

# Determinants of event type in Persian complex predicates

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In this paper we analyse the interdependence of Persian nonverbal (NV) element and the light verb (LV) in determining the syntactic properties, the event structure, and the alternation possibilities of the entire complex predicate (CP) and we argue that these properties provide strong evidence against a Lexicalist approach to such phenomena. Further we show how these facts may be naturally accommodated within a constructionalist position such as Hale and Keyser (1993, 2002), and argue that the combination of compositionality and syntactic independence effects observed in these constructions, are difficult, if not impossible, to deal with in a projectionist approach.

## 1 INTRODUCTION

It has been argued in the literature that the argument and event structures of Persian *complex predicates* (CPr), as well as syntactic properties such as control, cannot be simply derived from the lexical specifications of the *nonverbal element* (NV) or the *light verb* (LV), therefore suggesting that the syntactic and semantic properties of these elements must be determined post syntactically rather than in the lexicon (Karimi 1997). In this paper, we show that the event structure of LV is not always the same as the event structure of its heavy counterpart. Furthermore, although LV determines the *agentivity* (*xordan* 'collide' versus *zadan* 'hit') and the eventiveness of the CPr, it fails to completely determine the event structure and the telicity of the CPr. Thus, depending on the NV element, the same LV may occur in different types of event structure. For example, the LV *xordan* 'collide' may occur in both *accomplishment* and *achievement* complex predicates, while the LV *zadan* 'hit' can occur in *activity*, *accomplishment*, and *semelfactive* complex predicates, when combined with different NV elements. We argue that when the LV allows for event type variation (as in the case of *xordan* 'collide'), it is the category of the NV element that determines the event structure of the whole CPr. That is, if the NV element is a noun, the CPr is *atelic* (activity or semelfactive), unless the noun is eventive (see section 5), in which case the CPr may be *telic* (accomplishment). If the NV element is an adjective, an adverbial particle, or a prepositional phrase, the CPr is always *telic* (accomplishment or achievement). This is summarized in (1):

### (1) Event Structures

Category of NV	Telic	Atelic
Noun (if not eventive)	*	√
A/Adv Particle/PP	√	*

However, there are also cases where the event type of the complex predicate is determined by the LV alone, and not the NV element. This is the case of *shodan* 'become' which gives rise only to accomplishments and achievements, due to its inherently telic meaning which does not allow for aspectual variation (see section 4.3.3). (This inherently telic meaning may turn out to be reducible to *shodan*'s selectional properties, if the current proposal is on the right track).

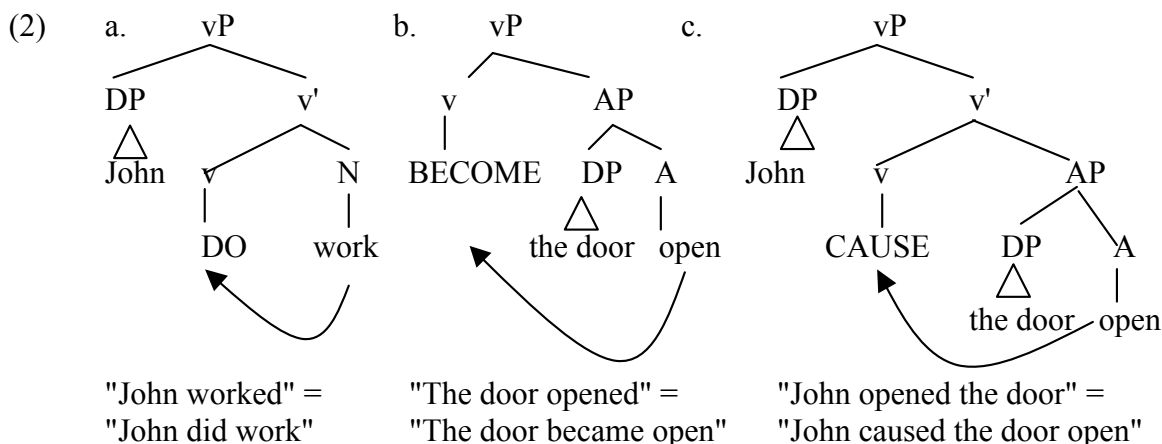
We go on to show that the semantics of the NV element determines whether it can combine with particular LVs. Finally, we discuss certain predictions that follow from our analysis of Persian CPR.

As it can be inferred by these very preliminary considerations, the interdependence and systematicity of the NV element and LV's contributions to determining the event structure and alternation possibilities of the entire CPR seem to be strong evidence against a Lexicalist approach to such phenomena. Accordingly, in this paper we show how these facts may be naturally accommodated within a syntax-based approach to argument structure, and argue that the combination of compositionality and syntactic independence effects observed in these constructions are difficult, if not impossible, to deal with in a projectionist approach.

The traditional GB-style approach to projection involves representing verbs complete with their argument structures in the lexicon, which then project into the syntax. Accordingly, the Projection Principle (Chomsky 1986:84) states that lexical information must be syntactically realized. The argument structures of the verbs are linked via universal principles to particular syntactic positions.

In such a theory, argument-structure alternations, whether morphologically marked or not, are accomplished via a separate generative process that occurs within the lexicon, prior to projection. For instance, a transitive verb may be mapped to an intransitive verb via the lexical rule of Passive, which alters both the argument structure and the morphology of the relevant verb. The altered lexical entry then projects in accordance with the linking principles, thereby indirectly giving rise to the altered syntax of passives. The same kind of explanation has then been adopted by various lexicalist analyses to explain not only active/passive alternations, but also many other kinds of alternations that verbs display in languages like English (Levin and Rappaport 1995, among many others).

Beginning with Baker, Johnson and Roberts (BJR) (1989), and realized most fully in the work of Hale and Keyser (1992, 1993 and subsequent work.), however, a sustained effort has been made to eliminate lexical rules and generate all argument structure alternations in the syntax, greatly simplifying the model of the lexicon. In such "constructionalist" theories, the verb is inserted into a particular complex syntactic structure, which determines the location and interpretation of each of the arguments in the verb phrase. Argument structure alternations then become a matter to be treated in the syntax, rather than in the lexicon. The BJR treatment of passive, for instance, involved treating the passive morpheme as an argument of the verb, which saturated the verb's external argument position and was then suffixed to the verb in the syntax. Hale and Keyser's approach is even more radical. Unergative verbs are created by incorporating the object in a transitive structure into an abstract verbal head, which then appears to be intransitive. *Work* is underlyingly transitive: "do work", as in (2a) below. Argument structure alternations are created when the same root appears in different syntactic structures (see (2b-c)).



In this paper, we show that two of the Hale and Keyser structures above map naturally onto the Persian CPr constructions, accounting for their varying event structure and agentivity. Evidently, the Persian CPr constructions in many cases look like an obvious one-to-one match with the underlying syntactic representations of argument structure, assuming that incorporation of the NV element into the LV does not take place (and allowing for the head-final nature of Persian).

The article is organized as follows. In section 2 we look at phrase structure of Persian in general and the way the language forms Complex Predicates in particular. We show that a number of pieces of evidence can be adduced in support of the independent syntactic nature of the LV and the NV element. In section 3 we briefly summarize Hale and Keyser’s framework for deriving argument structure and verb alternations. In section 4 we analyze the effect of each element of the complex predicates in determining the aspect properties of the whole and we discuss different types of complex predicates, depending on the categorical nature of the NV element. The phrase structure of eventive NV elements is discussed in section 5. The compatibility of the NV element with LV is discussed in section 6. Finally in section 7 we look at some other cases of possible and impossible alternations that our analysis is able to predict. Section 8 concludes this paper.

## 2 PHRASE STRUCTURE OF PERSIAN

### 2.1 General Background

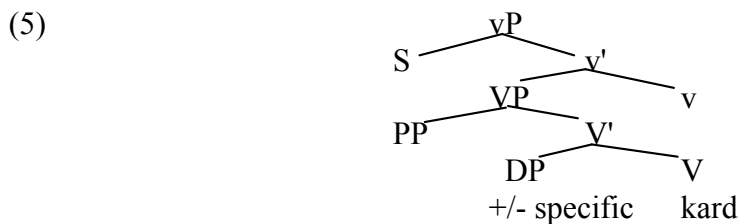
Persian is a verb final language that exhibits the following unmarked word order in a double object construction:

- (3) a. S O<sub>specific</sub> PP V  
 b. S PP O<sub>nonspecific</sub> V

The specific direct object appears in a higher position, preceding the indirect object. The nonspecific object is adjacent to the verb, following the indirect object. This is a property seen in many other languages such as Hindi, Turkish, German, and Dutch. Examples illustrating (3a) and (3b) are provided in (4a) and (4b), respectively.

- (4) a. Kimea ketâb-ha ro be Papar dâd  
 K book-pl râ to Papar gave  
 'Kimea gave the books to Papar.'  
 b. Kimea be Paper ketâb dâd  
 Kimea to Paper book gave  
 'Kimea gave book(s) to Papar.'

(5) exhibits the phrase structure underlying both (4a) and (4b) (Karimi, to appear):



The surface order in (3a) is obtained by movement of the [+specific] object, which is followed by the specificity marker *râ*, to the edge of vP. Accusative Case on the object is checked in that position prior to its movement out of vP in order to escape the existential closure. (Of course, the subject in spec-vP moves further leftward yet, to Spec-TP or higher, in order to check its case features; this gives the final S O<sub>spec</sub> PP V word order). The nonspecific object remains in situ, directly generating the word order in (3b).<sup>1</sup>

## 2.2 Complex Predicates

### 2.2.1 Overview

Complex verbs have gradually replaced simple verbs in Persian since the thirteenth century. The tendency to form complex verbs has resulted in the existence of two sets of verbs, simple and complex, for a number of verbal concepts. In many cases, the application of the simple verb is restricted to the written and elevated language. A few examples of simple/complex pairs appear in (6) (See Karimi, 1997 for more examples). The productivity of CPr formation is such that it has completely replaced the former morphological rule of simple verb formation in this language (Bateni, 1989).

(6)	<b>Simple</b>	<b>Complex</b>		
	lasidan	las zadan	(flirtation doing)	'to flirt'
	raghsidan	raghs kardan	(dance doing)	'to dance'
	agahanidan	agah kardan	(informed making)	'to inform'
	aghazidan	aghaz kardan	(start doing)	'to start'

The LV of Persian CPr ranges over a number of simple verbs, as shown by Karimi (1997). A sample of LVs employed in CPr constructions is provided in (7).

(7)	a.	<i>kardan</i>	'to do'	l.	<i>budan</i>	'to be'
	b.	<i>shodan</i>	'to become'	m.	<i>chidan</i>	'to arrange'
	c.	<i>xordan</i>	'to collide'	n.	<i>gereftan</i>	'to catch, to take'
	d.	<i>zadan</i>	'to hit'	o.	<i>keshidan</i>	'to pull'
	e.	<i>dâdan</i>	'to give'	p.	<i>nemudan</i>	'to show'
	f.	<i>dâshtan</i>	'to have'	q.	<i>oftâdan</i>	'to fall'
	g.	<i>âmadan</i>	'to come'	r.	<i>pâshidan</i>	'to scatter'
	h.	<i>andâxtan</i>	'to throw'	s.	<i>raftan</i>	'to go'
	i.	<i>âvardan</i>	'to bring'	t.	<i>sepordan</i>	'to entrust'
	j.	<i>bastan</i>	'to tie'	u.	<i>shostan</i>	'to wash'
	k.	<i>bordan</i>	'to carry'	v.	<i>gozashtan</i>	'to pass, to cross'

The light verb *kardan* 'to do/make' has almost entirely lost its heavy interpretation, and is the most productive LV. The LV *shodan* 'to become' is systematically used in so-called passive or unaccusative constructions.

Another characteristic of Persian CPr is that its NV element ranges over a number of phrasal categories, as exemplified by (8) (see Karimi, 1997 for additional examples).

<sup>1</sup> Karimi (2003) suggests two distinct underlying object positions: the nonspecific object is base-generated as a sister to the verb, and the specific one in the Spec of VP. The structure in (5) differs from that proposal in that the specific object and its nonspecific counterpart are both base generated in the same position. The two proposals have one important property in common: the specific object receives its interpretation in its surface position, that is in a position preceding the indirect object. In the spirit of Baker (1988, 1996), it is assumed that the nonspecific object, being inside the predicate construction, does not need Case. For detailed analysis see Karimi (to appear).

(8)	a. <b>N+LV</b>		
	kotak zadan/xordan	(beating hitting/colliding)	'to beat, to get beaten'
	xar kardan/shodan	(donkey doing/becoming)	'to fool, become fooled'
	dust dâshtan	(friend having)	'to love'
	b. <b>A+LV</b>		
	sabok kardan/shodan	(light doing/becoming)	'to degrade' (tr & intr)
	pahn kardan/shodan	(wide doing/becoming)	'to spread, to widen' (tr & intr)
	derâz keshidan	(long pulling)	'to lie down, to take a nap'
	c. <b>Particle+LV</b>		
	birun kardan	(out doing)	'to dismiss, to fire (someone)'
	bâlâ âvardan	(up bringing)	'to vomit'
	bâlâ keshidan	(up pulling)	'to steal'
	d. <b>PP+V</b>		
	be yâd dâshtan	(to memory having)	'to have in memory'
	bejâ âvardan	(to place bringing)	'to recognize'
	be bâd dâdan	(to wind giving)	'to waste'

Finally, the NV element of Persian CPr may also be a complex phrasal element, as in (9):

(9)	<b>Complex NV element</b>		
	dast o pâ kardan	(hand and foot doing)	'to try (hard)'
	sar o kêr dâshtan	(head and work having)	'to be involved'
	dast be dast kardan	(hand to hand doing)	'to hesitate'

We will not discuss this type of NV element in this paper.

### 2.2.2 The syntactically independent nature of the LV and the NV element in Persian

A Persian CPr cannot be considered a lexical unit since its NV element and LV may be separated by a number of elements, including (a) negative and inflectional affixes, (b) the auxiliary verb for future tense, and (c) emphatic elements (Mohammad and Karimi 1992).<sup>2</sup> Furthermore, the NV element of Persian CPr allows limited modification, as in (10).

(10)	a.	Kimea az ra'is-e edâre [CV [NV da'vat-e <i>rasmi</i> ] kard ]]	
		Kimea of boss-Ez office invitation-Ez formal did	
		'Kimea extended a formal invitation to the boss of the office.'	
	b.	Kimea barâye in xune [CV [NV chune-ye <i>xubi</i> ] zad ]]	
		Kimea for this house chin-Ez good hit	
		'Kimea performed a good negotiation for this house.'	

The adjective *rasmi* 'formal' modifies the nominal NV element in (10a), while *xubi* 'good' modifies the NV element *chune* in (10b).

Gapping is also allowed in the case of Persian CPr:

<sup>2</sup> Abbreviations:

râ = Specificity Marker for Accusative Case     pl = plural     sg = singular  
 hab = habitual     emph = Emphatic     neg = negation     Ez = Ezafe particle

The Ezafe construction involves a DP consisting of a head noun (an element with the feature [+N] such as N or A), its modifier(s), an optional possessive DP, and the Ezafe particle *e* that is structurally utilized as a link between the head and its modifiers (and the possessive DP). For recent analysis of Ezafe constructions see Ghomeshi (1996).

- (11) Kimea faghat man-o da'vat karde, to-ro ke \_\_\_ na-karde  
 Kimea only me-râ invitation did, you-râ emph \_\_\_ neg-did  
 'Kimea has only invited me, not you.'

Finally, Persian NV elements cannot be scrambled out of V' (Karimi 2003) unless they contain a quantificational element and receive heavy stress, as attested by the contrast in (12).

- (12) a. Kimea [*che zamin-e saxti*]i diruz [<sub>CV</sub> t<sub>i</sub> xord]  
 Kimea what earth-Ez hard yesterday collided  
 'What a hard fall Kimea had yesterday.'  
 Lit. Kimea what a hard earth yesterday collided.
- b. \*Kimea *zamin* diruz xord  
 Kimea earth yesterday collide

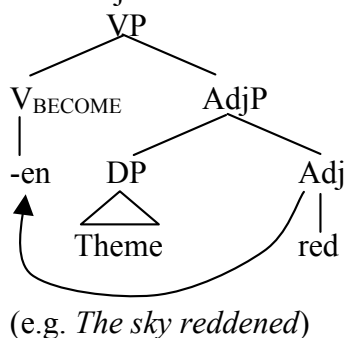
These examples suggest that the LV and the NV element in Persian CPr are separately generated and combined in syntax, and become semantically fused at a different, later level. The two parts of CPr enjoy syntactic freedom to a certain degree; nonetheless, their semantic properties are the same as those of single word elements elsewhere in Persian and in the grammars of languages like English. These conflicting properties can be easily accommodated in a non-Lexicalist theory (like, for instance, Distributed Morphology or other radical constructionalist theories like that proposed by Borer 2002), where all interpretation occurs post-syntactically. They pose a more serious problem for lexicalist accounts, which would essentially need to claim that Persian Complex Predicates are instances of 'idioms', receiving a separate entry in the lexicon complete with their syntactic structure. As noted by Marantz (1997), there is no principled independent way of distinguishing between the meanings of so-called 'idioms' and the meanings of single-word elements like 'cat' or 'pacify'.

### 3 INTRODUCTION TO HALE AND KEYSER'S SYNTACTIC ARGUMENT STRUCTURE

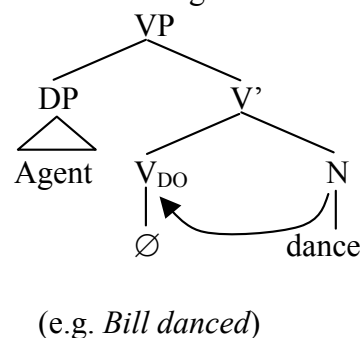
As outlined above, Hale and Keyser (1993 et. seq., esp 2002; henceforth H&K) propose a radical new approach to argument structure. Verbs, even in English, are not syntactically simplex items, but rather are composites of a light verb and a non-verbal syntactic element. The surface form of the verb results from incorporation of one or more heads in the non-verbal constituent with the light verb.

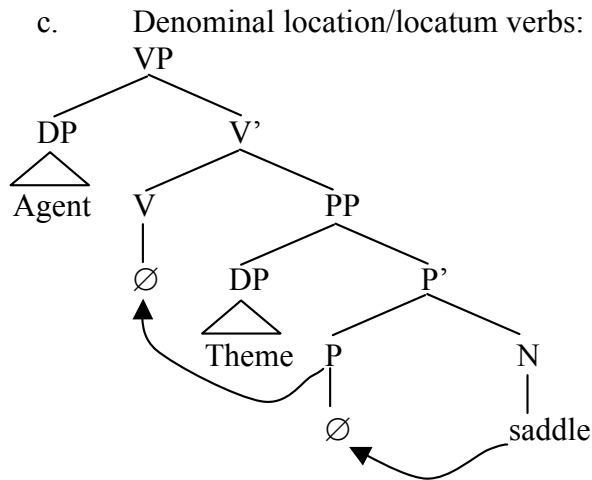
Their analysis deals with three main kinds of non-verbal constituent: bare N heads, adjectival small clauses, and prepositional small clauses. Their analysis draws its primary inspiration from English, where the categorial status of adjectival and nominal verb roots is very clear. They propose that denominal and deadjectival verbs are derived from three primary underlying structures:

- (13) a. Deadjectival verbs



- b. Denominal unergative verbs





(e.g. *The cowboy saddled the horse*)

This approach immediately explains many puzzles, both theoretical and empirical. Among other things, it makes the difference between unergative and unaccusative verbs depend on more than the X-bar notation. It explains the morphological properties of English verbs of these classes. In many languages, the verbalizing part of the structure is visibly morphologically realized as an affix, as in these examples from Jemez, taken from H&K 1993:

- |      |    |         |    |         |    |         |
|------|----|---------|----|---------|----|---------|
| (14) | a. | sáae'-a | b. | záae'-a | c. | se-ʔa   |
|      |    | work-do |    | song-do |    | word-do |
|      |    | “work”  |    | “sing”  |    | “speak” |

Here, the V portion, so often a zero morpheme in English, is realized as the suffix *-a*, ‘do’, attached to a clearly nominal element. Even in English, the various V heads are often overtly realized; the *-en* suffix is arguably such a morpheme, as are *-ize* (as in *criminalize*), *-ify* (as in *clarify*), and *-ate* (as in *marinate*).

On such an approach, the thematic properties of a particular verb are dependent on the syntactic and semantic properties of the verbalizing functional element and of the non-verbal constituent which make it up. Changing the properties of the verbalizing element — the *light verb* — results in a change in Agent selection: the light verb is responsible for the presence or absence of an external argument. (Hence, on this approach, Passive is naturally seen as the result of a change in choice of light verb, not as a result of a lexical operation. Similarly, the causative/inchoative alternation in pairs like *John opened the door/The door opened* is also the result of varying the light verb, although the morphological consequences of this variation are invisible in English).

Harley (2001) argued that the syntactic and semantic properties of the non-verbal constituent are responsible for the internal event structure of the final composed predicate. Simple N complements, as in the denominal unergative verbs, behave as Incremental Themes, measuring-out the event by virtue of their inherent boundedness properties (hence, e.g. *dance* is atelic, but *foal* is telic). Predicative complements, as in the verbs based on adjectival and prepositional non-verbal constituents, function as small-clause results, measuring-out the event by virtue of the inherent boundedness or lack thereof of their incremental status (hence, e.g. *red* is atelic, because a thing can continue to become more intensely red for an arbitrary period, but *clean* is telic, since once something is clean, it can’t get cleaner — cleanliness is inherently bounded (see Weshcler, 2001, Hay, Kennedy & Levin, 1999, Folli and Harley, 2002)). Finally, of course, the properties of the nonverbal constituent determine

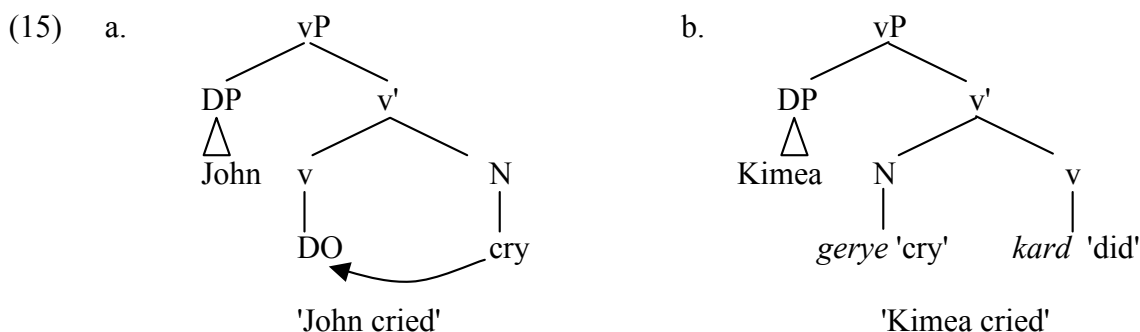
the number of internal arguments present: 0 (as in unergatives), 1 (as in unaccusatives and transitives) or 2 (as in ditransitives).

Below, we will show that each of H&K's proposed underlying structures for English verbs, above, have natural non-incorporated counterparts in Persian complex predicate (CPr) constructions, where the light verb and non-verbal element are realized separately. Further, we will show that the agentivity of a particular CPr is dependent on the light verb involved, and the telicity of the CPr is dependent on the non-verbal element involved, in a very transparent fashion. Persian, therefore, is a language in which the complex syntactic nature of verbs is very easily discerned, and in which Hale and Keyser's proposals concerning the structure of the verb phrase find striking confirmation, despite the fact that they were originally designed to account for the facts of a typologically extremely dissimilar language.

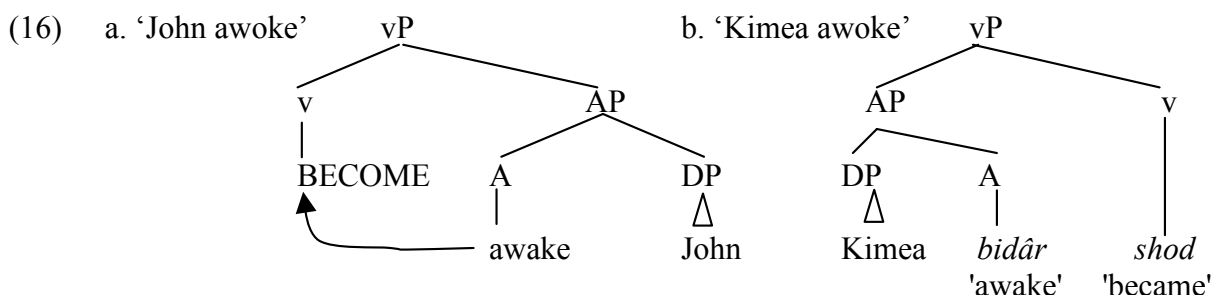
#### 4 DETERMINANTS OF EVENT STRUCTURE IN CPr

##### 4.1 Deriving unergative, inchoative, and causative argument structures

In the previous section we saw that unergatives are formed when a nominal element is incorporated into a light verb which selects for an external argument. Similarly, inchoatives result when an adjectival element is incorporated into a light verb which does not select for an external argument. These structures translate naturally to Persian CPr. Consider the representation of a CPr like *gerye kardan*, 'weeping doing', that translates as a typical unergative like *cry*:

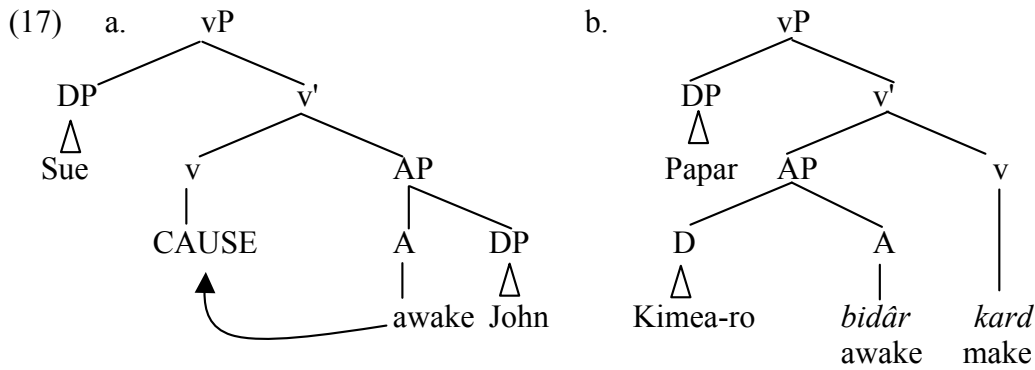


Similarly, consider the syntax of a CPr that translates as a typical inchoative, like *bidâr shodan* 'awake becoming':



Just as hypothesized by Hale and Keyser for the English causative/inchoative alternation, the alternation between the inchoative and the causative of *awake* in Persian is accomplished by changing the light verb from the equivalent of 'become' (*shodan*) to the causative 'make' (*kardan*).





It should be clear from the above that the Persian case constitutes the strongest possible evidence for the syntactic nature of l-syntax.

Above, we have seen that altering the particular light verb in a Persian CPr can affect the appearance or absence of an Agent argument, as expected on a vP-shell theory of argument structure. We show below that this is a general property of the LV in the CPr. Further, we demonstrate the tight relationship between event type and the category of the NV element in the CPr. That is, the category of the complement to v determines the event type of the CPr, when the LV itself is not inherently telic.

## 4.2 What the LV can do

### 4.2.1 Agentivity and Causativeness

The choice of LV determines whether or not the CPr selects for an agent (Karimi, 1997, Megerdooian, 2002a). This is shown in the following contrasts.

- (18) a. tim-e mâ unâ-ro shekast *dâd*  
 team-EZ we they-râ defeat gave  
 'Our team defeated them.'
- b. tim-e mâ az unâ shekast *xord*  
 team-EZ we of they defeat collided  
 'Our team was defeated by them.' (lit. our team got defeat from them.)

As in the case above, the alternation between an agentive and non-agentive structure is accomplished by selecting a different light verb; we have moved from a causative to an inchoative argument structure with the shift from agentive *dâdan* ('give') to inchoative *xordan* ('collide'). A similar pair can be seen in (19) below:

- (19) a. Minu bachcha-ro kotak *zad*  
 Minu child-râ beating hit  
 'Minu hit the child.'
- b. bachche kotak *xord*  
 child beating collided  
 'The child got hit.'

If we go back to our list of LV in (7), we see that the Agent-selecting properties of any given light verb are consistent across all Complex Predicates formed with a given LV. We can show this because the grammaticality of an agentive adverbial such as *amdân* 'intentionally' remains constant even when the NV element's category is manipulated. In (20) and (21) below we give evidence for this with respect to two LVs *zadam* 'to hit' and *xordan* 'to collide' (HV stands for Heavy Verb).

- (20) *zadam* 'to hit'
- a. Kimea amdan bachcha-ro *zad* HV  
 Kimea intentionally child-râ hit  
 'Kimea hit the child intentionally.'
- b. Kimea amdan be ghazâ dast *zad* LV  
 K intentionally to food hand hit  
 'Kimea intentionally touched the food.'
- c. Kimea amdan dâd *zad* LV  
 K intentionally yell hit  
 'Kimea yelled intentionally.'
- d. Kimea amdan dast *zad* LV  
 K intentionally hand hit  
 'Kimea clapped intentionally.'
- (21) *xordan* 'to collide'
- a. \*Kimea amdan be divâr *xord* HV  
 K intentionally to wall collided  
 'Kimea intentionally hit the wall.'
- b. \*ghazâ amdan dast *xord* LV  
 food intentionally hand collided  
 'Food became intentionally touched.'
- c. Kimea amdan shekast *xord* LV  
 K intentionally defeat collided  
 'Kimea intentionally got defeated.'<sup>3</sup>

We consider this strong evidence for the contention that Agents are selected for by a different predicate than other arguments, cross-linguistically. This has been argued for notably by Kratzer (1996) and Marantz (1997), on purely semantic grounds (the unavailability of idiomatic interpretations of agents+verb, to the exclusion of the object) in languages where the complex vP structure is morphologically invisible. Here in Persian, the complex structure is transparent, and it is clear that agentivity is a property of the LV in the CPr, and never depends on the nature of the NV element selected.

The only cases where choice of NV element appears to affect the projection of an Agent argument is with verbs of motion, like *pass* and *come*, as illustrated in (22) and (23) below.

- (22) *gozashtan* 'to pass'
- a. Kimea amdan az xiyâbun *gozasht* HV  
 K intentionally of street passed  
 'Kimea intentionally crossed the street.'
- b. \*Kimea amdan dar *gozasht* LV  
 K intentionally away passed  
 'Kimea intentionally passed away.'
- (23) *âmadan* 'to come'
- a. Kimea amdan âmad HV  
 K intentionally came  
 'Kimea intentionally came.'

<sup>3</sup> As in English, this is only grammatical on a coercion reading, where the subject agentively did some action that resulted in his/her purposeful defeat. If we substitute a subject which is incapable of having intentions, we can see that the result will be ungrammatical:

(i) \*asb-e sefid amdan shekast *xord*  
 horse-Ez white intentionally defeat collided (lit. \*The white horse got defeat intentionally)

- b. \*Kimea amdan be donyâ *âmad* LV  
 K intentionally to world came  
 'Kimea was born intentionally.'

Verbs of motion in many languages alternate between an agentive/unergative and an inchoative/unaccusative reading: (compare German sentences in: *Johann ist nach Hause gefahren* 'John went home (by car, someone else drove the car)' and *Johann hat nach Hause gefahren* 'John drove home'); we consider this alternating behavior to be characteristic of verbs of motion also in Persian.

Similarly, the causativity of CP<sub>r</sub> is also determined by the LV, as suggested by Megerdooomian (2002b). In (24) and (25) below we consider two examples:

- (24) a. âb be jush âmad  
 water to boil came  
 'The water boiled.'
- b. Nimâ âb-ro be jush âvard  
 Nima water-râ to boil brought  
 'Nima boiled the water.' (Megerdooomian 2002b)
- (25) a. Homa be gerye oftâd  
 Homa to crying fell  
 'Homa started to cry.'
- b. Nima Homa-ro be gerye andâxt  
 Nima Homa-râ to crying dropped  
 'Nima made Homa (start to) cry.' (Megerdooomian 2002b)

In both cases, the non-verbal element is the same (*jush* 'boil' and *gerye* 'crying'), but the CP<sub>r</sub> changes from the inchoative *âmadan* 'to come' in (24) to the causative *andâxtan* 'to throw/drop' in (25).

#### 4.2.2 States and events

In addition to determining whether the CP<sub>r</sub> is causative and its external argument is agentive, the light verb distinguishes between eventive and stative CP<sub>r</sub>s. In the examples below we see that *dashtan* is stative (both in its heavy (26) and light form (27)) and therefore it is ungrammatical in the progressive form, as typical of statives.

- (26) *Have* as a heavy verb
- a. Kimea ye sag *dâr-e*  
 K one dog have-3sg  
 'Kimea has a dog.'
- b. \*Kimea *dâr-e* ye sag *dâr-e*  
 K. have-3sg one dog have-3sg  
 Lit. \*Kimea is having a dog.
- (27) a. Kimea Papar-o dust *dâr-e*  
 K. P. -râ friend have-3sg  
 'Kimea loves papar.'
- b. \*Kimea *dâr-e* Papar-o dust *dâr-e*  
 K. have-3sg P.-râ friend have-3sg  
 Lit. \*Kimea is having love Papar.

If we alter the LV while keeping the nonverbal element constant, we see that the stativity of the construction changes, suggesting that normally the eventiveness of a complex predicate

depends on the light verb involved and not on the non-verbal element. We can see this in (28) below:

- (28) a. Kimea esm-e un-o be yâd *dâr-e*  
 K. name-Ez her-râ to memory have-3s  
 'Kimea has her name in her memory.'
- b. \*Kimea esm-e un-o dâr-e be yâd *dâr-e*  
 K. name-Ez her-râ have-3sg to memory have-3sg  
 Lit. \*Kimea is having her name in her memory.
- c. Kimea esm-e un-o be yâd *mi-yar-e*  
 K. name-Ez her-râ to memory hab-bring-3sg  
 'Kimea remembers her name.'
- d. Kimea esm-e un-o dâr-e be yâd *mi-yâr-e*  
 Kimea name-Ez her-râ have-3sg to memory hab-bring-3sg  
 'Kimea is remembering her name.'

#### 4.2.3 Duration

Another property that depends on the LV is the the duration of the CPr as noted by Megerdooian 2002a. In (29) the light verb *keshidan* 'to pull' implies duration of the event, while the the light verb *zadan* 'to hit' contributes punctuality to the meaning of the complex predicate. In (30), although both Complex Predicates mean 'to yell', (30b) implies duration.

- (29) a. dast zadan (hand hitting)      b. dast keshidan (hand pulling) 'to touch'
- (30) a. dâd zadan (yell hitting)      b. dâd keshidan (yell pulling) 'to yell'

#### 4.2.4 Summary

The following chart summarizes what the LV does within a CPr.

(31)

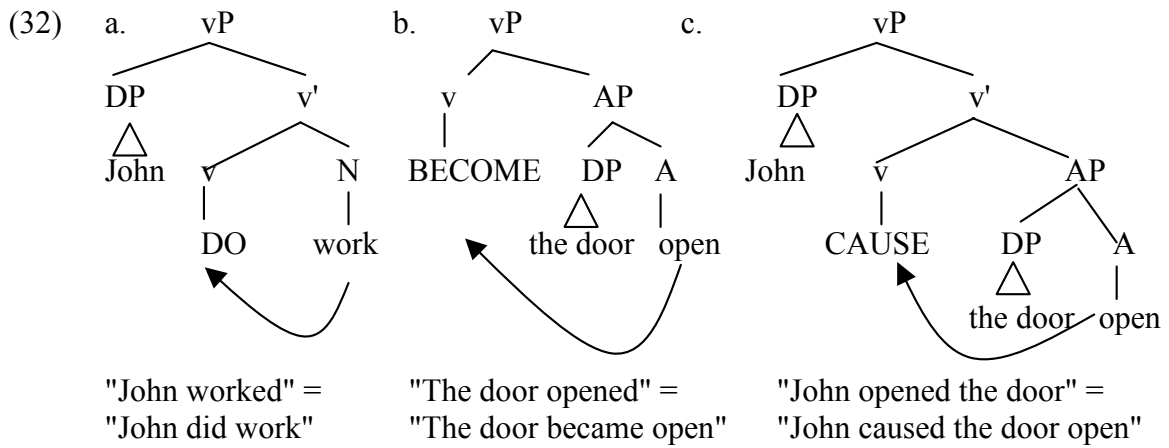
The role of LV in CPr
1. Agentivity/Causativity
2. Eventiveness
3. Duration

### 4.3 What the NV element can do

In this section we discuss the role of the NV element and its contribution to the aspectual interpretation of the whole CPr. An overview is presented in 4.3.1, followed by data in 4.3.2. The summary of this section is provided in 4.3.3.

#### 4.3.1 Overview

In a constructionalist system like Hale and Keyser's, there is a correspondence between the type of embedded structure below the vP and the Aktionsart of the whole predicate. Consider the structures for unergatives, inchoatives and causatives above, repeated here:



The unergative predicate is characteristically an Activity, in Vendlerian terms, while the inchoative and causative are Accomplishments. We can see this using the standard tests for event structure below:

- (33) a. John worked for 3 hours /#in 3 hours  
 b. The door opened #for 3 minutes<sup>4</sup>/ in 3 minutes  
 c. John opened the door #for 3 minutes/ in 3 minutes
- (34) a. John is working  John has worked  
 b. The door is opening  The door has opened  
 c. John is opening the door  John has opened the door

The crucial difference between the two classes seems to be the type of clause that appears in the complement of v: When the verb denotes a telic Accomplishment, the lower phrase is a predicate and its subject — a small clause indicating a change of state. When the whole predicate denotes an Activity, the lower phrase incorporating into the verbal shell is a nominal expression.

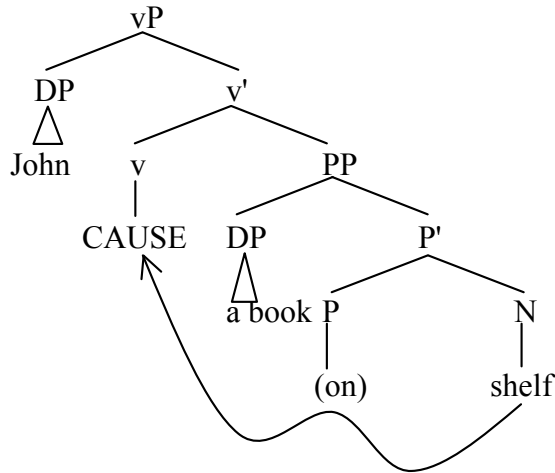
Turning to Persian, let's consider the contrast between 'bidar shodan' *awake* (intr) and 'bidar kard' *awake* (tr), illustrated below. In the alternation between the causative and the inchoative form the LV changes from *kardan* to *shodan*, but the Aktionsart is not affected, because the complement of the LV is an adjectival small clause in both cases. In contrast, the same LV *kardan* is used in *awake* (tr) and *cry* (unergative), and yet the Aktionsart of the two constructions is different, as we can see using the tests below:

- (35) a. Kimea ye sâ'ate/\* barâye ye sâ'at *bidâr shod*  
 K. one hour/for one hour awake became  
 'Kimea became awake within an hour.'  
 b. Kimea ye sâ'ate/ \*barâye ye sâ'at Papar-ro *bidâr kard*  
 K. one hour/for one hour P.-râ awake did  
 'Kimea woke Papar up within an hour.'  
 c. Kimea \*ye sâ'ate/ barâye ye sâ'at *gerye kard*  
 K. one hour/for one hour cry did  
 'Kimea cried for one hour.'

<sup>4</sup> Of course, in these constructions and in their Persian counterpart, there is a grammatical reading of 'for an hour' that modifies the result state that is syntactically represented by the adjectival phrase. The ungrammatical reading is one in which the actual event of becoming open goes on for an hour. The result-modification reading of 'for an hour' is in fact predicted on the syntactic decomposition approach, as the PP may adjoin directly to the AP [door open], and express the length of time that the open state lasted.

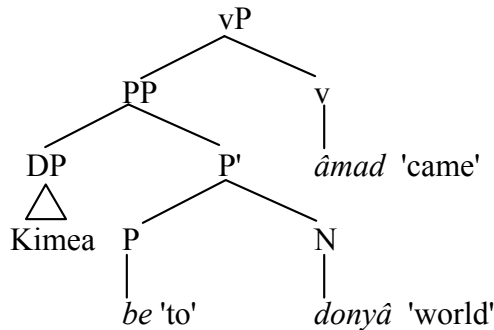
The same picture is true of cases where the small clause contains a prepositional, rather than adjectival, NV element. The preposition functions as the predicate of the small clause which introduces a result to the event structure of the CP<sub>r</sub> as a whole. Above, we illustrated the structures we assume for adjectival and nominal complements to LVs. We can extend Hale and Keyser's account of denominal location/locatum verbs to CP<sub>r</sub>s with a prepositional NV element, which will contain a small clause complement to vP, exactly as the adjectival ones do. The only distinction is that the predicate, rather than being adjectival, is prepositional.

(36) "John shelved a book" (H&K 1993)



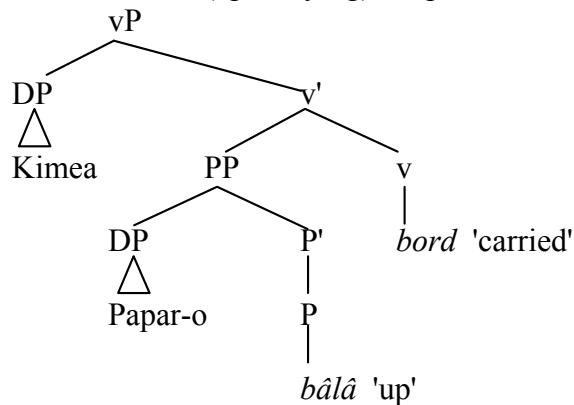
Again, for NV elements that are PPs, the H&K structure will translate directly:

(37) *be donyâ âmadan* (to world coming) 'to be born'



Similarly, in cases where a particle, rather than a full PP, is the NV-element, the same structure will apply:

(38) *bâlâ bordan* (up carrying) 'to promote'



In these cases, as for the adjectival SC cases above, it is the presence of the downstairs predication that is responsible for the telic interpretation of CPR.

#### 4.3.2 Data

The dependence of the Aktionsart on the NV element but not on the light verb is even clearer when we consider the data below. The following tests, using temporal adverbials sensitive to telicity, examine different LVs when used as main verbs ('heavy' verbs), and compared with their light counterparts. For each LV, different types of NV elements are employed, and we can see in each case that a change in the category of the NV element determines a change in the event structure of the complex predicate. The data is summarized in the table in (53).

- (39) HV *âmadan* 'to come'
- a. Kimea *âmad*.  
K came.  
'Kimea came.'
  - b. \*Kimea *kâmelan âmad*  
K completely came
  - c. Kimea \**barâye ye sâ'at/ ye sâ'ate be kelâs âmad*  
K for one hour/in an hour to class came  
'Kimea came to class for one/in one hour hour.' OK as 'she spent one hour in class.'
  - d. Kimea *dâr-e be kelas mi-yâ-d*  
Kimea have-3sg to class hab-come-3sg  
'Kimea is coming to class.'
- (40) PP + LV *be donyâ âmadan* (to world coming) 'to be born.'
- a. Kimea *diruz be donyâ âmad*.  
K yesterday to world came.  
'Kimea was born yesterday.'
  - b. Kimea \**kâmelan/\*barâye ye sâ'at/? ye sâ'ate be donyâ âmad*  
K completely/for an hour/within one hour to world came  
'Kimea was born within one hour.'
  - c. Kimea *dâr-e be donyâ mi-yâ-d*  
Kimea have-3sg to world hab-come-3sg  
'Kimea is about to be born.'
- (41) HV *zadan* 'to hit'
- a. Minu ?*kâmelan/ barâye ye sâ'at/\*ye sâ'ate Papar-o zad*  
M completely/for an hour/within one hour P-râ hit  
'Minu hit Papar for an hour.'
  - b. Minu *dâr-e Papar-o mi-zan-e*  
M. have-3sg P-râ hab-hit-3sg  
'Minu is hitting Papar.'
- (42) N + LV *dast+zadan* (hand-hitting) 'to touch'
- a. Kimea \**kâmelan/ \*barâye ye sâ'at/\*ye sâ'ate be ghazâ dast zad*  
K completely/for an hour/within an hour to food hand hit
  - b. Kimea *dâr-e be ghazâ dast mi-zan-e*  
K have-3sg to food hand hab-hit-3sg  
'Kimea is touching the food.'
- (43) HV *xordan* 'to collide'
- a. Kimea *kâmelan/ \*barâye ye sâ'at/\*ye sâ'ate be divâr xord*  
K. completely/for an hour/within an hour to wall collided  
'Kimea completely hit the wall.'

- b. Kimea dâr-e be divâr *mi-xor-e*  
K have-3sg to wall hab-collide-3sg  
'Kimea is about to hit the wall.'
- (44) N + LV *shekast xordan* (defeat colliding) 'to be defeated'  
a. Kimea kâmelan/ \*barâye ye sâ'at/ye sâ'ate *shekast xord*  
K. completely/for an hour/within an hour defeat collided  
'Kimea got completely/within an hour defeated.'  
b. Kimea dâr-e *shekast mi-xor-e*  
K have-3sg defeat hab-collide-3sg  
'Kimea is about to get defeated.'
- (45) HV *dâdan* 'to give'  
a. Kimea \*kâmelan/\*barâye ye sâ'at/\*ye sâ'ate ketâb-ro be Papar *dâd*  
K completely/for and hour/within an hour book-râ to P. gave  
b. Kimea dâr-e ketâb-ro be Papar *mi-d-e*  
K have-3sg book-râ to P. hab-give-3sg  
'Kimea is giving the book to Papar.'
- (46) N + LV *shekast dâdan* (defeat giving) 'to defeat'  
a. Kimea kâmelan/ \*barâye ye sâ'at/ye sâ'ate Papar-o *shekast dâd*  
K completely/for an hour/within an hour P.-râ defeat gave  
'Kimea defeated Papar completely/within an hour.'  
b. Kimea dâr-e Papar-o *shekast mi-d-e*  
K have-3sg P.-râ defeat hab-give-3sg  
'Kimea is defeating Papar.'
- (47) HV *andâxtan* 'to throw'  
a. Kimea \*kâmelan/ \*barâye ye sâ'at/\*ye sâ'ate gol-ro *andâxt*  
K. completely/for an hour/in an hour flower-râ threw  
b. Kimea dâr-e gol-ro *mi-y-andâz-e*  
K have-3sg flower-râ hab-throw-3sg  
'Kimea is about to throw the flower.'
- (48) N + LV *dast andâxtan* (hand throwing) 'to mock'  
a. Kimea kâmelan/ barâye ye sâ'at/\*ye sâ'ate Papar-o *dast andâxt*  
K. completely/for an hour/within an hour P.-râ hand threw  
'Kimea completely/for an hour mocked Papar.'  
b. Kimea dâr-e Papar-o *dast mi-y-andâz-e*  
K. have-3sg P.-râ hand hab-throw-3sg  
'Kimea is mocking Papar.'
- (49) HV *keshidan* 'to pull'  
a. Kimea kâmelan/ barâye ye sâ'at/\*ye sâ'ate dast-esh-ro *keshid*  
K. completely/for an hour/within an hour hand-her-râ pulled  
'Kimea completely/for an hour pulled her hand.'  
b. Kimea dâr-e dast-esh-ro *mi-kesh-e*  
K. have-3sg hand-her-râ hab-pull-3sg  
'Kimea is pulling her hand.'
- (50) PP + LV *be âtash keshidan* (to fire pulling) 'to put on fire'  
a. Kimea xuna-ro kâmelan/\* barâye ye sâ'at/ye sâ'ate *be âtash keshid*  
K house-râ completely/for an hour/within an hour to fire pulled  
'Kimea completely/in an hour put the house on fire.'  
b. Kimea dâr-e xuna-ro *be âtash mi-kesh-e*  
K. have-3sg house-râ to fire hab-pull-3sg  
'Kimea is putting the house on fire.'



- (51) HV *gozashtan* 'to pass, cross'
- a. Kimea kâmelan/\*barâye ye sâ'at/ye sâ'ate az xiyâbun *gozasht*  
 K. completely/for an hour/within an hour of street passed  
 'Kimea completely/in an hour crossed the street.'
- b. Kimea dâr-e az xiyâbun *mi-gzar-e*  
 K. have-3sg of street hab-pass-3sg  
 'Kimea is crossing the street.'
- (52) Particle + LV *dar gozashtan* (away passing) 'to pass away'
- a. Kimea kâmelan/\*barâye ye sâ'at/?ye sâ'ate *dar gozasht*  
 K. completely/for an hour/within an hour away passed  
 '?Kimea died within an hour.'
- b. \*Kimea dâr-e dar *mi-gzar-e*  
 K. have-3sg away hab-pass-3sg  
 'Kimea is dying.'

### 4.3.3 Summary

The summary of the event structures of the CPRs, some of them presented in this section, is as follows:

(53) Table

TELIC	ATELIC
PP + LV Ex: <i>be donyâ âmadan</i> (to world coming) 'to be born' <i>be âtash keshidan</i> (to fire pulling) 'to put on fire'	N + LV Ex: <i>dast xordan</i> (hand colliding) 'to get touched' <i>dâd zadan</i> (scream hitting) 'to yell' <i>gush dâdan</i> (ear giving) 'to listen' <i>dast andâxtan</i> (hand throwing) 'to mock'
Particle + LV Ex: <i>kenâr âmadan</i> (side coming) 'to get along, agree' <i>dar gozashtan</i> (away passing) 'to pass away'	
A + LV Ex: <i>derâz keshidan</i> (long pulling) 'to take a nap'	
Eventive Nominal + LV Ex: <i>shekast xordan</i> (defeat colliding) 'to be defeated' <i>shekast dâdan</i> (defeat giving) 'to defeat' <i>farib dâdan</i> (deceit giving) 'to deceive'	

As mentioned in the introduction, if the LV is inherently telic, such as *shodan* 'become', the NV element will not have an effect on the telicity of the whole CPR. The example in (54b) illustrates this fact:

- (54) a. xorshid barf-ro âb kard  
 sun snow-râ water made  
 'The sun melted the snow.'
- b. barf âb shod  
 snow water became  
 'The snow melted.'

If the above treatment of telicity is on the right track, the apparent 'inherent telicity' of such a verb boils down to a selectional restriction: it selects for a predicative small clause complement. The telicity of the whole CPR is then still determined by the complement to the LV, not the LV itself. The problem for the purely category-based treatment here, however, is the fact that above we are assuming that only Adjs and PPs may function as NV predicative

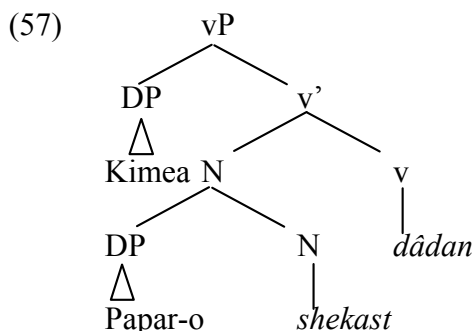
elements. Here, however, a nominal NV element is able to act as a predicate. Apparently, while NV elements of category Adj and P *must* function as predicates (leading to the generalization we present above), NV elements of category N may function as predicates in (a very limited number of) cases, as here.

## 5 AN EXCEPTION: EVENTIVE NOMINALS

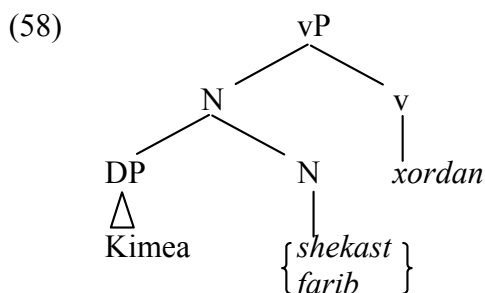
In the chart in (53), there are three cases with NV elements that are nominal and yet in which the event structure of the CPr in which they occur is telic – in fact, it is an Accomplishment. Two of them are repeated here:

- (55) *shekast dâdan* (defeat giving) 'to defeat'  
 Kimea dar ye sâ'at/ ye sâ'ate    Papar-o *shekast dâd*  
 K.    in one hour/within an hour P.-râ    defeat gave  
 'Kimea defeated Papar in one hour.'
- (56) *shekast xordan* (defeat colliding) 'to be defeated'  
 Kimea ye sâ'ate *shekast xord*  
 K    one hour    defeat collided  
 'Kimea got defeated in an hour.'

While these seem to be counterexamples to our observation above that NV elements of category N always produce an atelic (activity or semelfactive) reading, in fact, we think they can be accommodated within the framework if we adopt Harley (2001)'s proposal that the sister-to-v, when it is of category N, functions as an Incremental Theme. Most elements of category N are either themselves unbounded or instantaneous, which leads to the generalization above, but if some event-denoting Ns can themselves be telic accomplishments, we expect them to produce accomplishments in combination with a LV, as they will function as Incremental Themes. The following phrase structure represents the CPr consisting of *shekast dâdan* in (55):



The corresponding unaccusative CPr *shekast xordan*'s underlying structure is presented in (58), created by varying the LV only, of course, as usual. This structure represents other unaccusatives such as *farib xordan* 'to be deceived' as well.



In these cases, the nominal NV element itself denotes an event which happens to be an Accomplishment. The event properties of the NV element, then, are inherited by the entire CPr, along the lines proposed by Harley (2001) for bounded and unbounded nominal elements in English. Compare, for example, the properties of the verb derived from the eventive nominal *work* (Activity, -bounded N) and *knock* (Semelfactive, +bounded N). Here, the boundedness of the whole event is therefore expected.

An alternative account of these verbs would involve proposing that they contain a covert PP small clause (in a standard analysis of *give/get* in languages like English, see Pesetsky, 1995, Harley, 1995); however, since Persian shows no overt morphology that would confirm this proposal, and the present paper is attempting to provide the most morphosyntactically transparent possible account, we do not consider that possibility here (although see section 7.3).

## 6 WHAT DETERMINES THE COMPATIBILITY OF AN NV ELEMENT WITH A GIVEN LV?

Although CPr formation is clearly a syntactic process, it is equally clearly not completely productive. Certain LVs may not combine with certain NV elements, while others, of course, may. It seems likely to us that at least some of these restrictions themselves reflect general properties of the CPr construction, rather than idiosyncratic properties of the lexical items involved. The following data, for instance, seem to show the effects of the importance of the concepts of internal vs. external causation, along the lines of Levin & Rappaport's (1995) proposal concerning the difference between alternating inchoative/unaccusatives (like *open*) and non-alternating ones (like *blush*). Consider the example below:

- (59) a. Kimea sorx shod  
       Kimea red became  
       'Kimea blushed'  
       b. \*Papar Kimea-ro sorx kard  
       Papar Kimea-ro red made  
       \*Papar made Kimea blush  
       ('Papar fried Kimea')

Because *blushing* may only be internally caused, *sorx* 'red' may not receive the 'blush' meaning when it occurs in combination with *kardan* despite being syntactically unaccusative when it occurs in the intransitive form with *shod* 'become', and despite the availability of a *shod/kardan* alternation for many CPrs illustrated earlier. Similarly, certain NV elements may not be combined with the unaccusative *xordan*, because the events that they denote can only be caused agentively—they are, in essence, inherently unergative. Accordingly, the ill-formedness of the (b) examples is not syntactic, but semantic.

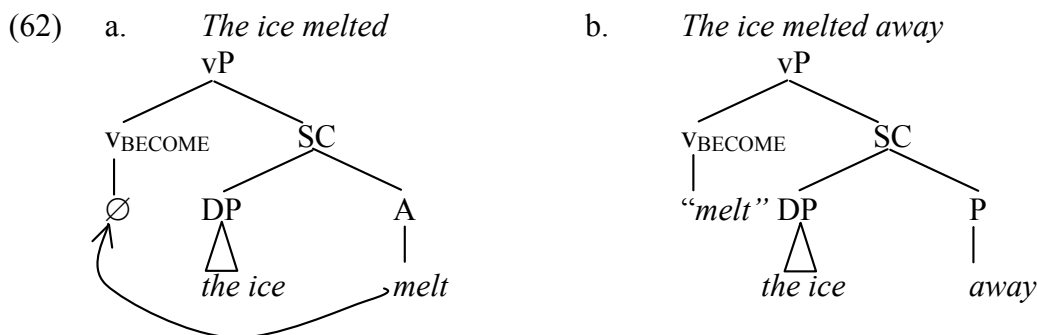
- (60) a. dâd zadan (scream hitting) 'to yell'  
       b. \*dâd xordan
- (61) a. kâr kardan (work doing) 'to work'  
       b. \*kâr shodan

## 7 SOME CONSEQUENCES AND PREDICTIONS

In this section, we discuss some predictions of our proposal. We start with resultative constructions, continue with passives, and finish with a discussion of location/locatum CPr constructions.

## 7.1 Resultatives

In a Hale and Keyser-style system, most Accomplishment-denoting verbs are structurally covert resultatives, resulting from a null causative or inchoative light verb combining with a predicative small clause that denotes the Result (*The ice melted*). The formation of a true resultative, with a secondary Result predicate (*The ice melted away*), in a language like English, is the product of an exceptional process whereby a verb root like *melt* is merged in the place of the causative light *v*, and the secondary predicate forms the result-denoting predicative small clause (Harley 2001, Mateu 2002, Folli & Harley forthcoming). The structures of each of these two sentences in the present framework are illustrated below:



As is well known, the availability of this sort of ‘manner incorporation’ operation varies parametrically across languages (Talmy 1985); English and the Germanic languages generally allow it, while Romance languages do not. Whatever the account of the Germanic/Romance variation, it seems clear that the present analysis predicts that Persian should *not* allow the formation of such resultatives.

If resultatives result from the ‘merge’ of an ordinarily predicative root in the light verb position, combined with the insertion of a new resultative predicate low in the structure, resultatives in general should only be possible with NV predicates which are potentially verbal in nature. In Persian, of course, change-of-state CPrs are made up of a light verb plus a resultative NV element. Two predictions about resultative formation ensue: (i) Persian should not allow the addition of a secondary predicate to a CPr construction, since the result-predicate slot is already occupied by the NV element; (ii) Persian should not have the option that English does, of merging a result-denoting Root in the LV position in order to make room for a resultative secondary predicate, because in Persian, the set of light verbs is tightly constrained, limited to a few dozen elements at the most.

That is, our analysis thus far predicts that resultatives with complex predicates should not exist in this language since there is no room for complex structure for the secondary result-denoting predicate. This prediction is borne out as the following contrast indicates.

- (63) a. Kimea xuna-ro rang zad  
 K house-râ color hit  
 ‘Kimea colored the house.’  
 b. \*Kimea xuna-ro sefid rang zad  
 K house-râ white color hit  
 The intended meaning: ‘Kimea colored the house white’

Although *sefid*, ‘white’, cannot be a secondary resultative predicate, the NV element *rang* ‘color’ can be modified by *sefid* ‘white’, as in (64) — recall that NV elements may be structurally complex.

- (64) Kimea be xune rang-e sefid zad  
 K to house color-EZ white hit  
 ‘Kimea colored the house white’ Lit: Kimea hit (on) the house white color

However, (64) does not have the resultive reading *Kimea colored the house white*. A Resultative reading is obtained only by adding a resultative clause, as in (65).

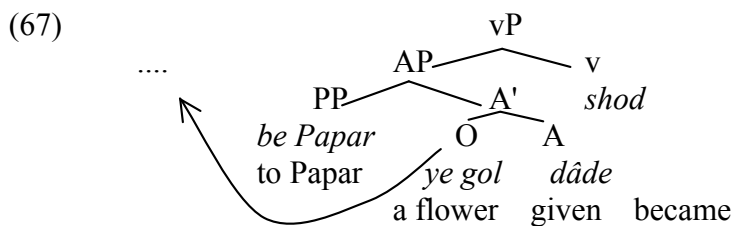
- (65) Kimea xuna -ro rang-e sefid kard tâ pro kâmelan sefid shod.  
 K house-râ color-Ez white did till completely white became  
 ‘Kimea put white color on the house till it became completely white.’

## 7.2 Passives

Whether or not there is syntactic passive construction in Persian has been highly controversial. Given our analysis of Persian complex predicates, it could be argued that the passive construction is just an instance of CPr, with a past participle serving as its NV element (Karimi, to appear).

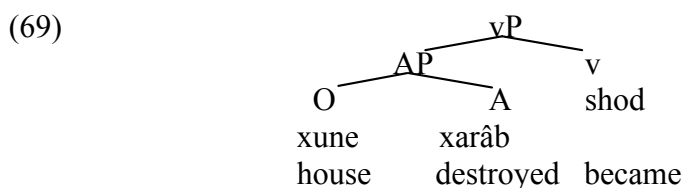
- (66) ye gol be Papar dâde shod  
 a flower to Paper given was  
 ‘A flower was given to Papar’

The past participle *dâde* has adjectival properties. The phrase structure of (66) is provided in (67). The complement of the verbal adjective moves to the subject position.



This structure is identical to the regular unaccusative CPr consisting of an adjective as the NV element of LV. Consider the example in (68) and its phrasal structure in (69).

- (68) xune xarâb shod  
 house destroyed became  
 ‘The house was destroyed.’



Our analysis predicts that there is no passive of atelic verbs with a nominal NV element. This is in fact borne out as shown by the following data:

- |      |    |                      |                       |                   |
|------|----|----------------------|-----------------------|-------------------|
| (70) | a. | hol dâdan            | (push doing)          | 'to push'         |
|      | b. | *hol dade shodan     | (push given become)   |                   |
| (71) | a. | kise keshidan        | (brush pulling)       | 'to brush (body)' |
|      | b. | *kise keshide shodan | (brush pushed become) |                   |

In (70) and (71), we see that the LV which creates the 'passive' in combination with a deverbal adjective cannot co-occur with both the deverbal adjective AND a nominal NV element, which would be necessary in order to form a passive of an atelic CPr with a nominal complement. If the deverbal adjective is truly functioning as a NV element in the Persian passive, this is expected: CPrs can contain only one NV element.

Of course, there is also no unaccusative alternation with these atelic nominal-based CPrs, where their normal agentive light verb is simply switched for a non-agentive one; this is presumably for the world-knowledge reasons outlined in section 6 above.

### 7.3 Location/locatum: Mejerdoomian 2002

Megerdoomian (2002) makes a proposal concerning aspect in CPrs that is in general very compatible with the view proposed here. She argues, as we have argued above, that the event structure of a CPr is the compositional result of the combination of the LV and the NV element, contra the view of Karimi-Doostan (1997) that it depends entirely on the LV. (This point is also made in Karimi 1997). However, our final conclusion that telicity is present when a predicative SC is present, i.e. with PP and Adj NV predicates, is significantly different from that of Megerdoomian. She argues that it is the presence of a 'become' predicate that ensures telicity, whether or not the 'become' predicate is overt. Given the complementary distribution of the inchoative and causative predicates, however (see (24a and b) and (25a and b), as well as (55) and (56) above, for example) we feel that the change in the structure of the NV element is the crucial determinant of telicity, rather than the presence of any covert inchoative element in telic causatives.

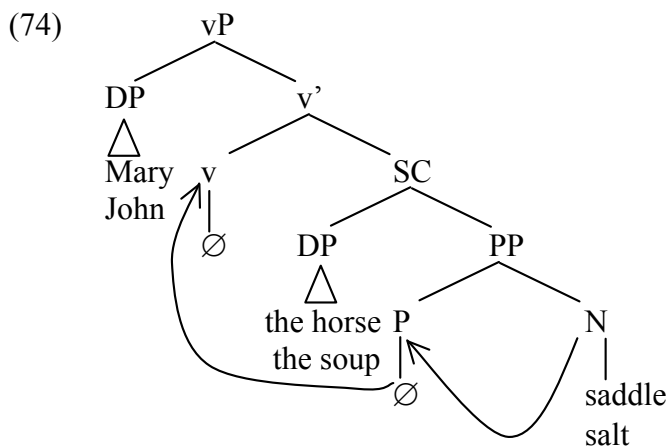
There is one class of cases discussed by Megerdoomian, however, which at first glance appear to go against our proposal here: a set of CPrs which can be telic despite having NV elements which are unambiguously Ns. These are CPrs with meanings like those of the English denominal predicates that Hale and Keyser dub 'location/locatum' verbs: *shelve*, *box*, *saddle*, *paint*, *oil*, *corral*, etc. A subset of Megerdoomian's examples are presented in (72) and (73) below:

- |      |    |             |              |
|------|----|-------------|--------------|
| (72) | a. | afsâr zadan | 'to harness' |
|      |    | harness hit |              |
|      | b. | pâlân zadan | 'to saddle'  |
|      |    | blanket hit |              |
|      | c. | zang zadan  | 'to bell'    |
|      |    | bell hit    |              |
| (73) | a. | roqan zadan | 'to oil'     |
|      |    | oil hit     |              |
|      | b. | namak zadan | 'to salt'    |
|      |    | salt hit    |              |
|      | c. | gard zadan  | 'to powder'  |
|      |    | powder hit  |              |

These CPs have interesting properties which parallel the properties of their English counterparts. According to our proposal above, they should all be atelic, since they are CPs with nominal NV elements. However, the first group, but not the second are necessarily *telic*—exactly like their English counterparts.

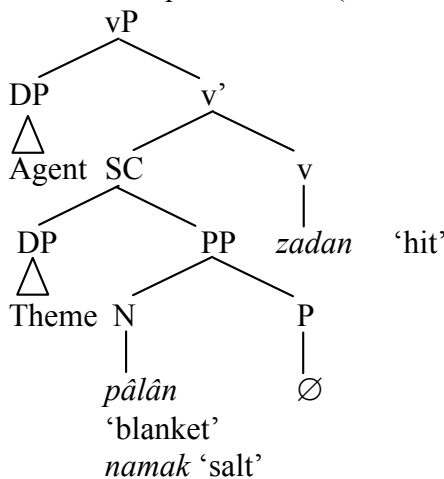
This fact about these English predicates was first noted in Harley (1998, 2001), who argued that for location/locatum verbs, the telicity of the denominal verb was correlated with the boundedness of the nominal: if the nominal was unbounded (‘mass’) as *sand, powder, salt* etc., the verb was unbounded; if it was bounded (‘count’), as *saddle, bell, bag*, etc., the verb was bounded. Megerdooomian points out that this appears to be true in Persian as well.

We can account for this in the system presented here if we allow for the presence of a covert resultative predicate in the NV element—a preposition—in just this limited class of cases. Hale and Keyser, recall, propose that location/locatum verbs have the following structure, with a covert SC headed by a preposition:



Recall that we asserted above that the boundedness of a CP with a SC within it was determined by whether or not the SC denoted a scalar state—whether it provided a definite endpoint (result) or allowed for indefinite increases in the degree of the state. Harley (2001) argued that the boundedness of the state denoted by the covert PPs in locatum verbs depended on the boundedness of the locatum itself. Megerdooomian has shown that, for the class of CPs with locatum meanings, this is true in Persian as well. Consequently, we assume that there is a covert prepositional predicate present in these CPs, providing the locative component: the structure of *pâlan zadan*, ‘to saddle’, and *namak zadan*, ‘to salt’, is given in (75) below.

(75) Structure of *pâlan zadan* (‘saddle’) and *namak zadan* (‘salt’)



This is the only case in which Persian does not seem to provide a direct morphological realization of every component in Hale and Keyser's proposed I-syntax. However, the clues provided by the aspectual properties of these CPrs, and their locative meaning, combine to suggest that the analysis proposed by H&K for English should indeed be extended to Persian in these cases as well.

## 8 CONCLUSIONS

In this paper we have argued that Persian CPrs are syntactically derived from two independent elements: a non-verbal element and a light verb. We have considered in turn the contribution of each element and shown that while the light verb determines the agentivity/causativity, the eventiveness and duration of the CPr, the NV element determines the Aktionsart of eventive CPrs. These conclusions support a syntax-based approach to verbal composition, as the event structure and agentivity of the CPr are direct functions of its individual parts. This division of labor is not predicted by Lexicalist approaches, which are further faced with the problem of accounting for the syntactic independence of the two elements. Persian CPrs directly show the complex structure proposed for independent syntactic and semantic reasons in the literature for languages like English. Not only do they realize the individual sub-events of verbal structure as separate morphemes, they realize them as independent syntactic elements, rather than as dependent pieces of morphology attached to verbs. Lexicalist approaches, which can argue that complex predicates in many languages should be derived in the lexicon since they are single phonological words, cannot take that tack with Persian.

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