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The internal structure of the Edo verb

Abstract. Chomsky (1986b) employs a feature value approach in the specification of universal lexical categories ([±V, ±N]). The verbal category is identified by [+V,-N] feature combination while the noun is specified by the features; [+N,-V]. The verb is a universal category with categorical features that are in direct opposition to the categorical features of the noun. The verb is therefore understood to be exclusively verbal; void of any nominal traits just as the noun is unambiguously nominal without any verbal traits. Interestingly, evidence from our data show that the feature specification of the Edo verb does not conform to Chomsky's universal categorical distinction. We show in this paper that the Edo verb is a complex component consisting of a combination of lexical units with categorial and semantic features that complement each other to represent a single semantic verbal element. These lexical units sometimes introduce features that contrast with the standard specification of verbal features, yet the resulting derivation is acceptable as a verb in Edo. Our combinatorial analysis of such verbs with contrasting features reveals that, action-process verbs (for example) consist of a string of lexical units representing the native-speaker interpretation of the activities that a given verb depicts. Chomsky's (1986) category tetrachotomy features and Hale and Keyser's (1993) concept that syntax is projected from the lexicon does not seem to apply wholly to Edo verbs

Key words: Edo verb, basic verb, complex verb, syllable structure, verbal extensions.

1. Preliminaries

Edo is an Edoid language (Elugbe 1979) that belongs to Eastern Kwa which is part of the putative Western Benue-Congo group of the New Benue-Congo (NBC) (Williamson and Blench 2000). Igboanusi and Peter (2005) have listed Edo among Nigeria's important minority languages. Modern day speakers of Edo are descendants of the inhabitants of the ancient Benin Kingdom. There are over 2.5 million Edo speakers who live mostly in Edo State of Southern Nigeria. Though there exist a good number of quality studies which attempt a description of aspects of Edo grammar, the language is yet to be wholly described. There are still conflicting views on the structure of basic sentential constituents, phonological forms, tone patterns and even orthographic representations. Our analysis in this paper takes cognizance of relevant previous studies and attempts to describe the internal structure of the Edo verb. Larger constituents can only be properly described when the computation of smaller units have been ascertained. The paper is organized as follows: Section 2 discusses previous studies on the Edo verb, highlighting verbal syllabic forms and tonal patterns. In section 3, we examine the internal structure of the verb, recognizing the two broad verb forms: the simple and the complex verbs. Section 4 is a preliminary overview of the semantic relevance of Edo verbal extensions. Section 5 is the summary and conclusion leading from our findings.

2. Previous Studies

A number of scholars have shown interest in the structure of the Edo verb and the various arguments the different verb forms subcategorize for. Amayo (1976) in his analysis of the Phonology of Edo interprets the Edo verb phrase as a constituent consisting of an obligatory verbal stem and optional complements (VP = V + (NP) + (ADV)[1]. The verb stem is understood to be either monosyllabic or disyllabic. The vowel of monosyllabic verbs bears either a High or Low tone. His disyllabic verbs can have either a CVV (màá 'to be good') or a CVCV (kpòló 'to sweep') syllable structure. Amayo's CVV verb forms bear a Low-High tone, while his CVCV verb forms equally bear a Low-High tone on the vowel of each syllable.

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[1] Adverbial phrase

Omoruyi (1986) broadly splits Edo verbs into Action Verbs and Adjectival verbs. He observes that Adjectival Verbs possess the capability to undergo transformations (changing into attributive adjectives), which action verbs lack. Agheyisi (1986) identifies three morphological classes into which Edo verbs can be categorized: Simple Verbs, Compound Verbs and Complex Verbs. She isolates and describes verbal affixes marking tense and aspect. Her work does not make a clear distinction between inflectional elements that are rightly associated with the Inflection Node (INFL) from purely verbal affixes (for instance, verbal extensions). Ogie (2003) employs the term 'multi-verbs' to describe verbs that occur in a series within the basic clause. She does not give details of the morphological composition of these verbs. We have evidence that her *multi-verbs* are a type of our broad categorization of *Complex Verbs* in Edo.

Omozuwa (2003) is interested in the tonal patterns of the Edo verb rather than in its morphology. He notes that tense and aspect in the language are marked by different tone patterns. Wescott (1962), Elugbe (1973, 1986), Amayo (1976) and Aikhionbare (1989) have consistently claimed that Edo verb stems are either toneless or at best exhibit only grammatical tone. Omozuwa (2003) following Melzian (1937) presents evidence that verbs in the language have both lexical and grammatical tone. Relying on acoustic, phonemic, and phonetic evidence, Omozuwa, (2003:57) confirms the existence of Amayo's (1976: 229-230) CVCV verb type in Edo. Omozuwa argues that the disyllabic CVV verb-type does not exist in Edo. He analyzes the CVV verb-types as monosyllabic verb stems with a single rising tone which is usually not orthographically[2] marked. Phonetically, it is represented as [ˇ] ([mǎ]). Such representation is at variance with the Low-High tone recognized for the same verb-type by Amayo (1976).

It is easy to identify the contrast in the platforms of analysis between Amayo, (1976) and Omozuwa, (2003). Amayo employs the Edo orthography in his representation of verb forms, while Omozuwa relies on phonetic representation. This paper recognizes that the CVV verb form is monosyllabic. Amayo assigns two contrasting tone patterns (Low-High) to the two vowels of the lone syllable. To Omozuwa, the long vowel is an inappropriate representation of the rising tone borne by a single underlying verbal

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[2] Following Omozuwa (2003), we include phonetic representations of our examples in Edo to illustrate distinct tone patterns that otherwise are not orthographically marked.

segment. In his examples, he opts for phonetic segments and features a lone vowel bearing a rising tone which appropriately represents pitch variation in an Edo native speaker's speech. Omozuwa fails to harmonize such phonetic representation with the standard writing system which Amayo relies on to propose the long vowel in his CVV argument.

Herein the basic CV verb types will bear either a high or a low tone in their citation forms, while the orthographic forms of the CVV verb types will bear a Low-High tone as in Amayo (1976) and a rising tone as in Omozuwa (2003) each time the need arises to capture the long vowel in phonetic segments.

3. The Structure of the Edo Verb

Basically, the Edo verb phrase constitutes of an obligatory verb stem with [+V] features in association with other optional constituents (VP → V + (Complement) + (Adjunct). In addition, the Head verb may be inflected for tense, aspect or modality. There is usually morphological and phi-feature (person, number or gender) agreement between the verb and its associative constituents. This paper asserts that Edo verbs are morphologically either basic or complex. The simple verbs forms comprise of only the basic stem while the complex verbs can be made up of four structural forms comprising of the Head verb and other semantically related constituents. These related constituents sometimes introduce nominal and adjectival features onto the verbal category that have traditionally been interpreted as being universally exclusive of any nominal features.

3.1. The Basic Verb

We will describe the verb stem that comprises only a single morphological form as "the simple verb". In the data in example 1, we present three basic verb forms. The CV and the CVV forms are interpreted as monosyllabic while the CVCV verb forms are understood to be disyllabic.

CV-Verb Forms			CVV- Verb Forms			CVCV-Verb Forms		
1. gbè	[gbè]	'to dance'	sàá	[să]	'to burst'	kpòlò	[kpòlò]	'to sweep'
dẹ̀	[dɛ̀]	'to buy'	gbọ̀ọ́	[gbɔ̌	'to bark'	gbìnnà	[gbìnnà/ã̀]	'to fight'
dè	[dè]	'to fall'	kpèé	[kpě]	'to beat'	dìguè	[digwɛ̀]	'to kneel'
gbà	[gbà]	'to tie'	khùí	[xwǐ]	'to lock'	bòlò	[bòlò]	'to peel'

tàn [tã̀] 'to be tall'   màá [mǎ] 'to be good'   kpòlò [kpɔ̀lɔ̀] 'to be fat'

The data in 1 reveals the standard phonological forms of basic verb forms in Edo. In each case, the syllable is open (i.e., begins with a consonant and ends with a vowel). The CV form bears a low tone. The CVV form bears a rising tone while each vowel of the CVCV form bears a low tone. These tone patterns may be altered with changes in the syntactic constructions within which the verb occurs.

3.2. The Complex Verb

The verb forms that we refer to as complex comprise a verb stem and another constituent that may either be an additional verb, a nominal element or a verb and a noun. Our examples will show that it is possible to identify a complex verb with a particle that is not a lexical unit in the language which nonetheless is a semantic unit. Knowledge of these component parts is fundamental in deciphering the derived meaning of each complex verb form. Syntactically, each part constitutes a distinct semantic unit, but their combination translates to one single semantic unit.

If our assertion in the preceding sentence is correct, and we are certain it is; then the term *multi-verbs* employed by Ogie (2003) to describe complex verbs is misleading. The implication of *multi-verbs* in the sense of Ogie is that of verbs in consecutive occurrence while in reality a complex verb may consist of only a single verb with other lexical categories that do not possess any verbal features. Also, Ogie's concept of *multi-verbs* does not directly make any allusion to the internal computation of the Edo verbal category. Rather, reference is to the parameter of verb serialization which describes a feature of the Kwa family of languages that employs consecutive verbs in a sentence to relay a string of activities. Evidence from our data indicates that a combination of verbs and other lexical units constitute the Edo verbal complex.

Agheyisi's (1986, 1990) preference for the term *compound verbs* is vague since it gives the impression of an amalgam of verbs with similar features. We choose to examine each version of the complex verb form identified above on its own merits. For each verbal form, we intend to isolate and

discuss any agreement feature(s) within the verbal units and the semantic value that the native speaker derives from employing such forms in day-to-day communication.

3.2.1 The V+Noun Complex

The universal category definition of lexical items of Chomsky's (1986b), specify [+V, -N] as feature values for the verb. Interestingly, these feature specification cannot be said to be absolutely true of all verbs in Edo. Within derivations, complex verbs in the language with [+V], [+N] feature composition do not indicate any irregular characteristics. But its underlying morphological structure will immediately contradict the universal tetrachotomy features of Chomsky (1986b). The data below shows that each verb is a product of [+V, -N] and [-V, +N] combination. Expectedly, the output of such a combination should be an adjective, but in Edo is a verb.

The verb + noun complex relates either a state or a process. This complex specifies an activity by combining two words that describe the different units relevant in the realization of the state or the process in focus. Sometimes the units that make up the complex semantically relate the manner in which an action is carried out. In other cases it is the reaction of an entity to the impact of some action on it that the complex relays. In example 2, we present V+N structures that derive acceptable verbs in Edo.

		D-structure			S-structure
2. a)	sò [sò]	+	ìhuán [ihwã̄]	→	sìhuán [sìhwā́]
	'to sing		'song'		'to sing'
b)	kpèé [kpě]	+	ùrhù [ùɾ̥ù]	→	kpòórhu [kpǒɾ̥ù]
	'to beat'		'voice'		'to preach'
c)	tòlò [tòlɔ̀]	+	óhuén [óhwɛ̃́]	→	tòlòhuén [tòlóhwɛ̃̀]
	'to scratch'		cough		'to cough'
d)	mù [mṹ]	+	òhù [òhù]	→	muóhù [mwóhã̄́]
	'to catch'		anger		'to be angry'
e)	mù [mṹ]	+	òhán [òhã̀]	→	muòhán [mwòã̀]
	'to catch'		'fear'		'to be afraid'
f)	gbè [gbè]	+	úgbó [úgbó]	→	gbúgbó [gbúgbó]
	'to do'		'farm'		'to farm'

g)   ròó [ɹɔ̌]   +   ìrò [iɹ̖ò]   →   ruírò [ɹwɨ̌ɹ̖ò]

'to think'   'thought'   'to think'

At the D-structure level of derivation in example 2a-g, each syllable of either the verb or the noun bears a tone characteristic of its category. The derivation of their surface forms involves a variety of phonological processes (tonal assimilation, vowel elision, umlauting, verbal assimilation etc). In example 2a, the vowel of the verb *sọ̀* is elided. The Low tone of the deleted vowel fuses with the Low tone of the initial vowel of *'ihuán'* to derive *'sìhuán'*. In 2b, *kpèé + ùhù* has *kpòórhu* as the output at surface level. The low tone borne by /e/ reduces the height of the High tone of the initial vowel borne by /u/ in *ùhù* to its level. /e/ is then elided, leaving the rising tone which is assimilated into the vowel /o/. The last vowel of the noun (/u/) is then realized as a falling tone. (Omozuwa (1989, 1990, 1996, 2003) has examined tonal alternation in Edo in some detail.

   In example 2a, the verb *sò* 'sing' participates in transitivity alternation. *ìhuán* 'song' is generally an appropriate argument the verb can subcategorize for. The combination between *sò* and *ìhuán* therefore cannot be better chosen if *ìhuán* is selected as the NP complement of *sò*. But this isn't the case. The D-structure in 2a derives the verb *sìhuán* 'to sing'. We return to 2a soon. In 2b, the verb *kpòórhù* 'to preach' is derived from *kpèé* 'to beat' and *ùrhù* 'voice'. Preaching is often associated with a speaker attempting to convince a gathering of people with a belief, an argument or an opinion. Not too long in the past, the public address system was not very common to the Edo native speaker. Someone seeking to convince a group, either out of passion or the need to be heard, would usually attempt to project their voice. The force of energy often exerted on the vocal cords of the speaker in this endeavour was associated with 'beating the vocal cords', the principal organs in the production of speech sounds. Preaching to the Edo native speaker has therefore been rightly or wrongly linked to stressing *kpèé* the vocal cords *ùrhù*. Like *kpèé* 'beat' in 2b, *óhuén* 'cough' in 2c, is understood to scratching the throat in the process of coughing. *ròó* 'thought' in 2g, is conceived of as the activity of thinking. To be thoughtful, an individual needs to imagine; thought being conceived of as an object argument upon which the verb *ròó* 'think' effects a change of conception.   What example 2a to d reveals is that some Edo verbs exhibit an internal

composition at D-structure that when combined, relates the process or state which the S-structure verb form illustrates. We interpret process D-structure forms as participating in event extension while the state S-structure forms participate in argument change.

What is evident from example 2 above is that the nominal unit of the complex is carefully selected. Each [+N,-V] complements the verb to comprehensively express an activity. The verb + Noun complex constitutes a single lexical category at S-structure with dominant verbal features. The verb complex forms in 2 are distinct from Edo verbs that subcategorize for object arguments as represented in

3 a. tọ̀lọ̀ [tɔ̀lɔ̀] + ègbé [ègbé]   →   tọ̀ègbé [tɔ̀lègbé]

    to scratch   body   'to scratch the body'

  b. gbè [gbè] + úzò [úzò]   →   gbúzò [gbúzò]

    to kill   antelope   'to kill an antelope'

  c. mù [mṹ] + òmọ́mọ́ [ɔ̀mɔ̃́mɔ̃́] → muọ́mọ́mọ́ [mṹɔ́mɔ̃́mɔ̃́]

    to carry   baby   'to carry a baby'

The verbal arguments in 3a-c unlike those in 2 are ordinary nominal complements with no semantic contribution to the interpretation of the verb since they are exclusive of the internal structure of the Edo verb.

3. 2.2. Verb + Verb Complex

Some Edo verbs inherently consist of two separate verbs. Each verbal component contributes part of the semantic interpretation of the complex which expresses a single event at S-structure. The activity specified by the V+V complex cannot be fully expressed by only a part of the complex. The data in example 4 illustrates V + V verbs in Edo.

            D-Structure   S-Structure
4 a. mù [mṹ] + rré [ré]   →   mùré [mũ̀ré]

     'to carry'   'to come'   'to bring'

  b. dò [dò]   + rhie [r̩jé]   →   dòrhié [dòr̩jé]

     'to stealthily' 'to take'   'to steal'

  c. sì [sì]   + kòkó [kòkó] →   sìkòkó [sìkòkó]
     'to pull'   'to gather'   'to assemble'

d. mù [mū̀] + lèré [lὲɹ́é]   →   mùlèré [mū̀lὲɹ̀é]

   'to carry' 'to hide'   'to conceal'

e. gbà [gbà] + khèè [xɛ̌] →   gbàkhèè [gbàxɛ̌]

   'to lie'   'to wait'   'to lie in wait'

The S-structure meaning of the V+V complexes above suggest a two-dimensional approach to the activities specified by the complex verb. To bring an object from point A, to point B, the native speaker's interpretation is that one needs to pick up (*mù*) the object from point A, before transporting (*ré*) it to point B. The V+V complex gives an idea of the directionality of movement. Movement is either towards the speaker or away from the speaker. Most of the verbs within the V+V complex are action-process verbs. These verbs simultaneously specify the action and the process of the activity depicted by the verb. The verbs in 4 are obligatorily associated with both an Agent and a Patient. Each verb asserts of the patient NP an essential change from its original position, state or condition. The verbs in 4 represent the dual semantic value of the V+V verb forms in Edo, with each verb specifying the action while the other denotes either the procedure or the direction of the activity stipulated. Syntactically, V_2 of the V+V complex complements the activity of V_1. The V_1+V_2 complex represents a single semantic unit from the Edo native speaker's perspective. It may not therefore be absolutely correct to refer to the V_1+V_2 complex as *multi-verbs* in the sense of Ogie, (2003)

3.2.3 Verb + Verb + Noun Complex

The V+V complex examined in section 3.2.2 may be further complicated by the addition of a nominal unit. Such V+V+ N complex have variants which may manifest as: V+N+V, V+N+N as shown in 5.

    D-Structure   S-Structure

      V   V   N

5 a. khòó [Xɔ̌] + miė [mjɛ̀̄] + òtò [òtɔ̀]   →   khònmiótò [Xɔ̌mjɔ́̄tɔ̀]

   'to fight'   'to see'   'ground'   'to be victorious'

      V   V   N

 b. rhiò [ɹ̥jɔ̀] + kpàá [kpǎ] + ègbé [ègbé]   →   rhiòkpaègbé [ɹ̥jɔ̀kpaègbé]

   'to rise'   'to lift'   'body'   'to resurrect'

	V	V	N		
c.	làà [lǎ] +	ghèé [ɣě] +	òdárò [òdáɹò] →	làghòdárò [lǎɣòdáɹò]	
	'to enter'	'to look'	'front'	'to progress'	

	V	N	P		
d.	mù [mṳ̀] +	ètín [ɛ̀tĩ́] +	yàán [ɲǎ]	→	muètínyàán [mṳ̀ètĩ́ɲǎ]
	'to carry'	'strength'	'on'		'to believe/ to have faith'

	V	N	N		
e.	màá [mǎ] +	òmwá [ɔ̀ŋɑ̃́] +	èmwí [èŋĩ́]	→	màmwàèmwí [mǎŋɑ̃̀èŋĩ́]
	'to teach'	'person'	'thing'		'to teach'

The verb at the S-structure is the output of the combination of items at the D-structure level of derivation that are inherently linked. The initial lexical verbal segment is the semantic base form of the complex. Each of the following segments adds semantic information which further specifies the type of activity being described.

Serial verb constructions (SVCs) are a notable feature of the Kwa languages of West Africa (Bamgbose, 1974, Williamson, 1965, 1989, Kari, 1997b, 2000; and other works). SVCs has been defined as "… a type of construction in which two or more verbs are strung together, without an overt connective morpheme" (Ndimele, 1996: 127). Verbs in such a construction "… share a common surface subject and one or two more common aspectual/tense/polarity markers" (Williamson 1989: 30). The conflated sentence is derived through the combination of actions just as we have observed in our complex verb form examples. To the native speaker of Edo, to be victorious in a fight, you must sustain the fight until your opponent is wrestled to the ground. In example 5a, the verb that expresses victory in the language incorporates these stages: *khọ̀ọ́n* 'fight' and *miẹ́* 'see' (sustain the struggle) until you wrestle your opponent to the ground. *khònmiótọ̀* (to be victorious) is a process verb like *rhiòkpaègbé* (to resurrect) in 5b. There are a series of activities that culminates in resurrecting: you rise (*rhiọ̀*), then you lift (*kpàá*) up your body (*ègbé*). The verbal segments of the complex verb are semantically similar, but the idea of 'rise' (possess the volition to assume a vertical position) and 'lift' (move or be moved in an upward direction) taken apart fails to capture the underlying sense of revival from a state of inertia. It is only when you

'revive' that the volition to 'lift' can set in. The choice of the various components that make up the complex is carefully selected by the native speaker.

It is essentially the temptation to interpret the lexical units within the complex verb form as whole verbs that informs Ogie's (2003) choice of the terminology 'multi-verbs'. It is equally relevant to recognize that in serial verb constructions we deal with whole verbs of the type in example 5 at S-structure not at D-structure. A prominent weakness in Ogie's interpretation is that her argument fails to accommodate the nominal units within the D-structure in her sense of *multi-verbs*. The strong point in our argument is that at the S-structure level of derivation, Edo verbs can be serialized as in example 6.

6. Ò   rhiọ̀ kpàá ẹ̀gbé khòọ̣n mù òbọ́ yàá ikẹga
   he   rise lift   body   fight carry hand on wrist
   'He resurrected, fought to finish and won the fight.

Example 6 reveals that complex verbs can be serialized. The extensive literature on serial verb constructions confirms that the term is in reference to constructions of the type in example 6 and not of the D-structure level of derivation in example 5, as Ogie will have us believe. It can only be said that the composition of the verbs in example 6 is a reflection of the well studied serial verb constructions and not an example of verb serialization as such.

4. Verb + Extension

Verbal extensions have been identified to have a very wide distribution across the Niger-Congo family of languages (Williamson and Blench 2000, Hyman 2007). These extensions which bear distinct semantic values alter the meaning of the stem once affixed to it. Verbal extensions tend to participate in word formation process through the derivation of verbs of divergent semantic significance. Verbal extensions are difficult to identify and usually require native-speaker intuition to analyze and classify. Most of these extensions are often morphologically and phonetically similar but always semantically distinct within and across languages. These difficulties have rendered their study unattractive. A number of works aimed at identifying and classifying verbal extensions exist (Doke 1943, Childs 1987, Kari 1995, Tamnaji and Mba 2003, Paster 2005, Yuka 2008 etc). These studies show the multidimensional strategies for interpreting

verbal extensions across languages. Since verbal extensions form part of the Edo verb, this study simply attempts to identify them as a morphological component of the verb. We make no pretence at an in-depth semantic analysis of the phenomenon in the Edo.

Edo verbs exhibit class-maintaining derivational affixes which we have referred to as *verbal extensions* (VE). These verbs possess the inherent quality to take various forms of verbal extensions which signify grammatical relations as well as semantic extensions. In the following examples, we present a general overview of Edo verbal stems and verbal extensions. Our preliminary observations lead us to identify three verbal extensions for Edo verbs (the *–rV* extension, the *–lV* extention the *–fua* extension). These VEs can manifest themselves in different forms and play specific semantic roles.

3.3.1 The *–rV* extension

When attached to the verb, this VE signals past tense. It also participates in argument distribution. Example 7 contrast verbs without the *–rV* extension with those that take the extension.

		Verb		V+suffix	
7. a)	dè	[dé]	dé-rè	[déɹè]	
	'to fall'		'fell'		
b)	dè	[dɛ̀]	dé-rè	[dɛ́ɹè]	
	'to buy'		'bought'		
c)	wù	[wù]	wù-rú	[wú-ɹù]	
	'to die'		'died'		
d)	dèé	[dě]	dèé-rè	[děɹè]	
	'to tie'		'tied'		
e)	kpòló	[kpòlò]	kpòló-rò	[kpòlòrò]	
	'to sweep'		'swept'		

Notice from 7a-e that the verbal extensions have an *–rV* form. While the /r/ is constant, the /e/ is a copy of the final vowel of the verb. In combination, the *–rV* extension marks past tense.

4.2 The –*lV* extension

The –*lV* extension is employed with transitive verbs and bears a high tone on the vowel. As we observed with the –r*V* extension, the vowel of the verbal extension is a copy of the final vowel of the verb. The consonant /l/ is constant. The data below shows that the – *lV* extension marks a multiplication of the activity designated by the verb.

	Verb		V+suffix	
8. a)	dè	[dé]	dè-lè	[dèlɛ́]
	'to buy'		'buy repeatedly'	
b)	vù	[vù]	vù-lò	[vùló]
	'to uproot'		'uproot repeatedly'	
c)	fì	[fì]	fìló	[fìló]
	'to throw'		'throw repeatedly'	
d)	sàán	[sǎ]	sàán-nò	[sǎnɔ́]
	'to jump'		'jump repeatedly'	
e)	tìn	[tí]	tìn-nò	[tǐnɔ̌]
	'to fly'		'repeatedly fly'	

The –*lV* extension in Edo can be interpreted as iterative. It designates an action that recurs. The verb in question unfolds unceasingly. The –*lV* extension requires that the argument in subject position possess the attribute to undergo or undertake the action specified by the verb repeatedly. The –*lV* extension bears a high tone and is attached to transitive verbs as in the following examples;

9. a) Úyì dɛ́ éwù   b) Úyì dèlɛ́ avbé ɛ́wù   c) *Úyì dèlèrè ávbé éwù
   Uyi buy-past shirt   Uyi buy-lv pl shirt
   'Uyi bought a shirt'   'Uyi bought shirts'

The –*lV* (le) selects the plural object argument upon which the verb can act repetitively. 9c is unacceptable in Edo because of the addition of the –r*V* suffix to the [buy+-*lV*] complex, since 'buy' already bears a high tone (marking past tense) and participates in transitivity alternation. The [-*lV*+-r*V*] suffix can only co-occur in a verb when such a verb cannot participate in transitivity alternation.

Recurring action in Edo can equally be captured by the –no extension as in example 10 below.

10 a) sun -nǫ [sṹnɔ̀] sunno-kua [sṹnɔ̀kwá]

'crawl' 'repeatedly' 'repeatedly crawl away'

b) bùú -nǫ [bṹnɔ̀] bunno-kua [bṹnɔ̀kwá]

'break' 'repeatedly' 'repeatedly break away'

c) dele -nǫ [dèlè] dele-kua [dèlèkwá]

'fall' 'repeatedly' 'repeatedly fall away'

-n0 is frequentative. It can co-occur with –kua to indicate repeated movement away from the speaker

position. The verbal extension marking directionality is discussed below.

4.3 The *–fua* **extension**

The *–fua* extension adds directionality onto the activity spelt out by the verb. First, two positions are

assumed: the position of the subject argument and that of the speaker. Secondly, the verb must move the

subject argument some distance away from the speaker's position. The *–fua* extension in example 11

therefore encodes subject argument movement (from the speaker position).

Verb V+-fua

11 a) rhìé [r̥jè] rhìé-fua [r̥jèfwá]

'to take' 'take away'

b) lèę́ [lɪ̆] lè-fua [lɪ̆fwá]

'to run' 'run away'

c) sùn [sṹn] sùn-fua [sṹfwá]

'to crawl' 'crawl away'

d) bùún [bṷ̆] bùún-fua [bṷ̆fwá]

'to break' 'break away'

e) dè [dè] dè-fua [dèfwá]

'to fall' 'fall away'

This *–fua* extension occurs overtly with both transitive and intransitive verb forms. It also manifest as *kua*

[kwá] to encode plurality or repeated action as in example 12.

12. a) áhiámwè̞ tín fua   b) ávbè̞ áhiámwè̞ tìnò̞ kua   c) * àvbé áhiámwè̞

bird fly-past away   pl bird fly-lv away

'The bird flew away'   'The birds repeatedly flew away'

In 12b the plural marker (*ávbe*) is in agreement with the plurality of action marked by the *–lV* attached to the verb *tìnọ̀* (fly).*-fua* and *-kua* are very selective of the arguments they accommodate in subject position. This explains the ill-formedness of 12c in which the verb fails to bear the *–lV* suffix specifying plurality of action, yet the argument in subject position bears a plural marker.

4.4 The –rua/-ruan extension

When *–rua/-ruan* occurs with Edo verbs, it indicates that somebody or something is responsible for a certain result. It adds the meaning cause to, or make (Arnott 1970: 346-347). More than anything else, it encodes 'totality or completeness' (Paster, 2005) of an activity in which either the subject or the object of the clause motivates. It indicates the natural termination of a process that has been in progress for some time. The *–rua/-ruan* extension can be suffixed to either a transitive or an intransitive verb. It requires an an additional argument to the syntactic frame of the basic verb (Shadeberg, 2003). Such an additional argument syntactically functions as the subject (Yuka, 2008: 159-160). Its semantic role of 'causee' becomes evident in example 13. Examples 13a to f show Edo verbs; first without the *-rua/-ruan* extension and then with the *-rua/-ruan* extension.

13 a) vàá   [vǎ]   vàá-rua [vǎɹwá]

'to split'   'completely split'

  b) fàá   [fǎ]   fàá-rua [fǎɹwá]

'to disgrace'   'completely disgrace'

  c) rhìá   [ɹ̥jà]   rhìá-rua [ɹ̥jàɹwá]

'to spoil'   'completely spoil'

  d) gìèn   [gjɛ̀̃]   gìèn-ruan [gjɛ̀̃ɹwɑ̃́]

'to burn'   'completely burn'

  e) wìẹ̀n   [ŋwjɛ̀̃]   wìẹ̀n-rua [ŋwjɛɹwɑ̃́]

'to wear out'   'completely wear out'

  f) tìàn   [tjɑ̀̃]   tìàn-ruan [tjɑ̀̃ɹwɑ̃́]

'to praise'   'praise completely'

Once *–rua* occurs with nominals which have nasal vowels, it is realized as *–ruan*.

5. Summary and Conclusion

This study has identified and analyzed the different morpho-semantic units relevant in the computation of the Edo verb. It recognizes two broad verb types: the basic verb form with either a CV or CVCV syllable structure or the complex verb form consisting of V+V, V+N, V+N+V, V+extension. We have argued that the Low-High tone on the CVV verb forms posited by Amayo (1976) is tenable given that Omozuwa's (2003) proposal of the rising tone is not formulated on the basis of the standard Edo orthography. We have proposed the term *complex verbs* as against Agheyisi's (1986) *compound verbs* and Ogie's (2003) *multi-verbs.* Our preference for the term *complex* is informed by our morphological analysis and existing literature on verb serialization.

The claim by Chomsky (1986b) and Hale and Keyser (1993) that syntax is projected from the lexicon suggests that category distinction begins from the similarity/dissimilarity of the features of lexical units participating in category computation. Contrary to what Chomsky's (1986b) category distinction will have us believe, evidence from our data reveal that the Edo verb can combine both lexical units with verbal and nominal traits in the derivation of a verb. We can therefore conclude that the feature composition of the lexical units of the Edo verb cannot be a reliable basis for category distinction. The argument structure of each verbal phrase may be the safe starting point to identify the Edo verb since the verb participates in both event extension and argument distribution. The subcategorial frame of each verb also provides information that specifies the appropriate argument(s) that each verb subcaterizes for.

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