

**The Ezafe Phrase in Persian:
How Complements are added to N°s and A°s**

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ABSTRACT

This paper investigates the Ezafe Phrase (EzP), a functional phrasal category specific to Persian. The EzP is headed by a morpheme which may be phonetically realized as *e/ye* or null \emptyset . This morpheme regulates the occurrence of more than one complement in DPs/NPs and APs. The analysis follows the Minimalist framework of Chomsky (1995, 2000, 2001) and adopts Kayne's (1994) Linear Correspondence Axiom (LCA) which examines the relation of hierarchical structure and linear order based on the antisymmetry of syntax. Presenting a comprehensive analysis of this construction, the paper concludes that this functional category follows the general Spec-Head-Complement configuration proposed by the LCA.

Keywords: 1. Syntax 2. Functional category 3. Minimalist program 4. Complement 5. Antisymmetry.

1. Introducing the Construction

One of the peculiar features of Persian syntax which has a significant role in the phrase structure of this language is what has been traditionally called the "Ezafe Construction". The term *Ezafe* literally means "addition", and refers to the unstressed morpheme *e/*¹ which appears between the head of a phrase and certain modifiers and complements following the head. The Ezafe construction occurs in noun phrases and adjective phrases, as shown in (1):

- (1) a. *in pesar-e bāhuš*
this boy Ez clever
"this clever boy"
b. *farār-e bozorg*
escape Ez great
"the great escape"
c. *alāqemand-e musiqi*
interested Ez music
"interested in music"
d. *violonzan-e ruye bām*
fiddler Ez on roof
"Fiddler on the roof"
e. *dānešju-ye alāqemand-e zabānšenāsi*
student Ez interested Ez linguistics
"the student interested in linguistics"

In (1a), the Ezafe construction *e bāhuš* "Ez clever", which is comprised of "Ez +

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A", is the complement of the DP *in pesar* "this boy". In (1b), the Ezafe construction *e bozorg* "Ez great", which again is "Ez + A", is the complement of the N° *farār* "escape". In (1c), the Ezafe construction *e musiqi* "Ez music", which is "Ez + N" is the complement of the A° *alāqemand* "interested". In (1d), the Ezafe construction *e ruye bām* "Ez on roof", which is "Ez + PP", is the complement of the N° *violonzan* "fiddler". And in (1e), two Ezafe constructions are used: first, *ye alāqemand-e zabānšenāsi* "Ez interested Ez linguistics", which is "Ez + AP" is the complement of the N° *dānešju* "student", and second, *e zabānšenāsi* "Ez linguistics", which is "Ez + NP", is the complement of the NP *dānešju-ye alāqemand* "student Ez interested". Before presenting my analysis of this structure, certain aspects of this construction will be clarified through reference to previous studies.

2. A Review of Previous Works on the Ezāfe Construction

Traditional studies have normally surveyed the Ezafe construction in terms of the semantic relation expressed by the construction. Tabaian (1974) suggests that although the Ezafe has received a great deal of attention in almost all grammars on Persian, these treatments usually do not go beyond a classification of Ezafe constructions into several types. In the majority of the available classifications, the reader is usually provided with a description of the constituents of the Ezafe coupled with some remarks about the semantic contents of the constituents. In the generative literature on Persian syntax, Tabaian (1974) is the first linguist who tries to give a new analysis for this construction based on Chomsky (1965). He considers the Ezafe construction as a contracted form of an independent clause which is transformed into a phrase through a syntactic process. In other words, this construction results from a series of transformations (addition, substitution, deletion) applied to the structures like (2a), yielding (2b):

- (2) a. man ketāb-i xarid-am va ketāb sabz bud.
I book-a bought-I and book green was
 "I bought a book, and the book was green."
 b. ketāb-e sabz-i xarid-am
book Ez green-indefinite bought-I
 "I bought a green book."

To derive (2b) out of (2a), Tabaian utilizes the following consecutive transformations to produce the resulting construction. These transformations and their step-by-step outcome are shown in (3):

- | (3) Transformation | Phasic Result |
|-------------------------------|----------------------------------------------------------------------------------------------|
| I. "ke" insertion | ⇒ man ketāb-i xaridam va ke ketāb sabz bud
<i>I book-a bought and that book green was</i> |
| II. "va" deletion | ⇒ man ketāb-i xaridam ke ketāb sabz bud |
| III. pronominalization | ⇒ man ketāb-i xaridam ke un sabz bud
<i>it</i> |
| IV. pronoun deletion | ⇒ man ketābi xaridam ke sabz bud |
| V. copula deletion | ⇒ man ketābi xaridam ke sabz |
| VI. "ke" deletion | ⇒ man ketābi xaridam sabz |
| VII. ezafe insertion | ⇒ man ketāb sabz-i xaridam |
| VIII. ezafe particle addition | ⇒ man ketāb-e sabzi xaridam
<i>Ez</i> |

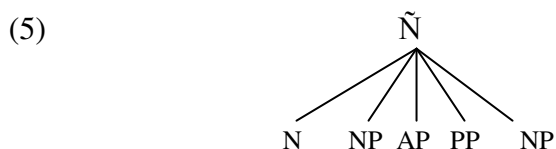
Although Tabaian's analysis is a novelty in the field and proposes a purely syntactic account for the structure under investigation, it is not compatible with the recent views

in generative syntax and especially the theoretical foundations of this paper.

Samiian (1983) is the next generative linguist who studies the Ezafe construction within the framework of the Extended Standard Theory and in particular X-bar theory. The core idea of Samiian is that in the Ezafe construction, the Ezafe morpheme /e/ is transformationally inserted before each phrasal complement. She gives the following rule to account for the presence of the Ezafe vowel:

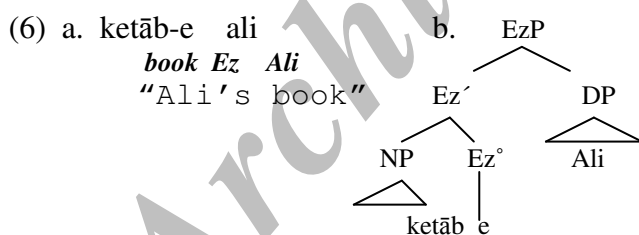
- (4) *Ezafe Insertion Rule*
 $X^{\max} \longrightarrow e + 1$ when X^{\max} is immediately dominated by Y' , $X \& Y \neq V$

This rule inserts the Ezafe vowel before every non-verbal phrasal category that occurs below the X' level. To see how Samiian's Ezafe Insertion Rule works, we apply this rule to the case where X^{\max} is an NP. She proposes the following structure as the base configuration for N' , with all the Ezafe-bearing complements generated as right sisters of the head:



The outcome of applying the Ezafe Insertion Rule to her NP-configuration would mean that the vowel *e* will occur before each of the phrasal constituents under \tilde{N} .

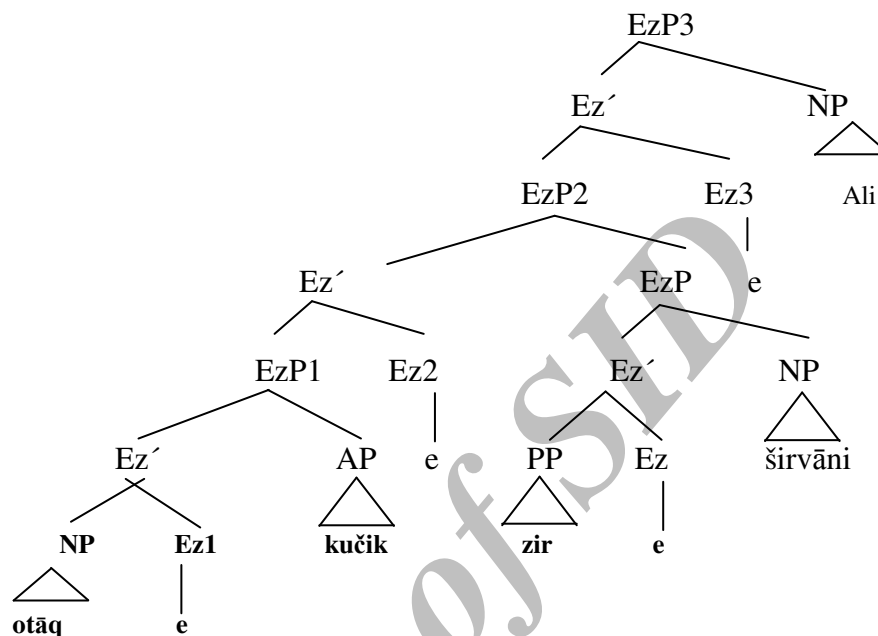
In her dissertation, Mahootian (1993) introduces a new theoretical analysis of the Ezafe construction, suggesting for the first time that it is a phrase, and proposes the Ezafe Phrase, which has the Ezafe morpheme as its head. Working within the G-B framework, Mahootian, unlike Samiian, does not use any transformational rules. She gives a small clause analysis to Ezafe Phrase and proposes the structural analysis shown in (6):



As shown in (6), Mahootian proposes that Ez° is a functional element and the head of its construction, with the DP *Ali* as the specifier of the EzP . Apparently, the sister to Ez° should be its complement which gives the NP *ketāb* "book" this status in the structure of this phrase. This analysis of the EzP assumes a head-final configuration for this construction. Although I agree with Mahootian that the Ezafe Construction represents a phrasal category, some refinements to her analysis will be suggested. First, in spite of treating the sister of the Ez° as its complement, Mahootian avoids the use of the term "complement" for this position. Her failure to do so raises questions about the status of the NP *ketāb* "book" in this tree. She correctly states that the DP *Ali*, which she supposes as the specifier of the phrase, functions semantically as the modifier of the NP *ketāb* in the complement of Ez° . But what justifies the modification of a complement by the specifier of the same phrase is something that Mahootian ignores, and is contradictory to the assumption that the role of the specifier and the complement are defined relative to the head of the phrase not to each other. Another problem with

Mahootian's analysis occurs when the NP *ketāb* is modified by more constituents. To clarify the problems borne out by her analysis, notice the treatment of an NP whose head has more than one modifier, based on her proposed model:

- (7) a. *otāq-e kučik-e zir-e širvāni-e ali*
room Ez small Ez under Ez roof Ez Ali
 "Ali's small room under the roof"
 b.

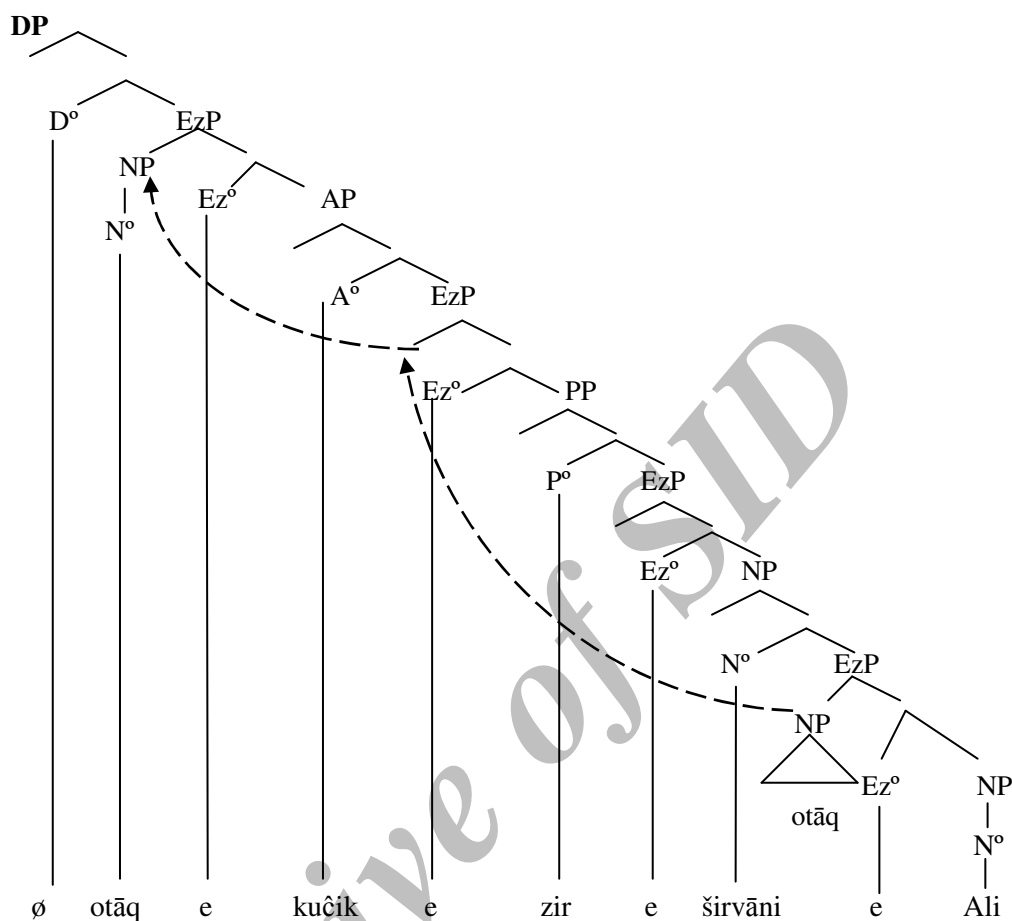


As (7b) shows, in the case where there are more modifiers for the NP which in her analysis is in the complement position of the Ez° , she builds up another EzP and puts the previous EzP in its complement position. In this way, EzP2 and EzP3 are generated. Mahootian's proposal treats the NP in (7a) as the projection of the highest head Ez° in (7b). This analysis does not reflect the nature of the NP in (7a). In fact, the head of the construction which projects and gives its label to the total is not the Ez° , but it is the N° *otāq* "room". The projection of the N° *otāq* "room" produces the NP in (7a). Furthermore, this analysis does not reflect selectional properties since the semantic modifiers of the head noun appear as specifiers of the higher EzPs to which they bear no semantic relation.

Due to these shortcomings, Mahootian's analysis of the EzP should be revised to reflect the categorical features of this construction. Thus, based on the LCA assumptions, I propose a head-initial phrasal category for the EzP whose head is the morpheme *e* with its complement to the right and its specifier to the left. Based on this analysis, and following the DP Hypothesis, (7a) will have the tree in (8), in which the null D° , head of the DP, selects an EzP as its complement to the right. The complement of this EzP is an AP. Then, another EzP will be selected as the complement of this AP. The complement of the second EzP is a PP. Then, this PP will select an EzP as its complement. The complement of this EzP is an NP. Later, this NP selects the lowest EzP as its complement. In the last stage, another NP will be chosen as the complement of the lowest EzP. The N° *otāq* "room" originates in the Spec of the lowest EzP which makes its semantic relation with the lowest NP "Ali" possible. This N° moves higher up, not as a head but as an XP, and, bypassing Spec NP and Spec PP which are potentially filled with relevant XPs, lands in the Spec of the intermediate EzP where it fulfils the semantic relation of *otāq* "room" with the PP *zire širvāni-e Ali*. In the last stage, the maximal projection NP containing the N° *otāq* "room" moves higher up and lands in the

Spec of the highest EzP and will be realized as the N° *otāq* “room”, yielding the PF realization of the DP. The foregoing process is illustrated in (8):

(8)



This analysis for EzPs which follows the general Spec-Head-Complement order is similar to the structure of VPs proposed by Larson (1988, 1990), in that N originates in lower shells and then moves up. Also, the movement of the head N° as a part of the movement of an XP is similar to the analysis of Shlonsky (2000) for movement in Semitic noun phrases.

The most recent work on the Ezafe construction is Ghomeshi (1996) whose treatment is based on Ezafe Insertion as proposed by Tabaian (1974) and elaborated in Samiian (1983). She suggests that the presence of the Ezafe vowel³ is accounted for by a rule inserting it at PF on X°s bearing the feature [+N] that are followed by another item (Ghomeshi 1996: p.76). Given that transformations of the kind used in Samiian (1983) are no longer thought to belong to syntax proper, she reformulates Samiian Insertion Rule (4) as a post-syntactic rule and states that this rule takes place in the spell-out component at PF. Her final version of the Ezafe Insertion Rule (4) is as in (9):

(9) *Ezafe Insertion Rule*

“Insert the vowel *e* on an X° that bears the feature [+N] and is followed by another non-affixal constituent within the same extended projection.”

Both the analyses of Samiian and Ghomeshi propose solutions based on Ezafe Insertion, an Insertion which appears to be assumed other than syntactically motivated.

3. The Ezafe Phrase: A Proposal

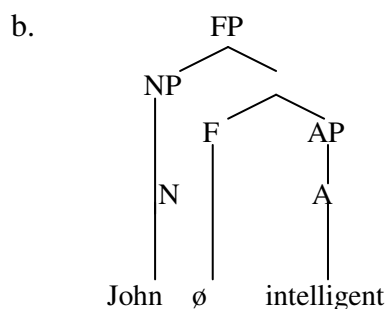
This paper adopts Chomsky's Minimalist Program (Chomsky 1998, 1999) and Kayne's Linear Correspondence Axiom as proposed in his *Antisymmetry of Syntax* (1994)⁴. The analysis proposed for the Ezafe phrase as sketched in (8) basically differs from Tabaian (1974), Samiiian (1983), and Ghomeshi (1996) in that they consider the Ezafe morpheme as a transformationally inserted vowel before each phrasal complement, while this paper treats the Ezafe morpheme as the head of a phrasal category which serves as the complement of another head. In this regard, this paper agrees with Mahootian (1993) who analyzes the Ezafe morpheme as the head of EzP. But this analysis differs from Mahootian's in that she proposes a small clause analysis for EzP while this paper treats the EzP as the complement of the head of a non-verbal phrasal category. As mentioned earlier, the advantage of treating Ezafe as the head of EzP over proposing Ezafe insertion is that this analysis does not require transformational rules⁵. Now notice why Mahootian's (1993) small clause analysis of the EzP can not be accepted.

EzP, as mentioned before, is a structure basically restricted to non-verbal phrasal categories. EzP can be the complement of any N°, A°, heads of NP and AP. In cases where there is more than one complement in a nominal phrase which necessitates a movement analysis inside DPs, as we saw in (8), the EzP will be selected by D°, head of DP. In case of PPs, considering the fact that P° is the head of PP, its complement will be an NP which, in turn, has N° as head, and this N° can select another EzP as its complement to the right. On the other hand, inside the EzP, in appropriate positions, there is the possibility to have other EzPs. This point is illustrated in (1e), repeated here for convenience as (10):

- (10) *dānešju-ye alāqemand-e zabānšenāsi*
student Ez interested Ez linguistics
 "the student interested in linguistics"

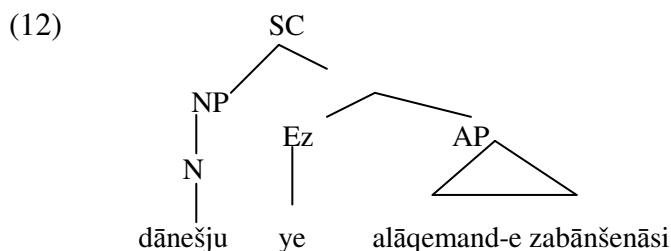
In (10), at first, the EzP *ye alāqemand-e zabānšenāsi* "Ez interested Ez linguistics" functions as the complement of the N° *dānešju* "student", and later another EzP *e-zabānšenāsi* "Ez linguistics" functions as the complement of the A° *alāqemand* "interested". This recursivity is confined only by the restrictions imposed on the order of the elements inside Persian DP. The repeatability of EzP is the main factor which prevents us from supposing a small clause analysis for the relevant structure in Persian. To clarify this point, the analysis of an English small clause (11a, b) with a Persian Ezafe Phrase will be compared. This analysis is from Haegeman (1994) which states that a small clause is in fact a maximal projection of a functional head F, an abstract head which does not dominate overt material:

- (11) a. I consider [_{SC} John intelligent].

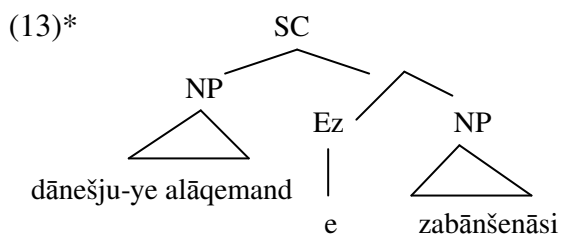


In (11a), the bracketed part [John intelligent] is a small clause, with "John" as its

subject and “intelligent” its predicate as shown in (11b). This analysis can be applied to a Persian structure like (10) yielding (12):

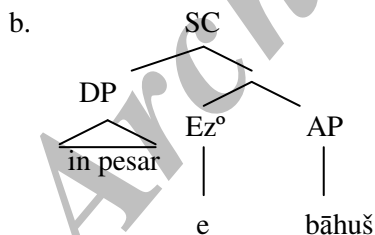


In a small clause analysis of (12), the subject of the small clause is *dānešju* “student”, and its predicate is *alāqemand-e zabānšenāsi* “interested in linguistics”. Up to this point, the analysis is applicable. But when the principle of repeatability of EzP appears, the small clause analysis cannot apply. Therefore, *dānešju-ye alāqemand* “student Ez interested” can not be the subject of a small clause whose predicate is *zabānšenāsi* “linguistics” yielding (13):

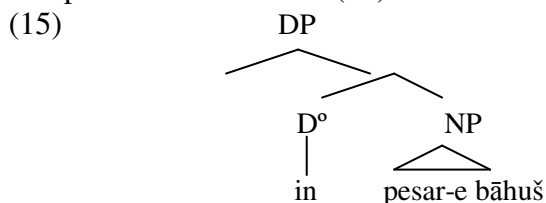


This observation makes me abandon the small clause analysis for this structure and follow the EzP analysis consistently. An additional reason for abandoning a small clause analysis of this construction is illustrates in (14):

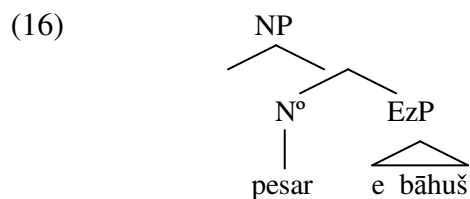
- (14) a. *in pesar-e bāhuš*
 this boy Ez clever
 “this clever boy”



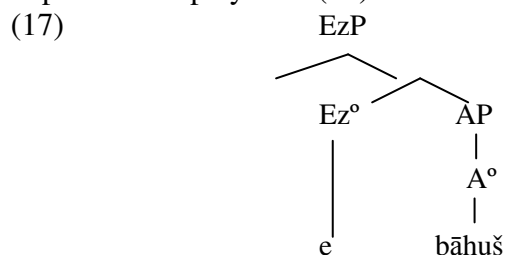
(14b) implies that SC is the maximal projection of Ez. *In pesar-e bāhuš* “this clever boy” is a DP with *in*⁶ “this” as its head, and *pesar-e bāhuš* “boy Ez clever” as its complement as shown in (15):



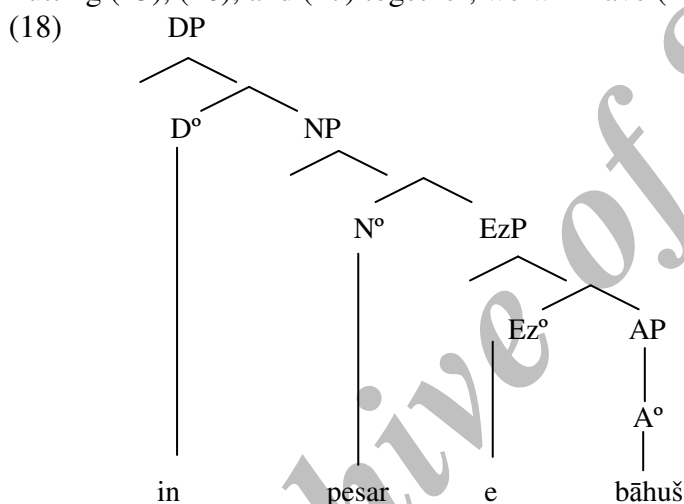
The complement of D° is an NP headed by N° *pesar* “boy” and EzP *e bāhuš* “Ez clever” as its complement shown in (16):



EzP in (16) is a maximal projection headed by *e* with AP *bāhuš* “clever” as its complement displayed in (17):



Putting (15), (16), and (17) together, we will have (18):



More EzPs can be added to the structure as long as the internal structure of DP allows, an advantage which is absent if we suppose a small clause analysis.

Another point which should be considered in the analysis of EzP is about the phonological positioning of Ez°, the head of EzP. In this regard, I agree with Samiiian (1983) that phonologically, the Ezafe is attached to the preceding element, while it is syntactically motivated by the relationship between the head N° or A° and the phrasal modifier; and therefore, it is triggered by the occurrence of the latter. Thus, in (1b), repeated here as (19), the Ez° *e* constitutes a phonological unit with the preceding element yielding *farār-e*, but syntactically, *e* combines with the following element to form the syntactic unit *e bozorg*:

- (19) a. *farār-e / bozorg* (phonological realization)
 b. *farār / e bozorg* (syntactic categorization)

Generally, researchers (e.g. Samiiian 1983: p.33) suggest that the Ezafe morpheme is obligatory, but there are cases where the Ezafe morpheme is absent from its expected position⁷. This fact is illustrated in (20):

- (20) a. *jām jahāni*
 cup world
 “the World Cup”
 b. *darvāze širāz*
 gate Shiraz

"Shiraz Square"

The equivalents of (20a) and (20b) are illustrated in (21a) and (21b) with the Ezafe morpheme phonetically realized:

- (21) a. *jām-e jahāni*
cup Ez world
 "the World Cup"
 b. *darvāze-ye širāz*
gate Ez Shiraz
 "Shiraz Square"

(21a) is exactly the same as (20a), and so is the relationship between (21b) and (20b). This observation means that the Ezafe morpheme is optional in PF.

The phonetic optionality of the head Ez° is illustrated in (22):

- (22) a. *jām-e jahāni*
cup Ez world
 "the World Cup"
 b. *jām jahāni*
cup world
 "the World Cup"
- c.
-
- ```

graph TD
 NP --> Ndeg[N°]
 NP --> EzP[EzP]
 Ndeg --> jam[jām]
 EzP --> Ezdeg[Ez°]
 EzP --> AP[AP]
 Ezdeg --> empty[Ø]
 empty --> or[or]
 empty --> e[e]
 AP --> Adeg[A°]
 Adeg --> jahani[jahāni]

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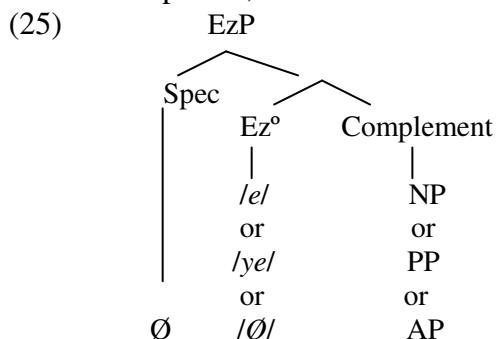
The cases of phonetically null  $Ez^\circ$  appear similar to a construction found in Arabic, Hebrew, and Russian:

- (23) a. Arabic  
*alī mašqul*  
*Ali busy*  
 "Ali is busy"  
 b. Hebrew  
*dani (hu) nehmad*  
*Dani (is) nice*  
 "Dani is nice."  
 c. Russian  
*on zanjat*  
*he busy*  
 "He is busy."

Clearly, in the constructions in (23), the unrealized constituent is the copula "be" whose position in the hierarchical relation of the clause is in Infl, and the structures in (23a, b, c) are equivalent to tensed clauses. The construction under investigation in Persian differs from these constructions in that its head, present or null, is not placed in  $I^\circ$ , but it is the head of the phrase  $EzP$  which is the complement of an  $N^\circ$  or  $A^\circ$  lacking features relative to  $I^\circ$ . In fact, the parallel construction for (23a, b, c) is ungrammatical in Persian as shown in (24):

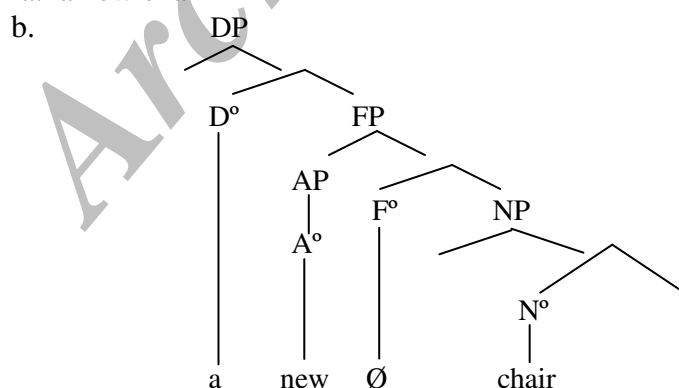
- (24) a. *gol zibā ast*  
*flower beautiful is*  
 "Flower is beautiful."  
 b. \**gol zibā*

In the analysis proposed thus far, the Ezafe construction is actually the projection of the head Ezafe, phonetically realized as *e*, or *ye* or  $\emptyset$  which subcategorizes for its complement to the right from all non-verbal phrasal categories. This maximal projection which was called Ezafe Phrase or EzP is a functional category, clearly a head-initial phrase, with a non-filled Spec, as shown in (25):



The unfilled Spec poses no problem for EzP, as we are familiar with such cases in other phrases such as TP (in Chomsky 1995). However, it is more plausible to follow Chomsky (2001) and consider the EzP a defective category which has no EPP features, thus no Spec. Supposing the EzP as a defective category reflects its characteristics better, but in order to have a parallelism between the EzP and other phrasal categories, the foregoing structure in (25) for the EzP will be used. In addition, as we saw in the analysis of complex structures like (8), in multi-complement DPs, N<sup>o</sup> originates in the Spec of the lowest EzP; and the intermediate EzP(s) are the positions which preserve the semantic relation between N<sup>o</sup> and its different complements; and Spec of the highest EzP is the landing site for N<sup>o</sup> as discussed in the analysis of (8). As for the case where the head of EzP is null, the same reasoning is applicable. This is not the first time in generative grammar that a functional phrase is proposed with a phonetically unrealized head. Following Cinque's (1995) analysis of attributive adjectives as specifiers of a functional head F<sup>o</sup>, Radford (1997) proposed that attributive adjectives are contained within a functional projection FP which has an empty functional head, as illustrated in (26):

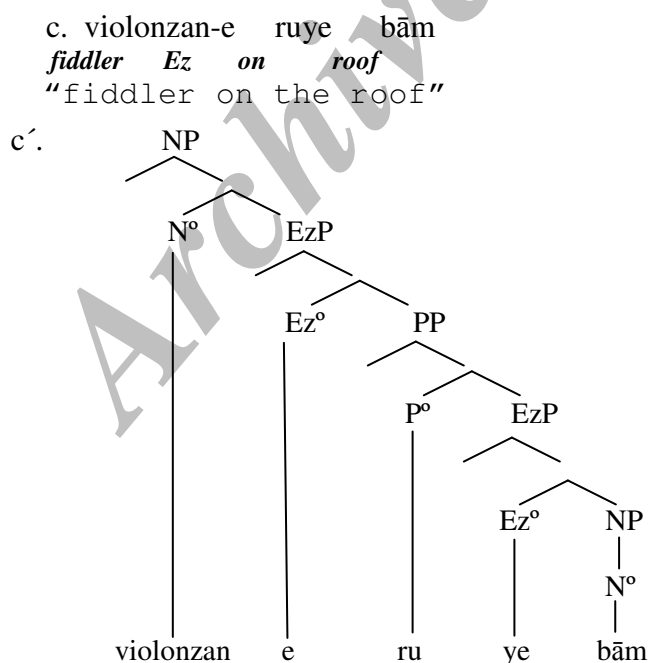
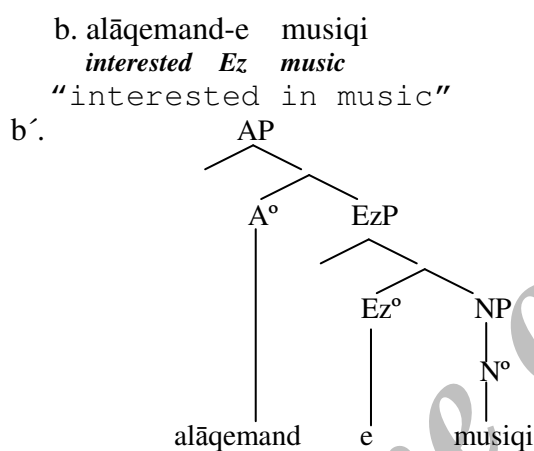
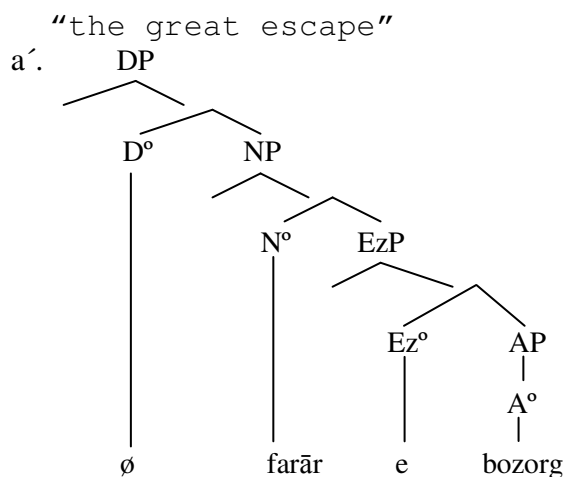
(26) a. a new chair



As (26b) shows, FP is a functional phrase selected as the complement of D<sup>o</sup> with a null head F<sup>o</sup>.

EzP, in turn, can be the complement of any supercategory [+N], as classified in Chomsky (1970). That is to say that any N<sup>o</sup> or A<sup>o</sup> can select an EzP as its complement to the right, a feature that V<sup>o</sup> and P<sup>o</sup> are lacking. No. (27) illustrates the case of EzP as the complement of N<sup>o</sup> and A<sup>o</sup>:

(27) a. farār-e bozorg  
*escape Ez great*



In the case where there is more than one EzP in a DP which implies a multi-complement N° in the nominal phrase, in order to preserve the selectional properties of the head and its complements, a movement analysis is proposed. As displayed in (8), in such complex DPs, N° originates in the Spec of the lowest EzP as the head of an NP. This analysis establishes the semantic relations between N° in the Spec of the lowest

EzP, i.e. *otāq* “room”, and the NP which is the complement of the lowest  $Ez^{\circ}$ , i.e. *Ali*. The same  $N^{\circ}$  moves up together with the other elements of the same phrase as an NP in order to establish the semantic relations with other complements of the DP. The only available slot for this XP to move to is the Spec of the intermediate EzP, because other Specs in its way are potentially filled by appropriate XPs which will be surveyed in the analysis of DPs. In the last step, for the same purpose, the NP containing the  $N^{\circ}$  *otāq* “room” moves higher up and ends in the Spec of the highest EzP and establishes the selectional properties of  $N^{\circ}$  with the highest complement in the DP. The PF realization of  $N^{\circ}$  as the head of the NP in the Spec of the highest EzP yields the word order of the DP in (10a).

#### 4. Conclusion

In this paper, a novel maximal projection was proposed for Persian, headed by a phonetically present (*e/ye*) or absent ( $\emptyset$ ) morpheme with a complement to its right. The complement of the head can be any non-verbal phrasal category. This maximal projection which was called Ezafe Projection or Ezafe Phrase or EzP is a functional category which by the operation Merge can be the complement of any [+N] supercategory, i.e.  $N^{\circ}$  or  $A^{\circ}$ . In case of multi-complement DPs where EzP is selected as the complement of  $D^{\circ}$  to its right, the same generalization is observed. This analysis of the previously called Ezafe construction follows antisymmetry of syntax as proposed in Kayne (1994) which supposes a head-initial status for all phrasal categories and gives a consistent syntactic analysis of this structure in Persian.

#### Notes

1. The morpheme for *Ezafe* is */e/*, but if the word ends in a vowel, */ye/* is used instead of */e/*, as the following examples show:

- a. *nāme-ye ali*  
**letter Ez Ali**  
“Ali’s letter”
- b. *pāru- ye čubi*  
**paddle Ez wooden**  
“the wooden paddle”
- c. *zibā - ye xofte*  
**beauty Ez sleeping**  
“sleeping beauty”

2. As a matter of fact, the idea of Ezafe insertion is not a new idea, since Tabaian (1974) introduces this transformation for the analysis of the Ezafe construction.

3. Ghomeshi (1996) suggests that “to consider the Ezafe vowel as a morpheme is problematic”. Throughout her thesis, she refers to the Ezafe morpheme as the Ezafe vowel.

4. For another aspect of the analysis of linear order, look at Phillips (2003, p.37-90).

5. For another analysis of this construction, look at Kahnemuyipour (2000).

6. Supposing *in* “this” as the head of DP is for the sake of argumentation. The realization of  $D^{\circ}$  in Persian is discussed in Moizadeh (2001). Cheng & Sybesma (1999) report that Tang (1990) regards Chinese demonstratives as instances of  $D^{\circ}$  (Cheng & Sybesma: p.527).

7. Historical evidence, too, implies the optionality of the Ezafe morpheme as the following pairs from Old and Middle Persian show:

(1) Old Persian

a. k̄āra māda (Kent 1953: DB2.16 p.121)  
p.122)

*army Median*

“the Median Army”

b. k̄āra hya manā (Kent 1953: DB2.55

*army Ez I*

“the army of mine”

(2) Middle Persian

a. mard hamrāz (Abolghassemi: 1996a p.63)

*man intimate*

“the intimate man”

b. handarz ī man (Abolghassemi: 1996b.p.226)

*advice Ez I*

“my advice”

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