An analysis of Adjuncts: A Syntco-Discoursal Approach  
(A case study in contemporary Persian)  
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Abstract:  
In broad terms, this paper is concerned with adjunct construction in Persian, which is an Indo-Iranian Language. During the recent century, specially in its final decades, different researches have been done about adjuncts and adjunction among different languages, but despite the fact that they are very important in Persian language, no attempts have been done regarding the position of adjuncts based on the Minimalist Program and functional Grammar. So authors of this article, after reviewing the records of Persian and non-Persian linguistic researches, introduce adverbs and prepositional phrases in Persian language, then their syntactic position is determined, based on, and Ernest (2002), Halliday (2004), Radford (2004) and Haegeman (2006).  

According to the data which have been analyzed in this paper, it is concluded that, in Persian sentences, the structural differences can be made to follow from the semantic one. The view of adverbial licensing makes the overall grammar more restrictive by banning reference to different syntactic structures for different semantic classes of adjuncts.  

Key words: adjunct, adjunction, adverbial licensing, metafunction.  

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1 Introduction

During the recent century, specially in its final decade, different studies have been done about negative elements and negation among different languages, but in Persian there is a few considerable attention regarding this phenomenon, of course it worth to mention that some Iranian and non-Iranian linguists and grammarian have discussed this field. They merely focused on existence of negative prefixes and their classifications. In this regard one could name, Anvari and Givi (1991), Hajari (1991), Kalbasi (2001) and Shaghaghi (2002).

Some non-Persian linguists studied negation and negative elements, namely: Klima (1964), Lasnik (1972), Pollock (1989), but no attempts have been done regarding the position of negative affixes in the Minimalist Program perspective, so in this article after reviewing the records of Persian and non-Persian studies, negative Persian affixes will be introduced, then their position will be analyzed in accordance with Radford (2004).

Questions:

1- Which stems do host negative suffixes in Persian?
2- How does minimalism analyze negative element in Persian?

Hypothesis:

1- Negative prefixes can freely attach to nouns, adjectives and verb phrases.
2- The analysis of negation element in Persian is compatible with Radford’s (2004) minimalism approach.

2. Review of previous scholarship

2.1 Previous scholarship of non-Iranian linguists
2.2.1 Pollock (1989)

One of the major adjustments regarding the X' theory (Chomsky 1986a) is the adjustment of Pollock (1989), he considered Inflection phrase (IP = I") in his work, and decomposed it into two smaller phrases, namely: Tense phrase (T" = TP) and Agreement phrase (Agr" = AgrP), which used to be considered as the parts of Inflection phrase. In other words, morphemes such as, tense, agreement and negation..., which associates the inflected verb, are regarded as a distinct syntactic phrase in the tree diagram of sentence.

Dabir-Moghaddam (2004) based on Pollock's explanations and tree diagrams, reconstructed the construction of a simple transitive sentence (in English) as follow (Dabir-Moghaddam 2004: 500-501):
Since the main goal of this paper is the investigation of the negative elements in negative sentences, outstanding works on negation, will be presented in this section.

2.1.2 Klima (1964)

Klima (1964) proposed that negative sentences can be determined by negative elements, which are pre-sentence structure that are governed immediately by S. The effect of the preverbal negative element is reflected in specific construction of sentence:

(2)

a) Inside an auxiliary:
   Writers **have not been** accepted invitation.

b) As a Noun Phrase subject:
   **Not much** rain fell.

c) As a part of an adverb of place:
   They went **no where**.

d) Inside a prepositional modifiers:
   The writers **of none of reports** thought so.

e) In an infinitival complement:
   I will force you **to marry no one**.
This diversity of negative elements would not mean that they belong to that specific constituent. Negative elements can occur, optionally as a part of sentence structure with NP subject, predicate or interrogative Wh marker, which is optional as well. Based on this assumption, the negative element structure is in relation with the structure of wh. This relation is not arbitrary. Negative and interrogative elements behave in the same manner, with respect to constituent consistency. The influence of preverbal negative elements on evoking indefinite elements in a sentence is the same as the effect of Wh, respectively. Furthermore NEG feature and Wh are alike with respect to the possibility of attachment to larger constituents and both of them would result in subject-auxiliary inversion:

(3) a. Who (Wh + some one) will accept suggestions?
    b. No one (NEG + any one) will accept suggestions.
    c. When (Wh + some time) will he marry again?
    d. Never (NEG + ever) will he marry again.

Klima claims that, a negative sentence is determined throughout a NEG feature, on a functional head. He also emphasizes on the role of C-command. Regarding the exact position of NEG feature in a sentence, Klima posits:

“The exact position of negative element in a chain consisting of nominal subject, and predicate, is not as clear as Wh.”

He proposed two base positions for NEG:

(4) a. before predicate  b. before declarative clause

He believes [Wh] and [NEG] may cause in subject-auxiliary inversion in negative and interrogative sentences (Haegeman 1995: 83-89). Klima (1964) calls polarity expressions as affective constituent, which includes negative, interrogative and conditional expressions. He adds that these constituents
must c-command quantifiers and partitives. As an example, “nobody” is an affective expression that must c-command “anything” which is a partitive, as follow:

(5) a. Nobody need do anything.
   b.

As a matter of fact, Klima says that indefinite quantifiers such as, any, anyone and etc. are bounded to existence of a c-commanding negative elements (Radford 2004: 102). He believed that affective verbs like, unwilling, afraid, need, deny are negative inherently and these verbs are opposed to factive verbs like regret (Kiparsky 1971). Factive verbs presuppose the truth of their complements, meanwhile affective verbs do not have such a property:

(6) a. He **denies** that he has been there.
   b. He **regrets** that he has been there.

As a matter of fact, affective verbs license partitives in complement clause:

   c. He **denies** / **doubts** that anything happened.
   d. *He **denies** / **doubts** anything.

(6d) is ungrammatical, because partitive items must be asymmetrically c-commanded by affective items. Therefore partitives necessarily must occur in complement clause, but in example (6d) the affective is used as a direct object that can c-command the affective item, this is mutual-command.

Laka (1990) and Progovac (1991) posit that affective verbs, select complements which their complementizers (c°) carry [NEG] feature. This feature licenses partitives (Haegeman 1995: 90).
2.1.3 Lasnik (1972)

Lasnik elaborates Klima’s analysis of negation (1964). His analysis is based on the Generative Grammar. Whereas Klima assumes only a single source for not (pre-sentence element), Lasnik postulates two positions for sentential negation:

1. Pre-sentences  
2. Auxiliary verbs

(7) Not many arrows didn’t hit the target.

In (7) the first “not” comes at initial and co-occurs with the second occurrence of “not” associated with Aux. The most salient characteristic of Lasnik’s analysis is the intimate link, he establishes between the sentential operators and the functional heads (Comp). NEG and Wh are features associated with the heads of clausal projection’s; C the head of CP and I the head of IP. Furthermore the presence of NEG and Wh features triggers subject – auxiliary inversion leads to I to C movement.

Lasnik believes that NEG and Wh as pre-sentential constituents, are generated under Comp. The same has been offered concerning Wh, In his earlier analyses. Here, the relation between complementizer C and NEG elements is not clear and according to Lasnik it seems that I or auxiliary are the most natural heads to associate NEG element.

Following Klima, Lasnik suggests that, those negative elements which cause inversion (: not often in 8a) and those which do not, (: not long ago in 8b) should be assigned two different structures in terms of the position of not in the sentence. For example, not in not often (in 8a) would be generated under Comp and often moves towards the initial position and then combines with not. In not long ago,(8b),on the other hand, not is not the pre-sentential particle, i.e. is not generated under Comp, but is a part of the constituent with which it is associated at D-structure. Its scope is restricted to that constituent.

(8) a. Not often does he digress from his topic.
   b. Not long ago it rained.
The structure of (8a), would be (9a), subject-auxiliary inversion is triggered by Neg under Comp:

(9) a.

The structure of (8b) is (9b): as Comp does not dominate NEG, there is no trigger for subject-auxiliary inversion (Haegeman 1995:90-92):

(9) b.

If the NEG feature is base generated at the clausal level, it takes clausal scope. If it is base generated at a constituent level, it takes local scope. At S-structure, Lasnik assumes that NEG and preposed AdvP in (8a) form one constituent. He proposes that some strings like not often and not many men are surface structure constituents, but he does not provide any syntactic arguments, but he assumes that they are constituents by some stage in the derivation. He also adds, to produce such derived structures there is a late rule, perhaps an adjustment rule. Through this rule which is called Not adjustment (NA), Not is incorporated in to the first constituent to its right (Lasnik 1972: 12-13).

The consequences of the proposed analysis in Klima and Lasnik’s approach are that a rather powerful adjustment rule is needed to generate sentences such as (10):
(10) a. Under no circumstance I do it.
If one considers this example in the same way as the previous ones, then it would be concluded that underlingly NEG feature has to be separated out from the preposed constituent.

    b. [NEG] under any circumstances.
The lowering of NEG in (10b) will have to reach in to the complement of the preposition. Under an approach in which the PP under any circumstances raises to NEG, the amalgamation also gives rise to problems (ibid: 93).

2.2 Previous scholarships of Iranian Linguists


    Kalbasi (2001: 22) believes that affix is a kind of bound morpheme which can not be used independently, they must be attached to another part which called “root”, whenever it comes before the root, it would be named PREFIX, and prefix comes before the root. There are many prefixes in Persian language, in this paper the focus is just on the negative prefixes.


    Here there are some samples which are formed with these prefixes:

        bi- is a negative prefix that is used with nouns and produces adjectives: bigonāh (‘not guilty’), biadab (‘impolite’).
**na-** is an other negative prefix which is used with adjectives and the outcomes are negative adjectives like: nasanjideh (‘unmeasured’), nashodani (‘impossible’). It used with Nouns to make adjectives: nasepas (‘ungrateful’). It used with the verb stem to make adjectives: natars (‘fearless’), nasuz (‘fireproof’), It also used in compound adjectives, and it is placed before their verbal components: xoda nashnas (‘irreligious’), Zaban nafahm (‘not amenable to reason’) (1998: 276).

**nā-** is a negative prefix that is used with adjectives and made negative adjectives: nābarabar (‘unequivallent’), nābina (‘blind’), nārava (‘unjust’). It used with nouns to make adjectives, respectively: nāsepas (‘unthankful’), nāomid (‘hopeless’). It used with compound adjectives, such as: haq nāshenas (‘ungrateful’), del nāchasb (‘undesirable’). It used with the present tense stems to make adjectives: nāshenas (‘unknown’), nāza (‘barren’), nāres (‘unripe’). It used with the past stems too, to make adjectives: nāshayest (‘undeserved’), nābud (‘non-existent’). Moreover, it is used with kinship adjectives: nāpedari (‘step-father’), nāmadari (‘step-mother’).

**pād-** means ‘against’, and ‘opposite’. It is seen in pādtan (‘antibody’), pādjen (‘antigen’).

**qeir-** is the other negative prefix in this language. It is attached to adjectives and produce negative adjectives, of course it should be mentioned that in this usage a ezafe marker (e) comes after qeir- and before adjective: qeir-e rasmi (‘informal’), qeir-eqanuni (‘illegal’).

**zed-** is added to Nouns to make adjectives. Here again an ezafe marker (e) comes after zed- and before adjective, like: zed-e āb (‘waterproof’), zed-e ofuni (‘antiseptic’).

**lā-** is a loan Arabic prefix, which is expectedly used with the Arabic loan words is Persian, but it could be find accompanied with Persian words, too, like: lāmorovat (‘ungenerous’), lāsho’ur (‘silly’). Nowadays bi- is commonly used instead of lā: bimorovat, bisho’ur.
2 Classifying verbs

Quirk and others (1985) divides English verbs into two groups, auxiliary verbs (non-lexical) and lexical verbs then divides auxiliary verbs into two groups primary auxiliaries such as: have, be, do and modal auxiliaries such as, could, might, must, would, may, should, can, will, shall (Quirk 1985:20) moreover they considers marginal modals, too, these verbs behave like modal verbs in some cases such as: used to, ought to, need, dare (ibid: 138). Quirk and others calls them auxiliary modals because these verbs can just take the role of auxiliaries, not the role of lexical verbs (ibid: 120).

Lambton (1966) mentions eight auxiliary verbs in Persian language: šodan, budan, tavānestan, xāstan, gozāstan (=ejazeh dādan), bāyastan, šāyastan and mānestan (1960: 53-56). He believes that xāstan can be used in two different meanings: first, when it is used as the future marker, it has the role of an auxiliary verb and second, by the meaning of inclination, it would be regarded somehow as a lexical verb and it is accompanied with a lexical verb. In this case it should be inflected for all phi features in all paradigms:

(11) xāh-am raft.
    will-1sg go-1sg
    (‘I will go.’)

(12) mi-xāh-am be-rav-am.
    IND-Will-1sg SUBJ-go-1sg
    (‘I will go.’)

Since there is no agreement among Persian linguists regarding auxiliary verbs classification, and in order not to be involved in this matter, admitting the distinction between lexical and auxiliary verbs, authors postulate six auxiliary verbs in Persian: šodan (‘would’), kardan (‘to do’), tavānestan (‘can’), xāstan (‘will’), bāyestan (‘should/ought to’), dāstān (‘be’). It would be illustrated that the strength of these verbs in being lexical or non-lexical, plays a crucial role in prefixation of negative element to the verbs. This characteristic would be represented as a continuum in following pages.
4 Negative prefix in Persian language

4.1 Standard negative markers

4.1.1 Lexical verbs

In Persian, “na-” as a negative prefix applies to all simple verbs in imperative sentences except progressive structures. In progressive mood, its allomorph, “ne-” applies as a negative prefix, instead. Negation in this language is done by adding negative prefix to the verb stem, and in this condition, stress would be placed on the negative prefix.

(13) man ne- mi- dân -am.         (Intransitive durative)
    I NEG-IND-know-1sg
    (‘I don’t know.’)

(14) man qazâ     ne-  mi- xor- am.                         (Transitive durative)
    I food NEG-IND-eat-1sg
    (‘I don’t eat.’)

(15) u     be      madrese  na-raft.                                     (Simple past)
    S/He to      school      NEG-go-PAST-3sg
    (‘S/He didn’t go to school.’)

Example (16) shows that, existential verbs (ast = be) and all the verbs that initiate with a vowel, negative prefix is pronounced in PF as follow:

(16) na- ast      → ni-st
    NEG-be-3sg →NEG-be-3sg

A. Negative prefix na-, as the result of vowel harmony between the initial vowel of existential verb (ast= be) and the final vowel of the negative prefix would be pronounced as ni-, and the negative prefix is realized as a part of the stem of the verb, by eliminating the initial vowel:

(17) u     mariz    ni-st.
    S/He sick      NEG-be-3sg
    (‘S/He is not sick.’)
B. In the same way, as the result of vowel harmony with the final vowel of the negative prefix na- in all the verbs initiating with a vowel, ahiatus consonant (y) inserts between them, like: āmadan (‘to come’), āvardan (‘to bring’), āmorzidan (‘to forgive’).

(18) na-ā → na-y-ā
   NEG –come → NEG - y-come-2sg-IMP
   (‘Don’t come!’)

4.1.2 Compound verbs

In Persian language, compound verbs are made by combination of noun, adjective, adverb, preposition with the stem of a verb. The negative prefix in all these mentioned cases, comes between the two parts of the compound verb, and attaches to stem of the verb, as follow:

(19) man  diruz      divār      rā      rang zad-am.
     I    yesterday  wall  OBJ  paint-1sg-PAST
     (‘I painted the wall yesterday.’)
(20) man  diruz        divār        rā        rang na-zad-am.
     I    yesterday  wall     OBJ     paint-NEG-1sg-PAST
     (‘I did not paint the wall yesterday.’)
(21) Ali  az  kāre   xud  xejālat kešid.
     Ali  of  action   his  ashamed -3sg-PAST
     (‘Ali was ashamed of his action.’)
(22) Ali  az  kāre   xud  xejālat na-kešid.
     Ali  of  action his  ashamed NEG-3sg-PAST
     (‘Ali was not ashamed of his action.’)

(23) Maryam az      qabuliy-e      Ali xošh šod.
     Maryam from acceptance-EZA      Ali happy become-3sg-PAST
     (‘Maryam became happy from Ali’s acceptance.’)
(24) Maryam az qabuliy e Ali xoshāl na-šod.
    Maryam from acceptance-EZA Ali happy NEG-become-3sg-PAST
    ('Maryam did not become happy from Ali’s acceptance.')

    Ali from school escape-3sg-PAST
    ('Ali escaped from school.')

(26) Ali az madrese dar na-raft.
    Ali from school escape NEG-3sg-PAST
    ('Ali didn’t escape from school.')

### 4.1.3 Copula verbs

The negative prefix na- in present tense of the copula of “astan” (to be), is pronounced as ni-, the same as the existential form of this verb. But, in past tense, this verb changes to “bud” (was/were) and the negative prefix (na-) remains without any changes, since “bud” is not initiated with a vowel:

(27) a. U ostād-e xub-i ast.
    S/He professor-EZA good-DEF be-3sg -PAST
    ('S/He was a good professor.')

     b. u ostād-e xub-i nist.
    S/He professor-EZA good-DEF NEG-be-3sg -PAST
    ('S/He is not a good professor.')

(28) a. Maryam dar javāni zan-i zibā bud.
    Maryam in youth woman-DEF beautiful be-3sg-PAST
    ('Maryam was beautiful in her youth.')
b. Maryam dar javānī zan-i zibā na-bud.
   Maryam in youth woman-DEF beautiful NEG- be-3sg-PAST
   (‘Maryam was not beautiful in her youth.’)

4.1.4 Imperatives

Warning in imperative sentences, always built by adding negative prefix, na- to the stem of the verb:

(29) xor → na- xor
   eat → NEG-eat-1sg-IMP
   (‘Don’t eat!’)

(30) ro → na-ro
   go → NEG-go-1sg-IMP
   (‘Don’t go!’)

Moreover, this prefix has an allomorph ma-, which is mostly applied in verse and nowadays, they are not used colloquially:

(31) begu → na-gu (= ma-gu)
   tell-2sg-IMP → NEG-tell-2sg-IMP(NEG-tell-2sg-IMP)
   (‘Don’t tell!’)

4.1.5 Auxiliary verbs in negative sentences

In Persian language, auxiliary verbs such as: šodan (‘would’), kardan (‘to do’), tavānestan (‘can’), xāstan (‘will’), bāyestan (‘should/ought to’), dāštan (‘be’), accompany main verbs. In unmarked forms, the auxiliary is the proper host for the negative prefix.

(32) a. man mi-xāh-am be-rav-am.
   I IND-will-1sg SUBJ-go-1sg
   (‘I will go.’)
b. man ne-mi-xāh-am be-rav-am.
   I NEG-IND-will-1sg go-1sg
   (‘I will not go.’)

(33) a. Ali bāyad dars be-xān-ad.
   Ali should lesson SUBJ-study-3sg
   (‘Ali should study.’)

b. ali na-bāyad dars be-xān-ad.
   Ali NEG-should lesson SUBJ-study-3sg
   (‘Ali should not study.’)

(34) a. Maryam mi-tavān-ad doruq be-guy-ad.
   Maryam IND-can-3sg lie SUBJ-tell-3sg
   (‘Maryam can lie.’)

b. maryam ne-mi-tavān-ad doruq be-guy-ad.
   Maryam NEG-IND-can-3sg lie SUBJ-tell-3sg
   (‘Maryam can not lie.’)

However, in the marked cases, stress and intonation have specific effect on
negation; there is a particular collocation between negative and focal elements. This
phenomenon is known in English, too:

(35) I want to go.
(36) I don’t want to go.
(37) I want not to go.

As the examples (35-37), it’s obvious that when the main verb is emphasized, the
negative prefix attaches to the main verb instead of auxiliary.

Now, let see how the attachment of negative prefix to the auxiliaries šodan
(‘would’), kardan (‘to do’), tavānestan (‘can’), xāstan (‘will’), bāyestan (‘should/ ought
to’), dāstān (‘be’), takes place informally in Persian:
a. Tavānestan (‘can’)  
(38) man mi-tun-am  be-ram.
   I IND-can-1sg  SUBJ-go-1sg  
   (‘I can go.’)  
(39) man ne-mi-tun-am  be-ram.
   I NEG-IND-can-1sg  SUBJ-go-1sg  
   (‘I can not go.’)  

(40) man mi-tun-am  NA-RAM.
   I IND-can-1sg  NEG-go-1sg  
   (‘I can, not to go.’)  

(41) man NE-MI-TUN-AM  NA-RAM.
   I NEG-IND-can-1sg  NEG-go-1sg  
   (‘I can not, not to go.’)  

b. šodan (‘would’)  
(42) mi-še  be-ri?
   IND-would  SUBJ-go-2sg  
   (‘Would you go?’)  
(43) mi-še  na-ri?
   IND-would  NEG-go-2sg  
   (‘Wouldn’t you go?’)  
(44) ne-mi-še  BE-RI?
   NEG-would  SUBJ-go-2sg  
   (‘Wouldn’t you go?’)
(45) ne-mi-shē NA-RI?
    NEG-IND-would NEG-go-2sg
    ("Wouldn’t you not to go?")

c. bāyestan (‘should/ought to’)  

(46) man bāyad be-ram.
    I should SUBJ-go-1sg
    (‘I should go.’)
(47) man na-bāyad be-ram.
    I NEG-should SUBJ-go-1sg
    (‘I shouldn’t go.’)
(48) man bāyad NA-RAM.
    I should NEG-go-1sg
    (‘I should go.’)
(49) man NA-BĀYAD NA-RAM.
    I NEG-should NEG-go-1sg
    (‘I shouldn’t not to go.’)

d. kardan (‘may’)  

(50) na-kone be-gi.
    NEG-may SUBJ-say-1sg
    (‘May not say.’)
(51) NA-KONE NA-GI.
    NEG-may NEG-say-1sg
    (*‘May not, not to say.’)

However, the negative form of auxiliary “kardan” is used as “nakone” and in this case, this is only the main verb which can be used in negative or positive form.
e. xāstan (‘will’)
(Only when it is the future marker, it can be used as an auxiliary verb).

(52) man xāh-am raft.
   I will-1sg go-1sg
   (‘I will go.’)

(53) man na-xāh-am raft.
   I NEG-will-1sg go-1sg
   (‘I will not go.’)

(54) man NA-XĀH-AM NA-RAFT.
   I NEG-will-1sg NEG-go-1sg
   (‘I will not, not go.’)

(55) * man xāh-am NA-RAFT.
   I will-1sg NEG-go-1sg
   (‘I will, not go.’)

f. dāštan (‘be’)

(56) dāšt-am mi-raft-am.
    be-1sg-PAST IND-go-1sg-PAST
    (‘I was going.’)

The auxiliary “dāštan”, is used only in its positive form and just with a positive main verb.

The examples show that auxiliary verbs, with respect to their strength of being auxiliaries, can be considered as a continuum. In other words, tavānestan, šodan and bāyastan, which are not completely converted to auxiliaries yet and still have the footprints of lexical verbs, are on the one side of this continuum. On the other hand, the verb dāštan is on the opposite side which is totally an auxiliary verb.
4.1.6 The Other negative elements

The prefixes na-, nā-, qeir- and bi-, are used for derivation of negative items from positive ones. In the same vein, English language makes use of the prefixes un-, in-, im- and il-. The prefix bi- in Persian is equal to the suffix -less in English.

(57) a. Ali šakibā ast.
   Ali  patient be-3sg-PRES
   ('Ali is patient.')

   Ali  NEG-patient be-3sg-PRES
   ('Ali is impatient. ')

   Maryam person-EZA literate-DEF be-3sg-PRES
   ('Maryam is literate.')

   b. Maryam ādam-e  bi-savād-i  ast.
   Maryam person-EZA illiterate-DEF be-3sg-PRES
   ('Maryam is illiterate.')

(59) a. In qazā  qābel-e  xordan  ast.
   this food-3sg able-EZA eat  be-3sg
   ('This food is eatable.')

   b. In qazā qeire-qābele xordan  ast.
   this food-3sg unable-EZA eat  be-3sg
   ('This food is uneatable.')
4.1.7 Affective & Partitive expressions

Negative quantifiers and adverbs, in Persian such as, hič-kas, hič-koja, be-hič-vajh, hič-čiz and hargez can be used in negative sentences. The interesting point is the different of these elements with their English counterparts; negative adverbs in English such as: never, no body, no where, any thing, nothing are inherently negative and negate the main verb in the sentence. Klima (1964) calls the negative elements, and the quantifiers, affective and partitive expressions, respectively. Klima, in this relation believes that partitive expressions should be asymmetrically c-commanded by affective expressions (Radford 2004: 102). Since English is a SVO language, Klima's suggestion is satisfied. On the other hand, Persian, in unmarked cases, is SOV, with a rather free scrambling, so the asymmetric c-command does not work in this language.

In Persian, these elements in negative sentences should be accompanied with the negated main verb, as well. Nevertheless, the outcome will be ungrammatical:

(61) Hič-kas be madrese na-raft.

no body to school NEG-go-3sg-PAST

('No body has gone to school.')

(62) U hargez doruq ne-mi-gu-yad.

s/he never lie NEG-IND-tell-3sg

('S/he never lies.')

(63) Maryam hič čiz ne-mi-xāh-ad be-xar-ad.

Maryam nothing NEG-IND-will-3sg SUBJ-buy-3sg

('Maryam is not going to buy anything.')
But in English this restriction does not exist. In Persian, in the presence of the negative adverbs and quantifiers, a negated verb should exist, including main or auxiliary. In unmarked sentences, there is a tendency for the negative prefix to attach to the auxiliary. It would be elaborated in details in the data analysis section (sec. 5).

4.1.8 Negation of regular quantifiers

Davison (1987) quoted by Reesink (1986), points out that SOV languages generally do not allow negation of regular quantifiers. This is supported by Payne (1985) who notes that not all languages permits negations like “not many” and “not all”. He notes Persian (which is an Indo-Iranian language) as one of these languages (Kahrel 1994: 141). So in standard Persian there is no way to use negative element with regular quantifiers like, har, hame, beseyari and xeyli.

(64) * na hame-y-e kasâni ke da’vat šodand, āmâd-and.

NEG all-hiatus-EZA people that invite-PASS come-PAST-3pl

(‘Not all the people which have been invited, came’)

Authors believe that, to account for this kind of restriction in Persian, one should says that, auxiliaries carry strong NEG feature in the negative sentences, nevertheless it is the main verb which carry this feature.

Negative element in unmarked negative sentences, would be presented as follow:

na-…………… all simple verbs - declarative sentences
ne-…………… verbs with durative mood
ni-…………… existential and copula verbs
ma-………….. imperative verbs and literal texts

5 negative prefix position in Persian based on Radford 2004 Minimalist program

Radford posits that an interrogative C is filled by a null question particle Q, and that Q attracts auxiliaries, therefore auxiliaries move from T to C to attach to it, so filling the strong C position. One possibility is to follow Chomsky (1995) in supposing
that \( Q \) is affixal in nature and attracts an overt head to attach to it. Since affixes generally only attach to a particular kind of word (e.g. the past-tense-d affix can attach to verbs but not nouns, prepositions or adjectives), and since only tensed auxiliaries move to \( C \), one implementation of this idea suggested in Chomsky (1993) is to suppose that \( Q \) carries a strong tense feature, and hence attracts the head \( T \) constituent of \( TP \) to move from \( T \) to \( C \), (to attach to the invisible \( Q \) affix in \( C \)) (Radford 2004: 153).

(65) a. Will you marry me?

b. [Diagram]

It should be noted that for this movement \( T \) must be c-commanded by \( C \). Another example that Radford points out is the subject-verb agreement in absence of auxiliary, so there is no overt auxiliary in \( T \). \( T \) in present-day English contains a weak Tns affix (more specifically, an affix with a weak V-feature), and a weak Tns affix can not attract a verb to move from \( V \) to \( T \) (as opposed to Elizabethan English in which verbs use to move). But in present-day English, the main verb carries strong Aux-feature, which causes lowering of Tns affix on to the main verbs. Radford adds that in such auxiliariless clauses, the weak tens affix in \( T \) undergoes the morphological operation of \textbf{Affix Hopping} in the PF component (ibid: 161).

The interesting characteristic of this proposal is that, affix hopping occurs in the opposite direction of movements which used to be considered in minimalist program. It means that; movements in minimalist program, is a kind of merging from bottom of the tree diagram toward its top. But affix hopping takes place vice versa (from upper head to lower one) lowering the affix on to the main verb in the manner shown by the arrow in (66) below:
(66) a. He enjoys syntax
   b.

So based on Radford suggestion, particular constituents carry specific properties which attracts other particular elements or cause them to move and according to the adjustment proposed by Pollock (1989), in which IP has been splited into two smaller phrases, namely: TP and AgrP, and considering other independent syntactic nodes: NegP which is located between TP and VP (Dabir-Moghaddam 1383: 501), Persian negative sentences would be presented as follow:

(67) a. man qazâ-i ne-mi-xor-am
    I    food-INDEF  NEG-IND -eat-1sg
     ('I do not eat food ')
   b.

in (67) the main verb carries strong NEG feature which causes the negative prefix to attract to the verb, this done by virtue of affix hopping.
(68) a. man qazâ-i ne-mi-xâh-am be-xor-am
   (‘I will not eat food’)

   I food-INDEF NEG-IND-will-1sg SUBJ-eat-1sg
   In (68) there are both main and auxiliary verb. In unmarked cases the NEG feature on the auxiliary is stronger than this feature on the main verb, which can attract the NEG feature on to T. So here a head to head movement occurs.

   In Persian marked negative sentences, despite of the presence of the auxiliary, and as the result of the main verb caring stressed emphasis, the negative prefix attaches to the main verb through affix hopping, not to the auxiliary. In the examples below the emphatic stress is shown by capital letters.

   (69) man mi-tun-am NA-R-AM.
   I IND-can-1sg NEG-go-1sg
   (*’I can, not to go.’)
   The tree diagram for (69) would be as (70):

   (70)
In (69) the main verb is emphasized, so the negative prefix is attached to the main verb instead of the auxiliary. On the contrary, we have (71):

(71) a.man NE-MI-TUN-AM NA-R-AM.
     I NEG-IND-can-1sg NEG-go-1sg
     (*'I can not, not to go.')

b.

In (71) both the main and auxiliary verbs are emphasized. In this case, two NEG phrases are postulated, which undergo two different processes: a head to head movement for auxiliary, and an affix hopping for the main verb.

6 Conclusion

Therefore it can be concluded that, in Persian negative sentences, both auxiliary and main verbs carry strong NEG feature, which causes the negative prefix move from the head of the NegP. This lowering movement is subject to affix hopping when the main verb is involved, on the other hand, whenever the negative element has to attach to an auxiliary (in unmarked cases), the movement will be a kind of head to head movement, and here the landing site for the moved negative head is T the head of TP, which carries an overt auxiliary. In both operations, we come across prefixation.

The last but not the least, Persian data analysis prove that Radford’s proposal is applicable in Persian, properly.
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English: