First Phase Syntax of Persian Complex Predicates: Argument Structure and Telicity

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ABSTRACT

In this paper, I propose an analysis of Persian complex predicates, based on the First Phase Verbal syntax developed by Ramchand (2008). I suggest that the light verbs lexicalize the subevent heads into which the verbal phrase is decomposed, while the preverbal element occupies the Rheme position and semantically unifies with the light verb to build one joint predication. Further, I propose a feature specification for some of the most productive light verbs. I discuss the role of the light verb and the preverb in determining the argument structure of the entire predicate and show how the aspectual properties of the complex predicate depend on the interaction between the preverb and the light verb.

1 Introduction

Persian is a language that makes extensive use of the so called complex predicates (CPr) — a predicate which consists of a non-verbal part, often referred to as preverb (Lazard 1957) and a semantically bleached verb, called light verb. The preverb and the light verb together build one predicate.¹

(1) mina reza-ro² dust dare.
Mina Reza-OM friend has
‘Mina loves Reza.’

The preverb can represent different syntactic categories: noun, adjective, adverb, preposition, or prepositional phrase. Interestingly, certain light verbs tend to take preverbs belonging to certain categories. In Table 1, I present some of the most common light verbs and the preverb categories they productively combine with.³

An issue that has been the cause of much debate in the literature relates to the role of the two elements in the complex construction with respect to the aspectual properties of the complex predicate and its argument structure (Karimi-Doostan 1997, Karimi-Doostan 2005, Megerdoomian 2001, Megerdoomian 2002a, Folli et al. 2005). A common view is that the light verb is responsible for the projection of the external argument and, according to Karimi-Doostan, it also determines

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1Abbreviations in glosses used in this paper are as follows: 1, 2, 3 – first, second and third person; CL – clitic; CLASS – classifier; EZ – Ezafe linker; OM – object marker; PL – plural; PP – past participle.

2The clitic –ro (-ra is the formal/written form), commonly termed object marker attaches to all direct objects that are construed as specific.

3At the end of the paper, I have given examples for the complex predicates included in the charts.
the aspect of the complex predicate. Folli et al. (2005), however, claim that the (un)boundedness of the event is dependent entirely on the type of preverb the light verb combines with. The goal of the present paper is to discuss this issue and provide insight into the ways telicity arises in complex predicates. More specifically, I am going to show how each of the two elements contributes to the telicity of the entire predicate and will investigate the ways in which they interact.

The analysis of Persian complex predicates I propose is based on the First Phase Syntax research program developed in Ramchand (2008). According to her theory, events are decomposed into three subevents (init, proc and res), each corresponding to a distinct head in the verbal projection and introducing an event participant. Applying this system to the Persian data, I will investigate the question of what the contribution of the two components of the complex predicate is when it comes to its argument structure and telicity.

The paper is organized as follows. In Section 2, I briefly introduce the First Phase Syntax system. In Section 3, I apply the system to Persian complex predicates and lay out the proposal concerning the syntactic structure that underlies them. Section 4 deals with the feature specification of the light verbs according to the model described in Section 2. In Section 5, I handle the question of telicity of events by means of the tools provided by the system. Section 6 summarizes and concludes.

2 First Phase Syntax of Persian complex predicates

2.1 A quick guide to the Verbal First Phase Syntax

Ramchand’s (2008) First Phase Syntax is characterized by the decomposition of the verbal domain into three distinct heads, each corresponding to a primitive element of events. The internal structure of the verbal phrase contains the following three subevent projections: init[iation]P, proc[ess]P, and res[ult]P. The first (init) and the third (res) are stative heads, while the second – proc – is the hallmark of dynamicity. Every dynamic verb, then, contains the proc head in its decomposition. The stative init and res heads, however, can be missing in the case of dynamic verbs. Each subevent head enters in a predicational relation with its specifier position, where we find the “subject” of the event. In (2), I present the maximal decomposition of the verb phrase.
(2) \( \text{initP} \)

\( \text{(causing projection)} \)

\[ \begin{aligned}
\text{DP}_3 & \quad \text{init'} \\
\text{Initiator} & \quad \text{init} \\
\text{(subject of “cause”)} & \quad \text{procP} \\
\text{proc'} & \quad \text{resP} \\
\text{DP}_2 & \quad \text{proc} \\
\text{Undergoer} & \quad \text{res} \\
\text{(subject of “process”)} & \quad \text{XP} \\
\text{res'} & \quad \text{Resultee} \\
\text{(subject of “result”)} & \quad \text{res} \\
\end{aligned} \]

As can be seen, the three core projections are:

- InitP: introduces the causation event and licenses the external argument (the Initiator)
- ProcP: specifies the process or the nature of the change and licenses the internal argument (the Undergoer)
- ResP: introduces the result state and licenses the holder of the result state (the Resultee)

Apart from the three thematic roles above, there exist composite roles which arise when the same DP argument occupies two (or more) specifier positions. This happens when a DP raises from the specifier of a lower subevent head to the specifier of a higher subevent head. In such cases, we have the roles of Initiator-Undergoer, Undergoer-Resultee, and Initiator-Undergoer-Resultee. The first one arises when the same argument is the holder of the initial stage and undergoes the process/change (e.g. the sole argument of the verb run). The second one arises when the same argument undergoes the process/change specified by the proc head and holds the result state (e.g. the direct object of break). The third one arises when the same argument initiates the event, undergoes the process/change and is the holder of the result state (e.g. the argument of arrive). The composite thematic roles of the participants in the event are encoded in the lexical entry of the verb, that is, the verb determines whether a certain DP will raise from one specifier to another or not.

Crucially, a verb can lexicalize more than one head in the verbal phrase. Thus, in this model, verbs come in the lexicon with a categorical feature specification which determines which subevents they lexicalize. For example, a verb specified as \(< \text{init, proc} >\) will spell out both the init and the proc head simultaneously. Depending on which subevent heads a verb lexicalizes, it belongs to a particular verb class. Thus, there is the class of \(< \text{init, proc} >\) verbs, the class of \(< \text{init, proc, res} >\) verbs, the class of \(< \text{proc, res} >\) verbs, etc. If we are to connect these classes to the traditional aspectual classes, then activities are characterized by the features \(< \text{init, proc} > \) or only \(< \text{proc} >\), achievement verbs are specified as \(< \text{init, proc, res} >\) or \(< \text{proc, res} >\), statives have only the feature \(< \text{init} >\), etc. When it comes to argument structure, unergatives are verb that are specified with the feature \(< \text{init} >\), while unaccusatives lack this feature.

Concerning the semantic interpretation of the verbal phrase, the system employs compositional semantic rules that interpret the embedded predication via a causational semantics. Thus, in the verbal decomposition, we have two stative heads (init and res), the first one “leads to” the process subevent and hence is interpreted as initiation, the second one is “caused” by the process, and is therefore interpreted as result.
Clearly, the advantage of this system is that it allows for many different types of verbs to be put together by means of a fairly impoverished set of primitives, some general principles of lexical association and a compositional semantic rule based on the relation “leads-to.”

A subevent descriptor is not restricted to taking another subevent phrase as a complement. An event head can also have non-verbal material (DP, AP, PP, etc.) occupying its complement position. Such non-verbal complements are called Rhemes (e.g. the XP in (2)). Rhemes are not subjects of events but part of the description of the predicate. Hence, there is an important difference between a DP in the Rheme position and a DP occupying the specifier of a subevent head. Namely, the first one builds one joint predication with the verb, while the latter is a verbal argument.

It is important to note that the (un)boundedness of the macro-event does not necessarily entail that there is a resP in the structure. The Rheme plays an important role in determining the telicity of proc verbs that do not instantiate res. As the material in the Rheme and the verb unify, a bounded Rheme makes the entire predication bounded. Examples for such bounded Rhemes are closed scale gradable adjectives, bounded Path PPs, and quantized nouns. Hence, whenever a < proc > verb has such a bounded Rheme, a telic interpretation will arise for the entire macro-event, despite the fact that there is no res head in the structure.

3 Assembling the complex predicate
3.1 The role of the light verb
Butt (2003) argues that light verbs always have a main verb counterpart in the language. I take this to mean that there is no syntactic difference between light and heavy verbs. It is then logical to assume that light verbs lexicalize the subevent heads in the decomposed VP, just like heavy verbs do. The distinction between light and heavy verbs can be then due to the fact that the former have a very abstract semantics, while the latter have full lexical meaning. Take, for example, the verb zædæn, which, as a heavy verb, is agentive and punctual and means roughly “cause x to come into contact with y, quickly and forcefully,” and can be best rendered by the English verb hit (see (3a)). The light verb zædæn, according to Family (2006, 60), also participates in agentive complex predicates that, in general, denote instantaneous actions, with the possibility of being iterated. The action usually involves change of state either of the agent herself, or of another entity. Thus, the light verb zædæn is impoverished semantically, however, it is not totally deprived of content. The semantic content of the heavy verb and the light verb zædæn share some meaning components, but the heavy verb carries a richer conceptual content. Note that the meaning of “hitting” is not preserved in the complex predicate in (3b), where there is no notion of impact whatsoever. Still, in both examples, the event is bounded and we have an agent.

(3) a. mina sæng-ro be divar zæd.
   Mina stone-OM to wall hit
   ‘Mina hit the stone at the wall.’ (heavy verb zædæn)
b. mina mu-ha-sh-ro fer zæd.
   Mina hairs-PL-3CL-OM curl hit
   ‘Mina curled her hair.’ (CPr with light verb zædæn)

As the reader can observe, the meaning of the complex predicate fer zædæn (curl hit) in (3b) is very specific, although, as I just argued, the light verb contributes to the predicate only a very abstract meaning. Hence, it is logical to conclude that the main conceptual-intentional content of the CPr comes from the preverb. With respect to the syntactic position of the preverb, I suggest that it occupies the Rheme position and semantically unifies with the light verb to build one joint predicate. The syntactic structure of the complex predicate fer zædæn (curl hit) ‘to curl’ in (3b) will be then as in the tree diagram in (4).
In the tree structure above, the light verb zædæn spells out all three subevent heads, thus projecting all three specifier positions in the VP. The direct object muhash ‘her hair’ is first merged in the lowest one as a RESULTEE and subsequently moves to Spec,procP. As a consequence, the argument muhash acquires the composite role of UNDERGOER-RESULTEE, that is, it undergoes the process and holds the result state of having curls.4 The subject Mina is merged directly in the specifier of init where it is interpreted as the Initiator of the event. The third noun element — the preverb fer ‘curl’ in the RHÈME — is interpreted as part of the entire predicate.

### 3.2 The role of the preverb

Given that it is the light verb that lexicalizes the verbal heads, the argument structure of the whole complex predicate will depend on the feature specification of the light verb. By argument structure I mean the projection of the specifier positions of subevent heads, or, put in other words, the presence of the “subjects” of the subevents: INITIATOR, UNDERGOER, and RESULTEE. Thus, if we want to have an agentive complex predicate, we need to choose a light verb that has the feature < init >, so that the init head is spelled out and the INITIATOR position is projected. This is very much in accordance with the complex predicate analysis of Megerdoomian (2001) and Foll et al. (2005), who convincingly show that the light verbs in Persian determine the agentivity/causativity of the predicates they form, regardless of the preverb. Further, the presence of UNDERGOER and RESULTEE positions is also dependent on the light verb, and these are the positions occupied by the internal argument. Thus, in a sense, the presence of a direct object depends on the light verb. This suggestion is in line with Megerdoomian’s claim that the light verb projects the internal argument of the complex predicate (Megerdoomian 2001, 2002a). However, this goes against some analyses of Persian complex predicates, according to which it is the preverb that contributes the internal argument (see, for instance, Karimi-Doostan 1997, 2005). This disagreement can be, however, resolved, as the system

4The -ro marker on the direct object muhash ‘her hair’ is due to the fact that it is construed as specific. I assume that specific direct objects (i.e., specific UNDERGOERS, RESULTEES, and UNDERGOER-RESULTEES) undergo a movement to a position higher in the tree. This is in line with analyses proposed by various researchers, according to whom specific direct objects appear in a higher position than their non-specific counterpart and argue that this is the result of a syntactic movement. For instance, Browning and Karimi (1994) propose that specific DPs move to a VP-external position for case reasons. Karimi (2005) also shares the view that all direct objects are merged in the same position in the verbal phrase, but the specific objects move to the specifier of vP to receive interpretation.
proposed here provides a way to unify the two approaches. Consider the following examples:

(5) a. mina gusht-ro næmek zæd.
    Mina meat-OM salt hit
    ‘Mina salted the meat.’

b. mina chærx zæd.
    Mina turn hit
    ‘Mina turned (around).’

The light verb in both sentences remains constant, still, the a-example features an external and an internal argument, while the b-example appears to have just an external argument. Since the element that varies in the two sentences is the preverb (næmek ‘salt’ versus chærx ‘turn’), an option is to conclude that the preverb næmek contributes the internal argument in (5a). The logical question is how the preverb in the RHEME position can add an argument, given that it is the light verb that projects the subevent head and consequently also the specifiers thereof, where we find the arguments of the predicate.

Recall that under the approach assumed here, one DP can raise through multiple specifiers of subevents, thus acquiring a composite thematic role. Maintaining the proposal that the INITIATOR, UNDERGOER and RESULTEE positions are contributed by the light verb, a solution of this problem will be if we assume that certain preverbs require the DP to undergo movement to a particular specifier (or specifiers), while other preverbs do not. Thus, the preverb in a complex predicate conditions the raising of a DP argument in the same way as a heavy verb does. Applied to the data in (5), this would mean that the preverb næmek ‘salt’ prohibits the DP gusht ‘meat’ to raise to the INITIATOR position, thus enforcing the merge of a distinct DP, Mina, in Spec, initP. The preverb chærx, on the contrary, requires the DP Mina to go through all specifiers, which results in there being just one argument but with the composite role or INITIATOR-UNDERGOER-RESULTEE. Hence, in a way, both the light verb and the preverb play a role in determining the presence of an internal argument: the light verb contributes the syntactic position for it, and the preverb says whether it is going to be a distinct DP from the external argument or not. A consequence of this proposal is that light verbs differ from heavy verbs in that the latter determine whether the DPs occupying the specifiers of subevent heads are distinct or not, while the former do not have this information encoded in their lexical entry.

The proposal that preverbs indirectly affect the argument structure of the complex predicate by determining the raising of DPs from one specifier position to another leads to a prediction. The prediction is that when a given preverb combines with two distinct light verbs with the same feature specification (but different abstract semantic contents), the argument structure of the complex predicate will be the same. Take as an example the light verbs zædæn ‘hit’ and kærdæn ‘make,’ which participate in resultative complex predicates (i.e., both have the feature res) with agents (i.e., both light verbs have the feature init). We expect the same number and thematic roles of the arguments of the complex predicates constructed by combining the same preverb with one of these two light verbs. This is illustrated by the example in (6).

(6) a. mina mu-ha-sh-ro ræng zæd.
    Mina hair-PL-3CL-OM paint hit
    ‘Mina dyed her hair.’

b. mina mu-ha-sh-ro ræng kærđ.
    Mina hair-PL-3CL-OM paint made
    ‘Mina dyed her hair.’

Thus, in (6) we have the same preverb ræng and two distincts < init, proc, res > light verbs — zædæn in (6a) and kærdæn in (6b). The argument structure of the complex predicates is the same in the (a) and (b) example: there is an external argument (Mina) and a distinct internal argument
(mubahsh ‘her hair’). What differs is the semantic interpretation because of the different abstract semantic contents of the two light verbs. The nuances in the meaning are somewhat difficult to define in a precise way, but they doubtlessly exist. The complex predicates in the minimal pair ræng zædæn (paint hit) and ræng kærdæn (paint make) are synonymous in that they both express the transitive event of painting/dyeing something. When we use the light verb zædæn, however, the implication is that the result state of the hair being dyed persist longer, and the change inflicted on the patient is more accentuated. In other words, the choice of the light verb zædæn leads to a complex predicate that focuses on the change of state and the following result state. With kærdæn, on the other hand, the main stress falls on the activity of dyeing, that is, on the process part of the event, and the result state is less emphasized.

3.3 Preverb modification

Preverb modification lends support to the hypothesis that preverbs occupy the rhematic position. The point is that modification of a preverbal noun element differs from the cases when a direct object is modified. Compare the (a) and (b) example in the data set below.

(7) a. mina do-ta shume geref.
   Mina two-class comb got
   ‘Mina received two combs.’

b. mina mu-ha-sh-ro do-ta shume zæd.
   mina hair-PL-3CL-OM two-class comb hit
   ‘Mina combed her hair twice.’

(modified from Megerdoomian 2006)

In (7a), the noun shume ‘comb’ is an Undergoer-Resultee direct object of the verb gerefæn and thus the number of combs received by Mina is two. In example (7b), featuring a complex predicate, however, the numeral does not scope over the noun but is interpreted as modifying the whole event. The reason for this is that the numeral is inside the RHEME, where it gets interpreted as part of the whole predication.5

A similar generalization extends to adjectival modification of noun preverbs. Consider, for instance, the data in (8).

(8) reza kotak-e bardì xord.
   Reza beating-EZ bad collided
   ‘Reza was beaten badly.’

The adjective in this example is interpreted as modifying the whole event. Still, it clearly is part of the RHEME, as evidenced by the presence of the Ezafe linking morpheme. Ezafe appears on a noun whenever it is modified by an adjective. Thus, we can conclude that the adjective in (8) indeed modifies the noun preverb and is therefore inside the RHEME.

3.4 The distinction between direct objects and noun preverbs

Before concluding this section, it is worth investigating how the approach advocated here can handle one widely discussed issue in the literature on Persian complex predicate — the status of the noun preverb or, more precisely, the question of how noun preverbs differ from bare direct objects. The reason for this interest in noun preverbs is that they, like all other preverbs, invariably precede the light verb. As Persian is an SOV language, direct objects, too, are placed before the verb. Very often then it is not easy to decide whether a given noun is a preverb or an internal argument

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5 An anonymous reviewer suggested the possibility that the numeral is adjoined and scopes over resP. However, the presence of the classifier -ta indicates that the numeral is part of the extended projection of the noun shume ‘comb’ (in the sense of Cinque 2005). In addition, if do-ta really were an adjunct, nothing would prevent it from adjoining to the VP in (7a) thus giving rise to a reading where Mina receives a comb twice. This reading is, however, unavailable for (7a).
of the verb. This question has triggered much debate in the literature concerning the relation of the nominal element in CPRs and the light verb. The result is a two-way split: according to some researchers, noun preverbs are just like (bare) direct objects (Samvelian 2001, 2004). According to others, most notably Megerdoomian (2006), noun preverbs differ from direct objects and occupy a different position in the syntactic structure. This is also the hypothesis maintained in this paper.

In the syntactic decomposition of verbs adopted here, the arguments of the verb occupy one or more specifiers of the subevent heads. Hence, this is where we find the noun sæng ‘stone’ in the example in (9a), where zædan is a heavy verb. Preverbs, as suggested above, are in the rhematic positions of the VP, therefore, the preverb ræng ‘paint’ in (9b) is hosted by the RHEME.

(9) a. mina be divar sæng zæd.
   Mina to wall stone hit
   ‘Mina hit a stone/stones at the wall.’

b. mina be divar ræng zæd.
   mina to wall paint hit
   ‘Mina painted the wall.’

Complex predicates with noun preverbs are then structurally different from direct object+verb constructions: in direct object+verb construction the noun is in the UNDERGOER and/or RESULTEE position, while in complex predicates, the noun is in the RHEME. Thus, in the case of complex predicates, there can be an internal argument occupying the specifiers of proc and res. This will result in a direct object+complex predicate combination, like the one in (10). (10) is a different way to say (9b), where instead of the PP be divar ‘to the wall,’ we have divar ‘wall’ as direct object, as evidenced by the object marker -ro.6

(10) mina divar-ro ræng zæd.
    Mina wall-om paint hit
    ‘Mina painted the wall.’

If we try to introduce divar ‘wall’ as a direct object in (9a), the result will be ungrammaticality (see (11)). The reason is that the noun sæng ‘stone’ already occupies Spec,procP and Spec,resP and these positions are not available for the intended direct object divar ‘wall.’

(11) *mina divar-ro sæng zæd.
    Mina wall-om stone hit
    Intended: ‘Mina hit the wall with stones.’

Thus, the proposed position of preverbs in the RHEME allows us to draw a distinction between noun preverbs and direct objects, which arises due to the different structural position they occupy.

3.5 Summing up

To recapitulate this section, I proposed that the light verb in Persian complex predicates lexicalize the subevent heads in a decomposed verbal phrase. The preverbal element is hosted by the RHEME and semantically unifies with the light verb to form one predicate.

Light verbs are like heavy verbs in that they are specified for the same verbal features in the lexicon. Still, there are two differences: (i) light verbs have a bleached and abstract semantics, and (ii) light verbs do not determine how high a DP can raise from one specifier of a subevent head to another. That is, light verbs have no bearing as to whether a given DP will have a composite thematic role or not.

I suggested that it is the preverb which determines the raising of argument DPs. This led to the prediction that a given preverb should form complex predicates with identical argument structure,

6There are syntactic and semantic differences between the construction in (9b) and (10), which are discussed in Pantcheva (2008).
provided it combines with light verbs with the same feature specifications. Proving or disproving this hypothesis requires an extensive corpus study, which I leave for future research.

Finally, the syntactic structure of complex predicates proposed in this paper allows us to take a stand on the issue of whether bare objects and noun preverbs are the same thing or not. I suggested that they occupy different positions in the decomposed VP, which accounts for their different properties and behavior (see also Pantcheva 2008).

4 Light verb classes

In the preceding section, I proposed that the light verbs in Persian complex predicates lexicalize the subevent heads in the verbal phrase. Hence, light verbs can be classified into types according to their feature specification just like ordinary “heavy” verbs. Given that all light verbs examined in this paper are dynamic, they will all be specified for the feature < proc >. The two feature that are left to investigate, then, are < init > and < res >. In the subsections to follow, I focus on these two subevent heads and propose a feature specification of some of the most commonly used light verbs in Persian, thus grouping them into classes.

4.1 Light verbs & init

Let us start with the init[iation] subevent and see which light verbs are endowed with this feature. Consider first the example below.

(12) mina gul xord.
    Mina deceit collided
    ‘Mina got deceived.’

In this example, Mina experiences a deceit and carries the role of a proto-Patient, or, put in the terminology of the Verbal First Phase, the role of UNDERGOER. Crucially, Mina cannot be seen as the person initiating the deceit, hence, she is not the INITIATOR. This is further evidenced by the fact that the complex predicate in (12) is incompatible with agentive adverbials such as æmdæn ‘intentionally.’

(13) #mina æmdæn gul xord.
    Mina intentionally deceit collided
    (‘Mina got deceived intentionally.’)

Moreover, the unavailability of an INITIATOR position in the sentence in (12) gains support from the impossibility to add a Causer (i.e., an INITIATOR).

(14) *reza mina-ro gul xord.
    Reza Mina-OM deceit collided
    (‘Reza deceived Mina.’)

Accordingly, we can conclude that the INITIATOR position is not projected in the examples just discussed, which in turn implies that there is no init head in the structure. The lack of the init head can be straightforwardly explained if we assume that the light verb xordæn is not endowed with the feature init.

In order to express the Causer of Mina’s deception, one need to substitute the light verb xordæn ‘collide’ for the light verb æzædæn ‘hit.’

(15) reza mina-ro gul æzæd.
    Reza Mina-OM deceit hit
    ‘Reza deceived Mina.’

7 In this paper, I will abstract away from the stative light verb dashtæn ‘to have,’ which forms stative complex predicates.
In (15), the light verb *zađen* ‘hit’ enables the expression of a *Initiator*, which was impossible with *zordan*. This leads to the conclusion that *zađen* has the feature *init* and thus projects the necessary specifier position, while *zordan* does not have the feature *init*, hence the non-agentive interpretation of CPs with *zordan*. In other words, I suggest that the two light verbs *zađen* ‘hit’ and *zordan* ‘collide’ have roughly the same abstract semantic content, expressing a (rather quick) change of state. They are also specified for the same syntactic features, modulo the feature < *init* >. When they appear with the same preverb, the difference in the meanings of the two complex predicates thus derived is due to the different underlying syntactic structures and the entailments they have for the interpretation of the predicate. More specifically, complex predicates with *zađen* will have an external argument, most commonly a causer (in the case of a transitive predicate – cf. (15)), or a volitional agent (in the case of an intransitive predicate – cf. (16a)).

(16) Data from Samvelian (2004)

a. bæchche qælt zađ.
   child roll hit
   ‘The child rolled.’ (intentionally)

b. bæchche qælt xord.
   child roll collided
   ‘The child rolled.’ (unintentionally)

The complex predicate formed by the verb *zordan* will lack a causer/volitional agent because of the absence of the feature < *init* > (see (12) and (16b)). The tree diagrams corresponding to the each of the sentences in (16) are presented in (17).

(17) a.
Persian, in fact, provides a fairly systematic way to transform a complex predicate with no external argument to one with it by simply exchanging a light verb with no init for a light verb that can lexicalize init and therefore offers a Spec,initP position to be occupied by the Initiator.

This fact relates directly to Karimi-Doostan’s (1997) classification of the dynamic light verbs in Persian into two groups called initiatory and transition light verbs, respectively. The former allow the expression of an Agent or Causer, while the latter do not. Translated into the terminology of the First Phase Syntax, the former lexicalize init, while the latter are not endowed with this feature. In Table 2, I present an overview of the most common light verbs with respect to the feature <init>.

The verbs are arranged in the rows in such a way that they reflect the most often encountered alternating light verbs to form transitive-intransitive pairs.

<table>
<thead>
<tr>
<th>light verbs with &lt;init&gt;</th>
<th>light verbs without &lt;init&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>zædæn ‘hit’</td>
<td>xordæn ‘collide’</td>
</tr>
<tr>
<td>kærdæn ‘make’</td>
<td>shodæn ‘become’</td>
</tr>
<tr>
<td>aværdæn ‘bring’</td>
<td>amædæn ‘come’</td>
</tr>
<tr>
<td>dadæn ‘give’</td>
<td>gereftæn ‘get’</td>
</tr>
<tr>
<td>ændaxtæn ‘throw’</td>
<td>oftadæn ‘fall’</td>
</tr>
</tbody>
</table>

TABLE 2: Classification of Persian Light Verbs with respect to init

Given this pairing, the pattern of preverb distribution, as presented in Table 1 does not seem surprising. The table is repeated below as Table 3 and rearranged so that the symmetry of light verb+preverb combinations becomes clearer. Thus, if we regard the light verbs in the left column simply as the causative versions of the verbs in the right column, it is reasonable that they will combine with the same type of preverbs.

So, causativization of complex predicates in Persian consist of replacing the light verb of an inchoative light verb by its causative peer (the one specified for init), as further illustrated for

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8The pairs given in Table 2 represent the most often encountered alternations. The relation between alternating light verbs is in reality many-to-many. For instance, the causative CPr atish zædæn (fire hit) ‘set on fire’ forms its inchoative counterpart by the verb gereftæn ‘catch’: atish gereftæn (fire catch) ‘catch fire,’ arguably because the light verb gereftæn has an additional meaning component of inception, which lacks in zædæn. Likewise, the inchoative light verb in the CPr shekæst xordæn (defeat collide) ‘to be defeated’ alternates with the causative light verb dadæn ‘give’: shekæst dadæn (defeat give) ‘defeat’ and the form *shekæst zædæn (defeat hit) is ungrammatical. Another example of a verb that has more than one possible inchoative counterparts is the light verb dadæn ‘give.’ It alternates with the verbs gereftæn ‘get’, ræftæn ‘go’, and shodæn ‘become’.
**Table 3:** Preverb and light verb combinations (modified and repeated from Table 1)

<table>
<thead>
<tr>
<th>Light verb</th>
<th>N</th>
<th>P/PP</th>
<th>Adj/Adv</th>
</tr>
</thead>
<tbody>
<tr>
<td>zædæn</td>
<td>‘hit’</td>
<td>xordæn</td>
<td>‘collide’</td>
</tr>
<tr>
<td>kærðæn</td>
<td>‘make’</td>
<td>shodæn</td>
<td>‘become’</td>
</tr>
<tr>
<td>aværðæn</td>
<td>‘bring’</td>
<td>amæðæn</td>
<td>‘come’</td>
</tr>
<tr>
<td>dadæn</td>
<td>‘give’</td>
<td>gereftæn</td>
<td>‘get’</td>
</tr>
<tr>
<td>ændaxtæn</td>
<td>‘throw’</td>
<td>oftadæn</td>
<td>‘fall’</td>
</tr>
</tbody>
</table>

amæðæn–aværðæn ‘come–bring’ and oftadæn–ændaxtæn ‘fall–throw’ in (18) and (19), respectively (examples from Megerdoomian 2002b).

(18) a. ab  be jush amæd
      water to boil came
      ‘The water boiled.’

   b. nima  ab-ro  be jush aværð
          Nima water-OM to boil brought
      ‘Nima boiled the water.’

(19) a. homa  be gerye  oftad
      Homa to crying fell
      ‘Homa started to cry.’

   b. nima homa-ro  be gerye  ændaxt
          Nima Homa-OM to crying threw
      ‘Nima made Homa (start to) cry.’

Further support comes from the passive. In the First Phase Syntax system, only verbs that project and identify *init* can passivize. In Persian, deriving passive from complex predicates is quite rare but it can be done with *init* light verbs, (20), while with *init*-less light verbs this leads to ungrammaticality, (21).

(20) a. reza  xunæ-ro  atish  zæd.
      Reza house-OM fire  hit
      ‘Reza set the house on fire.’

   b. xunæ  atish  zæd-e  shod.
      house fire  hit-PP  PASS
      ‘The house was set on fire.’ (adapted from Mace 2003)

(21) a. xunæ  atish  gereft.
      house fire  caught
      ‘The house caught fire.’

   b. *xane  atish  gereft-e  shod.
      house fire  catch-PP  PASS
      ‘The house caught fire.’ (adapted from Mace 2003)

Summing up, the light verbs called “initiatory” by Karimi-Doostan can all be characterized by the presence of the feature < |init | > in their specification. The “transition” light verbs lack this feature and lead to non-agentive complex predicates. Thus, the conclusion in this section is very much in line with the claim made in Folli et al. (2005) concerning the role of light verbs in complex predicates in determining agentivity.

**4.2 Light verbs & res**

Now that I have established that some light verbs have the feature < |init | >, while others lack it, in this subsection I will try to determine which light verbs are to be endowed by the feature < |res | >.
Since, in the First Phase Syntax, telicity arises as the result of complex interaction between different factors and, crucially, does not depend solely on the presence of a resP in the verbal decomposition, I will not make use of telicity tests in order to diagnose a resP. However, telicity is an important property of events and I will take up this discussion in Section 5.

The diagnostic I will be using in order to determine whether a certain light verb is endowed with <res> is the availability of a punctual reading for a complex predicate which it is part of. Here, I follow Ramchand’s (2008) suggestion that an event is punctual when a verb identifies both proc and res.

I will start out with an observation made by Megerdoomian (2002b) concerning different types of events expressed by the complex predicates. Consider the verbs in (22).

(22) a. dad zædæn dad keshidæn ‘to shout’
   cry hit cry pull
b. næfæs zædæn næfæs keshidæn ‘to breathe’
   breath hit breath pull

Megerdoomian notes that the verbs in the first column have a punctual reading, whereas the verbs in the second column have a durative reading. Hence, the difference between dad zædæn and dad keshidæn is that the former denotes an event of one (sudden) uttering of a cry, while the latter denotes a prolonged production of a shout.9 Similarly, for næfæs zædæn and næfæs keshidæn, the first one means roughly “to take a breath,” while the second denotes a prolonged event of taking breath.

This distinction allows me to draw two conclusions. First, it is the light verb that carries the <res> feature, since the noun in the pairs remains the same. Second, zædæn is endowed with it, whereas keshidæn lacks it.

However, this cannot be the whole story for zædæn, since complex predicates with this verb (shown in (23)) can give rise to durative (ateic) readings.

(23) a. chækosh zædæn hammer hit
   ‘to hammer’
b. lægæd zædæn kick hit
   ‘to kick’
c. dad zædæn shout hit
   ‘to shout’

The behavior of the verbs in (23) very much resembles the behavior of semelfactives, which are punctual, on one hand, but systematically give rise to a durative (indefinitely iterated) reading, on the other. Since, this is presumably what happens with the verbs in (23) above, I believe that it is not incorrect to ascribe the <res> feature to zædæn. I further believe that, just like all semelfactives in the First Phase Syntax, zædæn can be seen to be ambiguous between <init, proc, res> and <init, proc>, in the former case, giving rise to punctual events and in the latter case – to durative events. Thus, I directly adopt the way semelfactives are treated by Ramchand, namely, as being specified in the lexicon as <init, proc, (res)>.

9To help the reader understand the (untranslatable in English) distinction between the two Persian verbs, I provide a context where the different uses become clear: imagine children having a “shouting competition” with a prize for the one who can shout the loudest and the one who can shout the longest. In the first case, the verb dad zædæn will be used, in the second — the verb dad keshidæn, since here it is implied that the shout should last long time.

10A proposal along these lines is made by Megerdoomian (2005), who derives the different properties of zædæn by decomposing the predicate into different sets of primitive units of meaning.
4.3 Classes of light verbs

In this subsection, I present the lexical types of some of the light verbs in Persian. An important assumption is that the transitive-intransitive pairs, as shown in Table 2, differ only with respect to the availability of the init subevent. In other words, the feature specification of a verb from the left column will be identical, modulo init, to its peer in the right column.

In Table 4 below, I present my proposal regarding the feature specification of some of the light verbs in Persian.

<table>
<thead>
<tr>
<th>Light Verb</th>
<th>Lexical Meaning</th>
<th>Feature Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>kærdæn</td>
<td>‘make’</td>
<td>&lt; init, proc, res &gt;</td>
</tr>
<tr>
<td>ændaxæn</td>
<td>‘throw’</td>
<td>&lt; init, proc, res &gt;</td>
</tr>
<tr>
<td>aværdæn</td>
<td>‘bring’</td>
<td>&lt; init, proc, res &gt;</td>
</tr>
<tr>
<td>zædæn</td>
<td>‘hit, strike’</td>
<td>&lt; init, proc, (res) &gt;</td>
</tr>
<tr>
<td>dadæn</td>
<td>‘give’</td>
<td>&lt; init, proc &gt;</td>
</tr>
<tr>
<td>keshidæn</td>
<td>‘pull’</td>
<td>&lt; init, proc &gt;</td>
</tr>
<tr>
<td>shodæn</td>
<td>‘become’</td>
<td>&lt; proc, res &gt;</td>
</tr>
<tr>
<td>oftædæn</td>
<td>‘fall’</td>
<td>&lt; proc, res &gt;</td>
</tr>
<tr>
<td>amædæn</td>
<td>‘come’</td>
<td>&lt; proc, res &gt;</td>
</tr>
<tr>
<td>xordæn</td>
<td>‘collide’</td>
<td>&lt; proc, (res) &gt;</td>
</tr>
</tbody>
</table>

Table 4: Light verb classes

A couple of comments are due here regarding the Table 4. First, the motivation for the different treatment of the light verbs make, throw and bring, on the one hand, and hit, on the other hand, lies in the fact that the first three are not semelfactive (but still resultative) verbs, while hit is semelfactive, as discussed above. Second, the fact that the light verb kærdæn is listed twice reflects its ambiguity between an activity verb, roughly corresponding to English do (24) and a causative verb make (cf. Megerdoomian 2001, Megerdoomian 2005). It is only in the latter meaning that kærdæn alternates with shodæn, as shown in (25).

(24)  a. bæchche bæchche bæchche kærd.  
      child game did 
      ‘The child played.’

   b. *bæchche bæchche shod.  
      game became

(25)  a. reza mina-ro bidar kærd.  
      Reza Mina-OM awake made 
      ‘Reza woke up Mina.’

   b. mina bidar shod.  
      Mina awake became 
      ‘Mina woke up.’

What is to be noted concerning the ambiguity of the verb kærdæn is that when it is a < init, proc, res > verb, there are two distinct argument: an INITIATOR and an UNDERGOER-RESULTEE, as in (25). When kærdæn is a < init, proc > verb, there is only one argument carrying the composite role of INITIATOR-UNDERGOER, as in (24). In this latter case kærdæn is what is traditionally called an unergative verb and it is not suprising that it does not have an inchoative counterpart. Interestingly, the two varieties of kærdæn also appear in combination with different preverbs – the unergative one takes eventive nouns, while the causative one takes adjectival preverbs and non-eventive nouns. For this reason, I do not list kærdæn as an < init, proc, (res) > verb, as it is clearly different from zædæn, which appears with the same preverb, no matter whether it is < init, proc > or < init, proc, res >.

I now turn to the light verb keshidæn ‘pull’, which is marked in Table 4 as having no inchoative peer. As already discussed in Section 4.2, the light verb keshidæn contributes duration to the complex predicates it participates in. It is similar to the unergative kærdæn ‘do,’ as it often forms intransitive
complex predicates (e.g. *tul keshidæn* (length pull) ‘take a long time,’ *chopog keshidæn* (pipe pull) ‘smoke a pipe’). *Keshidæn* can also form transitive complex predicates, like *farahæm keshidæn* (together pull) ‘assemble,’ or *jaru keshidæn* (broom pull) ‘sweep.’ Even in such cases, though, *keshidæn* does not seem to have an inchoative counterpart, that is, a corresponding light verb specified for the feature <proc> and with the same abstract semantic content. It is true that there exist complex predicates like *farahæm shodæn* (together become) ‘be assembled,’ and *jaru zordæn* (broom collide) ‘be swept,’ but these CPrs are more likely to be the counterpart of *farahæm kærdæn* (together make) ‘assemble,’ and *jaru xædæn* (broom hit) ‘sweep,’ as they have the same aspectual properties and, crucially, lack the durative component of *keshidæn*.

### 5 Deriving telicity

In this section, I will outline how the temporal (un)boundedness of the macro-event can be accounted for by using the tools made available by the system. I will apply the *in an hour/for an hour*-test to diagnose telic and atelic predicates, respectively.

In Persian, there exist numerous ways to form the corresponding temporal phrases and sometimes speaker vary with respect to their interpretation.\(^{11}\) To avoid confusion, I will use the expression *dær yek sa’æt* ‘in one hour’ and *bemodæte yek sa’æt* ‘for one hour’\(^{12}\) to diagnose telic and atelic sentences, respectively.

#### 5.1 Rhematic material

As already mentioned in Section 2, the boundedness of the macro-event does not necessarily arise from the presence of *res* in the subevent decomposition of the VP. A telic interpretation can be the result of an <init, proc> verb combining with a RHEME complement that is a bounded path PP, a closed scale adjective, or a quantized NP (in the sense of Kennedy and Levin 2008). I argued in Section 3 that the preverb in a complex predicate occupies the RHEME position. Therefore, the system predicts that the preverb will have impact on the telic/atelic interpretation of the complex predicate. The prediction is borne out, as illustrated in the data set below, where the light verb is the same but the interpretation nevertheless differs. When the <init, proc> verb *kærdæn* ‘do’ (noted to lack <res> when combining with a noun preverb) combines with a non-quantized nominal preverb, the predicate is atelic (26a). If we exchange the preverb for a quantized noun, the predicate becomes telic (26b).

\[(26) \text{a. bæchche bemodæte} /{^*dær yek sa’æt geryæ kærd.} \quad \text{(atelic)}
\]

\* ‘The child cried for an hour /*in an hour.’

\[(26) \text{b. bæchche dær} /{^*bemodæte yek sa’æt hæme-ye geryæ-sh-ro kærd.} \quad \text{(telic)}
\]

\* ‘The child did all its crying in an hour /*for an hour.’

Megerdoomian (2005) presents some data which offer convincing evidence that an analysis like the one argued for in this paper might be on the right track. She discusses complex predicates which give rise to telic/atelic readings depending on the noun preverb. A sample of these verbs is presented in Table 5 below.

Folli et al. (2005) discuss this set of data and suggest that the reason the complex predicates in the first column are telic is that the noun element is bounded. The noun preverb in the second column is unbounded and therefore gives rise to an atelic reading. I will adopt this proposal without further discussion, since it is perfectly compatible with the First Phase Syntax and the facts are

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\(^{11}\)For example, as pointed out by Karimi-Doostan (1997), for some speakers the non-durative adverbial *zerfe yek sa’æt* ‘in one hour’ has a durative meaning when stressed.

\(^{12}\)The expression *bemodæte yek sa’æt*, roughly translated as ‘in the course of one hour,’ belongs to the formal style. A much more common way to convey the same meaning is to drop the preposition. *yek sa’æt* expresses the same notion of ‘for one hour.’
exactly what the system predicts. Below, I briefly summarize the properties of \textit{zædæn} with respect to the different event types it can give rise to, when it is an \textlangle \textit{init}, \textit{proc}\rangle verb.

(27) \textit{zædæn} as \textlangle \textit{init}, \textit{proc}\rangle

\begin{enumerate}[a.]
\item telic - \textit{palan zædæn} ‘to saddle’ (when the Rheme is bounded)
\item atelic - \textit{rouqæn zædæn} ‘to oil’ (when the Rheme is unbounded)
\end{enumerate}

Since the intransitive counterpart of \textit{zædæn} is \textit{xordæn} ‘collide’ and I assumed that it has the same categorial specification as \textit{zædæn} without the \textit{< init>} feature, it is expected that complex predicates with \textit{xordæn} will allow atelic readings of the type in (27b). This is the case with the complex predicate \textit{qosse xordæn} (worry collide) ‘to worry,’ which is atelic according to Megerdoomian (2006). Another example comes from Megerdoomian (2002a):

(28) \textit{mærdom} sal-ha az dowlat færib xord-æn.
   ‘People have been fooled by the government for years.’

More data illustrating the fact that telicity can be due to \textit{proc} light verbs with bounded \textit{rHEME} preverbs are shown below:

(29) a. mehmani do sa‘æt tul keshid.
   ‘The party lasted for two hours.’ (atelic)

\begin{enumerate}[a.]
\item telic - \textit{palan zædæn} ‘to saddle’ (when the Rheme is bounded)
\item atelic - \textit{rouqæn zædæn} ‘to oil’ (when the Rheme is unbounded)
\end{enumerate}

Here, we have the \textit{proc} light verb \textit{keshidæn} ‘pull’, which combines with an unbounded noun \textit{tul} ‘length’ and forms an atelic predicate. When \textit{keshidæn} appears with a bounded preverb, like in the case of the bounded PP \textit{be atish} ‘to the fire’ in (29b), the entire complex predicate is telic.

5.2 More remarks on telicity

Folli et al. (2005) discuss various important issues concerning Persian complex predicates. One of the conclusions they reach is that while the light verb determines the agentivity/causativity, the eventiveness and duration of the CPr, the preverb determines the Aktionsart of eventive CPrs. In other words, whether the CPr will be telic or atelic depends entirely on the preverb. The event structure they propose for Persian is presented in Table 6, where, they argue, there is no relation between the boundedness of the event and the light verb.

There are two observations to be made concerning the table above. First, a complex predicate with a noun as a preverb can be either telic or atelic. This is captured by the system and discussed in the beginning of this section, so it does not come as a surprise. Second, according to this table, it
is never the case that a complex predicate with an adjectival, adverbial, prepositional or PP preverb is atelic. If we now go back to Table 1 in Section 4.3, and have a look at which light verbs combine with the aforementioned preverbs, it turns out they are mainly $< \text{res}>$ verbs, with two exceptions. Therefore, the natural interpretation of these predicates is a bounded one, because $< \text{res}>$ verbs by default lead to telic predicates, no matter the Rheme (i.e., the preverb). The facts are repeated in Table 7 below.

<table>
<thead>
<tr>
<th>light verb</th>
<th>P/PP</th>
<th>Adj/Adv</th>
</tr>
</thead>
<tbody>
<tr>
<td>averden</td>
<td>'bring'</td>
<td>$&lt; \text{init, proc, res}&gt;$</td>
</tr>
<tr>
<td>keshidæn</td>
<td>'pull'</td>
<td>$&lt; \text{init, proc}&gt;$</td>
</tr>
<tr>
<td>amædæn</td>
<td>'come'</td>
<td>$&lt; \text{proc, res}&gt;$</td>
</tr>
<tr>
<td>gereftæn</td>
<td>'take'</td>
<td>$&lt; \text{proc, res}&gt;$</td>
</tr>
<tr>
<td>oftadæn</td>
<td>'fall'</td>
<td>$&lt; \text{proc, res}&gt;$</td>
</tr>
<tr>
<td>andaxæn</td>
<td>'throw'</td>
<td>$&lt; \text{init, proc, res}&gt;$</td>
</tr>
<tr>
<td>dadæn</td>
<td>'give'</td>
<td>$&lt; \text{init, proc}&gt;$</td>
</tr>
<tr>
<td>kærdæn</td>
<td>'make'</td>
<td>$&lt; \text{init, proc, res}&gt;$</td>
</tr>
<tr>
<td>shodæn</td>
<td>'become'</td>
<td>$&lt; \text{proc, res}&gt;$</td>
</tr>
</tbody>
</table>

**Table 7**

Let us now examine the cases when a proc verb combines with preverbs which are not nouns (dadan ‘give’ and keshidæn ‘pull’). In the system adopted in this paper, whenever the Rheme of a proc verb is bounded/closed scale, the predicate will be interpreted as telic. If the Rheme is unbounded/open scale, the event will be atelic. Applied to adjectival Rhemes, whenever a proc light verb combines with gradable, closed scale adjectival preverb in the sense of Kennedy and Levin (2008), the interpretation should be telic and whenever a proc light verb combines with a gradable, open scale adjectival preverb, the interpretation should come out as atelic. Thus, the system predicts that there can exist complex predicates with a proc light verb and an adjectival preverb that are atelic. The prediction is borne out, as shown by the sentence below with the complex predicate deraz keshidæn (long pull) ‘to take a nap.’

(30) madær yek sa’æt deraz keshid.
mother one hour long pulled
'Mother had a nap for one hour.'

In other words, the First Phase Syntax model correctly captures the telicity facts. To a certain extent the way telicity is accounted for in the present paper and in Folli et al. (2005) overlaps in the sense that under both approaches the preverb has a role to play in determining the boundedness of the event. However, I disagree that telicity depends exclusively on the type of the preverb.
6 Conclusion

In this paper, I presented an analysis of Persian complex predicates in the framework of the verbal First Phase Syntax, as developed in Ramchand (2008). I suggested that the subevent heads are lexicalized by the light verb and that the preverbal material occupies the rhematic position and semantically unifies with the light verb to build one joint predication. Under this account, the light verb plays a role in determining the argument structure of the entire predicate in that it projects the specifier positions where we find the participants in the event. The preverb can indirectly affect argument structure by determining how high a DP can raise from one specifier to another and thus what composite role a DP can have.

I examined some of the most productive light verbs and proposed a feature specification for them. Thus, I divided the light verbs in classes according to their feature specification. I also showed how each of the two components of the complex predicate affects the boundedness of the macro-event. Namely, light verbs with res feature participate in bounded complex predicates. But also proc light verbs can be bounded, as the preverb in the Rheme induces a telic reading when it is bounded.

Acknowledgments

I wish to thank two anonymous reviewers for their insightful comments and incisive questions. I am also grateful to Peter Svenonius and Pavel Caha. This work has profited a lot from the discussions I had with them. Finally, I thank Parvaneh Danesh for her native speaker judgments.
<table>
<thead>
<tr>
<th>N</th>
<th>PP/P</th>
<th>Adj/Adv</th>
<th>N</th>
<th>PP/P</th>
<th>Adj/Adv</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;init, proc, res&gt;</td>
<td>baz kærdæn</td>
<td>lule kærdæn</td>
<td>baz shodæn</td>
<td>lule shodæn</td>
<td>baz shodæn</td>
</tr>
<tr>
<td>tube make</td>
<td>open make</td>
<td>‘roll up’ (tr.)</td>
<td>tube become</td>
<td>‘roll up’ (intr.)</td>
<td>open become</td>
</tr>
<tr>
<td>‘roll up’ (tr.)</td>
<td>‘open’ (tr.)</td>
<td>lule shodæn</td>
<td>baz shodæn</td>
<td>open become</td>
<td></td>
</tr>
<tr>
<td>churuk ændaxtæn</td>
<td>æz pa ændaxtæn</td>
<td>churuk oftadæn</td>
<td>æz pa oftadæn</td>
<td>‘get opened’</td>
<td></td>
</tr>
<tr>
<td>‘wrinkle’ (tr.)</td>
<td>‘wear out’</td>
<td>‘wrinkle fall’</td>
<td>‘run out of energy’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yad aværdæn</td>
<td>be donya aværdæn</td>
<td>yad amædæn</td>
<td>be donya amædæn</td>
<td>gærd amædæn</td>
<td></td>
</tr>
<tr>
<td>memory bring</td>
<td>to world bring</td>
<td>memory come</td>
<td>to world come</td>
<td>round come</td>
<td></td>
</tr>
<tr>
<td>‘remind’</td>
<td>‘give birth’</td>
<td>‘assemble’ (tr.)</td>
<td>‘recall’</td>
<td>‘be born’</td>
<td>‘assemble’ (intr.)</td>
</tr>
<tr>
<td>&lt;init, proc, (res)&gt;</td>
<td>gærd aværdæn</td>
<td>gærd aværdæn</td>
<td>gærd amædæn</td>
<td>gærd amædæn</td>
<td></td>
</tr>
<tr>
<td>gereh zeædæn</td>
<td>know hit</td>
<td>‘tie in a knot’</td>
<td>‘tie in a knot’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bu dæst dæstæn</td>
<td>from hand give</td>
<td>‘lose’</td>
<td>‘become smelly’</td>
<td>‘be lost’</td>
<td></td>
</tr>
<tr>
<td>smell give</td>
<td>‘emanate a smell’</td>
<td>deraz keshidæn</td>
<td>size pull</td>
<td>‘grow taller’</td>
<td></td>
</tr>
<tr>
<td>‘emaneate a smell’</td>
<td>‘lose’</td>
<td>long pull</td>
<td>‘take a nap’</td>
<td>no inchoative counterpart</td>
<td></td>
</tr>
<tr>
<td>qæd keshidæn</td>
<td>‘grow taller’</td>
<td>fekærdæn</td>
<td>‘think’</td>
<td>no inchoative counterpart</td>
<td></td>
</tr>
</tbody>
</table>

**Table 8**: Appendix: Examples of complex predicates discussed in the charts
References