.1 Tense in Edo

Edo is an SVO language with tense expressed on the auxiliary if present; otherwise it is represented on the main verb. Tense and aspect in Edo can be marked in three ways; by tone, suffixation or by the use of an auxiliary. The basic tense and aspect distinction is that between past and non-past tense. As well as marking tense, tones and suffixation also indicate the presence of an object. Present tense is marked as a low tone (̀) and past tense as a high tone (́) on a transitive verb, if the object occurs in the canonical object position. It is realized as a high

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<sup>2</sup> I have limited the number of verbs in series to two in order to keep the discussion fairly simple.

tone (ˊ) in the present and a suffix –Rv in the past, if the verb is intransitive or if the object of a transitive verb is realized in a non-local environment. The following illustrates this (cf Beermann, Hellan and Ogie 2001).

Present “intransitive”

- (3a). Òtá gbé<sup>3</sup>  
 Ota write+PRES INTR  
*Ota writes*

Past “intransitive”

- (b). Òtá gbénrèn  
 Ota write+PAST INTR  
*Ota wrote*

Present transitive

- (c). Òtá gbè n èbé  
 Ota write+PRES TRANS book  
*Ota writes a book.*

Past transitive

- (d). Òtá gbè n èbé  
 Ota write+PAST TRANS book  
*Ota wrote a book.*

Figure 1 summarizes this ( Beermann, Hellan and Ogie (2001).

FIGURE 1 – *Relative tone marking for monosyllabic verbs in Edo*

VP- DOMAIN	present tense	past tense
Verbs realized with object	low tone on final vowel	high tone on final vowel
Verbs realized without object	high tone on final vowel	-Rv suffixation

With the exception of the post-verbal perfective marker *né*, other tense/aspect/ mood distinctions are expressed by auxiliaries that precede the verb. Below are some examples (cf. Omoruyi (1991)).

- (4) Òsàró ghá tiè èbé  
 Osaro FUT/PROG read book  
*Osaro will read/is reading a book*

- (5) Òzó rá khué  
 Ozo Inceptive marker bathe  
*Ozo is about to bathe*

- (6) Òzó rrí èvbàré nè  
 Ozo eat food PERF.  
*Ozo has eaten (food)*

<sup>3</sup> A word final –n indicates a nasalized vowel.

In (4) it is the context of usage and the shared knowledge between the speaker and the hearer that disambiguate the future tense and the progressive aspect interpretations.

In the following, I am mainly interested in the distribution of the –Rv suffix and its relation to the semantic structure of multi-verb constructions.

## 2. Multi-verb constructions in Edo.

In the discussion of multi-verb constructions, one traditionally identifies subtypes that correspond to the different semantic patterns that arise in the combination of events. In the following, I introduce 14 distinct patterns and identify each as a unique construction type within the class of serialization.

### DURATIONAL CONSTRUCTIONS

In this construction type the event depicted by V1 may either be delimited by V2 indicating the nature and type of ending of V1 or V2 may specify the duration of V1.

- (7) Òzó viǵèrè kpèé  
Ozo cry+Rv be long  
*Ozo cried for a long time*

Durational SVCs have been reported in a wide variety of languages (Lord 1993); Benue-Kwa (Twi (Ghana), Yoruba and Engenni (Nigeria)) and Lhasa a Tibeto-Burman Language.

### DIRECTIONAL CONSTRUCTIONS

In directional construction, V2 performs a deitic/ aspectual function.

- (8) Òzó rhùlǵèrè kpàá  
Ozo run+Rv go  
*Ozo ran away (away from the speaker)*

The reference point is the speaker. Agheyisi (1986b) classifies V2 in such construction types as having a modifying function. Directional SVCs are found also in Yoruba (Bamgbose 1982, Awobuluyi 1975 etc) and Kinyarwanda (Kinmeyi 1980 (Cf. Lord 1993)).

### DESIDERATIVE CONSTRUCTIONS

Desiderative constructions are those in which the event depicted by V2 is a desired outcome of the event depicted by V1. Oyelaran (1982) classifies this construction type as connative.

- (9) Òzó miànmiánrèn kié ǵkhú  
Ozo forget+Rv open door  
*Ozo forgot to open the door*

## COMITATIVE CONSTRUCTIONS

In comitative constructions V1 indicates group participation in an event. Edo has three verbs, which lexically encode this function; *gbá*, *kòkó* and *kùgbé*.

(10) Íràn kùgbéré rí ízè  
They join together+Rv eat rice  
*They eat the rice together*

(11) Íràn gbá dé  
They be together fall  
*They fell together.*

(12) Íràn kòkórò rí ízè  
They gather together+Rv eat rice  
*They eat the rice together*

Comitative SVCs have been reported also in Twi (Lord 1993). Oyelaran (1982), Awoyale (1988) and Lord (1993) classify this construction type as SVCs.

## INSTRUMENTAL CONSTRUCTIONS

In an instrumental construction, V1 indicates the means by which the event depicted by V2 is carried out. There are three kinds of instrumental verbs in Edo; *yá* 'use' *ló* 'use' and *rhié* 'take'. While *yá* is only used in instrumental constructions, *rhié* can be used in other construction types that encode transfer of an entity and *ló* can be used in construction types encoding just the event of using.

(13) Òzó yé/ lòó éhò fián àlímóí  
Ozo use/use knife cut orange  
*Ozo used a knife to cut the orange*

(14) Òzó rhié éhò fián àlímóí  
Ozo take knife cut orange  
*Ozo cut the orange with a knife*

Instrument constructions with *take* verbs have also been reported in Chinese (Cf. Lord 1993) Sranan (Sebba 1987 etc), Yoruba (George 1985 etc), Twi, Nupe, Ewe, Fon, Dagbani (Lord 1993), Kinyarwanda (Kimenyi 1980).

## CAUSATIVE CONSTRUCTIONS

In a causative construction, V1 is a causative verb. The two causative verbs in Edo are *gí* 'let', which occurs without an overt complementizer before the caused clause and *zèé* 'cause' which occurs with an overt complementizer before the caused clause. Only *gí* occurs in a multi-verb construction. Here, the two events may or may not overlap.

(15) Òzó gí ízè gién  
Ozo let rice burn  
*Ozo let the rice burn*

Causative SVCs are also found in Yoruba (Oyelaran 1982 and Lord 1974 and Kinyarwanda (Kinmeyi 1980).

#### RESULTATIVE CONSTRUCTIONS

Resultative constructions like causative constructions are those in which V1 may cause the realization of the event depicted by V2. However, there is little or no time lapse between the performances of the two events.

- (16) Òzó suá Àzàrí dé gbé òtò  
 Ozo push Azari fall against ground  
*Ozo pushed Azari down*

- (17) Òzó hòó úkpòn huán  
 Ozo wash cloth clean  
*Ozo washed the clothes clean*

Resultative constructions have been discussed for Yoruba (Awoyale 1988 etc), Chinese (Li 1993 etc) and Akan (Agyemen 2002). Stewart (1998) has discussed in great detail the SVC status of resultative constructions in Edo.

#### NEGATIVE RESULTATIVES CONSTRUCTIONS

In negative resultatives the event depicted by V1 causes a negative state in the event depicted by V2. The temporal relationship between the two events is non-overlapping.

- (18) Òzó gá ébò mién òkán  
 Ozo serve juju receive distress  
*Ozo got trouble as his reward for serving gods*

In (18) above Ozo could have served his gods a month earlier and got into trouble a month later. Negative resultatives have not been discussed in the literature on serialization as to now.

#### LOCATIVE CONSTRUCTIONS

Edo has only one verb *lao* “enter”<sup>4</sup> which expresses the end point (of change of location) of the action depicted by V1. All other locative functions are expressed by prepositions.

- (19). Òzó rhùléré làá òwá  
 Ozo run+Rv enter house  
*Ozo ran into the house*
- (20) Òzó gbéré làá óróré  
 Ozo dance+Rv enter outside (the house)  
*Ozo danced out of the house*

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<sup>4</sup> The verb *lao* “enter” undergoes lexical reanalysis to become an adverb when it occurs in V2 position in multi-verb constructions. This is discussed further in section 4.

Locative SVCs are attested in Twi (Lord 1993) and Yoruba (Lord 1993, Oyelaran 1982, Awoyale 1988).

### COMPARATIVE CONSTRUCTIONS

The notion of comparison in Edo is expressed by the verb *sèé* “surpass”.

- (21) Òzó m̀sè sèé Àzàrí  
 Ozo be beautiful Surpass Azari  
*Ozo is more beautiful than Azari*

Comparative SVCs occur also in Haitan (Dechaine 1987), Sranan (Sebba 1987) and Yoruba (Oyelaran 1982, Awoyale 1988).

### MANNER CONSTRUCTIONS

The construction type referred to as manner constructions depicts the body posture while performing an event. Awoyale (1988) classifies it under modality SVCs, while Oyelaran (1982) classifies it under circumstantial SVC. In this construction type V1 depicts the body posture of the Agent while performing the action depicted by V2.

- (22) Òzó d̀giénr̀n r̀rí èvbàré  
 Ozo stoop+Rv eat food  
*Ozo bent while eating*

In addition to Yoruba, manner SVCs are also found in Kinyarwanda (Kimenyi 1980).

### PURPOSE CONSTRUCTIONS

Purpose clauses describe projects rather than an actual action (Sebba 1987). However unlike in languages like Nupe where the event depicted in V2 is in the irrealis mood, in Edo, the event is in the realis mood (Baker and Stewart 2002:18). Below are examples. First, an example from Nupe.

- (23) Musa wan nangi ya tsigbe (Nupe)  
 Musa catch goat give medicine  
*Musa caught a goat to give it medicine*

- (24) Òzó mién àlimói kpá!án (Edo)  
 Ozo see orange pluck  
*Ozo saw an orange to pluck*

According to Baker and Stewart, V2 in purpose constructions in Nupe is not always asserted while in Edo, it is. (23) does not entail that Musa gave the goat medicine but (24) entails that Ozo plucked an orange. Purpose constructions have been discussed in the literature by Sebba(1987) in Sranan and Ekundayo and Akinnaso (1987) for Yoruba, as well as Baker and Stewart(2002) for Edo.

### CONSEQUENTIAL CONSTRUCTIONS

Consequential constructions are those in which the verbs in series express a natural sequence of events and they are temporally ordered in a precedence relationship (Stewart 1998).

- (25) Òzó lé ízè ré  
Ozo cook rice eat  
*Ozo cooked rice and ate*

The SVC status of this construction type in Edo has been discussed extensively by Stewart (1998), Baker and Stewart (1999), Baker and Stewart(2002) etc.

### COVERT CO-ORDINATION CONSTRUCTIONS

In Covert co-ordination constructions two separate and distinct events are co-ordinated without any overt marker of co-ordination between the verbs in series. However, an intonational pause occurs between the two verbs. There are two types in Edo.

-Those in which the verbs in series express a natural sequence of events and they are temporally ordered in a precedence relationship. In addition each verb must have its own object. The object of V2 must be a pronominal and must be coreferential with the object of V1 (26).

-Those that can express any sequence of events that may or may not be naturally related. Both V1 and V2 must have different objects (if transitive) (27).

- (26) Òzó dé ízè rrí òré  
Ozo buy rice eat it  
*Ozo bought rice and ate it*

- (27) Òzó lé ízè kpòlò òwá  
Ozo cook rice sweep house  
*Ozo cooked rice and swept the house*

## 3.0 The internal structure of events

In order to describe the difference in event structure encoded in the 14 multi verb constructions described in the above section, I heavily rely on Pustejovsky's (1995) work on predicate decomposition and event reification, relevant parts of which I will briefly summarize in the following section.

### 3.1 Defining Temporal events

According to Pustejovsky (1995), an extended event structure is interpreted as a tuple:

$\langle E, \leq, <, o, \subseteq, * \rangle$ , where  $E$  is the set of events,  $\leq$  is a partial order of part-of,  $<$  is a strict partial order,  $o$  is overlap,  $\subseteq$  is inclusion and  $*$  designate the "head" of an event. Event headedness provides a way of indicating foregrounding or backgrounding of event arguments.



He represents the relationship between an event and its proper sub parts as consisting of an ordered relationship between the sub events. He suggests three ordering: a partial order  $<_{\infty}$ , overlap  $\alpha_{\infty}$ , and ordered overlap  $<_{\alpha_{\infty}}$ .

A: Partial order

A partial order  $<_{\infty}$  relation is defined as

- a.  $[e_3 e_1 <_{\infty} e_2] =_{def} <_{\infty} (\{e_1, e_2\}, e_3)$
- b.  $\forall e_1, e_2, e_3 [ <_{\infty} (\{e_1, e_2\}, e_3) \leftrightarrow e_1 \leq e_3 \wedge e_2 \leq e_3 \wedge e_1 < e_2 \wedge \forall e [e \leq e_3 \rightarrow e = e_1 \vee e = e_2 ]]$ .

Where  $e_1$  and  $e_2$  are exhaustive ordered part of  $e_3$ , with  $e_1$  being temporally ordered before  $e_2$ .  $e_1$  must completely precede  $e_2$ . Verbs included in this description are causatives as well as inchoatives. An example is the verb *build*. *Build* is composed of two sub events: a process and a state. The process is interpreted as the cause of the resulting state.

B: Overlap

An overlap  $\alpha_{\infty}$  relation is defined as:

- a.  $[e_3 e_1 \alpha_{\infty} e_2] =_{def} \alpha_{\infty} (\{e_1, e_2\}, e_3)$
- b.  $\forall e_1, e_2, e_3 [\alpha_{\infty} (\{e_1, e_2\}, e_3) \leftrightarrow e_1 \leq e_3 \wedge e_2 \leq e_3 \wedge e_1 \subseteq e_2 \wedge e_2 \subseteq e_1 \wedge \exists e [e \subseteq e_1 \wedge e \subseteq e_2 \wedge e = e_3] \wedge \forall e [e \leq e_3 \rightarrow e = e_1 \vee e = e_2 ]]$

Pustejovsky uses as example the verb *accompany* which involves two sub events occurring simultaneously as made explicit in (28).

(28) John accompanied me while I was walking.

C: Ordered overlap

An ordered overlap is defined as

- a.  $[e_3 e_1 <_{\alpha_{\infty}} e_2] =_{def} <_{\alpha_{\infty}} (\{e_1, e_2\}, e_3)$
- b.  $\forall e_1, e_2, e_3 [ <_{\alpha_{\infty}} (\{e_1, e_2\}, e_3) \leftrightarrow e_1 \leq e_3 \wedge e_2 \leq e_3 \wedge e_1 \text{ o } e_2 \wedge \text{init}^5 (e_1) < \text{init} (e_2) \wedge \text{end} (e_1) = \text{end} (e_2) \wedge \forall e [e \leq e_3 \rightarrow e = e_1 \vee e = e_2 ]]$

Here  $e_1$  starts before  $e_2$  that is;  $e_1$  precedes and overlap  $e_2$  with both ending simultaneously. Pustejovsky points out that a type of causative relation exists between the two events. The verb *walk* illustrates this relation. *Walk* is analyzed as consisting of two motion processes structured in an overlapping relation: the efficient motion of the legs bringing about the final motion of the body. Typically, an ordered overlap consists of the process depicted by  $e_1$  beginning and subsequently giving rise to another process that continues only while  $e_1$  continues to hold. In the following, I adapt Pustejovsky (1995) proposal to account for Edo multi-verb constructions.

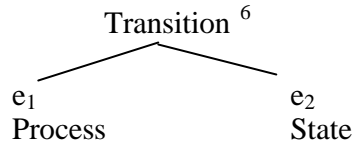
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<sup>5</sup> *Init* is a function over events, returning the initial part of that event and *end* is a function returning the final part of the event.

### 3.2 Lexicalization of sub-events

SVCs are generally represented as depicting single events (Baker (1989), Law and Veenstra (1992) and Durie (1997) etc.). Interestingly, we find that sub-events lexicalized as single verbs or as resultative constructions in English can be expressed by multi-verb constructions in Edo. Below is an example:

(29) English/ Edo :



English:

'John hammered the nail flat'

Edo:

Òzó kán ìsé bìgòó<sup>7</sup>  
 Ozo nail nail bent  
*Ozo nailed the nail bent*

Different from the English example where  $e_2$  is a result XP, in Edo it is a verb, with  $e_3$  corresponding to a resultative multi-verb construction.

### 3.3. Edo multi-verb construction and temporal interpretation<sup>8</sup>

In addition to the three ordering discussed above and considering the nature of multi-verb constructions I suggest adding an additional relation to the relational types suggested by Pustejovsky (1995). This relation will allow a time interval between sub-events. As a consequence then, I recognize two classes of event relations:

- Those that are co-compositional<sup>9</sup>: These consist of two overlapping events which stand in

<sup>6</sup> Pustejovsky (1991, 1995) assumes that events can be sub classified into at least three sorts: processes, states and transitions. Transitions are accomplishments, achievements and bounded processess.

<sup>7</sup> Bìgòó 'bent' is a verb in Edo (but see footnote 15 on page 15):

(a) Ìsé bìgòó  
 Nail bent  
*The nail is bent*

<sup>8</sup> I have left out desiderative and comparative constructions in this discussion. V2 in desiderative constructions has an irrealis interpretation. Also, in comparative constructions, the relationship between the sub events is not temporal in nature.

<sup>9</sup> Pustejovsky (1995:61) defines co-composition as follows... multiple elements within a phrase behave as functors, generating new non-lexicalized sense for the words in composition. This also includes cases of underspecified semantic forms becoming contextually enriched , such as manner co-composition, feature transcription, and light verb specification.

In the context of my data, I apply the term to mean the co-specification of the verbs in series. For example, only a closed class of verbs can occur in V2 position in durational , directional and locational constructions. Also, new non-lexical senses of the words in composition may be created:

Directional constructions

‘ordered overlap’ and ‘overlap’ relations as defined by Pustejovsky (1995) (and discussed above).

- Those that are non-overlapping. I will label this relation as disjoint order. Borrowing from Allen and Ferguson (1994), I define disjoint order as:

#### DISJOINT ORDER

Two sub-events are disjoint if they do not overlap:

- $e_1 \prec: e_2 \vee e_2 \prec: e_1$
- And  $e_1$  is sequential to  $e_2$ .

With this in place I now consider ordered overlap, overlap and disjoint order as the relevant relations for multi-verb composition.

#### ORDERED OVERLAP $e <_{o_\infty}$

In the following,  $e_1$  overlaps with the inception of  $e_2$  with  $e_2$  starting in the course of  $e_1$ .

(30) Òzó viérè kpèé  
 Ozo cry+Rv be long  
*Ozo cried for a long time*

(31) Òzó kán isé bìgòó<sup>10</sup>  
 Ozo nail nail be bent  
*Ozo nailed the nail bent*

(32) Òzó rhùlé dèé  
 Ozo run come+progressive  
*Ozo is running towards me*

In (30), a duration construction, the event of *crying* and the state of *being long* are structured in an ordered overlap relation whereby  $e_1$  begins before  $e_2$  and brings about  $e_2$ : the continuous crying bringing about the state of being long. The same applies to (31), a resultative construction where

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(a) Òzó rhùlé dèé  
 Ozo run come+progressive  
*Ozo is running towards me*

(b) Ízè gá dèé  
 Rice to be cooked come+progressive  
*The rice is gradually becoming cooked*

<sup>10</sup> (31) differs from (35) in the following way: In (31), the attainment of the state depicted by  $e_2$  is gradual and measurable while in (35), it is punctual and non-measurable. This is illustrated below:

(a) Ò kàkàbó bìgòó  
 It exceedingly bent  
*It is extremely bent*

(b) \*Ò kàkàbó dè  
 It exceedingly fall  
*It fell extremely*

the event of nailing brings about the transition into the state of being bent with both events ending at the same time. That is the process depicted by  $e_1$  brings about the state depicted by  $e_2$ . On the other hand, in (32) a directional construction  $e_1$  and  $e_2$  are processes, where the event of running begins along a part towards the speaker with the progression towards the speaker continuing only while the running event continues to hold. Other multi-verb constructions occurring in an ordered overlap relation are: locational and manner constructions.

‘Ordered overlap’ events such as (30) to (32) above are different from events expressing overlap as in (33) below in that  $e_1$  stands in an inclusive relationship to  $e_2$ , whereby  $e_1$  is included in  $e_2$ . That is  $e_1$  and  $e_2$  are part of  $e_3$  and  $e_1$  is included in  $e_2$  and vice-versa. The events of gathering and buying expresses joint ownership.

#### OVERLAP $e_0 \infty$

- (33) Ìràn kókórò dé ímótò  
 They gather buy car  
*They bought the car together (joint ownership)*

Also in (34) the event of using is properly included in the event of cutting. The using event begins with the cutting of the orange and ends when the orange is cut.

- (34) Òzó rhié èhó fián àlímói  
 Ozo take knife cut orange  
*Ozo cut the orange with a knife*

(33) is a commitative construction while (34) is an instrumental construction. Causative constructions also come within this class.

We find other constructions where the events satisfy a disjoint order relationship: Resultatives, negative resultatives, consequentials and covert co-ordination constructions.

#### DISJOINT ORDER $e <$ :

- (35) Òzó suá Àzàrí dé gbé òtò  
 Ozo push Azari fall against ground  
 Ozo pushed Azari down

- (36) Òzó lé ízè ré  
 Ozo cook rice eat  
*Ozo cooked rice and ate*

In (35) a resultative construction, the event of pushing must be over before the event of falling begins and in (36) a consequential construction, the event of cooking must be over before the event of eating begins.

Turning to (37) a purpose construction below, the successful completion of the seeing event implies the successful completion of the cooking event. While the English sentence *He sees a yam to cook* does not imply that *he cooks the yam* (see also, the purpose construction in Nupe example (23)), (37a) implies that *Ozo cooks the yam*. Also it is the combined interpretation of the verbs *mién* and *lé* that gives the purpose reading. The complex event being successfully completed only after the cooking event is achieved. The same applies to (37b). In that sense Edo purpose constructions can be described as having an ordered overlap event structure. I therefore classify the relationship between the two events as that of an ordered overlap.

(37a) Òzó mién ìyán lé  
 Ozo see yam cook  
*Ozo looked for/found/ was given yams  
 in order to cook them (and he cooked them)*

(37b) Òzó mién àkhé guó!ghó  
 Ozo see pot break  
*Ozo destroyed the pot (through a deliberate action of his)*

I summarize the patterns discussed above as follows<sup>11</sup>:

Figure 2

ORDERED OVERLAP	DISJOINT ORDER	OVERLAP
Directional constructions	Resultative Constructions (push+ fall)	Instrumental Constructions
Durational constructions	Negative resultatives	Commitative Constructions
Manner constructions	Consequential Constructions	Causative Constructions
Locational Constructions	Covert Co-ordination	
Purpose construction		
Resultative construction (nail+bent)		

<sup>11</sup> At the same time that these generalizations clearly exist, there may be idiosyncrasies.

## 4.0 Temporal event interpretation and syntactic structure

In the following, I correlate the event type classification of the multi-verb constructions with their morpho-syntactic properties.

### 4.1 Ordered overlap

In durational, directional, locational and comparative constructions, the constructions that seem to have an ordered overlap in their event structure,  $e_1$  is realized in the syntax as a full verb and  $e_2$  as a reanalyzed verb. In manner constructions,  $e_1$  is realized in the syntax as a reanalyzed verb and  $e_2$  as a full verb. Agheyisi (1986b) focuses on the grammaticalization and reanalysis of some verbs in SVCs to become prepositional case markers and adverbs synchronically. According to her, when some verbs have a modifying function they cannot take adverbial modifiers themselves, but when they occur as main verbs, they can.

In duration constructions, V2 cannot occur with manner adverbial:

- (38) \*Òzó viérè kpèé èsésè (duration)  
Ozo cry+Rv be long very much  
*Ozo cried intensely for a long time*

In addition, for some constructions Edo has different forms for events when they are lexicalized as verbs and when they are lexicalized as adverbs (cf Agheyisi (1986a, 1990), Aigbe (1985) and Omoregie (1983)). The distribution of the verb *fó* ‘finished’ and its adverb counterpart *fòó* ‘finished/completely/totally’ illustrates this (39) & (40)<sup>12</sup>.

- (39a) Òzó viérè fòó (durational)  
Ozo cry+Rv finished (adverb-modifier)  
*Ozo has finished crying*

- (39b) \*Òzó viérè fó (durational)  
Ozo cry+Rv finished (verb used as modifier)  
*Ozo has finished crying*

- (40a) Ízè khián fó  
Ize AUX (inceptive marker) finished (main verb)  
*The rice will soon finish*

- (40b) \*Ízè khián fòó  
Ize AUX (inceptive marker) finished (adverb-as main verb)  
*The rice will soon finish*

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<sup>12</sup> I thank Felix Amaka and E.Kweku Osam for their comments on this issue.

The verb *fó* and the adverb *fòó* occur in mutually exclusive environment. *Fòó* can only occur as a modifier to a verb (39a), It cannot occur as a main verb (40b). The reverse goes for *fó*. It can only occur as a main verb (40a) but not as a modifier (39b).

Indeed the pattern observed with respect to *fó* and *fòó* is attested with other categories in Edo too. For example, some verbs may also serve as prepositions as in the locational construction below. (Agheyisi (1986a,1990), Omoregie (1983)).

An additional syllable bearing a different tone from the final vowel of the verb stem is affixed to the verb *fí* ‘throw, leave behind’ to derive the preposition *fíí* ‘into’.

(41a) Òzó fí úgbé  
 Ozo threw(verb) stone  
*Ozo threw a stone*

(41b) Òzó suá èwé fíí ézé  
 Ozo pushed goat into (preposition) river  
*Ozo pushed the goat into the river*

In contrast to Edo, where  $e_2$  is lexicalized as an adverbial phrase in the constructions above, In Twi durational constructions,  $e_2$  is lexicalized as a verb having a modifying function as in (42) below.

(42) Q-da kye (Christaller (1875). Cf. Lord (1993))  
 he-sleep long  
*He sleeps long*

According to Lord (1993:217) the intransitive verb *kye* means ‘last, hold out, stand for a long time, endure’ as a main verb. In a serial construction it indicates the duration of the state or activity named by the preceding verb. Although its meaning is clearly relational in a serial construction, it merely indicates that the preceding event is prolonged, that is, its form has not started to become defective. Semantically, it modifies the previous verb, and can be view as an adverb in sense, even though it is formally a verb.

On the other hand in Edo, as shown in examples (39) –(40), V2 in these sentences semantically modify V1 is syntactically an adverb.

Turning now to purpose constructions, V2 does not undergo lexical re-analysis. In (43) below, we see that lexically realized mood elements can occur before V2 as would be expected with two independent fully specified verbs. *Té*<sup>13</sup> an auxiliary element precedes V2 in (43). Of interest here is the fact that the only interpretation available in (43) is that of ‘mood’. (43) can only mean Ozo saw /found/was given two yams to cook, he cooked them but perhaps he did not cook them long enough resulting in them being half done.

<sup>13</sup> Under this usage *té*, according to Agheyisi (1986a) implies that the state or action described in the verb, though attained or accomplished, is still lacking an effect. This lexical item has a homophone *té* used as an INFL element which specifies past habitual aspect.

- (43) Òzó mién ìyán èvá té lé  
 Ozo saw yam two AUX cook  
*Ozo saw two yams to cook and he cooked them (but ...)*  
 \* *Ozo saw two yams and used to cook them.*

## 4.2 Overlap

Events in series that stand in overlap relations are generally lexicalized as V+infinitival INFL complement constructions. This applies to instrumental, commitative and causative constructions. I follow here an analysis suggested by Stewart (1998). According to him, infinitival complements in Edo may be introduced by an infinitival marker *yá* which has the following characteristics.

- Cannot occur in a tensed clause
- Generated in an embedded INFL
- *Yá* always bears a high tone and does not vary tonally for tense like verbs do in Edo.

- (44) Írán kókórò yá tòbíràn ǵé ímótò  
 They gather+Rv infinitivalINFL bythemselves buy car  
*They bought the car together by themselves.*

- (45) Èhò èvá ǵré Òzó rhière (instrumental)  
 Knife two focus Ozo take+Rv  
 Yá fián àlímóí  
 infinitivalINFL cut orange  
*It is two knives Ozo used to cut the orange*<sup>14</sup>.

- (46) Òzó gí ǵré yá gién (causative)  
 Ozo let 3sing.(accusative) INFL burn  
*Ozo let it burn.*

Figure 3 summarizes the discussion so far:

<sup>14</sup> Here as the gloss indicates the verb *rhié* ‘take’ has lost its literal meaning. This is not peculiar to Edo. In Dagbani, a Gur language spoken in Northern Ghana, the verb *zang* ‘take’ when used in serial constructions is a marker of instrument and patient as well as aspect.

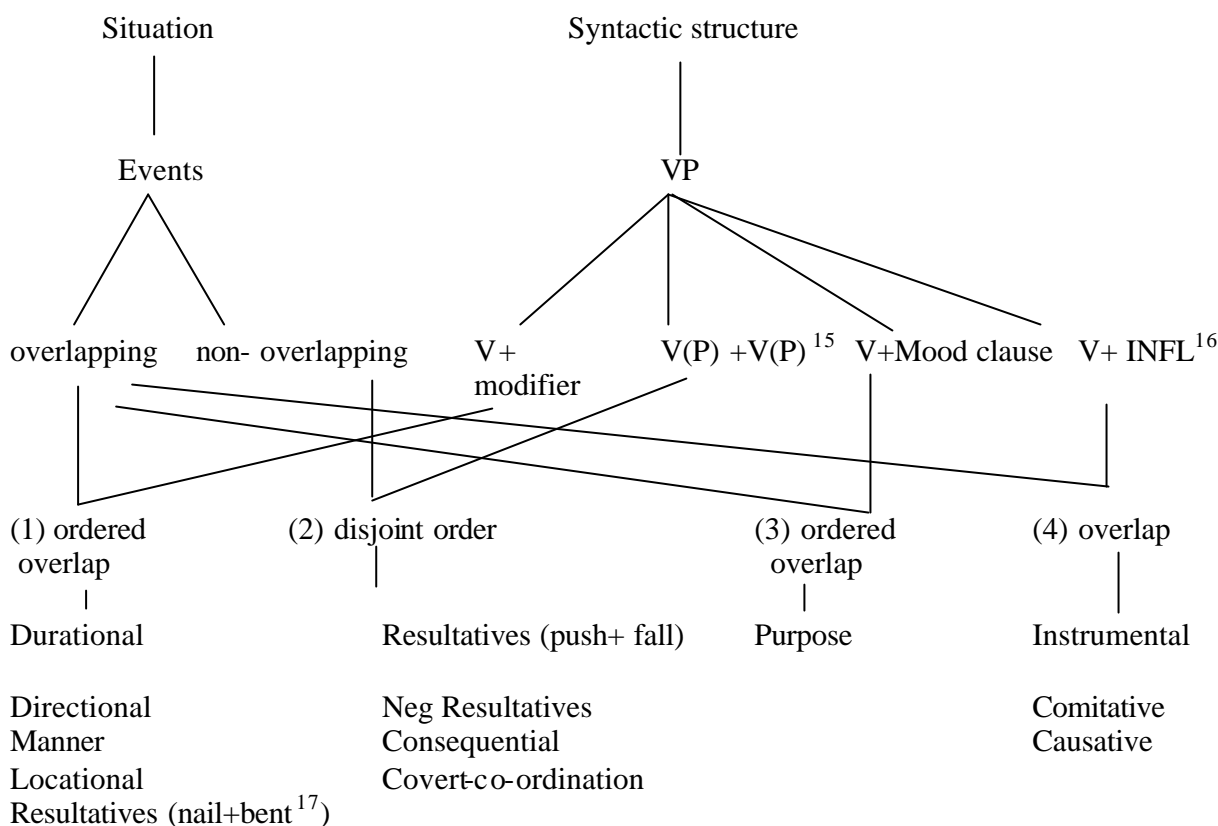
M	zang	m	suu	nmaai	nimdi (Lord 1993:128)
I	took	my	knife	cut-PERF	meat

*I cut the meat with my knife* (the knife may already be in my hand)

As the gloss indicates, *zang* contributes an instrumental meaning to the construction. It’s literal meaning being irrelevant to the construction meaning.



Figure 3



### 5. -Rv suffixation

The structural configurations shown above have implication for the realization of the past tense suffix -Rv. The -Rv suffix is made up of a consonant (R)+ a vowel (v), where the form of the vowel is determined by vowel harmony with the final vowel of the verb stem.

Interestingly, we find that V+modifier, V+Infinitival INFL and V+mood constructions all license -Rv suffixation on V1. We have argued in section 3 that these constructions all have overlapping event interpretations.

V(P)+V(P) constructions on the other hand do not license this suffix on the verbs in series.

Resultatives (transitive+unaccusative), negative resultatives ,consequential and covert co-ordination belong to this syntactic group while semantically, they represent non-overlapping events. The following paradigm arises:

<sup>15</sup> See Stewart (1998) and Baker and Stewart (1999, 2002) discussion on the syntactic structure of resultatives, consequentials, covert co-ordination and purpose constructions

<sup>16</sup> The INFL here is nonfinite.

<sup>17</sup> Interestingly, the  $\left\{ \begin{array}{l} \text{Prep} \\ \text{Adverb} \end{array} \right\}$  / verb alternation found in 39-41 is not manifested in V2 in this construction.

However, I show in section five below that V2 stands in some kind of adjunction relationship to V1.

### -Rv and overlapping events

- (47) Òzó vièrè kpèé (durational construction)  
 Ozo cry+Rv long  
*Ozo cried for a long time*
- (48) Írán kókórò dé ímótò (comitative construction)  
 They gather+Rv buy car  
*They bought the car together*
- (49) Ìyán ọ̀ré Òzó miénrèn lé (purpose construction)  
 yam focus Ozo see+Rv cook  
*It is yam Ozo saw to cook.*

(47) is a V+modifier construction, (48) is a V+infinitival INFL clause construction and (49) is a V+mood clause construction. All have overlapping event interpretation and license –Rv suffixation.

### -Rv and non-overlapping events

- (50) \*Èbò ọ̀ré Òzó gárè mién òkán (neg.result.)  
 Gods focus Ozo serve+Rv receive distress  
*It is gods Ozo served and got trouble as his reward*
- (51) \*Ízè ọ̀ré Òzó dérè ré (consequential)  
 Rice focus Ozo buy+Rv eat  
*It is rice Ozo bought and ate*

In (50) and (51), though the object NPs are realized in non-local environments, -Rv is not licensed on V1. Observe that in (49) above, the object NP is realized in a non-local environment and –Rv is licensed on V1. I attribute the licensing of –Rv in (47)-(49) and its non-licensing in (50) and (51) to the differences in temporal event structure. Multi-verb constructions with overlapping event structure license –Rv while those with non-overlapping event structures do not license the suffix. To further buttress this claim, consider (52) and (53) below:

- (52) Ísé ọ̀rè Òzó kánrèn dọ́<sup>18</sup> bìgòó (Resultative-  
 Nail focus Ozo nail+Rv adverb bend overlapping)  
 Vbéníánà  
 Like this

<sup>18</sup> Also, post verbal adverbs (e.g. bánbánnà ‘just now’) may occur after V1:

- (a) Ísé ọ̀rè Òzó kánrèn bánbánnà dọ́ bìgòó (Resultative-  
 Nail focus Ozo nail+Rv adverb adverb bend overlapping)  
 Vbéníánà  
 Like this  
*Ozo ruined the nail just now by nailing it bent.*

*Ozo ruined the nail by nailing it bent.*

- (53) \*Àzàrí òré Òzó suárè dòó (Resultative-nonoverlapping)  
 Azari focus Ozo push+Rv adverb  
 dé gbé òtò vbéniánà  
 fall against ground like this

The ungrammaticality of (53) a non-overlapping resultative construction is attributed to two factors: the suffixation of –Rv to V1 and the insertion of the preverbal adverb *dòó* before V2. *Dòó* functions as a sequential marker.

On the other hand, (52) an overlapping resultative construction, licenses the suffix and permit the insertion of the preverbal adverb *dòó* between the verbs in series. This suggests also that (52) and (53) have different syntactic structures (as proposed in figure 3). In the former, the verb *bìgòó* is an XP that stand in a modifying relationship to *kán* while in the latter, the verb *dé* preserves its status as a full verb.

To round up my discussion, let me point out that in their work on SVCs in Edo, Nupe and Yoruba, Baker and Stewart (2002) suggest that the non-licensing of –Rv in resultative constructions such as (53) is explained by the fact that two verbs in a resultative and a consequential construction must match morphologically and that each tense node has a unique morphological realization in a clause.

What Baker and Stewart describe are the syntactic reflexes of the fact that the verbs in non-overlapping constructions are “full” verbs each with its own event structure independent of the event structure of the other verb.

However, V+modifier constructions consist of a verb and a modifier and so –Rv attaches to V1 as with all verb+modifier constructions in Edo

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