Ezafe Constructions as Relative Clauses: Semantic Arguments

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1. Persian Ezafe Constructions: An Introduction

Persian Ezafe constructions have been extensively discussed in the literature (Samiian 1994; Ghomeshi 1997; Abolghasemi 2002; Larson and Yamakido 2005; among many others). Samiian (1994) defines Persian Ezafe as the unstressed morpheme *-e* (*-ye* when following a vowel segment) which appears before some right-branching phrasal complements and modifiers in nonverbal phrasal categories. Even though this morpheme is phonologically adjacent and connected to the head noun, its occurrence is syntactically motivated by the right-branching phrasal complement. Proposing the surface distribution of Ezafe before right-branching phrasal complements and modifiers under the first bar level in nonverbal phrasal categories, she concludes that in Persian, in accordance with the principles of UG, the case assigning categories are the [-N] categories V and P1 (e.g. *ba* 'with' and *bi* 'without'), and Ezafe is a dummy case assigner which occurs in phrases headed by non-case-assigning categories distinct from [-N] categories: N, A, and P2 (e.g. *zir-(e)* 'under', *ru-(ye)* 'on'). She also argues that Persian Ezafe is a case marker, inserted before complements of [+N] categories, including Ns, As, and some Ps (cf. Larson and Yamakido 2005).

Ghomeshi (1997), on the other hand, proposes that Ezafe refers to an unstressed vowel *-e* that links together elements belonging to a single constituent. The Ezafe vowel appears between an adjective and its complement, between a preposition and its complement, and more generally between any two items that have some sort of connection.

The historical origin of Modern Persian *-(y)e* in Ezafe constructions as a relative pronoun going back to Old Persian *haya* (Abolghasemi 2002:32) suggests at least the

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possibility that Modern Persian adjectives in Ezafe may have preserved the original syntactic structure, requiring a treatment as relative clauses with *-(y)e* as a relative pronoun and a phonologically null copula. In this squib, we argue that the selectional restrictions of modal adjectives in Modern Persian (i.e. their combinability with nouns) support a syntactic analysis of adjectives in Ezafe Constructions as relative clauses.

2. Inherited Syntax in Ezafe Constructions

The Modern Persian *-(y)e* in Ezafe constructions has been regarded as continuing the Old Persian masculine singular nominative relative pronoun *haya* formed by the agglutination of the demonstrative base **so-* to the relative base **yo-* in Proto-Indo-European **so-yo-* (Abolghasemi 2002:32; de Vaan and Lubotsky 2009:167).

This etymology suggests the possibility that Modern Persian adjectives in Ezafe may have preserved the original syntactic structure. If this is the case, they would require a treatment as relative clauses, that is as a CP with *-(y)e* originally base generated in the specifier of a small clause (SC). The Ezafe marker *-(y)e* then moves to the specifier of CP as a relative pronoun.

(1) a. ʔab$_i$ [$_{CP}$ e$_i$ [$_{C'}$ [$_{SC}$ t$_i$ særd][$_{C0}$ Ø]]]
        water   EZ   cold
      'cold water' – literally 'water which is cold'

b.
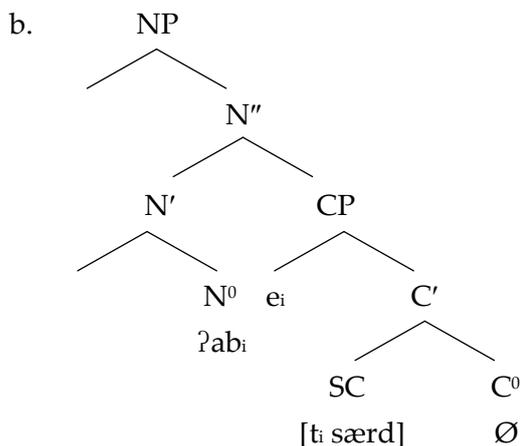
(1b) is head-final, consistent with the prevailing word-order in Old and Modern Persian, with the heavy CP constituent to the right. This analysis also accounts for the apparent noun-adjective order in Modern Persian, as opposed to the adjective-noun order, which is much more common in head-final languages: if adjectives in Ezafe are

relative clauses underlyingly, they will be heavy constituents, and as such placed to the right.[1]

3. Modal Adjectives in Modern Persian

Noun-adjective combinations: The analysis in (1) is supported by the selectional properties of modal adjectives, e.g. *momken* 'possible' and *ʔehtemali* 'probable'. In Modern Persian, these adjectives display a more limited combinability in attributive position than they do in English. This behavior is most conspicuous in combinations with role nouns, i.e. nouns which describe entities in context; for instance, a winner is a person winning a certain contest. With role nouns, not all combinations that are allowed in English are acceptable in Modern Persian – see the contrast between (2) and (3) (Ilkhanipour and DeLazero 2013):

(2) bærænde-ye   ʔehtemali
    winner-EZ   probable
    'probable winner'

(3) #bærænde-ye   momken
     winner-EZ   possible
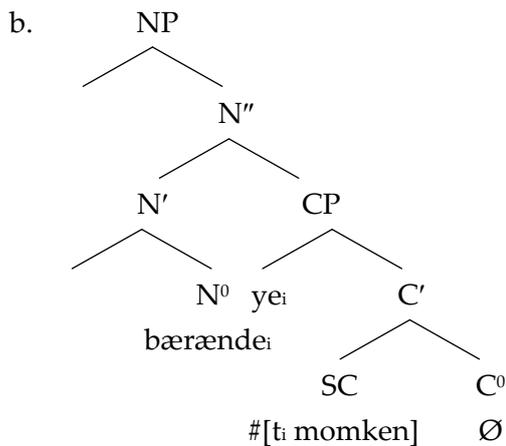   'possible winner'

    On the other hand, these adjective are disallowed in predicative position in both languages:

(4) #bærænde ʔehtemali / momken   ʔast
    winner   probable / possible   be.3SG
    '#The winner is probable/possible'

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[1] A reviewer asked if the same analysis can be applied for Ezafe element that comes between adjectives or prepositions and their complements. For the vowel *e* that comes between some adjectives and their complements, as in *ʔælaqemænd-e be sinæma* 'interested in cinema', we consider *-e* not as Ezafe but as a vowel inserted for phonetic reasons; also note that the occurrence of this vowel, unlike Ezafe, is optional. With regard to the Ezafe marker that appears in prepositional phrases, as in *zir-e miz* 'under the table', it is worth mentioning that Persian complex prepositions have been studied as "Ezafe nouns" and thus can be analyzed as noun-noun combinations (Negin Ilkhanipour, pers. comm.).
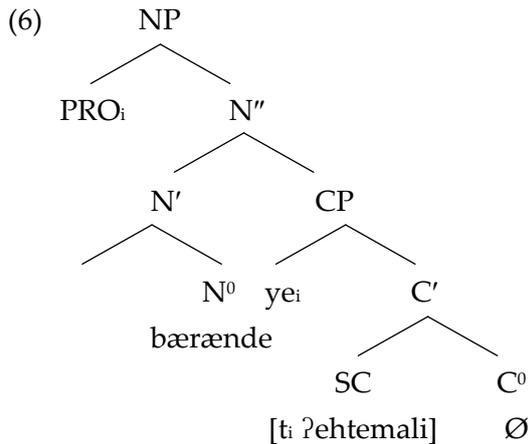
Selectional restrictions based in syntax: An analysis of (3) as involving a relative clause accounts for its unacceptability, since the intensional adjective will be in a predicative position, where it is disallowed (5b). The ungrammaticality in (5a) follows from the uninterpretability of the 'small clause' SC in (5b).

(5) a. #bærænde$_i$ [$_{CP}$ ye$_i$ [$_{C'}$ [$_{SC}$ t$_i$ momken][$_{C0}$ Ø]]]

        winner   EZ   possible

        'possible winner' – literally '#winner who is possible'

b.

```
              NP
             /  \
               N''
              /   \
           N'       CP
          /  \     /   \
        N⁰ ye_i    C'
      bærænde_i   /   \
               SC      C⁰
          #[t_i momken]   Ø
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Exceptions: On the other hand, acceptable examples of combinations of role nouns with modal adjectives like (2) could be accounted for by language contact: as it was the case with several other languages, including English (DeLazero 2013:188–190, 192–195), Modern Persian borrowed combinations of attributive intensional adjectives plus role nouns (here, from Western European languages) in a piecemeal fashion, without generalizing their use. Also as in other languages, intensional adjectives in Modern Persian are originally confined to learned registers of the language.

Syntax of acceptable combinations: For the cases of role nouns with modal adjectives which are acceptable, we propose an analysis involving a PRO element in Spec,NP, whose reference is given by the discourse. This PRO will denote the context (situation) in which the entity described by the role noun performs that role. For instance, in (2) and (3), the entity described as a 'winner' will be the winning party in a certain competition, contest, game, battle, war, etc., i.e. in a certain context. This context will be the referent of PRO.

(6)

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                    NP
                   /  \
              PRO_i     N''
                       /   \
                     N'      CP
                    /  \    /   \
                  N^0  ye_i     C'
                bærænde       /    \
                            SC      C^0
                        [t_i ʔehtemali]   Ø
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Here, SC is interpretable, because the relative *ye* refers not to the entity described by the role noun *bærænde* 'winner', but to the context (situation) referred to by the PRO. Indeed, nouns describing situations can be used as subjects in sentences where modal adjectives are predicates – in Modern Persian as well as in English (see Ilkhanipour and DeLazero 2013):

(7) piruzi-ye   tim   ʔehtemali bud
   victory-EZ team probable be.PST.3SG
   'The victory of the team was probable.'

The PRO in Spec,NP is analogous to the possessor in Spec,NP in Semitic construct states (Ritter 1988): the context where the entity plays a certain role is analogous to the context of possession given by the possessor. In both cases, the context can be said to 'contain' the entity described by the noun.

Semantics of acceptable combinations: In the acceptable example in (2) interpreted as 'winner in a probable context', what is described as 'probable' is not the winner's existence, but the occurrence of the context in which the respective individual will emerge as a winner. A role noun must combine not only with an entity x (semantic type e), but also with the context c (semantic type s) where that entity will perform the respective role (see the semantics of role nouns in DeLazero 2013):

(8) [[bærænde]] = $\lambda c_s \lambda x_e$[<u>winner</u>(c)(x)] = $\lambda c_s \lambda x_e$[x is a winner in c]

The denotation of the Ezafe construction will be as in (9), and it will combine with the noun by predicate modification (10):

(9) [[-ye ʔehtemali]] = λc_s[<u>probable</u>(c)] = λc_s[c is probable]

(10) [[bærænde-ye ʔehtemali]] = $\lambda c_s \lambda x_e$[<u>winner</u>(c)(x) & <u>probable</u>(c)] =
       $\lambda c_s \lambda x_e$[x is a winner in the probable context c]

4. A Cross-Linguistic Comparison

A situation similar to the one discussed here can be observed in Chinese, where constructions like (2) and (3) are not acceptable, as in (11), and adjectives are linked to the nouns by the particle *de* which also introduces relative clauses and links possessions to possessors. As such, all adjective-noun combinations in Chinese that contain *de* can be regarded as relative clauses, as illustrated in (12), with *de* as a complementizer, and the small clause containing a PRO co-indexed with the noun (there is no relative pronoun, because Chinese has no wh-movement).

(11) #kěnéng   de   huòshèngzhě
        possible/probable   PART   winner
       'possible/probable winner'

(12) #[$_{CP}$ [$_{C'}$ [$_{SC}$ PRO$_i$ kěnéng][$_{C0}$ de]]] huòshèngzhě$_i$

        The role of Chinese *de* is similar to the role of Modern Persian *-(y)e* in that it links adjectives to nouns and possessions to possessors, although their syntactic categories are different (Chinese *de* is a complementizer in C^0, while Modern Persian *-(y)e* is a relative pronoun in Spec,CP). As regards adjectives, they appear to be relative clauses underlyingly in both Modern Persian and Chinese, this analysis being supported by the similar selectional restrictions of modal adjectives in both languages.

5. Conclusion

We have argued that an analysis of Ezafe constructions as involving a relative clause accounts for the distribution of modal adjectives in the nominal domain, thereby suggesting the preservation of syntactic structure throughout the evolution from Old to Modern Persian. The parallel structure and behavior of nominal modal constructions in Chinese point to the possibility of cross-linguistic comparison as a means to verify the correlation between relative clause syntax and selectional properties of ad-nominals.

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