

# Split complex predicates in Persian

Jon Dehdari

## Abstract

Complex predicates, or compound verbs, constitute a major portion of verbal forms in the Persian language. They are normally formed using a noun, adjective, preposition, or prepositional phrase, followed by a light verb. Unlike many other languages that employ such constructions, Persian allows the two components to become separated. This paper will investigate where complex predicates syntactically originate and possible movements necessary to account for separation.

## 1 Introduction

Complex predicates are “composed of more than one grammatical element (either morphemes or words) each of which contributes part of the information ordinarily associated with a head”, as defined by Alsina et al. (1997). Many languages have complex predicates (CP)<sup>1</sup> which are non-compositional – the meaning of the predicate cannot be gleaned by simply

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<sup>1</sup>Unless specified otherwise, CP will stand for Complex Predicates in this paper.

knowing the meaning of each of the words. In this sense they resemble idioms. However, the words used in CPs greatly vary in their degree of productivity. Thus the more productive CPs depart from the idiosyncratic nature of idioms. Both the more productive CPs and the less productive CPs can become separated, however. This paper will primarily focus on the syntax of separated non-compositional complex predicates in Persian. I propose that Persian complex predicates are not lexical units in the same sense that normal one-word verbs are, but rather syntactic units which are lexically marked with subcategorization restrictions.

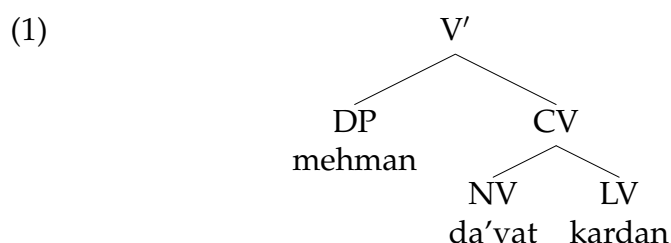
## 2 Complex Predicates

The Persian language uses one-word verbs and compound verbs<sup>2</sup> to head VPs. Compound verbs generally consist of a *light verb*, which is morphologically like other verbs, but semantically unlike other verbs: light verbs apparently do not assign theta roles (Mohammad and Karimi, 1992; Vahedi-Langrudi, 1996; Karimi-Doostan, 1997). Compound verbs also consist of a *non-verbal element*, usually nouns, adjectives, prepositions, or prepositional phrases. No other phrasal node other than prepositional phrases may be used within a non-verbal element. Normal morphological suffixes such as comparative, superlative, and pluralization may not be used on the non-verbal element.

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<sup>2</sup>Compound verbs, complex verbs, complex predicates, and light verb constructions are synonymous in this paper.

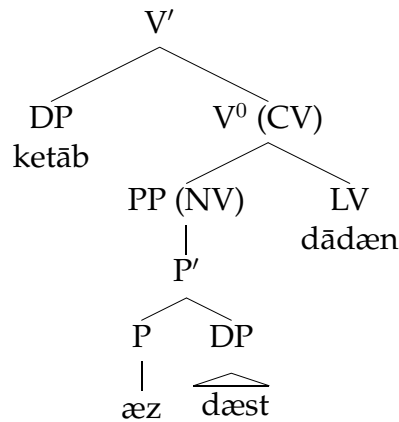
Karimi (2003) follows Marantz (1997) in formulating the notion of *Syntactic Word Formation* (SWF). The SWF posits complex predicates at the  $V^0$  level. Thus the non-verbal element (NV) and the light verb (LV) reside at a sub-word level. This can be seen in Figure 1, from (Karimi, 2003).



While this proposal offers a unique and insightful description of CVs, certain phenomena remain unaddressed. For example, prepositional phrases serving as the non-verbal element push the limit of a sub-word. These NV prepositional phrases have some characteristics of a sub-word and some characteristics of a normal phrase. The individual words under the NV node are not morphologically inflected. Thus pluralization is not permissible on a noun within an NV prepositional phrase. However, NV prepositional phrases do have internal structure, with the preposition heading the phrase. They also follow normal PP word order.

For example, the transitive verb *از دست دادن* *æz dəst dādæn* (lit. “from hand give”), ‘to lose’ placed within the SWF framework would require a phrase to combine with the light verb to form a terminal node (CV), as seen in Figure 2. Morphological operations would be permitted for the light verb, but not for the noun – both elements residing at the sub-word

(2)



level. The light verb morphemes not only include affixes on the right edge of the LV, but also on the left edge. This rules out a possible hypothesis that the LV affixes attach to the whole CP instead of just the light verb.

Another phenomenon which has yet to be accounted for within SWF is the split complex predicate. Persian CPs can become separated by noun phrases, prepositional phrases, accusative pronominal clitics, negative clitics, or future auxiliary verbs. This separation is optional for all cases except for accusative clitics, where separation is strongly preferred, and for future auxiliary verbs, where the separation is required (Goldberg, 2004).

If the elements of a CP reside at a sub-word level, then either a split CP would be based generated as such, or would move to become separated. Base generating a complex verb with sub-word elements divided by prepositional phrases, accusative DPs, or a future tense verb seems unlikely. However, base generating a complex verb together under the V<sup>0</sup> and then moving the light verb would allow normal syntactic operations

under the terminal node. This amounts to essentially dissolving the syntactic word/syntactic phrase distinction.

### 3 Explanation

One possible explanation for complex predicates, in light of their potential for separation, is that they are normal syntactic units. This places them under the V' node. How does this account for the unique syntactic properties of light verbs? We could say that LVs are lexically marked for subcategorization of the non-verbal element, in addition to the other normal subcategorization information found in the lexicon for verbs.

This might imply that the Two Object Position Hypothesis (TOPH) by Karimi (2003) could be extended to three object positions. The non-verbal element would be viewed as an extended non-specific DP, with all the morphological restrictions accompanying them.

### 4 Examples

#### 4.1 Normal Verbs

Sentences which do not make use of a complex predicate may contain the same words as those found with a CP, but its structure blocks a CP from forming. The specific accusative marker *rā* serves such a function. Example 1 shows a sentence with *rā* 'They hit the hand.'

(1) آنها دست را زدند

ānhā dæst rā zæd-ænd  
they hand ACC hit-3P

'They hit the hand.'

## 4.2 Complex Predicates

By removing the specific accusative marker *rā*, the above sentence means 'They touched', as seen in Example 2. Note that 'hand + hit' (*dæst zædæn*) can mean 'to touch', 'to handle', or 'to embark on'. Direct objects of *dæst zædæn* are contained in a prepositional phrase headed by *be* 'to', as seen in Example 3. Based on this information so far we could hypothesize a structure like that in Figure 1.

(2) آنها دست زدند

ānhā dæst zæd-ænd  
they hand hit-3P

'They touched.'

(3) آنها به او دست زدند

ānhā be u dæst zæd-ænd  
they to it hand hit-3P

'They touched it.'

In light of the previously mentioned phenomenon of CP separation, we would need to refine the original structure found in Figure 1. Movement of the light verb ultimately to  $\text{AgrS}^{\wedge}$  would allow us to account for

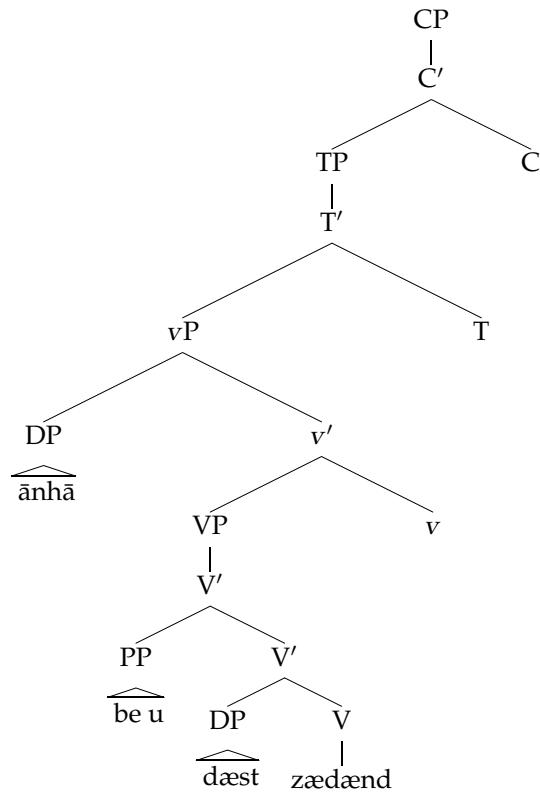


Figure 1: Preliminary structure for Example 3 “ānhā be u dæst zædænd.”

separation, tense marking, and subject agreement. Figure 2 shows such a movement.

### 4.3 Split Complex Predicates using Accusative Clitic

Complex predicates may be separated by an accusative clitic. The accusative clitic could be seen as an applicative construction, originating from a prepositional phrase. As Goldberg (2004) notes, the placement of the clitic between the two CP components is preferred, but not required. With the light verb out of the VP, we can now form an applicative construc-

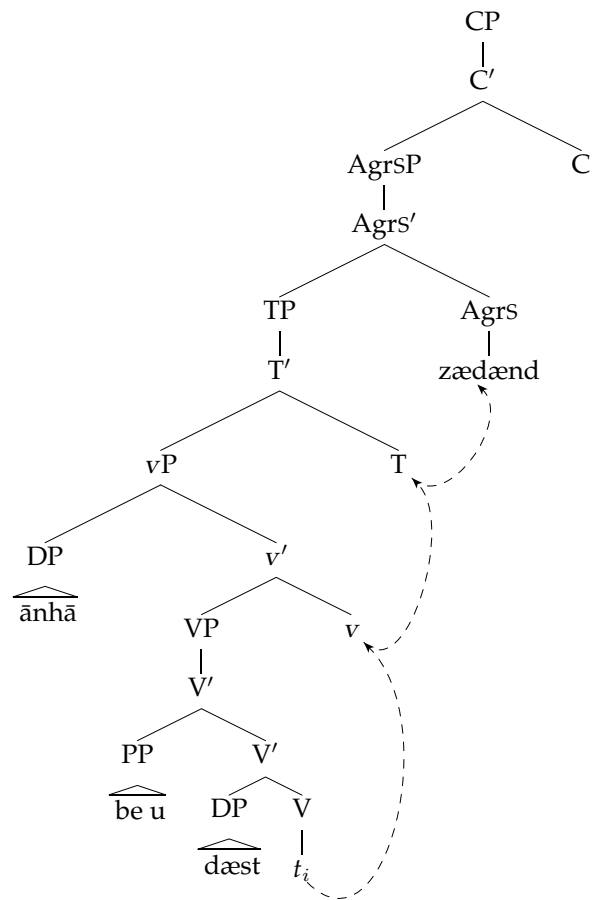


Figure 2: Modified structure for Example 3 "ānhā be u dæst zædænd."

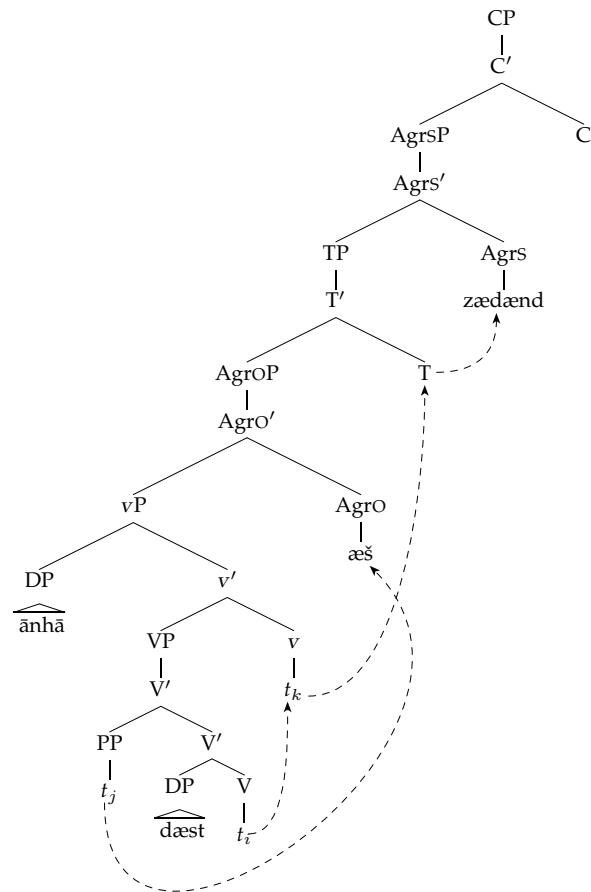


Figure 3: Example 4: “ānhā dæstæš zædænd.”

tion, such as Example 4. It lands between the non-verbal element (sister to the V\*) and AgrS — at the AgrO node. Figure 3 shows these movements.

(4) آنها دستش زدند

ānhā dæst=æš zæd-ænd  
they hand=it hit-3P

‘They touched it.’

#### 4.4 Split Complex Predicates using Prepositional Phrases

Complex predicates can also be separated by prepositional phrases, as Example 5 shows. These intermediary prepositional phrases exhibit the same properties as PPs outside of complex predicates. Noun phrases within these PPs can pluralize, receive genitive marking, and can coordinate with other NPs. None of these properties are allowed for NPs under a prepositional phrase inside of a complex predicate. This seems to indicate that the two PP types would be posited differently in the subcategorization specification of the light verb.

Figure 4 shows how the prepositional phrase would adjoin to the vP. This intermediary PP seems to eliminate any morphological or SWF boundaries that could exist between the non-verbal element and the light verb.<sup>3</sup>

(5) آنها دست به تظاهرات زدند

*ānhā dæst be tæzāhorāt            zæd-ænd*  
they hand to demonstration.PL hit-3P

‘They embarked on demonstrations.’

#### 4.5 Split Complex Predicates using Future Auxiliary

Last of all, complex predicates can become separated by a future auxiliary verb. The previous separation environments might have been attributed

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<sup>3</sup>This point is further illustrated in the example *ānhā æz dæst ketābhāye mævā dāštænd* ‘They lost my books’, where a morphologically productive DP is found between an unproductive PP and a light verb.

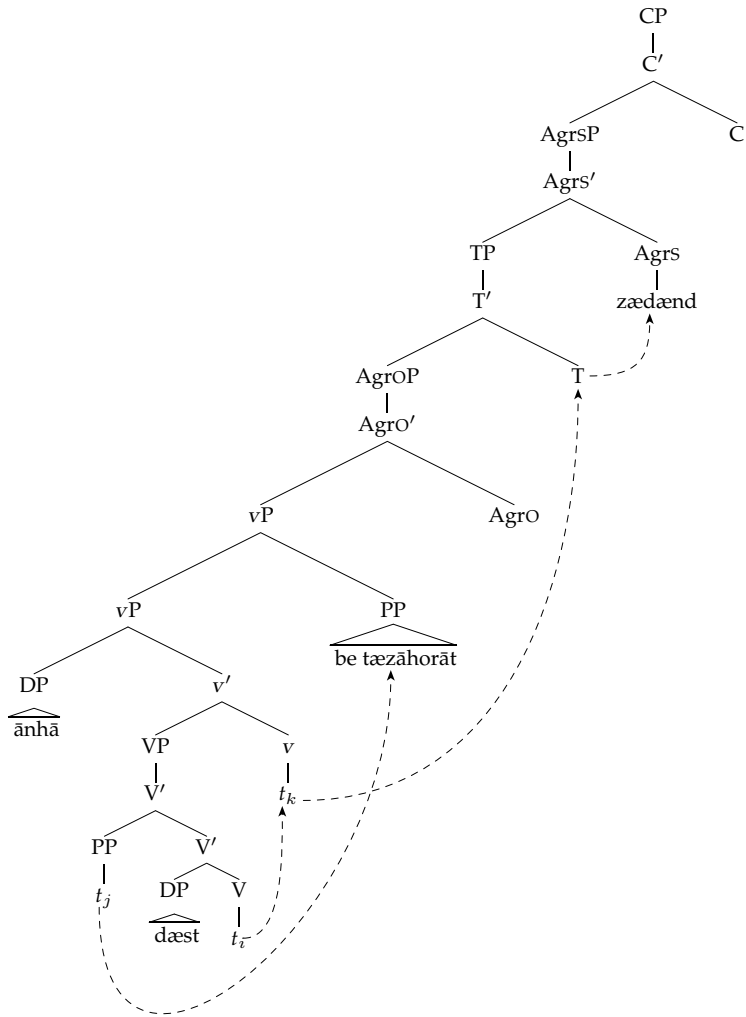


Figure 4: Example 5: "ānhā dæst be tæzāhorāt zædænd."

to scrambling or related phenomena, due to the optionality of intermediary placement. However, placement of the future auxiliary verb between the non-verbal element and the light verb is *required*; no other position is grammatical. This seems to rule out scrambling as an explanation for complex predicate for separation.

Example 6 extends Example 5, putting the sentence in the future tense. By considering the light verb as the  $V^0$  we can move the verb up to receive tense, in a normal verb raising movement. Figure 5 illustrates this movement.

(6) آنها دست به تظاهرات خواهند زد

ānhā dæst be tæzāhorāt      xāh-ænd zæd  
 they hand to demonstration.PL will-3P hit

‘They will embark on demonstrations.’

## 5 Addressing Weaknesses

Positing complex predicates at the  $V'$  level could possibly allow too productive usage of CPs, as they are viewed as a syntactic unit. This may be the case, however note that Mohammad and Karimi (1992) have stated that complex verbs are “a growing set”, indicating their increasing productivity.

Along the same lines, the explanation suggested in this paper assumes a fairly compositional reading of CPs. Complex predicates using certain

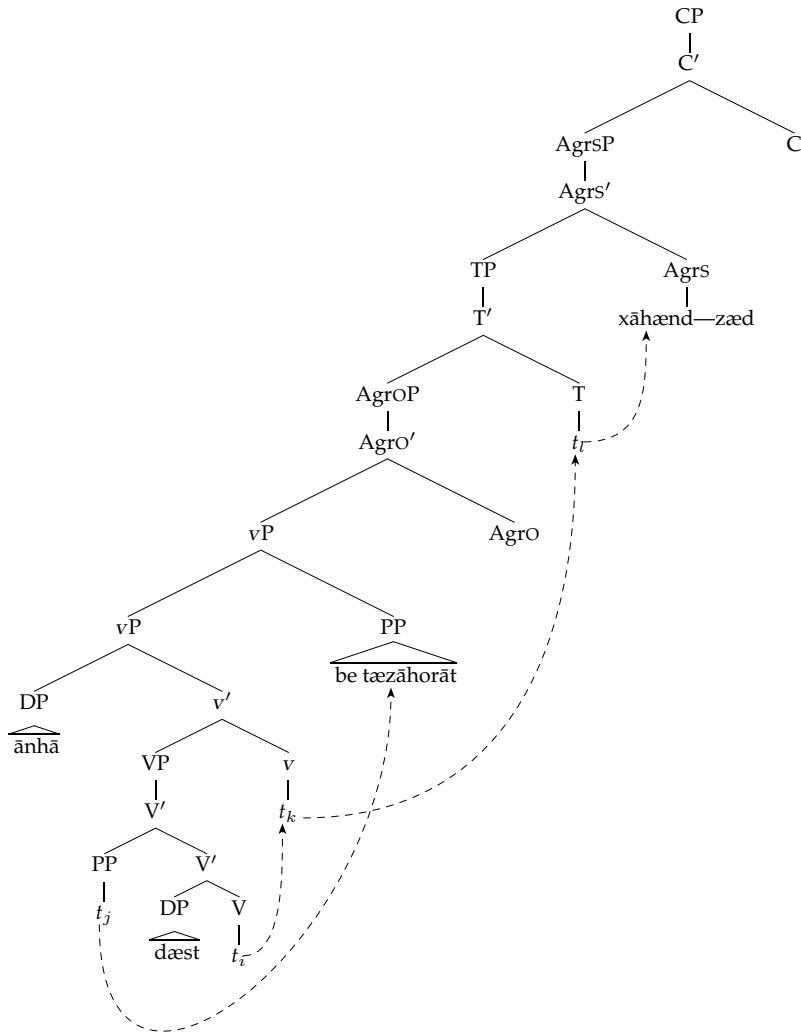


Figure 5: Example 6: "ānhā dæst be tæzāhorāt xāhænd zæd."

light verbs like *xordæn* ‘eat’ or *gozāštæn* ‘put’ usually have little transparent meaning based on the individual words contained therein. However, complex predicates using the more commonly used light verbs such as *kærdæn* ‘do’ or *šodæn* ‘become’ have much more transparent meaning, furthering claims of compositionality.

## 6 Conclusion

The separation of complex predicates sheds light onto their internal structure. While an explanation such as Syntactic Word Formation (Karimi, 2003) accounts for many properties of CPs, it becomes problematic for separated complex predicates. SWF posits prepositional phrases under the  $V^0$  node. It also allows some morphological inflexions at a sub-word level, while preventing others. SWF allows syntactic movements for sub-word elements.

The explanation proposed in this paper resolves each of these issues. Prepositional phrases are simply complements of a light verb. LVs receive their normal inflexion, like other verbs. Also, raising and other syntactic phenomena occur where syntactically permitted.

## References

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