Strength and Interpretability of Agreement and Tense Features in English and Iẓọn: A Comparative Study

Odingowei M. Kwokwo[1*]

[1]*Department of English and Literary Studies, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Original Research Article

ABSTRACT

This paper examines strength and interpretability of Agreement and Tense features in English and Iẓọn languages within Chomskyan minimalist program which places premium on feature checking. Agreement (Agr) and Tense (T) are abstract functional heads in the clause structure of natural languages which check corresponding Agr and Tense features of nouns and verbs to ensure the convergence of syntactic derivations. The objective of the study is to characterize the strength and interpretability of the morphosyntactic features of Agr and Tense in the process of checking in both English and Iẓọn. The study derived data from standard and regularly used textbooks in English and from competent native speakers in Iẓọn. The study reveals that phi-features in both languages are interpretable at both Phonetic Form (PF) or phonological level and Logical Form (LF) or semantic level, but the +N agreement feature of Iẓọn verbs is interpretable only at LF but is uninterpretable at PF. On the other hand, Tense features of verbs of both languages are strong and interpretable at both LF and PF. Consequently, checking of these morphosyntactic features takes place before Spell-Out but the +N feature of Iẓọn verbs undergoes Procrastination and is checked after Spell-Out. This study characterizes the interface between functional morphological features and syntactic derivations and contributes to the linguistic discourse of feature checking.

_____

*Corresponding author: E-mail: odingowei@gmail.com;

1. INTRODUCTION

This paper is a study of aspects of the checking processes of morphosyntactic features of nouns and verbs in English and Ịzọn language. The study is carried out against the background of the minimalist program propagated by Chomsky [1]. The conceptualization of the minimalist program is that in the process of the derivation of a sentence, lexical items which carry grammatical features of Agreement and Tense particularly but not restricted to nouns and verbs are picked from the lexicon fully inflected with the appropriate morphological features before being mapped to the working area or computation. However, along the process of derivation, these morphological features which carry grammatical information that contributes to the grammaticality and convergence of the final product of the derivation need to be checked and licensed by some abstract functional heads namely Agr(eement) and T(ense) which share the same morphosyntactic features as nouns and verbs Kwokwo [2]. It is the hypothetical consideration of this paper that in spite of universal features available to natural languages, parametric variations are likely, as acknowledged by linguists, to be observed between English and Ịzọn.

Ịzọn is an SOV language which belongs to the Ijoid phylum of the Niger-Congo family (Williamson and Blench [3], Ehret 2000). English, on the other hand, is an SVO language and belongs to the Indo-European language phylum. Ịzọn is spoken by the Ịzọn (Ijaw) people of the Niger Delta Basin of Nigeria. This paper is based on the Kolokuma dialect, primarily because it is the standard variety.

Not much has been written about Ịzọn syntax within the framework of the theory of Government and Binding and the Minimalist Program. The major scholarly works are Kwokwo [4] which was a study of the role of functional categories in syntactic derivations. The analysis of the data in that study is based on the feature checking processes of the minimalist program. Other notable studies of Ịzọn language are Williamson's [5] and Egberipou and Williamson's [6]. These works provide basic insight into the structural descriptions of Ịzọn grammar. However, none of these works addresses the morphosyntactic roles played by the functional elements of Agreement and Tense because they

are basic grammar books. The present study therefore concentrates on Agreement and Tense as functional categories. The focus is on the strength and interpretability of the features in Ịzọn in relation to similar features in English.

2. LITERATURE REVIEW: THE MINIMALIST PROGRAM AND FEATURE CHECKING/LICENSING

Marantz [7] explains that morphological features are at the centre of the MP. According to him, "these are features associated with tense, agreement and Case". Agr(eement) and T(ense) are functional heads and are also phonologically visible affixes on nouns and verbs (and pronominal DPs). These features play a role in the computation or syntactic component of language. This is why the verb raises to T functional node (as a fully inflected lexical item) to check off its Tense (T) and Agreement (Agr) features. This raising movement takes place before Spell Out because the morphological features of Agr and T of a verb are visible and interpretable in English. It is also argued that Agr and T have Case and Phi-features. Thus, determiner phrases (DPs) also move to the checking domain of these functional heads (i.e. the *Specifier* positions) to also check their Case and Phi-features. Lamidi [8] and other scholars agree that fully inflected lexical items are picked from the lexicon and spilled into the working area to begin the computation and the derivation.

The Principles and Parameters Theory (PPT) which preceded the Minimalist Program (MP) in the general theory of universal grammar (UG) assumed that lexical items are selected from the lexicon and inserted in the derivation in their bare form in the sense that they are neither inflected for tense nor for agreement. PPT also assumed that verbs picked up their tense and agreement inflection morphemes through the syntactic movement of affix hopping. This, according to Fakih [9], is called the derivational approach.

Inflectional features remain the central concern also of the MP. The minimalist framework postulates that syntactic arguments and verbs are inflected for tense and agreement features right in the lexicon and are picked up by numeration in their fully inflected forms in the process of the derivation of phrases and clauses. The tense and agreement features which are morphological inflections of the verb are checked

against similar, corresponding features encoded in the functional inflectional heads of Agr and T. The understanding, therefore, is that the functional heads of Agrs, Agro and T have their features to which the inflectional features encoded in DPs and verbs must correspond. This postulation accords with Pesetsky and Torrego's [10] feature sharing concept. It is assumed that Morphosyntactic features are shared by lexical items and functional heads and that the function of the functional heads is to check and license the morphological (inflectional) properties which nouns and verbs project with from the lexicon.

The functional categories of Agr and T do not only check and license the morphological features of the verb but also the +N-features of the DP that raises to their *Specifier* position [9]. This is reflected in the VP-internal subject hypothesis [11] which provides that every subject DP originates within the verb phrase (VP), specifically at Spec-VP, where it receives its nominative Case feature but has to raise to specifier of subject agreement phrase (Spec-AgrsP) or specifier of Tense phrase (Spec-TP) for the purpose of checking and licensing same features [12]. Similarly, a complement DP also originates as a VP-internal *Argument* and may move out of the VP to specifier of object agreement phrase (Spec-AgroP) to check and license its accusative case and agreement status when it is necessary.

The Agreement, Tense and Case features are also described as categorial features. The phi features of person, number and gender usually appear on the subject DP and on the verbal head. This allows for agreement between the subject and the verb since it is a shared feature. Chomsky [1] points out that phi-features are overtly realised when a DP is raised to the checking domain as in the case of subject-verb agreement. This implies that they are interpretable at LF and visible at PF. The Case feature does not show up on the (lexical) head [9]. In English, the Case features of V and T are intrinsic and are –interpretable. Interpretable features continue in the projection to PF visibility but uninterpretable features are eliminated at LF.

3. METHODOLOGY

This work is a research in comparative syntax involving two languages. Therefore, data is derived from the two languages. Sentences in English are retrieved from standard textbooks in English language. On the other hand, data on

Izǫn were gathered from fieldwork in communities which speak (the Kolokuma dialect of) Izǫn in Kolokuma and Opokuma clans. These two clans constitute the Kolokuma/Opokuama Local Government Area of Bayelsa State of Nigeria. Sentences were recorded from native speakers on such occasions as marriages, burial ceremonies and community meetings. These data were complemented and supported by the researcher's introspection. It is these derived sentences that are analysed independently and comparatively in order to demonstrate the presence or absence of agreement and tense features in the two languages as well as their strength and interpretability in relation to checking of these features. These issues are presented in the data analyses or discussion section. The discussion on agreement and tense features in English and Izon are presented separately in different sections before a comparative statement is made thereafter.

4. STRENGTH AND INTERPRETABILITY OF MORPHOLOGICAL FEATURES IN ENGLISH

Strength and Interpretability of features play important syntactic role in feature checking, and the motivation for movement of constituents. Some features are deemed to be strong and it is on such strong features that checking is done, at least, at the critical point before Spell-Out. Chomsky [1] explains that a strong feature (or Strong F) is a feature of a functional head which is interpretable. Interpretable features, according to Chomsky, remain active and relevant even after feature checking and that only features which are not interpretable (i.e., -interpretable) at the PF interface are eliminated. This means that strong and interpretable features contribute to semantic interpretation or semantic distinction. Lamidi [8] affirms that strong Agr features are visible at the PF interface before and after Spell-Out whereas weak features are not visible after Spell-Out.

Indeed, in minimalist literature, movement is said to be feature-driven. Such movements may be overt or covert. Overt movement is motivated by the requirement that strong features must be eliminated. The formal or morphological features of DPs and verbs that are checked are either strong or weak. Therefore, checking involves the elimination or erasure of these formal features namely phi and tense features. Significantly, strong and interpretable features move for checking before Spell-Out. Lotfi [13] affirms the

fact that 'an interpretable feature has to be checked in order for a derivation to converge because feature checking, according to him, is a process of deleting uninterpretable features [14]. The distinction needs to be made that strong and interpretable features are checked before Spell-Out while weak and uninterpretable features are checked after Spell-Out.

A strong feature is categorial and interpretable, and is visible after Spell-Out. Categorial features specify the syntactic (combinatorial) properties of a word, such as the head, *Specifier* and complement features. The distinction between interpretable and uninterpretable features is determined by their role in the semantic interpretation of a derivation. Radford [15] explains that interpretable features play a role in the semantic interpretation of a derivation whereas those grammatical features which do not play active roles in semantic interpretation are regarded as –interpretable. For instance, in a clause like the one below, the Case feature of the pronoun 'they' is uninterpretable.

1.   *The police arrested they.

The pronoun 'they' is uninterpretable because it is a nominative case item surfacing at an accusative case position. In terms of feature value, it would therefore be said that the pronoun 'they' has entered the derivation without a Case feature value. However, Radford [15] makes it clear that pronouns which occur in their proper Case positions are interpretable since the person and number features of different pronouns contrast with one another in the same position thereby contributing meaningfully to semantic interpretation of the derivations. Consider the following sentences.

2a.   They   are   coming
       3perplnom   3perplaux

b.   He   is   coming
       3persgnom   3persgaux

In the examples in (2) above, the pronouns and the auxiliary verbs play a role in the semantic interpretation of the respective derivations. In the first sentence (2a), for instance, the pronoun 'they' has the third person and plural number phi features which contrast with the third person singular number feature of the pronoun 'he' in the second sentence (2b) and makes a clear semantic distinction between the two sentences. Therefore, the Case and phi-features of the pronouns are interpretable and strong, and

following Radford [15], they entered the derivations already valued. Therefore, the respective words would have to move up in the derivation for the relevant features to be checked by Agr functional head. Expectedly, also, the checking operation takes place before Spell-Out.

Similarly, the 'be' verb not only possesses interpretable tense feature but also number feature which is visible at PF. This is shown in the same examples in (2) above where 'are' and 'is' are used and where they respond to Agr requirements of the subject NPs (which are pronouns) while also exhibiting inherent tense feature . They differ in their tense feature which creates semantic contrast in time reference. Therefore, tense feature is also interpretable, strong and visible at PF. Similarly, their movement to T functional head for checking also takes place before Spell-Out. It is instructive to note that the gender feature of the pronouns *they* and *he* is uninterpretable in these sentences because it does not make any semantic contrast that could affect the convergence of the derivations. In this regard, the gender feature is weak and is eliminated after checking. Checking of this feature is hinged on the economy principle of procrastination; that is, it is delayed until after Spell-Out.

So far we have seen the interpretability and checking of pronouns and the 'be' verb and its allomorphs. We shall now look at some canonical English sentences and the checking of Agr and tense features. Let us consider the following sentences.

3a. The students decided to boycott the lecture.
3b. The students boycotted the lecture.
3c. The students know the answer.
3d. The student knows the answer.

In the sentences in (3), the nouns 'students' and 'student' possess Agr feature of number while the verbs 'decided', 'boycotted', 'know' and 'knows' possess Tense feature. In the minimalist thesis, the nouns and verbs left the lexicon fully inflected either as singular or plural nouns or as present or past tense verbs instead of picking up their morphosyntactic features along the process of derivation. This is why these words have to submit themselves for checking in the Computation. Of course, the movement of lexical items upwards the derivation for checking conforms with Abney's [16] VP-internal subject concept. Therefore, in (3a), both the subject, 'students' ant the verb, 'decided' move out of the

VP to check their morphosyntactic features in order to ensure the convergence and grammaticality of the derivation. This argument also goes for the other sentences in (3b), (3c) and (3d) as will be seen in the phrase markers below in (4).
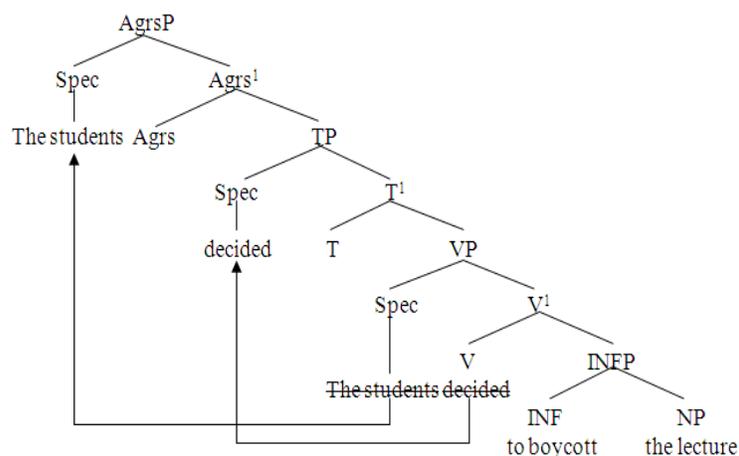
4a. The students decided to boycott the lecture.

Fig. 1. The flow chart showing "the students decided to boycott the lecture"

Agrs and T(ense) are functional heads and they perform the syntactic function of checking the morphological inflections that the subject NP and the tense feature the verb have projected with from the lexicon. The reason is that minimalist syntax provides that these functional positions contain only morphosyntactic features which are used in checking lexical output for appropriateness.[1] Expressed in other words, according to Lotfi [14], checking is way of establishing a relationship between certain morphological requirements of a language and operation move. Consequently, Agrs checks the Agreement or phi- features of the subject NP at Spec-AgrsP while T functional head checks the tense feature of the verb at Spec-TP. When the checking operation is completed, the derivation is licensed as either convergent and grammatical or crashed and ungrammatical.
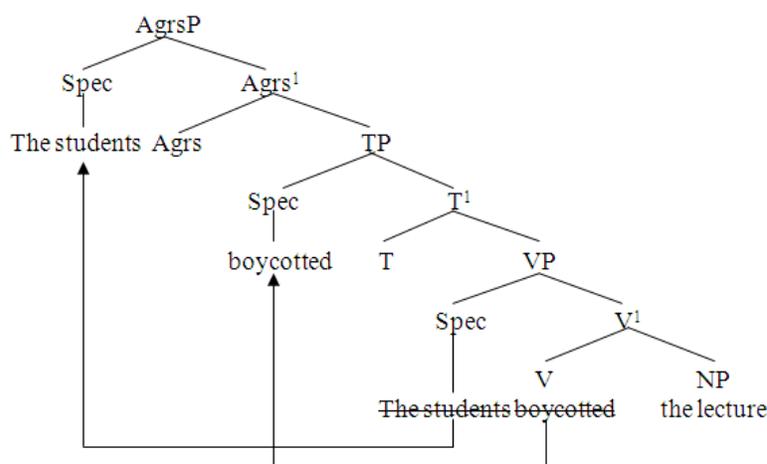
4b. The students boycotted the lecture.

Fig. 2. The flow chart showing "the students boycotted the lecture"

---

[1]*This information is contained in "Preliminary Notes on Checking Theory" in California Linguistic Notes Volume XXXI No 1 Spring, 2006.*
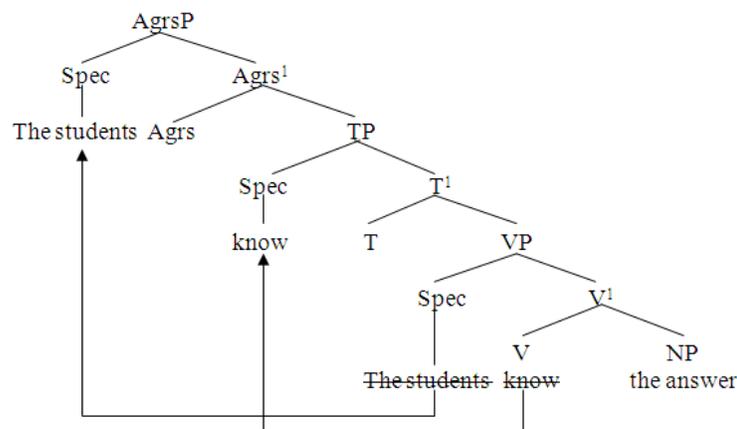
4c. The students know the answer.

Fig. 3. The flow chart showing the students know the answer

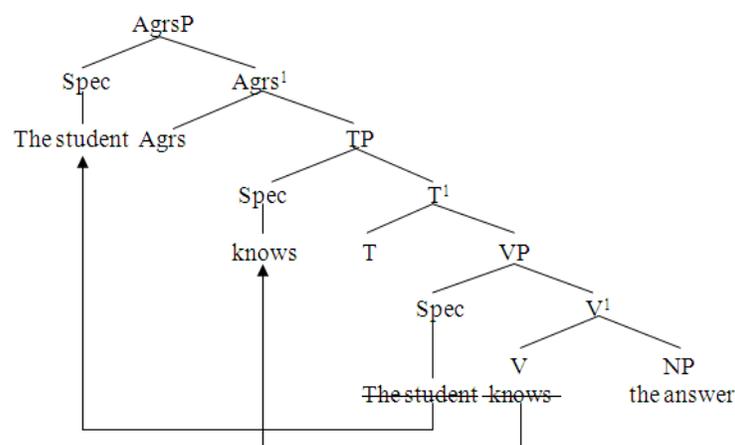4d. The student knows the answer.

Fig. 4. The flow chart showing the student knows the answer

The strikethrough on words that moved for checking of the morphological features they carry indicates that these words left a shadow copy of themselves that maybe required for recoverability of the original derivation.

What needs to be noted about the derivations in (3) and (4) is the strength and interpretability of the features that are being checked. The NP 'The students' in all four derivations possess +N categorial features but these features weak and uninterpretable in (3a) and (3b) due to the tense of the verbs (past tense) which defy subject-verb agreement. In other words, there is no obligatory agreement between the plural noun 'students' and the verb 'decided', nor is there agreement between 'students' and the verb 'boycotted'. Therefore, the morphosyntactic features of the NPs and verbs in these sentences are weak and uninterpretable, and are checked only after Spell-Out.

On the other hand, however, the subject NPs in (3c) and (3d) which are 'The students' and "The student' respectively, and their corresponding verbs namely, 'know' and 'knows' possess strong and interpretable features which contribute to the convergence or otherwise of the derivations in terms of subject-verb agreement. For instance, both the nouns and the verbs have +N number feature and they overtly agree with each other. For this reason, movement for checking of features via Operation Attract takes place before Spell-Out and the features remain visible at the PF after checking. In effect, while weak and uninterpretable features delay checking by

obeying the economy principle of Procrastinate, strong and interpretable features have to abide by the economy principle of Greed.

5. AGREEMENT ELEMENTS IN ỊZỌN

Agreement is a bundle of three Phi- features namely person, number and gender. as well as Case features. Agreement provides structural configuration at which Phi- and Case features are checked. The Agreement feature of number is morphologically marked in NPs/DPs in Izọn language. This means that Agr features in Izọn are strong and interpretable. Izọn has two plural number morphemes, '-ama/ọmọ' and '-mọ'. These morphemes are allomorphs and enclitics to the head DPs. The distinction of the Ịzọn number feature (morphemes) is that apart from being plural markers, they also encode definite and indefinite reference. In other words, they possess dual value both of which are subject to checking operation. Table 1 illustrates the dual valuation of the Izọn number Agr elements.

Agreement features are also inherently encoded in Ịzọn pronouns as every pronoun in the language, and they are many, carry case, number, person and gender (namely masculine, feminine and neuter genders) features. These features play significant role in syntactic derivations.

5.1 Subject-verb Agreement in Ịzọn

Agreement is perhaps the most compulsive syntactic process for a derivation to converge and be grammatical. Radford [15] defines it as an operation by which the verb or T-constituent is assigned the same person and number phi values as those of the subject DP. Lotfi [14] states that minimalist syntax stipulates that T functional head has both verbal and nominal features and Fakih [9] explains that T in English has the categorical features of +V and +N while the verb has Agr, tense and Case features. These categorial features determine the interaction between T and the verb on the one hand and between T and the Specifier or subject on the other.

The agreement relation between a subject DP and the verb in the VP is usually morphologically marked in English. This is why a verb would have to inflect to agree with the number feature of the subject or Spec-AgrsP. This means that agreement features in English are strong and interpretable and checking of +N morphological feature of the verb occurs before Spell Out.
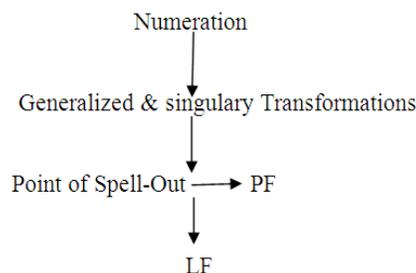
Numeration

↓

Generalized & singulary Transformations

↓

Point of Spell-Out ⟶ PF

↓

LF

Fig. 5. The flow chart showing the Subject-verb agreement

Table 1. Plural morphemes (number agreement features) in Ịzọn

	Nouns in Ịzọn	English translation	Plural forms in Ịzọn	Plural forms in English	Semantic values of plural morphemes in Ịzọn
a	warị	house	warị-ama	houses	Num+indef. det
b	warị	house	warị-mọ	the houses	Num+def. det
c	fun	book	fun-ama	books	Num+indef. det
d	fun	book	fun-mọ	the books	Num+def. det
e	arụ	canoe	arụ-ama	canoes	Num+Indef. det
f	arụ	canoe	arụ-mọ	the canoes	Num+def. det
g	kịmị	man	kịmị-ama	men	Num+indef. det
h	kịmị	man	kịmị-mọ	the men	Num+def. det
i	egberi	story	egberi-ama	stories	Num+indef. det
j	egberi	story	egberi-mọ	The stories	Num+def. det

However, agreement between subject DP and the verb in Ịzọn is weak and uninterpretable. As a result, subject-verb agreement is not overtly morphologically realized as the verb in Ịzọn does not inflect for number to agree with the number feature of the Specifier DP. Data in this study (eg. 5 and 6) below reveal that verbs in Ịzọn do not inflect for number.

5a.   Ọmịnị   indi bi   fẹẹyemi
        They (*3PerPlnom*)   fish (*sg def det*)   buy+pr+prog
        'They are buying the fish'

b.   Eri (*3PerSgnom*)   indi **bi** (*+sg+def det)*   fẹẹyemi
        He   fish the   buy+pr+prog
        'He is buying the the fish.'

6a.   Araụ (*3PerSgFnom*)   indi-**mo** (*pl + def.det.)*   fẹẹdọụ
        She   fish the   buy+perf
        'She has bought the fish'

b.   Woni (*1stPerPlnom*)   indi-**ama** (*pl + indef.det*) fẹẹdọụ
        We   fish   buy+perf
        'We have bought (some) fish'

Number feature of Agreement is encoded in the form of noun inflections. In [6a] and [6b] above, for example, there are two plural forms of the noun ***indi*** (fish)*.* These plural forms are marked with two different morphemes namely, ***mọ*** and ***ama*** with varying semantic implications. The first is a plural morpheme with a definite reference while the second is a plural morpheme with an indefinite reference. They are allomorphs. The gender feature is distinguished in the pronominal system, which also has number features internally interpretable. But neither the verb nor the noun inflects for Agr.

What emanates from the foregoing data is that the Agreement features of person and number are not overtly, morphologically marked in respect of subject-verb agreement in the syntax of Ịzọn. This accounts for why the verb ***fẹẹyemị*** (buying) in [5] remains morphologically unchanged in spite of the change in number in its subject DPs. Similarly, the verb 'fẹẹdọụ' in [6] which has perfective feature do not inflect to reflect the number of the Specifier DPs such as the singular 'Araụ' (she) and plural 'Woni' (we). The implication is that there is no overt agreement between a subject DP and the verb in Ịzọn clause structure. This is agreementless syntax.

The implication is that these features are interpretable at LF but uninterpretable at PF. Therefore, checking of the features occurs only after Spell Out. This is to say that movement of the Specifier DP is overt but movement of the Verb up the syntactic tree for checking of +N feature of the verb is a covert operation and occurs only after Spell Out since it is not interpretable at PF. It can then be concluded that checking of +N feature of a verb applies the economy principle of *procrastinate*.

6. THE STRENGTH OF TENSE (T) IN ỊZỌN

Tense (T) feature which is both a property of the verb and, until Pollock's [17] Split-INFL hypothesis, was also a co-hyponym of Agr. Following the split, both elements have become independent functional heads of their respective maximal projections namely, AgrP and TP.

Comrie [18] defines Tense (T) as a grammatical expression of time. As such, tense specifies what took place in the past, what takes place in the present, or what will take place sometime in the future. In Ịzọn as in English, tense is a grammatical category that is realized by morphological inflection of a main verb or an auxiliary verb. Therefore, T has three basic values of past, present and future time relations. In the literature, for instance, Yuka [19], T node also contains aspect (Asp) whose values are specified as perfective and progressive (or imperfective). This notwithstanding, some linguists also characterize Asp as head of Aspect Phrase (AspP). In the literature, then, it is assumed that Agr and T features check off or eliminate corresponding features in DPs and verbs respectively. In other words, verbs move up and adjoin to T for checking of their tense features while DPs raise to Spec-Agrs positions for checking of Phi-features.

Verbs in Ịzọn, like English verbs, also inflect for tense and Aspect. Tense/Aspect morphemes in Ịzọn language are strong and provide the motivation for movement up the syntactic ladder to check of and eliminate the Tense and/or Aspectual features. Because these features are strong and interpretable, their movement for checking takes place before Spell Out. Table 2 shows some examples of verbs and their Tense and Aspectual inflections. The table is followed by a sentence and a tree diagram.

Table 2. Tense (T) in Ịzọn

S/No	Present T	Past T	Future T	Pr Prog Asp	Pst Prog Asp	Perfective Asp
1	tụọ	tụọmi	tụọngimi	tụọyemi	tụọtimi	tuodou
2	fẹẹ	fẹẹmi	fẹẹngimi	fẹẹyemi	fẹẹdou	fẹẹdou
3	zoru	zorumi	Zorungimi	zoruyemi	zorutimi	Zorudou
4	gẹẹ	gẹẹmị	gẹẹngimi	gẹẹyemi	gẹẹtimi	gẹẹdọụ
5	dawaị	dawaịmị	dawaịngimi	dawaịyemi	dawaịtimi	gẹẹdọụ

7. Tọbọụ ma fịyaịmọ   tụọmị
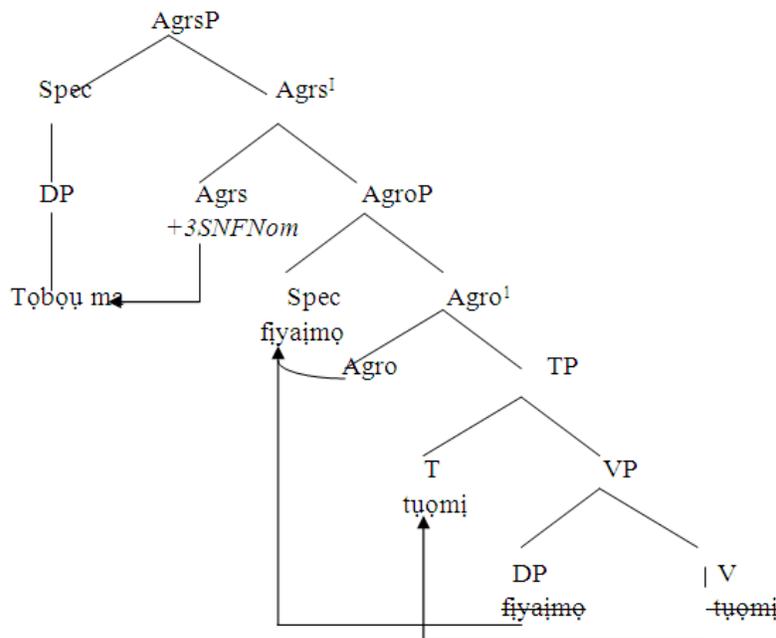   Child the food+the cooked
   "The girl cooked the food."

Fig. 6. The flow chart showing "The girl cooked the food"

The sentence in [7] and the Phrase Marker show the movement of constituents for feature checking. The SOV configuration of Ịzọn clause structure makes it mandatory for the subject and complement Arguments of the verb to be contiguously positioned while the verb occupies clause-final position. In spite of this configuration, the verb and its complement DP remain sister constituents within the VP. For instance, the complement of the verb *fịyaịmọ* (the food) has plural agreement values inflected at the lexicon, so it moves up to Agro functional node tor the plural feature to be checked. In the same vein, the verb *tụọmị* (cooked) has past tense value also fully inflected at the lexicon. Therefore, it also raises to T node to check off its tense feature. It is the process of checking that that guarantees the convergence and grammaticality of the derivation.

7. CONCLUSION

This study x-rayed the concept of feature checking within the minimalist program and reveals that lexical heads such as nouns and verbs undergo syntactic movement operation or raising to functional heads for the checking of their morphological elements which carry agreement and tense features. Movement therefore is feature-driven. Movement of NPs/DPs and verbs in English actually takes place before Spell-Out because their essential features are strong and interpretable before and after Spell-Out and in both LF and PF. These are

9

the Agr and Tense features. Similarly, same constituents in Iẓọn take place also before Spell-Out because the phi-features are also strong and are interpretable at both the LF and the PF. However, movement of verbs in Iẓọn for +N agreement feature checking takes place after Spell-Out because number agreement feature is uninterpretable at PF. There is no overt agreement between a subject non in Spec-Agr position and the verb in Iẓọn clause structure. The theoretical implication is that the number feature in Iẓọn is not shared by the subject NP/DP and the verb. This may be regarded as agreementless syntax. This is clearly different from movement of verbs to T functional head in English which occurs before Spell-Out because subject-verb agreement is interpretable. This is one of a number of parametric variations between English and Iẓọn languages.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Chomsky N. Minimalist Program. Cambridge, MA: MIT Press; 1995.
2. Odingowei Kwokwo. Morphosyntactic interface of agreement and tense in English and Iẓọn. Journal of the Linguistic Association of Nigeria. 2014;17(1-2):11-25.
3. Williamson K, Blench R. Niger-Congo. Ed. Heine B and Nurse D. African languages: An introduction. Cambridge: Cambridge University Press. 2000;11-42.
4. Kwokwo OM. A morphosyntactic investigation of functional categories in English and Iẓọn. PhD Thesis, University of Ibadan, Nigeia; 2012.
5. Williamson K. A grammar of the Kolokuma Dialect of Ijo. Cambridge: Cambridge University Press; 1969.
6. Egberipou OA, Williamson K. Iẓọn Tolumọ - Learn Iẓọn. Port Harcourt; Riverside Communication; 1994.
7. Marantz. The minimalist program In Webulhuth, G. Government and binding theory and the minimalist program: Principles and parameters in syntactic theory. Cambridge, Mass: Blackwell. 1995; 351-381.
8. Lamidi MT. The Minimalist program. An Encyclopedia of the Arts. 2006;4(2):92-96.
9. Fakih AA. Licensing, movement and feature checking in standard Arabic: A minimalist approach. King Saud University Journal of Arts. 2006;19:37-54.
10. Pesetsky D, Torrego's E. The syntax of valuation and the interpretability of features in S. Karimi, V. Samiian and W. Wilkins, Eds. Phrasal and Clausal Architecture. Amsterdam: Benjamins; 2004.
11. Koopman H, Sportiche D. The position of subjects'. Lingua. 1991;85;211-58.
12. Radford A. Syntactic theory and the structure of English. Cambridge: Cambridge University Press; 1997.
13. Lotfi AR. Minimalist program revisited: Chomsky's strength to trigger movement. In proceedings of the 34th Linguistic Colloquium (Germersheim 1999); 2002.
14. Lotfi AR. Feature sharing v. feature checking: An analysis of Persian pre- and post-verbal CPs; Califonia Linguistic Notes. 2006;XXXI(1).
15. Radford A. Minimalist syntax: Exploring the structure of English. Cambridge: Canbridge University Press; 2004.
16. Abney S. The English noun phrase in sentential aspects. PhD Dissertation: MIT; 1987.
17. Pollock JY. Verb movement, universal grammar and the structure of IP. Linguistic Inquiry. 1989;20:365-424.
18. Comrie B. Tense. Cambridge; Cambridge University Press; 1985.
19. Yuka C. An articulated clause structure for Lamnso. Research in African languages and linguistics (RALL). University of Ibadan, Ibadan. 1999-2000;5(1):1-11.