

ARTICULATED STRUCTURE OF THE IGBO TENSE PHRASE DOMAIN

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Abstract

The tense phrase (TP) domain is the domain that expresses grammatical tense, aspect and mood. Existing studies concentrated on describing the morpho-syntactic features of the Igbo TP categories with little attention paid to their interaction and hierarchical order. This study, therefore, investigates the morpho-syntactic features and interaction of the functors with a view to determining their hierarchical order in the clause structure. Primary and secondary data were collected and subjected to syntactic analysis. Three main functors, Tense, Aspect and Negation, overtly occur in the Igbo TP area as verbal affixes and they exhibit two opposing patterns of morpheme order: V-T-ASP-NEG and T-ASP-NEG-V. The former, where the functors follow the verb, requires obligatory movement of the VP to spec TP, while the latter requires no such movement since the functors precede the verb. The study demonstrated that these morpheme orders are derived syntactically via operation merge with surface order corresponding to the hierarchical order. This is in contrast to preceding studies which assume mirror image where the linear order is the inverse of the hierarchical order.

Keywords: Igbo, Tense, Aspect, Negation and Tense Phrase Domain

Ụmị edemede

Alaka ngosi oge bụ alaka na-eziputa tensi, aspeeki na nju. Nchọcha ndị e merela gbadokari ụkwu n'etu e si eziputa katigori utoasusu ndị a n'elebaghi anya nke ukwu n'etu ha si emekorita nakwa etu ha esote onwe ha n'ahiriokwu Igbo. N'ihia nke a, nchọcha a lebera anya n'akparamagwa katigori utoasusu ndị a nakwa etu ha si emekorita iji wee choputa onodu ha na ndoko ahiriokwu. E wetara data n'aka ndi na-asu Igbo nakwa site na nchọcha ndi e merela, ma jiri atutu usorookwu tulee ha. A choputara na tensi, aspeeki na nju putakarichara ihe di ka mgbakwunye ngwaa ma na-eziputa usoro mofim abuo site n'etu ha si nodebe isingwaa. Usoro abuo ahu bu Ngwaa-Tensi-Aspeeki-Nju nakwa Tensi-Aspeeki-Nju-Ngwaa. N'usoro nke mbu, ebe ha na-esote isigwaa, a na-enwe mbughari nkebiokwu kengwaa site alaka ngwaa jee n'ntzi nkebiokwu ketensi. N'aka nke ozo, anaghi enwe mbughari obula iji nweta usoro nke abuo n'ihia na mofim ndi a na-esote isingwaa. Edemede a gosiri na a na-enweta usoro mofim ndi a site n'usorookwu n'uzo na-egosi na onodu mofim obula n'ahiriokwu na onodu ya n'esere nkowa nkebiokwu bu otu. Nke a di icha na nchọcha ndi ozo gbadoro ụkwu na ngosi enyo ebe onodu mofim n'ahiriokwu na onodu ya n'esere okwu na-agba icha.

Okpuruokwu okwu: Igbo, Tensi, Aspeeki na Alaka Ngosi Oge

1. Introduction

The tense phrase (TP) domain is the clausal domain that expresses grammatical tense, aspect and mood. Crosslinguistic studies show that it is a universal property of languages. However, its structure and content are parameterised across languages. In other words, languages may vary in the manner by which these elements manifest and the morpheme ordering therein. This is evident in the works of Pollock (1989), Ouhalla (1991), Mbah (1999), Julien (2002; 2007), Svenonius (2007), Adéoyè (2019 and Amaechi (2020) among many others. The most common categories that manifest in this domain are tense, aspect, negation, modal auxiliaries and to-infinitive. The morpho-syntactic behaviour of these elements has attracted scholarly attention. Although extant studies on this phenomenon as it concerns Igbo such as Mbah (1999), Obiamalu (2013, 2015) and Emenanjo (2015) have discussed the morpho-syntactic behaviour of the functors in the Igbo TP area, there are pockets of unresolved issues such as the position of tense and aspect morphemes in relation to the verb and the status of the *e*-prefix.¹ Therefore, it is important to re-examine the distribution and interaction of these elements in order to determine their hierarchical ordering in the articulated structure of the TP domain. This hierarchical ordering is significant for crosslinguistic generalisation.

¹ This prefix is realised as *e*-/*a*- based on $\pm$ ATR feature root vowel.

Igbo is a West Benue-Congo Igbooid language (Blench, 2019:42) spoken in the South-eastern and some parts of South-south Nigeria. It has a number of dialects with varying degrees of intelligibility (Nwaozuzu, 2008: 10-11). The population of speakers is estimated to be 35 million (Emenanjo et al, 2011:2). There are three distinctive tones in the language – low (*è*), high (*é*) and a downstep (*ē*) that indicate lexical and grammatical distinctions (Emenanjo, 2015:107-108). The language distinguishes between [+ATR] vowels (i, u, o, e) and [–ATR] vowels (ĩ, ɥ, ɔ, a); within a phonological word, ATR-harmony applies (Mbah & Mbah 2010:101-102). In Igbo, verbal morphology is used to indicate tense and aspect as well as derivational affixes (see Emenanjo, 2015:445). However, verb–argument agreement in the language is impoverished. Case distinctions can only be strictly detected in the personal pronoun paradigms for 2nd person singular ‘i/ĩ’ and 3rd person singular ‘o/ɔ’ as shown in (1).

(1)	Personal pronouns in Igbo:	
	NOM:	ACC:
	1sg: m	1sg: m
	2sg: i/ĩ/(gĩ)	2sg: gĩ
	3sg: o/ɔ (ya)	3sg: yá
	1pl: ànyĩ	1pl: ànyĩ
	2pl: unù	2pl: unù
	3pl: ha	3pl: ha

In coordinated structures, *gĩ* (2SG) and *(ya)* (3SG) can occur in the nominative case as in

- (2) **Gĩ nà ya bù enyì.**
 2SG CONJ 3SG be friend
 ‘Both of you are friends.’

The basic word order in an information-structurally neutral sentence is subject (SU)– verb (V) – indirect object (IO) – direct object (DO) – adjuncts (ADJ), see (3). This word order is strict, there is no scrambling-like operation within TP and adjuncts are confined to the clause-final position. The order can only be changed to express information-structural categories (See Amaechi and Goergi 2019:3).

- (3) **Òbí nyèrè Àdà éḡō nà mgbèdè.**
 Obi gave Àdà money P evening
 ‘Òbí gave Àdà money in the evening.’

The goal of this paper is to identify the elements that manifest in the Igbo TP area, determine their morphosyntactic behaviour, interaction and hierarchical ordering. The paper addresses the following questions: (a) How do the elements that manifest in the TP area interact? (b) what is their hierarchical order in the clause structure? In the sub-sections that follow, the study shall review the relevant literature, analyse data and summarise the findings of the study.

The variety of Ìgbò used in this work is the standard Igbo often used in formal writing and teaching. The data were both primary and secondary. Secondary data were gathered mainly from previous empirical studies and Ìgbò grammar texts while primary data were collected using observation and introspection. Data collected via introspection were verified by native speakers. The tone marking convention adopted is developed by Emenanjo (1978) where low tones and down-stepped tones are marked while high tones are left unmarked. Generally, the analysis is based on the Minimalist Program advanced by Chomsky (1993) and works by other linguists. The program has two basic components of language: a lexicon and a computational system. Morphemes are selected with their idiosyncratic properties and built into a structure by successive application of operation merge. Displacement operations are motivated by the need to check strong features. At some point during computation, the

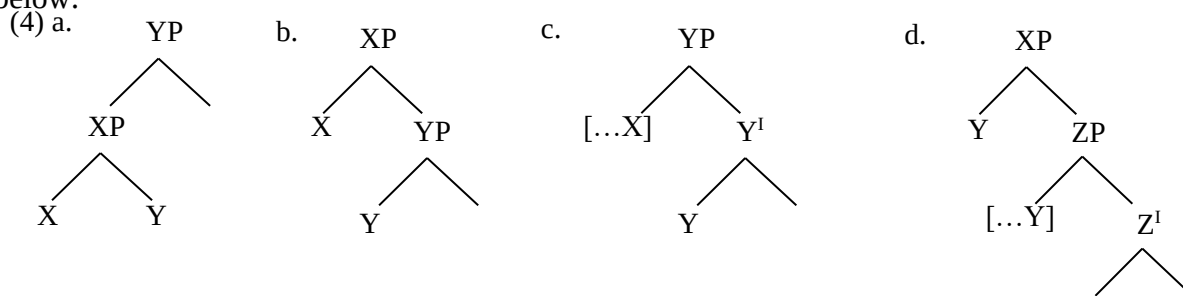
derivation is transferred to the PF and LF interfaces for appropriate interpretation. In addition, the study adopts suggestions in Julien (2002, 2007), Svenonius (2007) which posit that morphemes rather than words are the atoms of syntax. Syntax operates on morphemes and gives certain arrangements of these morphemes as output.

2.0 Literature Review

Since the emergence of the split projection idea which allows functional categories to project maximally, many studies have observed that there is a wide range of cross-linguistic variation in morphological realisation and ordering of morphemes especially in the TP area (cf. Ouhalla, 1991: 67). In the TP area, temporal, aspectual and negative heads may be overt, or covert. They may also occur as prefixes, suffixes or free morphemes. Hence, analysts propose various approaches to capture these peculiarities.

In this connection, one of the widely known proposals is Baker's (1985) mirror principle which suggests that morphological derivations must directly reflect syntactic derivations. This has been interpreted to mean that a morphological structure of the form X–Y–Z, where X is a head and Y and Z are suffixes, corresponds to a syntactic structure in which X is the complement of Y and Y the complement of Z, if the morphemes are combined via head-to-head movement (cf. Julien, 2002: 54; Svenonius, 2007: 252). Since the emergence of this idea, linguists have argued that this is not the only possibility.² Chomsky (1993), for instance, posits that words are fully inflected before they are merged with other syntactic objects to form phrases and sentences. In other words, the shape of the word is not altered by movement in the derivational procedure, rather, only the feature properties of words are checked to determine if they are appropriate. Sometimes, there are challenges in applying the mirror principle to agglutinative languages where most grammatical categories are realised as affixes and affixes could be shuffled within the word

Julien (2002), on the other hand, assumes a model where the verb is base generated as a bare root while the inflectional markers are inserted in the corresponding functional heads. In this case, a complex head emerges as heads that are successively adjoined to other heads. This model predicts that a root will not carry any affix if it has not moved while independent morphemes will be generated in their base position. However, the feature checking mechanism were largely retained in the proposal to account for the fact that overt inflectional markers must be seen as reflexes of the features of the inflectional heads and not of the features of the verb itself. She outlines four syntactic configurations by which morphemes can combine to form words if it is assumed that left to right order corresponds to top-down hierarchical relations as proposed in Kayne (1994). These possibilities are schematised below.



In (4a) X and Y are combined to form a complex; X could be the next head up from Y as in (4b); X could be the final element in the specifier of Y, as in (4c); and lastly, Y could be the initial element in the specifier of the complement of X as in (4d). Julien argues that all morphologically complex words correspond to one or a combination of these configurations. The sequence of XY can have distributional properties of a word relative other constituents in

² Marit Julien (personal communication) stated that some studies have argued that the Mirror Principle does not hold, and that morphemes can be shuffled around inside words. Generally, it is argued that the mirror principle does not make any prediction about word order variation.

It has been argued that temporal heads occur higher in the clause than aspectual heads. According to Julien (2002), this is the commonest order when tense and aspect markers are realised as free morphemes. Below is the outline of possible and impossible morpheme orders observed in a study of 530 languages (see Julien 2002:235).

- It is pertinent to determine which of these morpheme orders that apply to Igbo since this issue has not been addressed by preceding studies some of which are discussed below.

Mbah (1999), for instance, argues that the components of IP include Tone, Tense, Modal, AGR (e.g. Number, Gender) and Negative. He observes that most concord elements of I are not expressed overtly in Igbo. While Tone, PST, NEG and Modal are overt; Agr-S, Agr-O and Present Tense are covert. He posits that tone should be treated as a generative node in the language since lexical items generated at the base are prone to change depending on the tone pattern of the dominating node. In other words, Tone Phrase (TnP) generates all the changes in tone. Although, it is agreed that tone performs grammatical functions in Igbo, it is not interpretable in itself. It is also problematic to posit that a singular TnP determines all the tonal changes in a construction.

Similarly, Ikegwuonu (2011) examines the structure of Igbo IP in order to determine its elements, their tone patterns and morphemic realisations in Igbo. She argues that T, Asp, MOD, NEG, AGR and Tone are projected within the IP. According to her, NUM, PERS, GEN are not realised inflectionally. However, the study is based on the unitary IP where all the INFL elements are lumped in a single head. It, therefore, did not provide information about their syntactic ordering. Crosslinguistic studies show that these categories are morphologically expressed, therefore, lumping them in one head creates analytical problems and makes it difficult to determine their distribution and hierarchy in the syntactic structure.

With regard to ordering of temporal and aspectual heads in Igbo, one of the issues in debate is the status of the open vowel suffix (OVS) that occurs in Igbo perfective constructions. Obiamalu (2015:81-82) argues that the suffix is an empty morpheme. Observe the sentence below.

- (7) Àda à-lu-ḡ-la di
 Ada PRE-marry-PST-PERF husband
 ‘Ada is married.’

Obiamalu (2015) argues that the bolded suffix³ is an empty morpheme based on three pieces of evidence: First, it does not occur in perfective constructions where the verb root has CVV syllable structure as in

³ The suffixes identified as open vowel suffixes in Igbo are -e/-a and o/ɔ. Green and Igwe (1963) explain that these suffixes are so called because they are always drawn from the set of non-close vowels. It harmonises with the vowel of the preceding syllable, usually the verb root. It occurs in imperative, conditional, perfective and serial verb constructions (see also Emenanjo 2015).

- (8) **Ọ bịa-la**
 3SG come-PERF
 ‘He has come’

Naturally, the syllable structure of the verb in (8) would block the occurrence of the suffix because Igbo verbs do not have CVVV form. Secondly, the suffix does not occur in a complex verb root (a verb with two roots or a root and an extensional suffix) as shown below.

- (9) a. **Ọ zụ-ta-la ụgbọ àlà ọhụrụ**
 3Sg buy-Ext.Suff-PERF vehicle land new
 ‘S/he has bought a new car’

In this case, there are quite a number of cases where complex verbs may take an open vowel suffix as shown below.

- (10) a. **Ike e-gbū-dà-a-la nkwụ ahụ**
 Ike PRE-cut-fall-PST-PERF palm tree that
 ‘Ike has cut down the palm tree’
- b. **Ọfunna à-gba-ju-chē-ē-lā ìte mmiri**
 Ofunna PRE-fetch-full-all-PST-PERF pot water
 ‘Ofunna has filled all the water pots’

Lastly, Obiamalu notes that in dialects where the perfective is marked by the suffix *-go* and other phonologically related variants: *-gwo*, *-wo*, *-gwe*, the VS does not occur as in Ọnịchà dialect as shown below (see Obiamalu, 2015: 82):

- (10) a. **Ọ gbū-gō ekē**
 3SG kill-PERF python
 ‘S/he has killed a python’
- b. **Ọ gō-gō ụnọ n’Ọnịchà**
 3S buy-PERF house P Ọnicha
 S/he has bought a house at Onicha’

In this case, the difference is not surprising because there is microparametric variation⁴ among the dialects of Igbo including Ọnịchà. They differ in some aspects with the standard Igbo used for this study.

These counter observations indicate that the morpheme is not an empty morpheme. In section 3, this study argues with empirical evidence that the OVS is not an empty morpheme but the remnant of a partially deleted tense affix.

In Igbo, the markers of tense, aspect and negative may vary morphologically or phonologically in some dialects. In this connection, Maduagwu and Obiamalu (2016:159,162) observe that tense, aspect and negative morphemes in Ogbahụ dialect of Igbo differ phonologically from the standard variety. In this dialect, past tense and negative suffixes are realised as ‘-IV’ and ‘-họ’ respectively. Consider these examples. .

- (12) a. **Òbi gbù – lù agụ . c. Òbi gbù-rù agụ**

⁴ See Nwankwegu (2015).

Obi kill – IV (PST) lion
‘Obi killed a lion’

Obi kill –rV (PST) lion
‘Obi killed a lion’

b. **Òbi e-gbū-hō agū.**
Obi Agr-kill-Neg lion
‘Obi did not kill a lion’.

d. **Òbi e-gbū-ghī agū.**
Obi Agr-kill-Neg lion
‘Obi did not kill a lion’.

(12a) shows that the suffix, -IV, is used to mark the past in the dialect while -hō is used to mark negation as in (12b). These morphemes differ from the suffixes –rV and –ghī in (12c&d), which are used to mark the past and negative respectively in the standard Igbo. However, the study did not discuss the ordering of these functors in the clause structure.

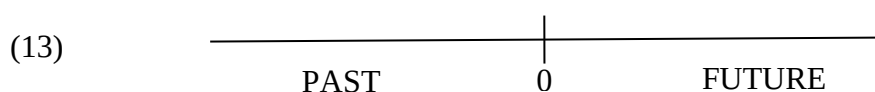
To sum up, the studies discussed above reveal that there are unresolved issues regarding the interaction and ordering of morphemes in the TP domain. These issues are mainly related to the lack of linguistic evidence for the co-occurrence of T and Asp morphemes and the status of the open vowel suffix in perfective constructions. Some of these issues are discussed in the sections that follow.

3.0 Tense, Aspect and Negation in Igbo

These sub-sections re-examine the morpho-syntactic features of tense, aspect and negation in Igbo. These are the elements that manifest in the Igbo TP area. It is important to understand how they behave independently before proceeding to how they interact in complex verb forms.

3.1 Tense in Igbo

Tense is defined as the grammaticalised expression of location in time (Comrie, 1985: 9). In the view of Demirdache and Uribe-Etxebarria (2000: 158), tense establishes an ordering relation between utterance time and the time at which the event (or state) denoted by the VP occurs (or holds). Hence, it is identified as a deictic category (see also Dahl 1985). Extant studies show that the commonest type of tenses distinguished in languages (including Igbo) are present, past and future. In order to capture this distinction, time is diagrammatically represented as a straight line where a point along the line labelled ‘o’ is regarded as the present moment or speech time. Events that occur to the left of speech time are regarded as past and events that occur to the right of it as future as illustrated below.



(Comrie, 1985:2)

With reference to the timeline above, past tense locates a situation to the left of the moment of speech (Comrie 1985). Emenanjo (2015:450) posits that the past tense is the one absolute tense that is clearly marked in Igbo. It is morphologically expressed by the ‘–rV’ suffix. The suffix is so called because the *r* is constant while the V copies the vowel features of the preceding verb root by a process known as vowel copying. The suffix inherently bears a low tone (LT) which is copied unto the verb root notwithstanding the verb’s inherent tone. Consider the following examples.

(14) a. **Obìnnà bjà-rà Ọnịcha taā**
Obinaa come-PST Onitsha today
‘Obinna came to Onitsha today’

b. **Èberè bà-rà skuulù n’afọ à**
Ebere enter-PST school P-year DEM

‘Ebere entered school this year’

- c. **Ha zà-rà ụlò**
3PL sweep-PST house
‘They swept the house.’
- d. **Chịdị kwù-rù okwu**
Chidi talk-PST talk
‘Chidi spoke.’

In (14a-c), the verbs *bia* ‘come’, *bà* enter, *za* ‘sweep’ and *kwu* ‘speak’ bear the low tone (LT) ‘-rV’ suffix which expresses past tense. Apart from the verb *bà* in (14b) which is a LT verb, all the other verbs are HT verbs. But the HT verbs copied the LT of the tense morpheme. Semantically, the events described in the sentences took place at some point prior to the utterance time.

Another type of tense expressed in Igbo is the present tense. It describes a situation that is located temporally as simultaneous with the moment of speaking (Comrie 1976). Uwalaka (1988:53) observes that Igbo does not have one particular verb form for expressing present tense meaning. Some verbs could appear bare as exemplified below.

- (15) a. **Ifēē nọ n’ụlò ugbu a**
Ifee be P-house now DEM
‘Ifee is at home now.’
- b. **Anyị kpù òkpụ ojii**
1PL wear cap black
‘We are wearing a black cap.’
- c. **Uchennà bì n’Àba**
Uchenna live P-Aba
‘Uchenna lives at Aba.’
- d. **Ada kwọ nnwa n’azu**
Ada carry baby P-back
‘Ada is carrying the baby.’

The examples in (15) are instances of present tense in Igbo because the situations located in the sentences coincide with the present moment. The verbs *nọ* ‘be’ and *kpu* ‘wear’ *bi* ‘live’ and *kwọ* ‘carry (at the back)’ show that there is no affix or auxiliary indicating tense. But semantically, they all express present time meaning. In (15a) for instance, the situation of being at home coincides with the time of speech. The adverbial *ugbu a* ‘this time/now’ is a pointer to this fact. In (15b-d), the acts *kpu okpu ojii* ‘wear a black cap’, *bi n’Aba* ‘live at Aba’ and *kwọ nnwa* ‘carry (at the back)’ are simultaneous with the time of utterance.

Present time meaning can also be achieved when stative verbs bear the ‘-rV’ morpheme as these examples demonstrate (see Obiamalu 2013:102).

- (16) a. **Ada mà-rà mma**
Ada be-STAT beauty
‘Ada is beautiful.’
- b. **Nnekà nwè-rè ụlò**
Nneka own-STAT house

‘Nneka owns a house.’

In contrast to (14), the –rV morpheme in (16) does not express past time meaning. It rather expresses present time meaning when it is borne by stative verbs. Due to the multifunctional nature of this suffix, some studies have classified the ‘–rV’ morphemes in Igbo based on their distribution and function (see Nwachukwu, 1984, Onukawa 1994).

Apart from the use of stative verbs form, the progressive form can also be used to express present time meaning in Igbo. Consider the following sentences.

- (17) a. **Gịni kà ọ nà è-me ùgbu ā?**
 What FOC 3SG PROG PART-do now DEM
 What is s/he doing at the moment/now?
- b. **Ọ nà à-nụ mmanyā**
 3SG PROG PART-drink wine
 S/he is drinking (at the moment)'
- d. **Ọ nà à-sa ahụ.**
 3SG PROG PART-wash body
 S/he is bathing (at the moment)'

In (17), (17b) and (17c) are acceptable responses to the question posed in (17a). The context indicates that the events of drinking and bathing are located temporally as simultaneous with the moment of speaking. The foregoing shows that there is no particular way of expressing present time meaning. Locative verbs often occur bare as in (15), verbs of quality bear the –rV stative as in (16) while most eventive verbs express present time meaning using the (na) progressive verb form as in (17). Hence, it is plausible to posit that there is no overt morphological marking of present tense in Igbo as Obiamalu (2013) suggests.

Lastly, future tense is expressed when a situation is located at a time subsequent to the moment of speech (Comrie, 1985: 43). In Igbo, this meaning is expressed by a low tone auxiliary *gà* which precedes a participial form of the verb (see Emenanjo 2015:452). The participle is often marked by the prefix, -e/-a, that harmonises with the vowel of the root. Consider the following examples.

- (18) a. **Obi gà è-je ọrụ.**
 Obi FUT PART-work work
 ‘Obi will go to work.’
- b. **Èberè gà à-gụ-cha skuulù n’afọ ā.**
 Ebere FUT PART-gù-COMP school P-year DEM
 ‘Ebere will finish school this year.’
- c. **Ha gà a-zà ụlọ**
 3PL FUT PART-sweep house
 ‘They will sweep the house.’
- d. **Chidi gà è-kwu okwu**
 Chidi FUT PART-talk talk
 ‘Chidi will talk’

The sentences in (18) are instances of future tense in Igbo where the event described in the sentence is anticipated to take place at some point ‘later’ from the moment of speech. The presence of the low tone auxiliary verb, *gà*, marks sentences as future. Note that the order of the verb and the auxiliary in Igbo is Aux-V. In (18a), for instance, the LT *gà* precedes the

participial form of the verb, *je* ‘go’ which is *è-je*. This also applies to *a-gucha*, *a-za* and *e-kwu* in (18c-d). The examples also show that the tone of the participle morpheme is high when the verb root bears a low tone (see 18c) and low when the verb root bears a high tone (see 18a,b&d). It is pertinent to mention that although *-gà* is used to achieve future tense, it is aspectual. This postulation is based on two reasons: First, auxiliaries are employed in marking the imperfective aspect where they precede a nomino-verbal element (or the participle form of the verb); secondly, it differs maximally from the strategy employed in marking the past which is expressed by a verbal affix. Based on the foregoing, it is deducible that only past tense is absolutely expressed in Igbo.

3.2 Aspect in Igbo

Aspect is defined as different ways of viewing the internal temporal constituency of an action or situation (Comrie 1976:3). In the view of Demirdache and Uribe-Etxebarria (2000: 160-161), it focuses only on the time interval in the temporal contour of the event described by a sentence. This time interval in the VP event is commonly identified as the assertion time - a time for which an assertion is made or for which the speaker makes a statement. Demirdache and Uribe-Etxebarria (2000: 162) argue that aspect and tense are semantically related because they both relate or order two times. While aspect relates the Event-time to the assertion-time, tense relates the Assertion time to Speech-time. Traditionally, aspect is often categorised into two: perfective and imperfective aspects. The perfective form indicates that an action has been completed with a location in time. In Igbo, the perfective form is expressed by the suffix *-la* (see also Emenanjo 2015: 45). However, it is possible to contrast the present perfect from the past perfect. The present perfect indicates an action that has just been completed but which is relevant in the present. Consider the examples below.

- (19) a. **O** **sī-e-la** **nri.**
3SG cook-PST-PERF food
‘She/he has cooked food.’
- b. **O** **zū-ọ-la** **ugbo àlà ọhụrū.**
3SG buy-PST-PERF vehicle land new
‘S/he has bought a car.’
- c. **Òfunnà** **à-gba-ju-chē-ē-la** **ite mmiri**
Ofunna PRE-fetch-full-all-PST-PERF pot water
‘Ofunna has filled all the water pots.’
- d. **Chịdị** **è-je-e-la** **ahịa**
Chidi PRE-go-PST-PERF market
‘Chidi has gone to the market.’

The examples above instantiate the present perfect of the perfective verb form. It is expressed by the bolded *-la* suffix. Its presence in (19a-d) indicates that the verb forms *sī-ē-lā* ‘has cooked’, *zuta-la* ‘has bought’, *à-gba-ju-chē-ē-lā* ‘has filled all’ and *è-je-ē-lā* ‘has gone’ express completed action respectively. Observe the presence of the harmonising *e*-prefix in (19c-d). It occurs when the subject of the sentence is not a monosegment pronoun. Its tone polarises with the word-final tone of the preceding subject such that it bears a low tone when the preceding tone is high, and bears a high tone when the preceding tone is low. In perfective constructions, the tense morpheme may intervene between the verb root and the perfective marker as in (19a, c&d) (See also Nweya, 2018: 129).

In contrast to the present perfect, it is possible to express the past perfect in Igbo using the adverbial suffix *ri(i)*⁵ ‘already’ or *long time ago* which indicates that an action was completed in the distant past. Consider the following examples.

- (20) a. **O sī-ē-la-ri⁶ nrī**
3SG cook-PST-PERF-already food
‘She/he had cooked the food’
- b. **Ọ zū-ō-la-ri ugbo àlà ọhūrū**
3SG buy-PST-PERF-already vehicle land new
‘S/he has bought a car’
- c. **Ọfunnà à-gba-ju-chē-ē-la-ri ìte mmiri**
Ofunna PRE-fetch-full-all-PST-PERF-already pot water
‘Ofunna has filled all the water pots’
- d. **Chịdị è-je-ē-lā-ri ahịa**
Chidi PRE-go-PST-PERF-already market
‘Chịdị has gone to the market’

The suffixation of *-ri* to the verb forms in (20) indicates that the events or situations described in the sentences happened in the distant past and have no relevance to the present.

In contrast to the perfective, the imperfective or durative aspect is characterised as explicit reference to the internal temporal structure of a situation (Comrie 1976). According to Demirdache and Uribe-Etxebarria (2000: 160), it focuses a subpart of the event that excludes the beginning and its culmination. Two types of imperfective are commonly identified in languages. They are progressive and habitual aspects. In the literature, progressive is commonly described as an on-going action either in the present, past or in the future as in *John is/was singing*. Hence, Dahl’s (1985: 92) observation that it is usually independent of time reference.

In contrast, the habitual aspect describes a habit which has been going on over a period of time. Comrie (1976:278) observes that the feature that is common to all habitual is that they describe a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period. There is no morpho-syntactic difference between progressive and habitual aspects in Igbo. Both are expressed by the use of the auxiliary verb ‘*na*’ (see also Obiamalu, 2015; Emenanjo, 2015). Context plays a significant role in determining whether a construction is progressive or habitual. Consider the examples below.

- (21) a. **Ànyị nà à-chụ ntā.**
1PL IMPERF PART-hunt hunting
‘We are hunting.’ (PROG)
‘We hunt/We are hunters.’ (HAB)
- b. **Ànyị nà à-chụ ntā mgbe Ada bịa-rà**
1PL PROG PART-hunt hunting when Ada come-PST
‘We were hunting when Ada arrived.’

⁵ When the morpheme occurs freely, speakers often lengthen the vowel. However, it was observed that the lengthening has a semantic effect. Speakers stylistically use it to indicate a very distant past.

⁶ This morpheme phonologically differs from the *-rV* tense morpheme because the vowel is constant. It is not influenced by vowel harmony.

- c. **Gịni bù aka ọrū unu? Anyị nà à-chụ ntā**
 what be hand work 2PL 1PL HAB PART-hunt hunting
 What is your handiwork? 'We hunt animals/We are hunters.'

With respect to imperfective aspect, (21a) is ambiguous because it is non-contextual. Therefore, it can be interpreted as either progressive or habitual. In (21b), the presence of *nà* indicates that the event of hunting is ongoing without reference to the initial or endpoints. One can get the discourse cue from the preceding question. Conversely, the italicised expression in (21c) is interpretable as a habitual action because the event of hunting is iterative and extends over a period of time as the preceding question suggests. The foregoing is evident of the fact that progressive and habitual aspects are similarly expressed in Igbo. Now, having discussed tense and aspect, the next sub-section discusses negation as one of the functors in the TP domain.

3.3 Negation in Igbo

Negation is a process or construction in grammatical and semantic analysis which typically expresses the contradiction of some or all of a sentence's meaning (Crystal, 2008:323). Studies show that it is a universal property of language since every language has a way of denying an affirmative statement (see also Zanuttini, 2001:511). Ndimele (2009:122) identifies different strategies employed in Igbo to mark negation. These are (a) negative inflectional affixes (b) inherently negative auxiliary verbs (c) tonal alternation (d) contrastive focus. However, he rightly points out that the main strategy for expressing negation in Igbo is through the use of negative inflectional suffix *-ghị*. According to him, this strategy has the widest distribution in standard Igbo (see Ndimele 2009:122-123). Below are affirmative constructions and their negative counterparts.

- (22) a. **jè-e ụkā.**
 go-IMP church
 'Go to church.'
- b. **E-jē-lē ụkā.**
 PRE-go-NEG church
 'Do not go to church.'
- c. **sù-ọ akwa ahụ.**
 wash-IMP cloth DEM
 'Wash the clothes.'
- d. **A-sū-lā akwa ahụ.**
 PRE-wash-NEG cloth DEM
 'Do not wash the clothes.'

(22a&c) are affirmative imperative constructions while (22b&d) are their negative counterparts. The negation morpheme in this case is *-le/la* as determined by vowel harmony. It differs from the main negator used in other types of constructions presented below.

- (23) a. **Ha gbà-rà bọlụ.**
 3PL kick-PST ball
 'They played football.'

- b. **Ha a-gbā-ghī̄ bọ̀lù.**
3PL PRE-play-NEG ball
'They did not play football.'
- c. **Ọ gbā-ghī̄ bọ̀lù.**
3SG play-NEG ball
'He/She did not play football today.'
- d. **Ọ sī-e-la nri ụtụtụ.**
3SG cook-PST-PERF food morning
'He/She has prepared breakfast.'
- e. **Ò si-bè-ghị̄ nri ụtụtụ.**
3SG cook-PST.PERF-NEG. food morning
'He/She has not prepared breakfast.'
- f. **Uchè e-sī-bè-ghị̄ nri ụtụtụ.**
Uche PRE-cook-PST.PERF-NEG. food morning
'Uche has not prepared breakfast.'

(Nweya, 2018:134)

In the data above, (23a) is a past affirmative construction while (23c&d) are its negative counterparts. (23d) is a perfective affirmative construction while (23e&f) are the negative counterparts. The negative constructions involve the main negator (-ghī) which is suffixed to the verb. The negative substitutes the past tense and perfective morphemes in all the negative constructions. In addition, a high tone *e*-prefix occurs in negative constructions if the external argument is not a monosegment pronoun as in (23b&f).

However, in progressive and future aspect constructions, the placement of negative is quite different due to the presence of the auxiliary verb. Consider the constructions below.

- (24) a. **Ogè nà à-gụ akwụkwọ.**
Oge PROG PART-read book
'Oge is reading.'
- b. **Ogè a⁷-nà-ghị̄ à-gụ akwụkwọ.**
Oge PRE-PROG-NEG PART-read book
'Oge is not reading.'
- c. **Obi gà è-je ọrụ.**
Obi FUT PART-work work
'Obi will go to work.'
- d. **Obi a-gà-ghị̄ è-je ọrụ.**
Obi PRE-FUT-NEG PART-work work
'Obi will not go to work.'

(24a&b) are progressive constructions. (24a) is affirmative while (24b) is the negative counterpart. Observe that negative is suffixed to the auxiliary verb. On the other hand, (24c&d) are future aspect constructions. (24c) is the affirmative form while (24d) is the

⁷ Note that his prefix will not surface if the subject is a monosegment pronoun like the second or the third person singular pronoun *i/i/o/o*.

negative counterpart. Similarly, the negative morpheme is suffixed to the aspectual auxiliary verb. The auxiliary is complemented by the participial form of the verb. Generally, the placement of negation shows the negative suffix is attached to the first verbal element in a clause whether it be a main verb or an auxiliary verb.

4.0 On the Interaction of Tense, Aspect and Negation

This section examines how tense, aspect and negative interact when they co-occur in canonical Igbo sentences, with a view to determining their ordering in the TP domain. One of the issues is whether tense and aspect morphemes co-occur in perfective constructions. This study argues that they do co-occur in Igbo. However, the ‘r’ of the tense morpheme is partially deleted by a process of syncope in simple sentences. Consider these examples.

- (25) a. **O si-ri ofē**
3SG Cook-PST soup
‘S/he cooked soup.’
- b. **O si-ē-la ofē**
3SG Cook-PST-PERF soup
‘S/he has cooked soup.’
- c. **O zụ-ru ugbo àlà ọhụrū**
3SG buy-PST vehicle land new
‘S/he has bought a car.’
- d. **O zụ-ọ-la-ri ugbo àlà ọhụrū**
3SG buy-PST-PERF-already vehicle land new
‘S/he has bought a car.’

The italicised suffixes *-e* and *ọ* are not empty morpheme but the remnants of a partially deleted tense morpheme. However, the exact copy of the vowels (*i* and *u*) are not retained. A plausible explanation is that the vowel of the “r” is influenced by vowel harmony. Note that the vowel of the “-rV” often copies the vowel of the root. As result of the deletion, the copying rule is blocked while vowel harmony applies. In addition, empirical evidence show that tense and aspect suffixes co-occur in Igbo as shown below.

- (26) a. **Naanị ihe na-echu ya nà ndị be**
only thing PROG-PART-deny 3SG CONJ PersonPL household
ya ụra bụ igbā-rū ọsọ ahụ ha
3SG-POSS sleep be INF-run-reach run DEM 3PL
màlitè-rè-là n’isi.
begin-PST-PERF P-end
‘The only thing that borders him and his family is to run the heavenly race they have already started’ (Ofomata 2009: 9)
- b. **Kèdụ ihe anyị gà-ème anụ anyị zùtā-rà-là?**⁸
What thing 1PL FUT-PART-do meat 1PL buy-PST-PERF
‘What do we do with the meat we have bought?’

⁸ This structure is also possible in Onicha Igbo as in *Gịnị ka anyị ga-eme anụ anyị zuta-go-ro?*. What shall we do to the meat we have bought? In this case, the ASP precedes T.

- c. **Onye nwụ-rụ anwụ bụ onye nke ya gà-rà-là**
 who die-PST dead be who POSS3SG go-PST-PERF
 ‘A dead person is the one whose own has ended’
 (Ofomata 2009: 139)
- d. **Ego ha nwètè-rè-là jù-rù ha anya.**
 money 3PL get-PST-PERF satisfy-PST 3PL eyes
 ‘They are satisfied with the money they have got’

Data (26a-d) are instances where T(-ra) and ASP(-la) morphemes co-occur in Igbo as the italicised morphemes indicate. The examples show that the subordinate clauses contain the verbs that bear the tense and aspect morphemes. Another piece of evidence in support of this postulation comes from coordinated structures as in the example presented below (see Ofomata, 2009).

- (27) **Òfunnà kèlè-rè ha mà⁹ jakwa-ā ha ike**
 Ofunna greet-PST 3PL CONJ shower-PST 3PL strength
n’orụ ha rụ-rụ-là
 P-work 3PL work-PST-PERF
 ‘Ofunna greeted them and praised them for the work they have done’

In (27), it is believed that the italicised T-morpheme *ā* in the second clause has the same tense value as the T-morpheme *-re* in the initial clause because they are coordinated structures. In addition, the verb form *rụ-rụ-là* ‘has done’ in the lowest clause contains both T and ASP affixes.

Therefore, this study postulates that the open vowel suffix in (25) is a tense morpheme on two grounds: firstly, the tense morpheme manifests completely with ASP morpheme in Igbo complex sentences as in (26&27); Secondly, the full form of the T affix and its partially deleted counterpart share the same tense value in coordinated structures in (27).

Turning now to tense and negation, it was observed that tense and negative morphemes hardly co-occur in Igbo. The negative morpheme seems to substitute the T-morpheme whenever they co-occur as in the following examples.

- (28) a. **O sì-rì nri.**
 3SG cook-PST food
 ‘S/he cooked (food).’
- b. **Ò si-ghī nri.**
 3SG cook-NEG food
 ‘S/he did not cook (food).’
- c. **Ha jè-rè ụkà.**
 3PL go-PST church
 ‘They went to church.’
- d. **Ha e-je-ghī ụkà.**
 3PL PRE-go-NEG church
 ‘They did not go to the church.’

⁹ The presence of the co-ordinator shows that this is not an instance of verbs in series. There is often no overt connective between verbs in series and they hardly form a verb-verb compound (see Onuora 2014:90, Emenanjo 2015:540).

- e. **Uchè gbùrù òkukò**
 Uche kill-PST chicken
 ‘Uche killed a chicken.’
- f. **Uchè e-gbu-ghì òkukò**
 Uche PRE-kill-PST chicken
 ‘Uche did not kill a chicken.’

The constructs above are instances of past tense constructions. (28a,c&e) are affirmative sentences while (28b,d&e) are the negative counterparts. Negative sentences show that the negative morpheme occupies the position of the tense morpheme. Consequently, the tense morpheme is not overt in the negative sentences.

On the other hand, the negative morpheme occurs as the verb final suffix in negative perfective constructions while the fused negative suppletive of the tense and aspect morpheme intervenes between negative morpheme and the verb as in the examples below.

- (29) a. **O si-ē-la ofē**
 3SG Cook-PST-PERF soup
 ‘S/he has cooked soup.’
- b. **O si-bè-ghì ofē**
 3SG Cook-PST.PERF-NEG soup
 ‘S/he has not cooked soup’.
- c. **O zū-ọ-la ugbo àlà ọhūrū.**
 3SG buy-PST-PERF vehicle land new
 ‘S/he has bought a car’
- d. **O zū-bè-ghì ugbo àlà ọhūrū.**
 3SG buy-PST.PERF-NEG vehicle land new
 ‘S/he has bought a car’
- e. **Òfunnà à-gba-ju-chē-ē-la ìte mmiri.**
 Ofunna PRE-fetch-full-all-PST-PERF pot water
 ‘Ofunna has filled all the water pots’
- f. **Òfunnà à-gba-ju-chē-be-ghì ìte mmiri.**
 Ofunna PRE-fetch-full-all-PST.PERF-NEG pot water
 ‘Ofunna has filled all the water pots’
- g. **Obi è-je-e-la ahĩa.**
 Obi PRE-go-PST-PERF market
 ‘Obi has gone to the market’
- h. **Obi è-je-be-ghì ahĩa.**
 Obi PRE-go-PST-PERF market
 ‘Obi has gone to the market’

Data (29a,c,e&g) are perfective affirmative constructions while (29b,d,f&h) are the negative counterparts. Recall that the open vowel suffix in (29a,c,e&g) is a partially deleted tense affix. It marks the past while the *-la* marks perfective. Conversely, (29b,d,f&h) show that the

tense and perfective morphemes are not overt. They are jointly replaced by the negative suppletive morpheme (*-be*) in (29). Hence, the assumption that the particle *-be* in (29b,d,f&h), is a negative polarity item in perfective constructions (Amaechi 2020:159). However, the aspect marker is overt in the imperfective aspect where it is realised as the auxiliary verb as in (30) below.

- (30) a. **Ànyị nà à-chụ ntā.**
 1PL IMPERF PART-hunt hunting
 ‘We are hunting.’ (PROG)
 ‘We hunt/We are hunters.’ (HAB)
- a. **Ànyị a-nà-ghị à-chụ ntā.**
 1PL PRE-IMPERF-NEG PART-hunt hunting
 ‘We are not hunting.’ (PROG)
 ‘We are not hunters.’ (HAB)

In (30) imperfective morpheme is overt in negative constructions because it is not affixal like the perfective and tense morphemes.

5 Morpheme Order in the TP Domain

Based on the foregoing, the basic surface order of morphemes in relation to the verb root is (S)-verb-T-ASP-NEG-(O). However, this order differs from the morpheme order observed in other constructions involving the auxiliary verb such as progressive/habitual aspect where aux is the aspect head (Asp⁰), the order of morphemes in such constructions would be (S)-(PRE)-ASP-(NEG)-PART-verb-(O) as in (30).

- (30) **Obi a-gà-ghị è-je ahịa.**
 Obi PRE-FUT-NEG PART-work work
 ‘Obi will go to the market.’

Consequently, two morpheme orders are observable in the language as stated in (31).

- (31) a. (S)-(PRE)-verb-T-ASP-NEG-(O).
 cf. Julien’s (2002:235) impossible word order: *(S) V+T+A (O)
 cf. Svenonius’ (2007:255) occasional skipping: 3-1-2: (V-T-A)
- b. (S)-(PRE)-T-ASP-(NEG)-PART-verb-(O)
 cf. Julien’s (2002:235) possible word order: (S) T A V (O)
 cf. Svenonius’ (2007:253) straight: 1-2-3: (T-A-V)

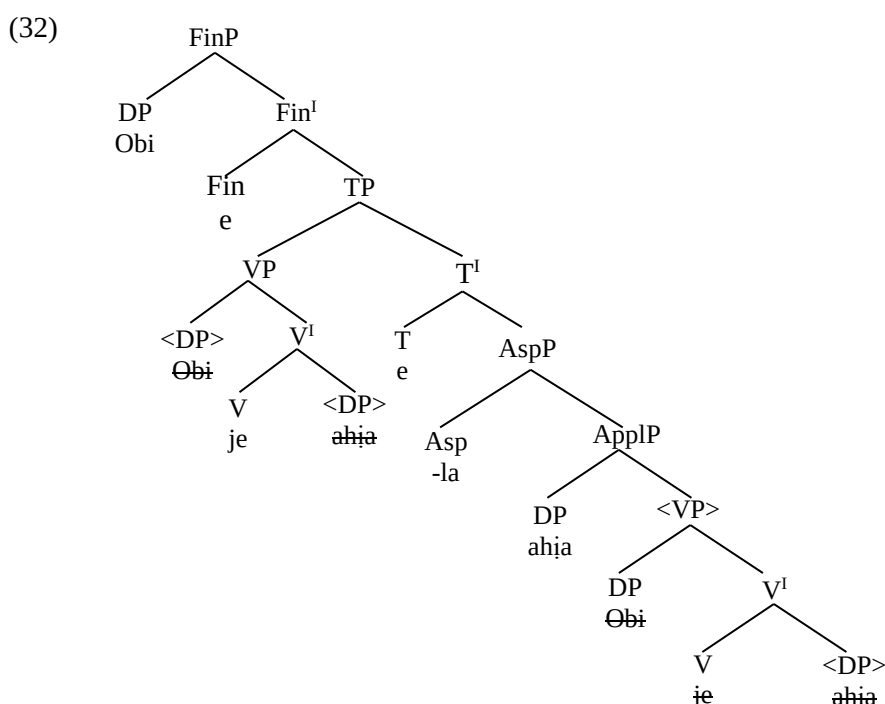
The orders in (31) show that T and Asp are follows the verb in (31a) but precedes it in (31b),¹⁰ even though T is not morphologically expressed. Svenonius (2007: 256) noted that examples of languages with the order in (31a) are relatively rare among sequences of selecting heads, and simple rules for deriving basic orders should not derive them. Therefore, it is important to determine how to derive this order which is exhibited by Igbo for the purpose of crosslinguistic generalisation.

To start with, it is pertinent to note that (31a) is a variant of (31b) because T, Asp and Neg follow the verb in (31a) but precede it in (31b). The implication is that while movement is necessary to check strong features in deriving the former, it may not be necessary in (40b) unless it terminates at some point in the VP domain. In this regard, two types of movement

¹⁰ This observation is quite intriguing because it lends support to the fact that Igbo exhibit mixed word order in the information structure as well as in the nominal domain. For instance, *wh*-words may be moved to the left periphery or left in-situ (see Author 2018).

have been proposed in the literature to account for ordering of suffixal tense, aspect and negation in the TP domain (see Svenonius 2007:249). They are head movement and phrasal movement. Head movement often yields a structure where the hierarchical ordering is the opposite of the linear ordering since the innermost affix will be lowest in hierarchy while the outermost affix will be topmost as the mirror image principle suggests. However, phrasal movement is preferable because it often yields a structure where the hierarchical order corresponds to the linear order.

To derive (31a) based on phrasal movement, it is assumed that there is a licensing position below Asp¹¹ that will check the features of the object, and that T has a strong V-features to trigger overt movement of the VP to the left of T as Svenonius (2007:249) suggests. This assumption allows the object to be extracted prior to movement. Furthermore, this study assumes a Finiteness phrase¹² (FinP) to account for the *e*-prefix, an Applicative Phrase¹³ as the licensing head for the object and a Participial Phrase to account for the participle marker. If the VP is displaced to the left of tense, the resultant structure will be the schema below.



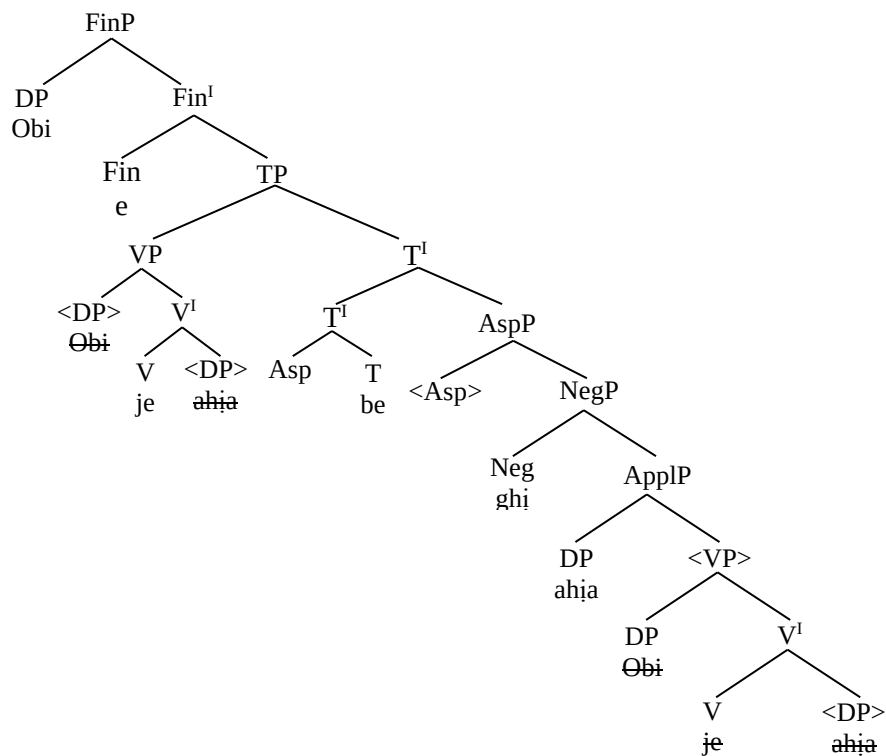
The Appl head checks the accusative feature of the object and attracts it to its spec while the strong V-features (categorical and complement selectional features) of T attracts the VP to its spec. The DP *Obi* adjoins to the spec of FinP to satisfy the EPP requirement of FinP. If negation is included in the picture, the resultant structure would have the Neg head below Asp as illustrated in the syntactic structure of (29h) shown as (33) below.

¹¹ If the licensing position is above Asp as Svenonius suggested, the derivation will crash because it will block the required adjacency between T and Asp.

¹² Julien (2002) notes that subject agreement markers appear to be located in Finite head in many languages.

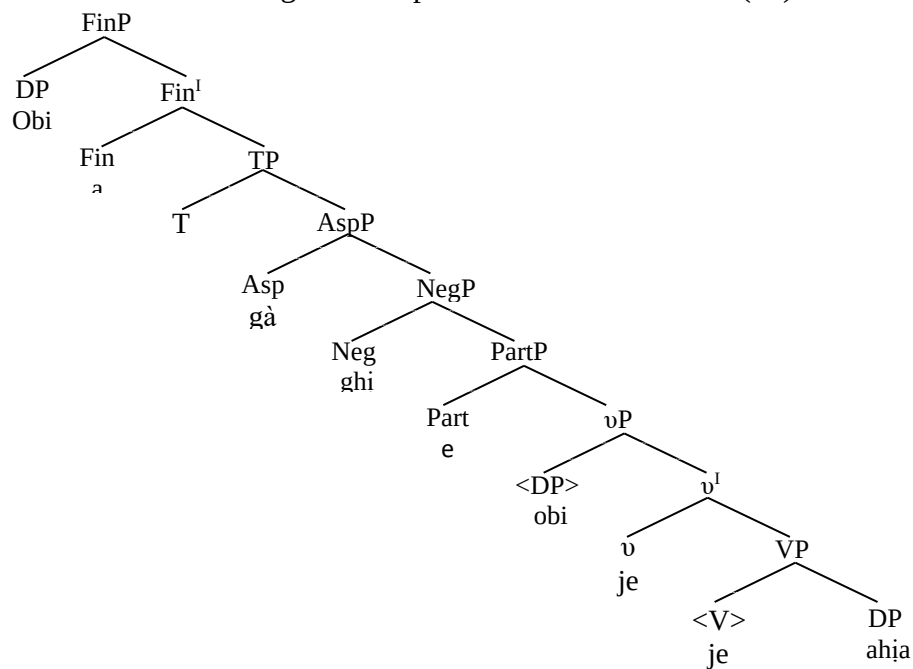
¹³ Igbo has an applicative morpheme that licenses additional objects in applicative constructions. It is morphologically similar to the past tense morpheme and it occurs as the outermost affix whenever it co-occurs with other affixes (See Nweya, 2018)

(33)



In contrast, to (31a), T, Asp and Neg morphemes precede the verb in (31b). Therefore, phrasal movement of the verb to T is not required to arrive at the corresponding syntactic structure. All the functors remain in their base generated positions as illustrated in (34).

(34)



In the syntactic structure above, only two movement operations were motivated: the head movement of V to v to check the strong V-features of the light v, and the movement of the

DP *Obi* from spec *v* to spec *FinP* in order to satisfy the EPP feature of *Fin*⁰. It is assumed that the head feature of *T* is weak, hence, it could not attract the *vP* to its spec. At the instance of spell-out, the semantic information is sent to LF while the phonetic information is sent to PF for full interpretation such as ordering of terminals and spelling out of copies.

6 Summary and Conclusion

To sum up, it has been demonstrated that *T*, *Asp* and *Neg* are the core elements that manifest in the Igbo TP domain besides the *e*-prefix and the participle morpheme. The order of *T* and *Asp* is compatible with the crosslinguistic generalisation that temporal heads occur higher above aspectual heads. However, the ordering of *T* and *Asp* morphemes in relation to the verb deviates from widely known crosslinguistic morpheme orderings identified in Julien (2002) and Svenonius (2007). The analysis shows that Igbo exhibits two opposing patterns of morpheme ordering: verb-*T*-*ASP*-*NEG*, where the functors follow the verbs; and *T*-*ASP*-*NEG*-verb where the functors precede the verb. In the former, it is assumed that *T* has a strong (categorial, complement selectional) feature that triggers the overt movement of the VP. This feature is assumed to be weak in the latter. Using the merge operation and phrasal movement, this study demonstrated that the surface morpheme order in Igbo can be represented in a corresponding hierarchical structure.

Abbreviations: A/APPL=Applicative, ApplP=Applicative Phrase, ASP=Aspect, ATR=Advanced Tongue Root, DEM=Demonstrative, EPP=Extended Projection Principle, Fin=Finite head Finite Phrase=FinP, FUT=Future, IMP=Imperative morpheme, IP=Inflection Phrase, NEG=Negation, PART=Participle morpheme, PERF=Perfective morpheme, PF=Phonological Form, PL=Plural morpheme, PRE=Prefix, PROG=Progressive, PST=Past tense morpheme, rV=constant 'r' and a harmonising Vowel, SEM-F=Semantic Feature, SI=Standard Igbo, SUF=Suffix, T=Tense, TP=Tense Phrase, T-morpheme=Tense Morpheme. V-movement=Verb movement, VP=Verb Phrase, OVS=Open Vowel Suffix, v=Light verb, vP=comrieLight verb Phrase, θ=theta, 1st First person singular, 2nd person singular, 3rd person singular.

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