



Language Teaching Research Quarterly

2017, Vol. 2, 12–21



A Comparative Study of Government and Binding Theory and Minimalist Theory in English, Persian and Turkish

Ali Akbar Jabbari^{1,*}, Mina Hosseini², Aysan Kolahdouzpour³

1Yazd University, Yazd, Iran

2MA Student in TEFL, Yazd University, Iran

3MA student in linguistics, University of Mohaghegh Ardabili, Iran

Received 18 March 2017 Accepted 9 June 2017

Abstract

This research is aimed to show the efficiency and sufficiency of Minimalist Theory in comparison with government and binding, to this end, absolute tenses of past, present and future of three languages (English, Persian and Turkish) were first analyzed within government and binding theories then the results of this analysis were compared with minimalist theory. Government and Binding theory helps to design computational model in natural language processing. It was developed principally by Noam Chomsky in the 1980s (Chomsky, 1993) also, Minimalism refers to a program under the Principles and Parameters Theory, which started in 1993 with a paper by Noam Chomsky (Boeckx, 2006). Data of this study was gathered by library facilities such as books also one of the authors is native speaker of Turkish language.

Data analyses revealed that not only minimalist theory is more sufficient and efficient than Government and binding Theory but also it was more economical.

Keywords: *Government and Binding Theory, Minimalist Theory, English, Turkish, Persian*

Introduction

Persian has a standard subject-object-verb (SOV) word order. Also, It's a pro-drop language, the subject of a sentence is often not apparent until the end of the verb, at the end of a sentence (Dabir-Moghaddam, 2006)

Modern English has a subject–verb–object (SVO) word order. Additionally, Modern English syntax language is moderately analytic. It has developed features such as modal verbs and word order as resources for conveying meaning. Auxiliary verbs mark constructions such as questions, negative polarity, the passive voice and progressive aspect.

The most common order of Turkish transitive sentences is subject–object–verb (SOV). The word order serves to express the theme and focus (rheme) of the sentence. The sentence initial portion is associated with the topic, the position just before the verb is used for the focus, and the post verbal position is used for background or clarifying information (Schachter, 1990).

Minimalism refers to a program based on the Principles and Parameters Theory, which started in 1993 with a paper by Noam Chomsky (1995). The program underlines the Principle of Economy in establishing the necessary elements for a universal grammar in which all representations and processes used to derive them are to be as economical as possible. The MP is based on the assumption that Universal Grammar constitutes a perfect design in the sense that it contains only what is necessary to meet the logical and phonological needs (according to AYDIN and ŞEKER; 2013) as cited in Boeckx, 2006).

A syntactic analysis was carried on the data of all three languages on the basis of Chomsky's GB model and then the results were compared with minimalist theory. The Tree diagrams of three time characteristics of simple past, present and future of three languages (Persian, Turkish, English) were first analyzed based on Government and Binding Theory then the results were accounted by minimalist theory to show that how minimalist theory is more sufficient and efficient to do. Furthermore, the methodology used in this research was based on the study of library facilities such as books, journals, articles, local media such as television and radio.

Review of Literature

Literature on the area of comparative syntactic study of minimalist and government and binding theory is rare. Aydin & Seker (2013) in an article entitled a comparative studied English and Turkish syntactic structures within the terms of the minimalist program, the aim of the study was to represent Turkish language according to the principles of the Minimalist Program and to discuss how Turkish and English behave with regard to this concept. The study tries to introduce sample Turkish and English sentence and phrase structure analysis comparatively in terms of Minimalist Approach and thus suggesting some solutions to Turkish particular differences in the scope of the Minimalist Program.

Timyam (2003) in an article entitled, a comparative study of double- object construction in English and Thai applied the minimalist program and construction grammar. This article studies the double-object construction in English and Thai within the frameworks of the Minimalist Program and Construction Grammar. It tried to examine the cross-linguistic properties of this construction to see if these properties could answer the controversial question of why only a small group of verbs can occur in double-object patterns. The results of the comparative study led to two major conclusions. First, they revealed that the double-object construction, involving

three NP arguments, is associated with a set of closely related senses of transfer such a semantic constraint and a syntactic property of the construction, i.e., the interaction between roles which accounted for its restricted occurrence. That is, the distribution of this linguistic structure is motivated by the meaning of the construction and the fusion of the construction's argument roles and the verb participant roles. Second, the results of the study show that a linguistic theory that aims to explain this argument structure should include syntax, semantics, and distribution in its scope of analysis.

Theoretical framework

One of the major simplifications in GB Theory concerned the status of X-bar Theory. As we saw above, X-bar Theory was taken to be a constraining module of acting on the phrase structure component of the grammar. In GB Theory, X-bar Theory replaced the phrase structure component altogether, and it took on the role of a constraint on actual structures rather than on the rules responsible for these structures.

The projection principle

A principle which ensures that lexical information remains constant at all levels of syntactic representations (e.g. D-structure and S-structure). A lexicon enters at D-structure with the insertion of lexical elements. This information is then projected into the structure information in accordance with X-bar principle.

The next section shows how the Projection Principle also serves to prevent this information from being changed by the action of transformation.

At the bottom is the VP supplying the basic thematic elements which make up the proposition? Recall that under the VP-Internal Subject Hypothesis, the underlying position of the subject in the specifier of the VP. So the VP contains the verbal predicate and all its arguments at the level of D-structure, though the subject moves out of the VP at S-structure. Next above the VP is the inflectional IP system which provides the distinctions of finiteness through the introduction of an inflectional head I. Its specifier is the surface position of the subject, as represented in figure 1. Finally, at the top comes the complementizer CP system which introduces the force of the clause: i.e. whether it is declarative or interrogative (Cook & Newson, 2007).

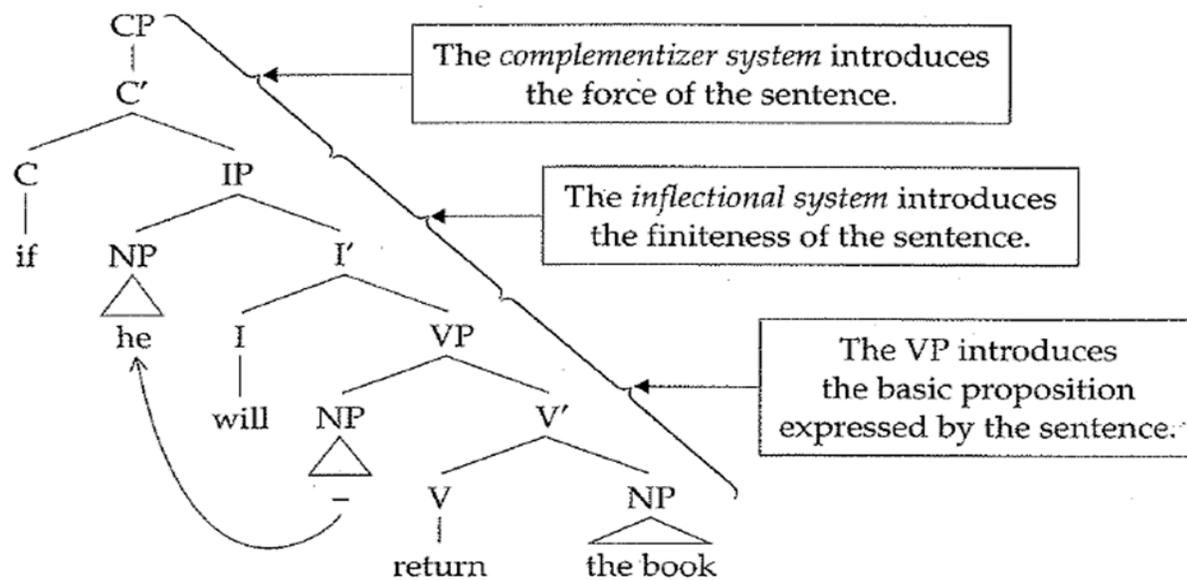


Figure 1. Surface position of the subject

The most recent outgrowth of the Principles and Parameters approach is the Minimalist Program (MP). MP explores the possibility that the content attributed to UG is an optimal way of satisfying requirements imposed on the language faculty by the external systems that the language faculty interfaces with and is characterized by optimal, computationally efficient design. Language is assumed to contain a lexicon and a computational system. The computational system is embedded in two performance systems: articulatory-perceptual and conceptual-intentional. Two linguistic levels, namely, Phonological Form (PF) and Logical Form (LF), are postulated as interfaces with the performance systems. Each linguistic expression, generated by the computational system, is a pair of representations at PF and LF. A computation converges at the interface levels if its structural description contains only legitimate PF and LF objects, with all of their morphological features satisfied, otherwise, it crashes. However, defining linguistic expressions simply as pairs (P, L) formed by a convergent derivation and satisfying interface conditions does not suffice; the operations of the computational system that produce linguistic expressions must be optimal, in the sense that they must satisfy some general considerations of simplicity and efficient design. (Shigeru, 2010)

Data analyses

The head of IP which is "I" contains interpretable Tense feature which determine which tense the sentence belongs to and uninterpretable number and person features. The uninterpretable features number and person are checked with the specifier of IP which is the subject of the sentence when this checking is done then these uninterpretable number and person features on

the "I" is checked and deleted. This is the end of derivation. So for present tense the head of IT, "I", contains [interpretable +present and uninterpretable number (singular) and person (third person) which results in the third person singular present tense inflectional "-s" marker (figure 5b).

English language past tense:

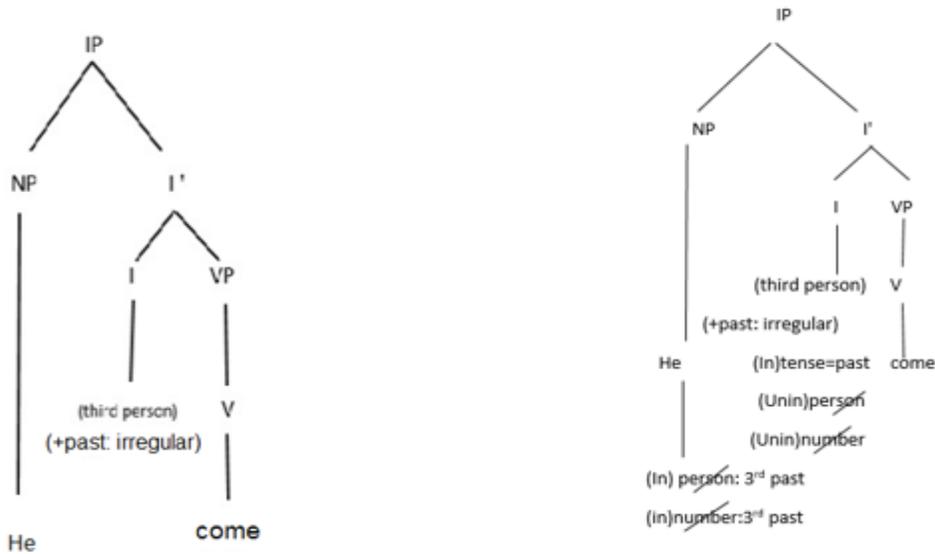


Figure 2 a & b

Persian language past tense:

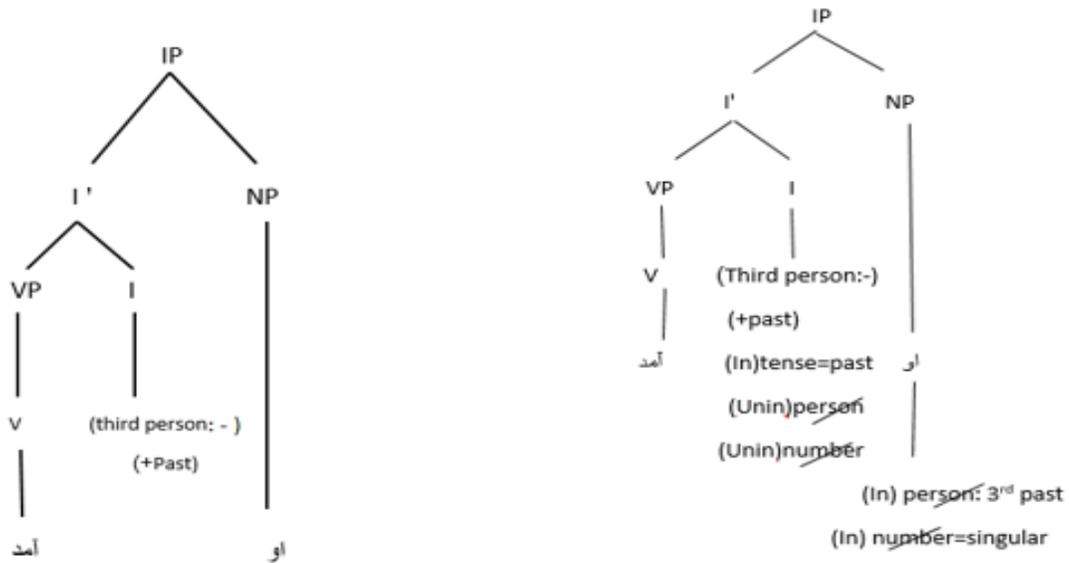


Figure 3 a & b

Turkish language past tense:

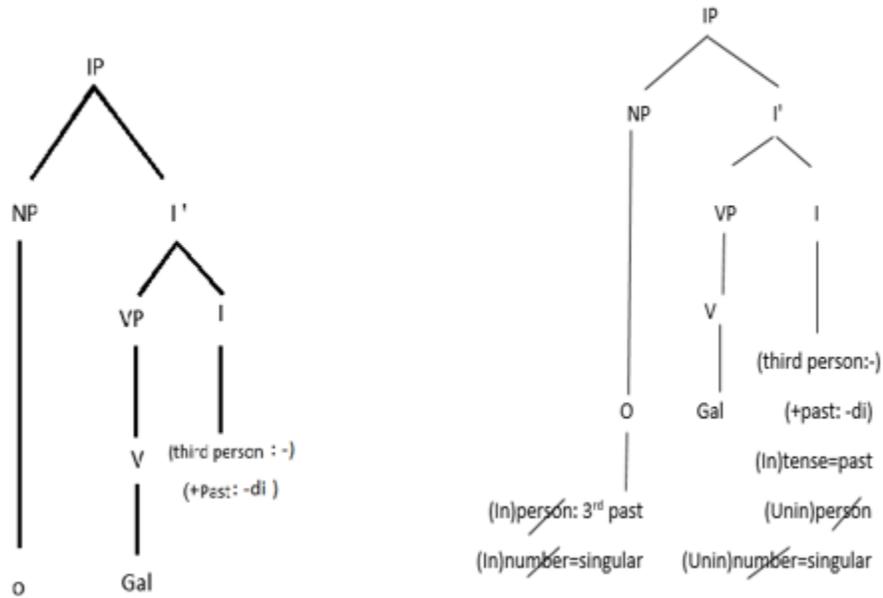


Figure 4 a & b

English language present tense:

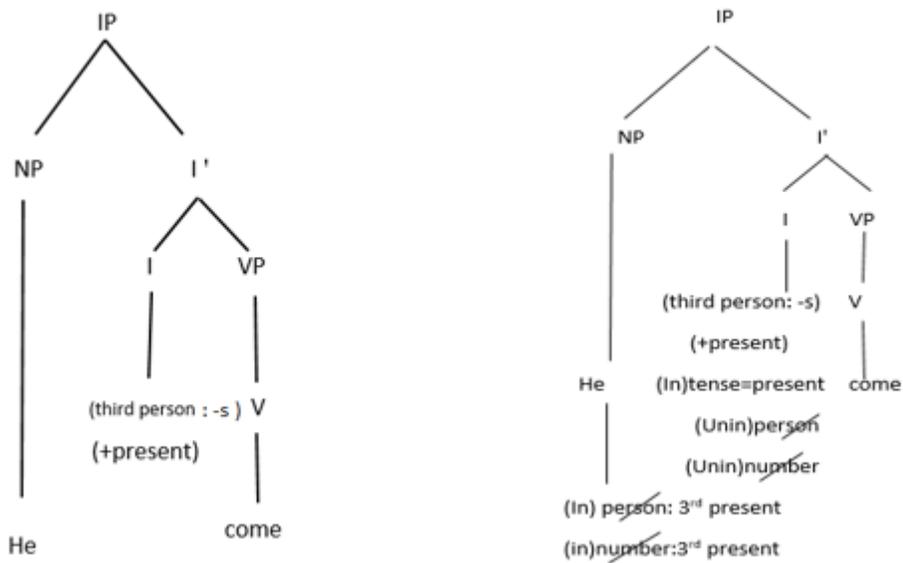


Figure 5 a & b

Persian language present tense:

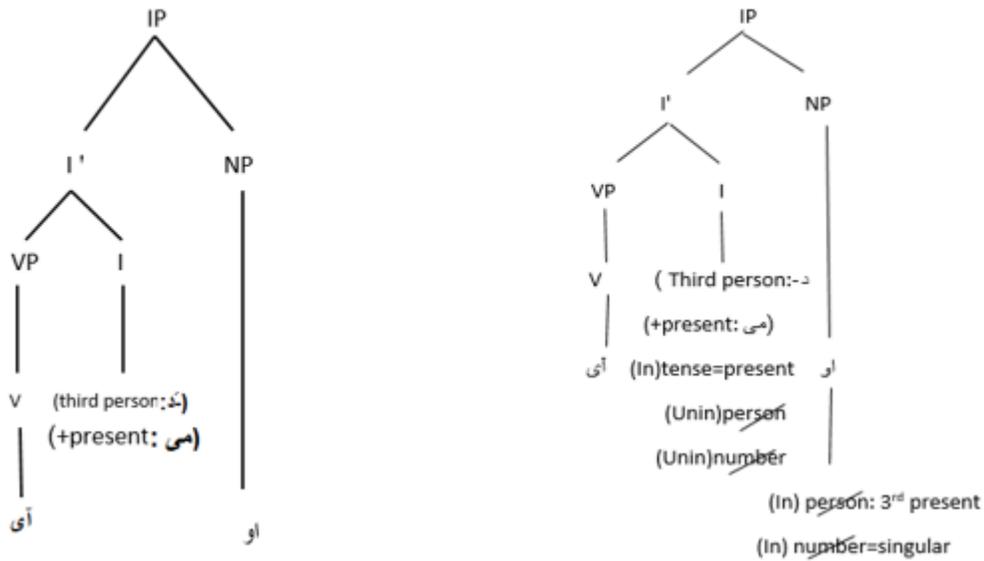


Figure 6 a & b

Turkish language present tense:

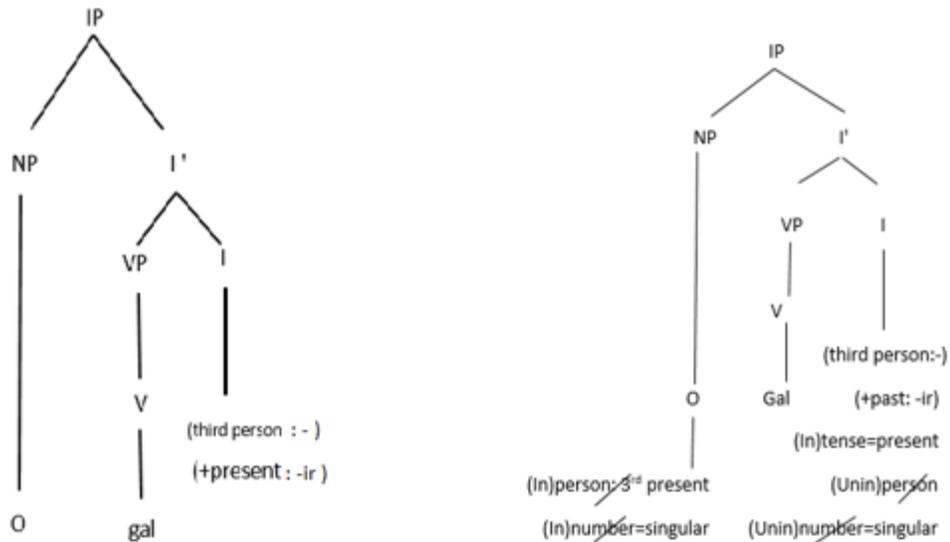


Figure 7 a & b

English language future tense:

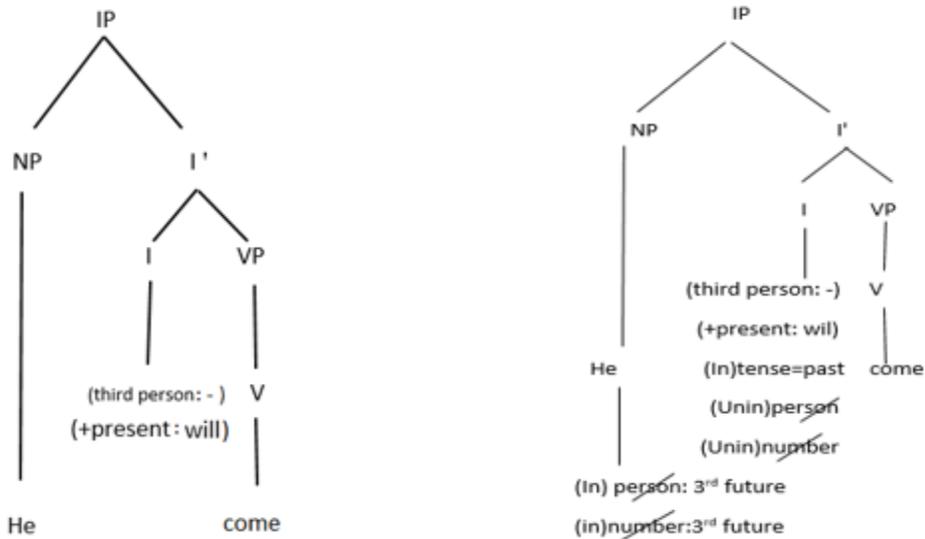


Figure 8 a & b

Persian language future tense:

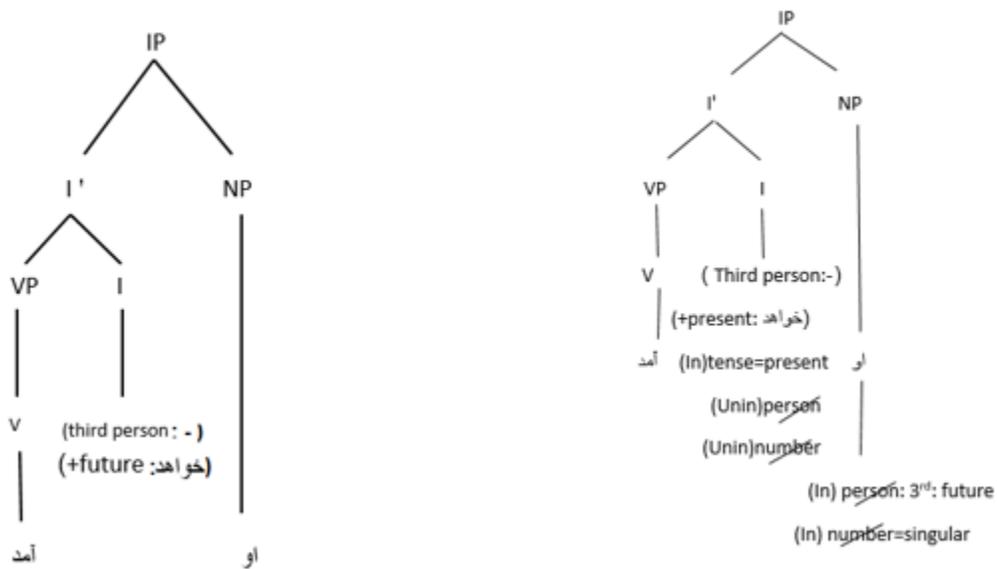


Figure 9 a & b

Turkish language future tense:

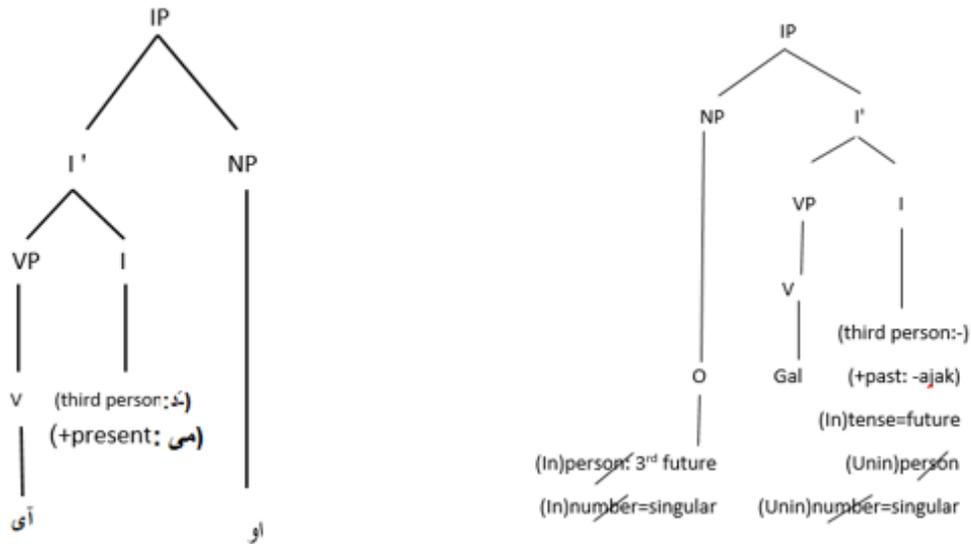


Figure 10 a & b

In GB subject-verb agreement is determined by the external argument. (Persian: u: Turkish: O, English: He) and the head of IP which is I 'however; in MP the head of IP, i.e., I has an interpretable feature of tense and two uninterpretable features of person and number. These uninterpretable features should be checked by interpretable features of specifier of IP, i.e. NP which contains two interpretable features, person and number. When these features are checked, then the uninterpretable person and number features of I 'are checked and deleted.

Conclusion

A finite T in English contains a tense affix which is strong enough to attract an auxiliary-like light verb to move to T, not a lexical verb. we noted that one implementation of this idea would be that a finite T in present-day English can either be filled by a strong affix which requires an auxiliary as its host and so with the affix being lowered onto V in the PF component. In other word the head of TP, i.e, T contains the interpretable feature tense and it should check its counterpart, i.e, uninterpretable tense of the verb of VP. Moreover, the head of TP (T) also is uninterpretable in subject verb agreement while the specifier of TP is interpretable in nominal case feature and when these features are checked then the subject-verb agreement is determined. However, GB requires different modules to determine tense marker on the one hand and subject-verb agreement on the other hand. Therefore, one can claim the both tense marker and subject-verb agreement are instantiated more explicitly and economically via minimalist program than GB (White, L. 1991).

References

- Aydin, I., & Seker, E. (2013). *A comparative study on English and Turkish syntactic structures within the terms of the Minimalist program*. International Journal of Linguistics, Vol. 5 No 1. doi:10.5296/ijl.v5i1.3308
- Boeckx, C. (2006). *Linguistic Minimalism. Origins, Concepts, Methods and Aims*. Oxford: Oxford University Press.
- Chomsky, N., & Lasnik, H. (1993). *Principles and Parameters Theory*, in *Syntax: An International Handbook of Contemporary Research*. Berlin: de Gruyter.
- Cook, V. J., & Newson, M. (1940). *Chomsky's universal grammar: an introduction*. Blackwell publishing.
- Dabir-Moghaddam, M. (2006). Internal and external forces in typology: Evidence from Iranian languages. *Journal of Universal Language*, 7, 29–47. Retrieved from www.iranianlinguistics.org/.../7-02-mohammad_dabir-moghaddam1.pdf
- Shigeru, M. (2010). *Minimalist syntax Essential readings*. Blackwell publishing.
- Schachter, J. 1990. On the issue of completeness. *Second Language Research* 6, 93-124.
- Timyam, N. (2003). *A comparative study of double-object construction in English and Thai: The Minimalist program and construction grammar*. Working papers in linguistics- University of Hawai'i at Manoa, Vol. 34(4).
- White, L. 1991. "Adverb placement in second language acquisition: some effects of positive and negative evidence in the classroom. *Second Language Research* 7: 133-61.