

## THE STRUCTURE OF THE SUBJECT-LESS CONVENTIONAL INFINITIVES

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### Abstract

*The present study investigates the structure of the subject-less conventional infinitives at the Logical Form (LF) and Phonetic Form (PF). The study employed a constructivism paradigm, qualitative research approach, and case study design. Data were extracted from the previous English Ph.D. research studies conducted in the years 2010-2019 by both English native and non-native speakers. The study employed successive approximation analytic tools to analyse data, following the Minimalist Program (MP), which framed this study. The results revealed that the structure of the subject-less conventional infinitives varies. As a result, it can have an inflectional phrase (IP), tense phrase (TP), and verbaliser phrase (vP) structures.*

**Keywords:** structure, subject-less conventional infinitives, verbaliser phrase

### INTRODUCTION

In this study, the researcher investigates the structure of the subject-less conventional infinitives in English at both Logical Form (LF) and Phonetic Form (PF). It follows the syntactocentric perspective, where the syntax is seen as a central language level. As part of the structure, subject and verb are considered to be major clause elements. However, unlike finite clauses, which have overt subject and verb, van Gelderen (2012) states that a non-finite clause may lack either independent subject or finite verb. The conventional infinitive clause is one type of non-finite clause. In accordance with Čakányová (2018), English infinitives have an underlying or core structure common to all the conventional infinitives (to-infinitives) at Logical Form (LF); however, it is not clear whether the subject-less conventional infinitives have a similar structure at the Phonetic Form (PF).

Furthermore, it has been observed that most of the grammar and syntax students at the National University of Lesotho find it challenging to describe the structure of the conventional infinitives. For this reason, this paper concentrated on the structure of the conventional infinitive clause embedding that lacks an independent subject, also known as the subject-less conventional infinitive clause. Those subject-less conventional infinitive clauses include control and subject-to-subject-raising infinitives.

Looking at the previous research, a number of studies related to the structure of the English conventional infinitives have been conducted starting from the Old English era to the present within hybrid, parallel, communication-and-cognition, and syntactocentric perspectives. These studies include the ones carried out by Wurmbrand (1998), Creissels and Godard (2005), Al-Hasnawi (2010), Wang (2014), Čakányová and Emonds (2017), Černa (2017), and Gu (2019). The researches focused on different languages: *English, Tswana, Germanic, and Romance languages*.

The reviewed studies such as Creissels and Godard (2005), Al-Hasnawi (2010), Wang (2014), Černa (2017), Gu (2019), and Morato-Maleke (2019) draw from other perspectives other than the syntactocentric perspective, and they did not articulate anything related to the structure of the subject-less conventional infinitives. They just highlighted the arrangement of the conventional infinitive clauses. However, the researchers such as Wurmbrand (1998) and Čakányová and Emonds (2017) followed the syntactocentric perspective. Wurmbrand (1998) concentrated on the structure of control infinitives, the mechanism of control, and the general construction of clauses involving auxiliary modals. She concluded that the structure of the re-structuring infinitives can be an *inflectional phrase* (IP), *tense phrase* (TP), and *subject agreement phrases* (AgrSP). These results imply that IP, TP, or AgrSP can head the re-structuring infinitive clauses.

Wurmbrand's (ibid) study foregrounds the current study on the notion of the structure of the control infinitives. It also serves as a reference for other researchers with regard to the re-structuring infinitive, which is not the case in this study. The focus in the present study lies on the conventional infinitives as clauses. Since Wurmbrand's (ibid) paper did not demonstrate the structure of the subject-less conventional infinitives generally, the current research study goes further to describe the structure of the subject-less conventional infinitives.

Čakányová and Emonds (2017) conducted a study on the phase-hood of infinitives with an aim to address the question of phase-hood as appropriate to the infinitive clauses of different types. Following Wurmbrand (1998), Čakányová and Emonds (2017) developed the idea that infinitives are mainly vP. In relation to the size of the infinitives, they found that some infinitives whose structures include the inflectional phrase (IP), such as exceptional case marking (ECM) *expect*-infinitives and *for-to* infinitives being complementiser phrase (CP), are bigger infinitive structures. The smaller infinitive structures are vPs, including ECM *believe*-infinitives and raising to subject infinitives.

There is a close resemblance between what Čakányová and Emonds (2017) did in their study and the present study. The two studies concentrate on the infinitives stemming from the syntactocentric perspective following the Minimalist Program (MP) as their underpinning. However, the espoused concepts differ as Čakányová and Emonds's paper used the phase. In contrast, the present work adopted several concepts, including the operations select, merge and label, and the Full Interpretation Principle. Čakányová and Emonds used unary branching, violating the adopted property of operation merge that informs binary branching in the current work. Even though Čakányová and Emonds's (ibid) study gave the general structure of the conventional infinitives, particularly at the LF, their research did not specifically focus on the structure of the subject-less conventional infinitives at PF, but the size of the infinitives. Consequently, this exclusion of the structure of the subject-less conventional infinitives leaves out a niche for the current study.

### **Theoretical framework**

This paper is underpinned by the Minimalist Program (MP), also known as Minimalism. MP is the theory proposed by Chomsky (1993) and was further developed by Chomsky (2001), Hornstein (2001), Nunes (2001), as well as Krivochen and Kosta (2013). This programme is a syntactic theory that has both LF and PF levels. It also includes functional categories which were hypothesised to project just like the lexical category; these categories include the following: Tense Phrase (TP), Inflectional Phrase (IP), Determiner Phrase (DP) and Complementiser Phrase (CP), nominaliser Phrase (nP), verbaliser Phrase (vP), of which Koster (2013) indicates that addition of these functional elements brought deeper analysis than was common before. Regarding the structure of the subject-less conventional infinitive clauses, this

paper adopted the MP's FI principle, which states that every syntactic element needs to be fully interpreted at the interface levels. This principle is coupled with three syntactic operations: select, merge and labelling. The syntactic elements are selected from the array and merged to form the syntactic structures in the derivation process.

## **METHODOLOGY**

The present paper is grounded within the qualitative approach. Verma and Mallick (1999) support this approach in the current paper as the researcher gathers information through evidence and relies less on scales and scores. The current paper employed a case study and descriptive designs as the researcher carried out an in-depth investigation to describe the English subject-less conventional infinitive embedding, one of the complicated phenomena shown by the researcher's predecessors. A case study is further noted as one of the qualitative methods used in applied linguistics (Riazi, 2016).

Data was collected from Ph.D. research studies conducted from 2010-2020 by both English native and non-native speakers. The combination of these documents was not meant to compare but used jointly as "empiricism can be made more amenable to the nativist" (Kinsella, 2009:5). The English native speakers' research studies were conveniently and purposively selected from the internet, while the non-natives' were taken from the National University of Lesotho. In spite of the authors' nativism, an implication is that they are all widely exposed to English language and linguistics starting from undergraduate to postgraduate, Ph.D. level as this language is their specialisation which is not the case with other specialisations. Therefore, they are assumed to be at a more advanced stage of structural competence, which results in knowledge and experience constructing the subject-less conventional infinitives than a diploma, first degree, and Master's degree holders. The native speakers of English possess inborn knowledge on how to construct subject-less conventional infinitive clauses. In addition to inborn knowledge, they also formally learned how to construct sentences, including the subject-less conventional infinitive embedding. Like the English native speakers, the non-native speakers formally learned how to construct the embedded subject-less conventional infinitive clauses.

The present study used successive approximation analytic tools to analyse data. According to Neuman (2013:489), the successive approximation is a “qualitative analytic tool that includes making cyclic interaction with empirical data and the abstract concepts, theories or modes, adjusting theory and refining the collected data from time to time.” When analysing, the current researchers began with the research questions, a framework of the MP’s concepts applicable for each question. The researchers then explored data, asking questions of evidence to see how the concepts fit the evidence and revealed features of data. Thereafter, they created new concepts by extracting from evidence and adjusting concepts to fit the evidence better. Finally, additional evidence was collected. According to Neuman (2013), theory and evidence shape each other at every step. This concept modification was repeated, “to approximate the full evidence data to become successively more accurate” (Neuman, 1997:425).

## **RESULT AND DISCUSSION**

The researcher aimed at describing the structure of the subject-less conventional infinitives at Phonetic Form (PF) and Logical Form (LF). In order to describe the structure of the subject-less conventional infinitives, operations select, merge, and labelling, and Full Interpretation Principle (FI) were used to describe the constructions in the analysis.

### **Operations select, merge, and labelling**

The paper revealed that the structure of the subject-less conventional infinitives at both the PF and LF is inflectional phrase (IP). The finding is driven by the application of operations select, merge, and labelling. The operation selected refers to choosing a syntactic element from either numeration or array. At the same time, the merge is an operation in which two selected syntactic elements or constituents are combined to form one larger constituent (Al-Horais, 2003). After merging two syntactic elements, each constituent, whether a mother or sisters, are labelled. According to Radford (2009), this is where operation labelling comes in, so it is defined as a notational device used to represent linguistic properties of constituents, and these linguistic properties include the grammatical category. As one of the subject-less conventional infinitives, the structure of the control infinitive at PF is demonstrated in example (1).

- (1) [IP DP [D *the* [N *students* VP [V *chose* IP [I *to* VP [V *have* DP [D *their* [N *conclusions*]]]]]]]]] (The structural representation is adapted from Radford, 2009)

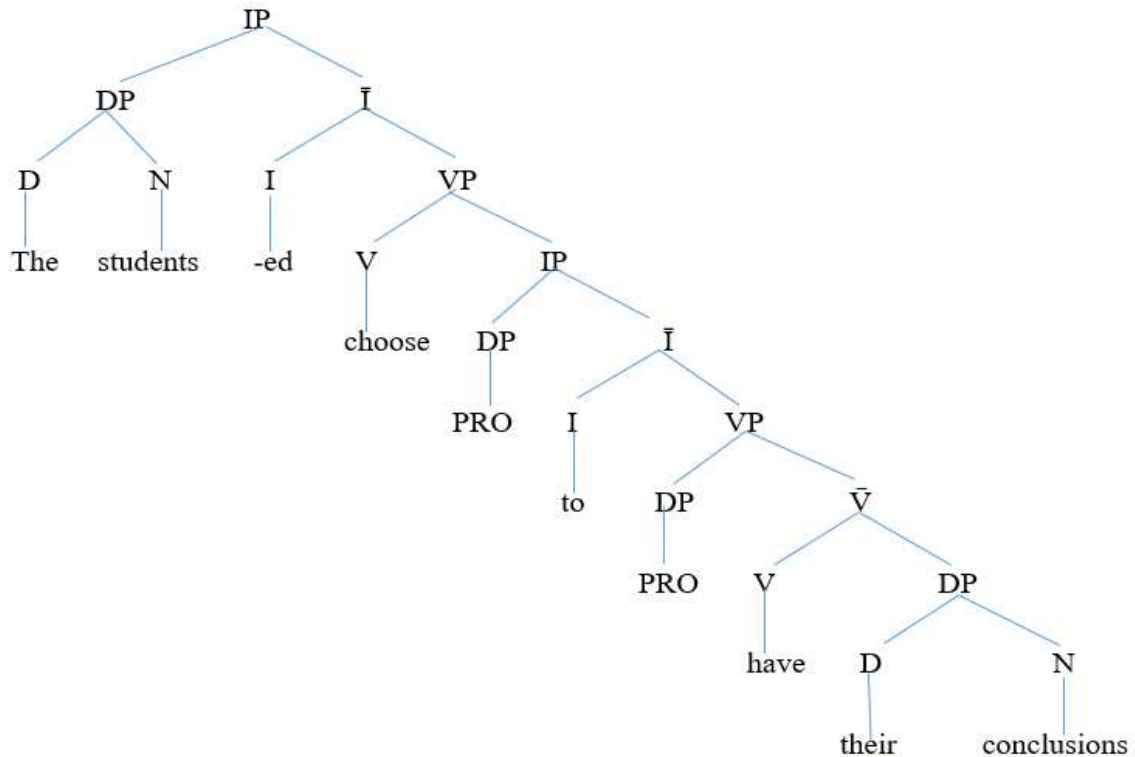
Example (1) illustrates the embedded control infinitive clause *to have their conclusions*. The findings in the current study reveal that the structure of the control infinitive clause at the PF is the *IP*. The result is supported by Čakányová & Emonds's (2017) and Tjabaka's (2021) findings, which also divulge that the structure of the control infinitives is the *IP*. Building on Radford's (2009) definition of the embedded clause, the control infinitive *to have their conclusions* is a non-finite embedded clause because it is positioned within another clause and complements the students' chosen clause. This construction is the control infinitive as the clause *to have their conclusions* complements the control verb *chose*.

To describe how the structure of the subject-less conventional infinitives is generated, Hornstein, Nunes and Grohmann (2005); Krivochen and Kosta (2013) state that the starting point for the syntactic structure is numeration which refers to a set of lexical items (LI) and the number of instances that lexical item is available for computation (i). Therefore, numeration is where the selection of lexical items is done. Looking at example (1), numeration has the following lexical items: (*the students, chose, to, have, their, conclusions*). To have such construction, *the students chose to have their conclusions*, those lexical items were derived following operations select, merge and label. It is worth noting that clauses within MP are generated from the bottom-up. The structure is formed from bottom to top, with lower constituents of the structure being built before the higher ones (Radford, 2009). Consequently, all the syntactic representations in this paper are analysed from the bottom-up.

A noun (N) *conclusions* is first selected from numeration and merges with a determiner (D) *their* in order to form determinative phrase (DP) *their conclusions*. DP *their conclusions* is then merged with a verb (V) *have*, and the resulting phrase is verb phrase (VP) *have their conclusions*. The VP *have their conclusions* is further merged with infinitive-*to* labelled as inflection (I), and the whole projection is inflectional phrase (IP). The IP *to have their conclusions* is merged with the V *chose* to form VP *chose to have their conclusions*. Lastly, the VP projection is merged with DP *the students* to form the IP *the students chose to have conclusions*. It is, therefore, spotted here that at the PF, the structure of the subject-less conventional infinitive clause *to have conclusions* is *IP*.

The results also illustrate the structure of the control infinitives at the LF, as seen in example (2).

- (2) The structure of the control infinitives at the LF (Recorded as example (1), but repeated here as example (2) for ease of reference)



Example (2) reflects the structure of the control infinitives at the LF. The current study observes that the structure of the control infinitives at the LF is the *IP*. The finding in the present study is supported by Čakányová & Emonds's (2017) results which show that the structure of the control infinitives at the LF is the *IP*. Nonetheless, the current study departs from their notion of the size of the control infinitives as it is not key in the present study. Just like example (1), the structure in example (2) *the students chose to have their conclusions* is also formed using select, merge, and labelling operations. N *conclusions* is selected from the numeration and combined with D *their* to form DP *their conclusions*. The DP *their conclusions* is also combined with V *have* to form  $\bar{V}$  *have their conclusions*. Following the assumption known as the VP-Internal Subject Hypothesis (VISH) which states that a subject originates within the VP, the  $\bar{V}$  *have their conclusions* is further combined with DP *the students* to form VP *the students have their conclusions*. VP *the students have their conclusions* merges with I *to* in order to have an intermediate projection  $\bar{I}$  *to the students have their conclusions*. Then, the DP *the students* moves from the specifier (spec.) [spec-VP] position leaving PRO as its copy, and

re-merges with  $\bar{I}$  *to the students have their conclusions* to generate *the students to PRO have their conclusions*, and the resultant constituent is *IP*. The *IP the students to PRO have their conclusions* combines with the verb *choose* to form the VP *choose the students to PRO have their conclusions*. This VP is further merged with inflection (I) to indicate the inflection of the verb *choose*, and the resultant constituent is  $\bar{I}$  *chose the students to PRO have their conclusions*. The implication here is that the past tense inflection *-ed* is later lowered on to the verb through what Radford (2009) calls it Affix Hopping operation in the PF component. According to him, in this operation, the unattached tense affix is lowered onto the closest verb. The D *the students* finally moves from [spec-IP] leaving another copy in a form of PRO, and re-merges with the I-bar *chose the students to PRO have their conclusions* to have the IP *the students chose PRO to PRO have their conclusions*. The lower DPs were deleted at the PF leaving only copies of the higher pronounced specifier *the students* to satisfy Theta ( $\theta$ ) Criterion Principle which states that one argument should bear one role.

As it has been noted that the infinitive constructions in the examples (1) and (2) are control infinitives, the copies in example (2) are then represented by null pronominal subject called big PRO. The PROs in example (2) reflect the subjectness of the control infinitives. In this paper, the researcher highlighted that the raising infinitive is one of the conventional infinitives, and the results in the study portray that one of the sub-categories of the raising infinitives is subject-less conventional infinitives while the other sub-category is not. It is their subjectness feature that determines whether they are subject-less or not. For this reason, Subject-to-Object-Raising (SOR-infinitive) which has an overt subject is illustrated in example (3).

(3) *Writers use [them to help readers].*

Example (3) reflects the SOR-infinitive *writers use them to help readers*. It is the SOR because D *them*, which is the subject of the conventional infinitive *to help the readers* originated within the VP *help the readers* as a subject. It raised to the object position to check objective case as the verb *use* is a two-place predicate. Meaning that it requires a subject and object; hence its position after the matrix verb *use*. This D *them* links with the verb *help* not the matrix verb *use*. The results are supported by Čakányová & Emonds's (2017) findings as they demonstrate that in this kind of construction, the subject of the complement clause receives objective case from selecting the verb. Nonetheless, the present paper departs from this sub-



category because it has the overt subject which is not the concern of this paper to describe the structure of conventional infinitives with the overt subjects.

Another sub-category, Subject-to- Subject Raising (SOR-infinitive) which has a covert subject is noted in example (4).

(4) *The writers had to make the reading easier.*

Examples (4) represents the Subject-to-Subject-Raising (SSR-infinitive) *the writers had to make the reading easier*. The infinitive clause *to make the reading easier* has unpronounced subject; however, DP *the writers* links with the verb *make* in an embedded clause *to make the reading easier* not the verb *had* as it does not assign any theta role. Consequently, the DP *the writers* raised to D [spec-IP] to check nominative case.

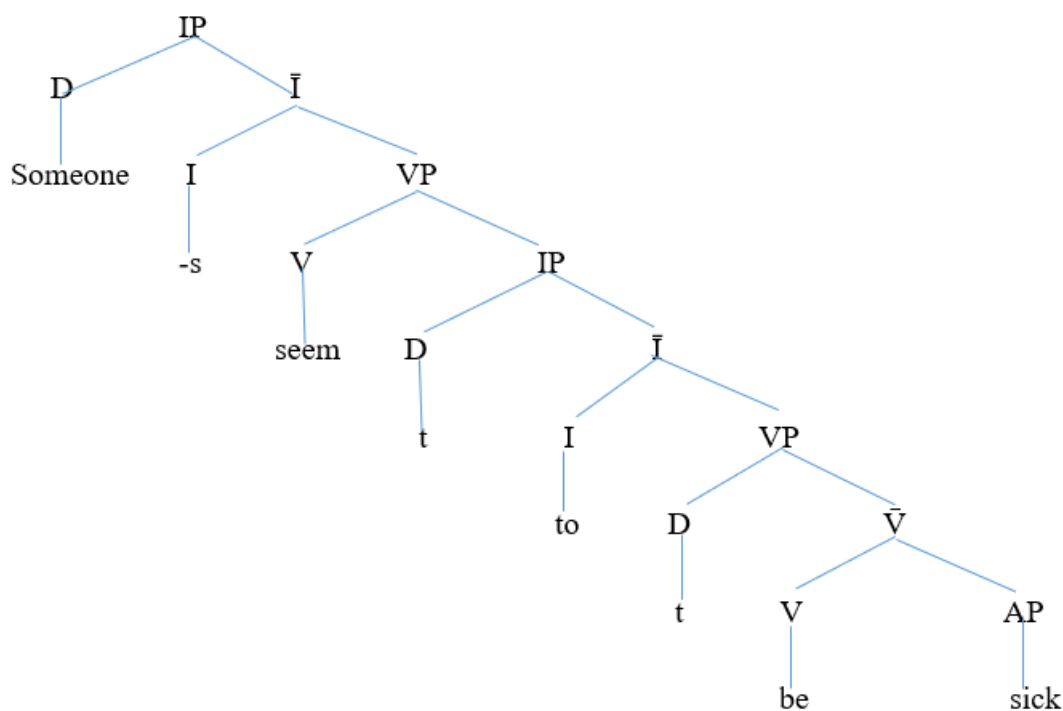
On the basis of this explanation, the present study reflects only the SSR-infinitives. Therefore, it is discovered that the structure of the SSR-infinitives is also the *IP*. Given their structure, let us consider the SSR-infinitive structure at the PF as presented in example (5).

(5) [IP [D *Someone* VP [V *seems* IP [I *to* VP [V *be* A *sick*]]]]]

Example (5) represents the structure of the SSR-infinitive at the PF. From the evidence, the present study observes that the structure of the SSR-infinitives at the PF is still the *IP*. In their studies, Wurmbrand (1998) argued that the *IP* is the structure of re-structuring infinitives whereas Čakányová and Emonds (2017) concluded that *IP* is the structure of the control infinitives. Following the operation merge, the current study claims that regardless of the types, kinds and size of the conventional infinitives, they are generated in the same manner. As a result, the syntactic elements such as *someone*, *seems*, *to*, *be* and *sick* in example (5) were first selected from the numeration, and generated through merger, that is, the combination of one constituent with the other one to form a new constituent. A *V be* is merged with an adjective (A) *sick* to form a *VP be sick*. The *VP be sick* also merges with *I to*, and the resultant phrase is *IP to be sick*. The projection *IP to be sick* is further merged with *V seems* to form *VP seems to be sick*. The *VP seems to be sick* is finally merged with *D someone* to form the *IP someone seems to be sick*. Following Adger (2003), pronouns are considered to be determiners within the *MP*, hence the label *D* given to the pronoun *someone*.

The present study also observes that the structure of the SSR-infinitives at the LF is still the IP as represented in example (6).

- (6) The structure of the SSR infinitive at the LF (Recorded as example (5), but repeated here as example (6) for ease of reference)



Example (6) represents the structure of the SSR-infinitive embedding *someone seems to be sick*. The finding in the current study reflects that just like the SSR-infinitives at the PF, the structure of the SSR-infinitives at the LF is still the IP. Unlike Čakányová & Emonds's results which revealed that the structure of the SSR-infinitives is verbaliser phrase (vP), the present study still maintains that the structure of the SSR-infinitives at the LF is generated the same way as the structure at the PF in the example (5). Therefore, its structure is IP. However, the difference between the structures in (5) and (6) is that, the syntactic representation in the example (5) involves only the pronounced syntactic elements including *someone, seems, to, be* and *sick* whereas (6) includes meaning. That is why  $\bar{V}$  *be sick* combines with D *someone* and assigns agent  $\theta$ -role to form VP *someone be (is) sick*. This VP is combined with I *to*, and the resultant constituent is an intermediate projection (bar)  $\bar{I}$  *to someone be sick*. The D *someone* moved from [spec-VP] to [spec-IP] leaving *t* which is the trace copy of moved constituent to be re-merged with the I-bar *to someone be sick* to form IP *someone to t be sick*. This IP subsequently merges with V *seem*, and the new phrase is VP *seem someone to t be sick*. As the

verb *seem* is inflected, the VP *seem someone to t be sick* is combined with I *-s* to form another intermediate projection  $\bar{I}$  *seems someone to t be sick*. Through Affix Hopping, the present tense inflection *-s* is lowered to the verb *seem*. The D *someone* moves from lower [spec-IP] to higher [spec-IP] leaving *t* to be re-merged with the projection  $\bar{I}$  *seems t to t be sick*, and the resultant constituent is IP *someone seems t to t be sick*.

Based on the data, the present paper, therefore, highlights that the structure of both control and SSR-infinitives are integrated structures. This observation is supported by Davies and Dubinsky's (2004) claim that the control structures can be analysed as a kind of raising as done in the current study; consequently, their structures are *IPs* at both the PF and LF.

Another reflection is that every clause including the subject-less conventional infinitive constructions contains one IP and subject. The finding is supported by Wurmbrand's (1998) observation that the subject-less conventional infinitive clauses have a single IP and a subject. Nevertheless, the observation in the present study shows that for the embedded subject-less conventional infinitive clause, the specifiers and structural case are reflected at the LF not the PF.

In this paper, it has also been observed that the labels from the bottom part match with the ones from the matrix clause. In particular, the sentences have two VPs, and this reflection is affirmed by van Gelderen (2013) that analysis of double verb structure is quite accepted. Following van Gelderen's observation, the results in the current study demonstrate that the structure of the subject-less conventional infinitives at the PF can also be a verbaliser phrase (*vP*) as illustrated in example (7).

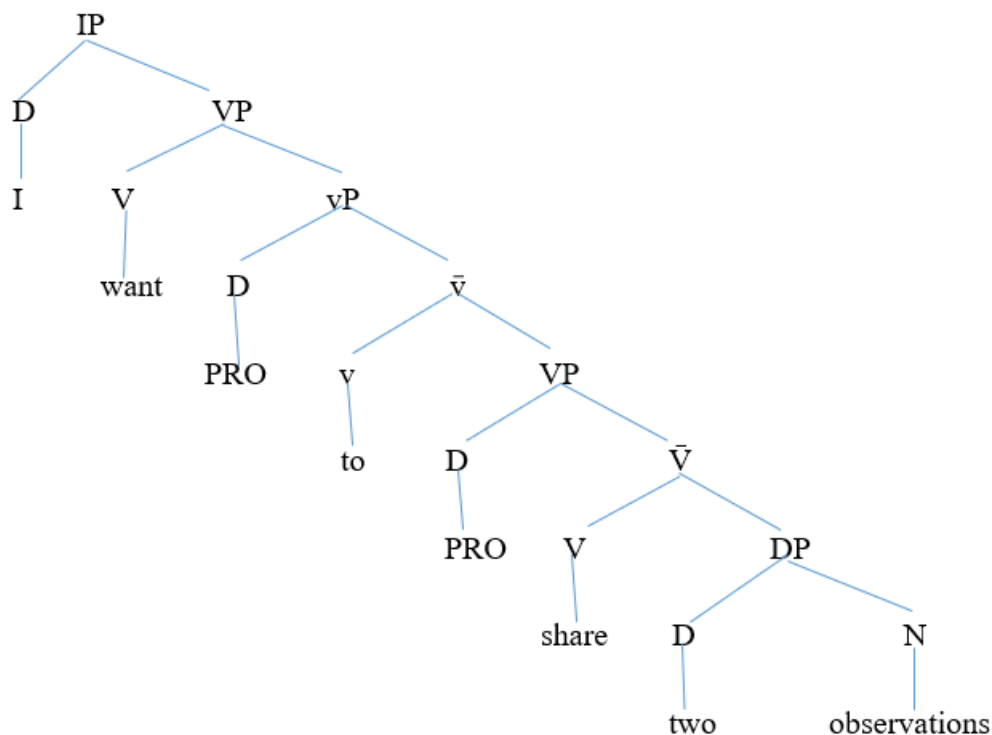
- (7) [IP [D *I* VP [V *want* *vP* [*v to* VP [V *share* DP [D *two* [N *observations*]]]]]]] (The hierarchy is taken from Radford, 2009)

Example (7) illustrates the structure of the control infinitive embedding *I want to share two observations*. This example shows only the pronounced syntactic elements. From the datum, the finding divulges that the structure of the control infinitive is the *vP*. The result is supported by Čakányová and Emonds observation which affirms that the internal structure of the conventional infinitives is the *vP*. The current study even builds on Adger's (2003) idea

that conceptually,  $v$  and  $VP$  have relations such that whenever there is a verbaliser ( $v$ ), there is also its  $VP$  complement. He further indicates that intuitively,  $vP$  is an extension of the projection of  $VP$ . Based on Adger's (ibid) claim, the  $vP$  *to share two observations* is extended from the  $VP$  *share two observations* in example (7). This statement implies that the  $VP$  *share two observations* is the complement of the  $vP$  *to share two observations*. According to Adger (2003), quantifiers such as numbers belong to  $D$  within the Minimalism; thus, *two* is labelled  $D$ .

The findings further demonstrate that the structure of the control infinitives at the LF is  $vP$  as indicated in example (8).

- (8) The structure of control infinitive at the LF (The hierarchy is adapted from Čakányová & Emonds 2017:102)



Example (8) reflects the structure of the control infinitive *I want to share two observations*. The present study observes that the structure of the control infinitives at the LF is the  $vP$ . The only difference seen in the structures at the LF is the inclusion of the meaning. The findings are still supported by Čakányová and Emonds's (2017) reflection which indicates that the general structure for the control infinitives is  $vP$ . For this reason, an intermediate projection  $\bar{V}$  *share two observations* is combined with  $D$  *I*, and the resulting constituent is  $VP$

*I share two observations.* This VP is then merged with *v* to forming the *v*-bar *to I share two observations*. Later, the D *I* moves from the [spec-VP] to the [spec-vP] leaving PRO behind as its copy, and re-merges with the intermediate projection  $\bar{v}$  to generate vP *I to PRO share two observations*. The vP is next merged with V *want*, and the resultant phrase is VP *want I to PRO share two observations*. The D *I* moves from the [spec-vP] to the [spec-IP] leaving its copy in a form of PRO, and is re-merged with the VP *want PRO to PRO share two observations*. The new structure formed is IP *I want PRO to PRO share two observations*.

The SSR-infinitive being the other type of the subject-less infinitives is also shown in example (9).

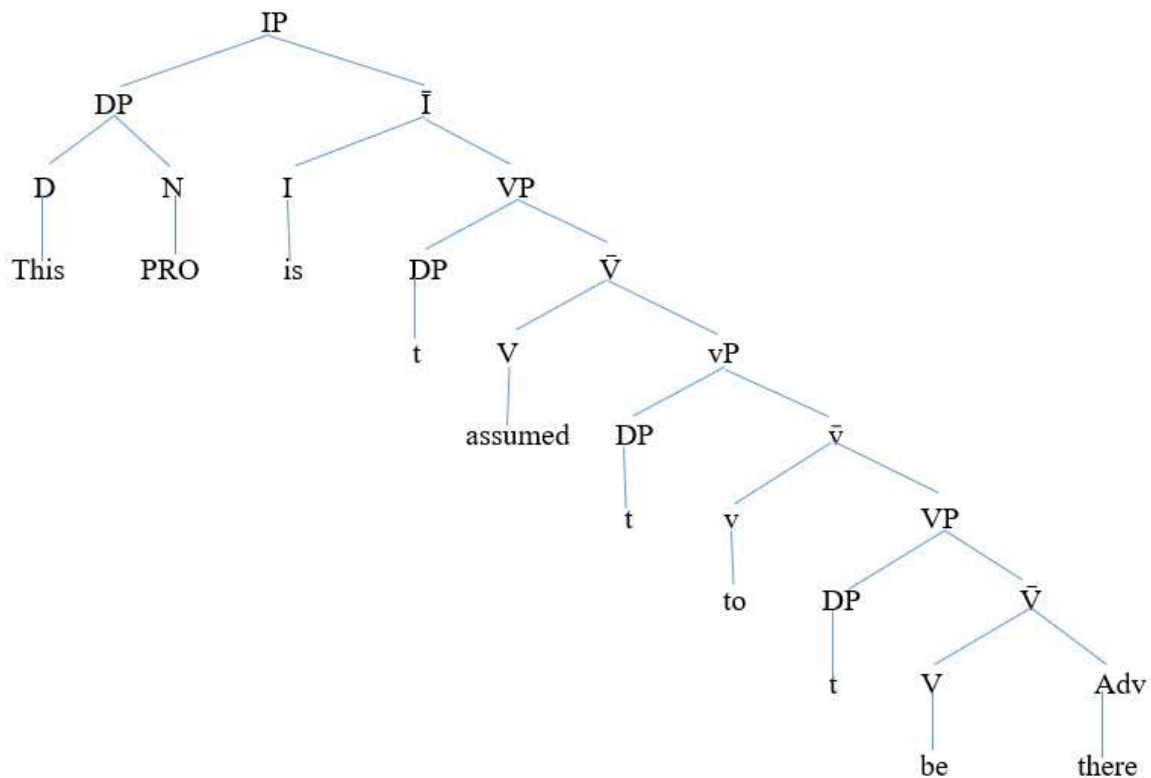
- (9) [IP DP [D *This* [N *PRO* [I *is* [V *assumed* vP [v *to* VP [V *be* [Adv *there*]]]]]]]] (The hierarchy is adapted from Radford, 2009).

Example (9) illustrates the syntactic structure of the SSR-infinitive *this PRO is assumed to be there*. The observation in the present study is that at the PF, the structure of the SSR-infinitives is the verbaliser phrase. The finding is maintained by Čakányová & Emonds's results that the general structure of the SSR-infinitives is vP. Even its size classifies it under the vP structure. Just like the previous analyses, the structure is formed using select and merge operations. Each syntactic element and constituent are labelled. In example (9), the only pronounced elements selected from the numeration came with the tag known as category label and merged together to form different constituents such as *adverb* (Adv), *Vs*, *VPs*, *v*, *vP*, *I*,  $\bar{I}$ , *N*, *D* and *DP* which constitute the whole structure labelled the IP.

From the present evidence, the structure of the SSR-infinitive is also vP at the LF as given in example (10). Example (10) represents the structure of the SSR-infinitive *this PRO is assumed to be there*. It is revealed that the structure of the SSR-infinitive at the LF is the vP. The syntactic elements that constitute the structure in example (10) are all selected from numeration, and the V *be* is combined with the Adv *there* to form the intermediate projection  $\bar{V}$  *be there*. The  $\bar{V}$  is also combined with DP *this PRO* to generate VP *this PRO be (is) there*. The VP *this PRO be there* is further merged with *v to*, and the resultant projection is  $\bar{v}$  *to this PRO be there*. The DP from the [spec-VP] moves to the [spec-vP] leaving its trace copy (*t*) to be re-merged with the *v*-bar, and the resulting constituent is vP *this PRO to t be there*. The vP

is then merged with the V assumed in order to form an intermediate projection V-bar assumed this PRO to t be there. The DP from the [spec-vP] moves again to the [spec-VP] leaving its trace copy, and re-merges with the  $\bar{V}$  assumed this PRO to t be there. The resultant constituent is VP this PRO assumed t to t be there. This VP is later combined with I is to generate an intermediate projection  $\bar{I}$  is this PRO assumed t to t be there. The DP from the higher [spec-VP] lastly moves to the [spec-IP] leaving its t to be re-merged with the I-bar is this PRO assumed t to t be there to form a new constituent labelled the IP this PRO is t assumed t to t be there.

(10) The structure of the SSR-infinitive at the LF

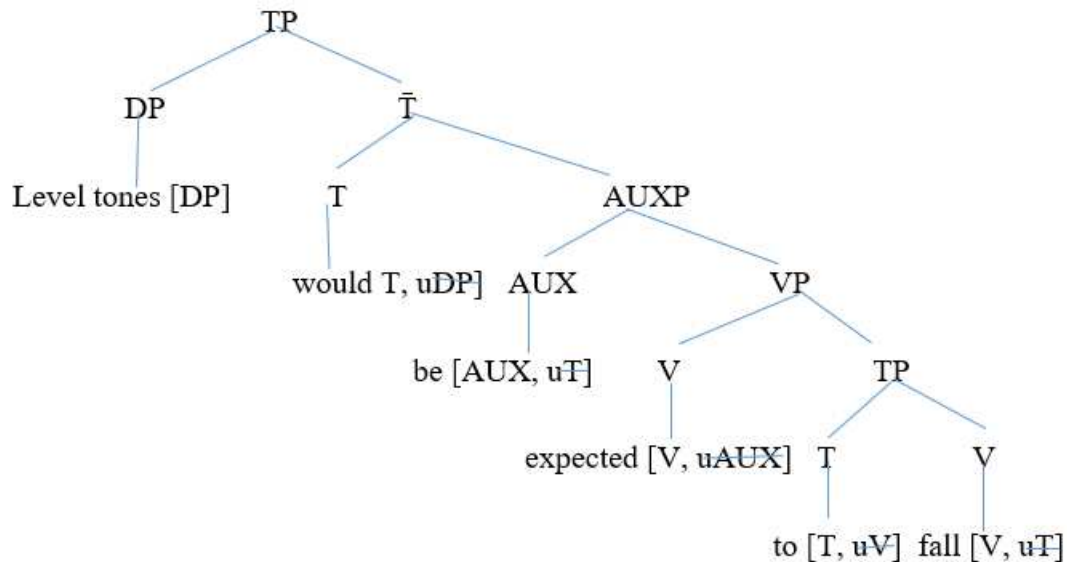


### **Full Interpretation Principle**

In Full Interpretation Principle (FI), the structure of the subject-less conventional infinitives is found to be tense phrase (TP). According to Chomsky (2002) and Al-Horais (2013), the principle states that at interface levels, every syntactic element and feature need to be interpreted. Uninterpretable features have to be checked, and once they are checked, they can be deleted (Adger, 2003). A certain constituent has a syntactic relations with the one it merges

with if they both share a specified feature, that is, the constituents having sisterhood relationship should share a certain features. The explanation is shown in example (11).

(11) The structure of SSR-SOR-infinitive at the PF



Example (11) represents the structure of SSR-SOR-infinitive at the PF. The study portrays that the structure of the SSR-SOR-infinitives is the *TP*. This observation is not supported by certain researchers including Sanchez (2018) who argues that infinitives do not convey a sense of tense on their own. Despite this view, the present study still maintains that the structure of the SSR-SOR-infinitives is *TP*. This finding is supported by Wurmbrand (1998) who views the re-structuring infinitives to have the *TP* structure. This study follows her general claim, but further suggests that through the generation of the structures which is merger coupled with the feature checking, the structure of the SSR-SOR-infinitive is still the *TP*. This structure in example (11) is the *SOR* infinitive, but due to passivisation, some elements including *DP level tones* are moved from their initial position to the upper [spec-*TP*] position. For this reason, there is a subject-to-subject raising; hence the inclusion of the notion of *SSR*.

In the current study *u* stands for uninterpretable features. A verb *fall* carries an interpretable [V] feature in an uninflected base form, lacks complement and specifier. It also has at least [uT] feature. For this reason, the *V fall* merges with *T to*, satisfying the uninterpretable [uT] feature of *fall*, and the resulting constituent is *TP to fall*. The *T to* possesses the interpretable [T] feature, requires the *V* complement in an uninflected base form, lacks a specifier, and carries at least [uV] feature. Subsequently, it merges with the *V expected to*

satisfy the [uV] feature of the T *to* forming VP *expected to fall*. The V *expected* carries the interpretable [V] feature, requires the TP *to fall* as its complement and lacks the specifier. It also carries the [uAUX], so to satisfy this feature, it merges with AUX *be* to generate AUXP *be expected to fall*. The AUX *be* has an interpretable [AUX], needs the verb as its complement, lacks specifier, but has [uT] feature. In order to satisfy this uninterpretable feature of the AUX *be*, AUX *be* merges with the T *would* forming T-bar *would be expected to fall*. The T *would* possesses an interpretable [T] feature, needs an auxiliary as its complement, but lacks specifier. It carries at least [uDP] feature, which is why it merges with the DP level *tones* to satisfy its [uDP] feature. The DP level *tones* is in plural form and carries an interpretable [DP] feature. It requires T-bar as its complement. The resulting structure is TP *level tones would be expected to fall*.

Contrary to the structure of the SSR-SOR-infinitive at the PF, the structure of the SSR-SOR-infinitive at the LF is represented in example (12).

- (12) \* $[TP [DP \textit{Level tones} [T \textit{would} \textit{AUXP} [DP \textit{t} [AUX \textit{be} \textit{VP} [DP \textit{t} [V \textit{expected} \textit{TP} [DP \textit{level tones} [T \textit{to} \textit{VP} [DP \textit{t} [V \textit{fall}]]]]]]]]]]]]]$  (Recorded as example (11), but repeated here as example (12) for ease of reference)

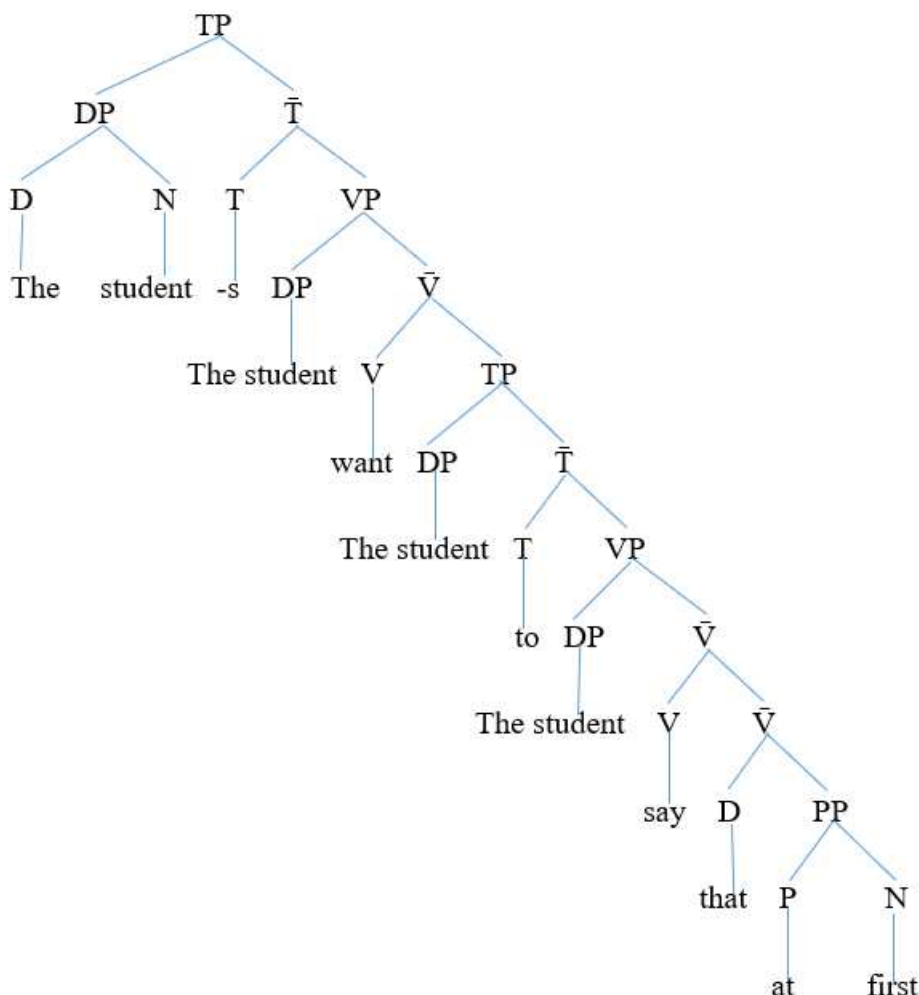
Example (12) reflects the structure of the SSR-SOR-infinitives at the LF. The finding shows that the structure of the SSR-SOR-infinitives is the TP. However, the structure ill-formed at the LF as indicated by the asterisk (\*) since the structure in example (12) does not represent the correct structure of the SOR-infinitives at LF that involves movement of both the V *expected* and DP *level tones*. The other reason is that the present study does not focus on the structure of the SOR-infinitives. Consequently, the present study departs from this analysis, and exemplify the structure of the control infinitive at LF in example (13).

Example (13) represents the structure of the control infinitive *the student wants to say that at first* at the LF. The finding in the study depicts that the structure of the control infinitive at the LF is the TP. This result is supported by Wurmbrand's (1998) reflection on the basis of the re-structuring approach which states that the structure of the re-structuring infinitives are TPs. However, through the features that the syntactic elements have, the present study argues that whether the conventional infinitives are re-structuring or non-re-structuring, as long as they are subject-less, their structure is the TP. It is be noted, for instance, that the control



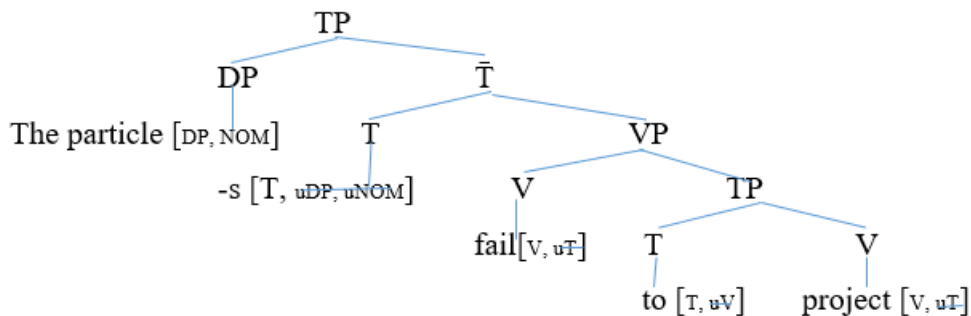
infinitive-*to* carries the tense feature (Wurmbrand, 1998, 2014). Looking at the V *say*, it is in an uninflected base form, and possesses an interpretable [V] feature; its spec-feature indicates that it needs a specifier as its external argument. As for the complement-feature, it requires a complement. The V *say* also carries at least [uT] feature; as a result, it merges with a lexical element carrying an interpretable [T] feature which is the infinitive particle *to*. The particle *to* carries an interpretable [T] feature, and needs a specifier as T attracts the specifier; its complement-feature shows that it requires an uninflected form of a V. The resulting constituent is a TP *to say that at first*.

(13) The structure of the control infinitive at the LF



Another SSR-infinitive structure at the PF derived through the feature checking is illustrated in example (14).

- (14) Feature checking on the SSR- infinitive at the PF (The hierarchy is adapted from Adger, 2003)



Example (14) replicates the SSR-infinitive at the PF where uninterpretable grammatical features including head, complement, specifier, case, tense and number have been checked. The observation in this study illustrates that the structure of the SSR-infinitives is the *TP*. The finding of the present study adopts Čakányová and Emonds's (2017) view that the structure of the SSR-infinitives is the *vP*. However, departs from it and dwells in the claim that the grammatical features that the syntactic elements have determine the syntactic projection. This claim is supported by Adger (2003) who states that some features are selected on a node and copied onto another one. Consequently, some of the features carried by the T *to* such as tense features are copied to the projection TP, hence the TP structure. The V *project* is in an uninflected base form, and it bears an interpretable [V] feature, it lacks both the specifier and complement. It also carries an [uT] feature; as a result, it merges with the T *to* as it has an interpretable [T] feature. The resultant phrase is TP *to project*. Once the [uT] feature of the V *project* is checked, it is deleted. The particle *to* lacks the specifier, but requires the V complement which is in the uninflected base form. In addition to the features it has, it also carries an [uV] feature. It therefore merges with V *fail* forming the VP *fail to project*. The V *fail* has an interpretable [V] feature; it lacks specifier; but has TP as its complement clause. It also bears uninterpretable [T] feature. Subsequently, the V *fails* merges with the T-*s* suffix indicating the tense of the verb *fail*. This T *-s* suffix bears an interpretable [T] feature, its complement is the verb *fail*, and it requires the specifier in a singular form that will be assigned a nominative (NOM) case or a subject, hence the uninterpretable features [DP, NOM]. To satisfy the uninterpretable features carried by the T *-s*, it then merges with the DP *the particle* which is in the singular form, and bears the interpretable [DP, NOM] features. The resulting structure of the whole construction is TP *the particle fails to project*.

At the LF, the present study reveals that the structure of the SSR-infinitives is still the TP as shown in example (15).

- (15) [TP DP [D *The* [N *particle* VP [V *fails* TP [DP *t* [T *to* VP [DP *t* [V *project*]]]]]]]]]  
(Recorded as example (14), but repeated here as example (15) for ease of reference)

Example (15) shows the structure the SSR-infinitive at the LF. The reflection in the current study is that the structure of the SSR-infinitives at the LF is the TP. Wurmbrand (1998) gave contrasting results to what the present study reveals in (15). Wurmbrand (1998) observes that the TP is the structure of the re-structuring infinitives, and that the SSR-infinitives do not belong to the re-structuring infinitives but to the non-re-structuring infinitives. For this reason, their structure is not the TP. Similarly, Čakányová & Emonds's (2017) findings noted that on the basis of the size and the general internal structure, the SSR-infinitives have the vP structure. With the present study, the structure of the SSR-infinitives is the still TP as both the control and SSR-infinitives are derived in a similar fashion. Furthermore, in any type of construction, the infinitive-*to* has an interpretable [T] feature, so it belongs to the tense category starting from the ME as shown by Tanaka (1997), and Nakagawa (2001). Since a head word, also known as a daughter node passes its features onto a mother node (Adger, 2003), the structure of the SSR-infinitives is therefore, the TP. The only difference identified between the structure of the SSR-infinitives at the PF and LF, is that the ones at the PF involve only the pronounced syntactic elements whereas at the LF meaning is incorporated.

Furthermore, the current analysis suggests that the subject-less conventional infinitives have no uniform structure because they can have the IP, vP and TP as their structure depending on the theory and concepts adopted. This revelation conforms to Wurmbrand's (1998) reflection that most of the researchers assume the re-structuring and non-re-structuring infinitives to have similar syntactic structure. However, the application of the re-structuring approach modifies their structure and properties.

## CONCLUSION

The aim of this paper was to describe the structure of the English subject-less conventional infinitives. The researcher assumed that the structure of the subject-less conventional infinitive

embedding varies. On the basis of the findings, this paper proves the assumption right as the structure of the subject-less conventional infinitives can be IP, TP, and vP at the PF and LF. The present study concludes that the structure of both the control and SSR-infinitives at both syntactic levels, that is, the PF and LF is the same, what leads to different structures is the adopted theoretical concepts.

## **RECOMMENDATIONS**

This study was limited to the structure of the subject-less conventional infinitives only. It did not focus on the subject-to-object raising infinitives (SOR-infinitives). Therefore, based on the findings of the current study, the researchers recommend that future research should be done on the structure of the passivised SOR-infinitives at the LF as it seems to be problematic. Both the object control and SOR-infinitives seem to be similar and quite confusing with regard to their subjectness; as a result, the present study recommends further research on their structure.

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