

A Lexical Analysis of Persian Complex Predicates

The dual nature of complex predicates in Persian was a much discussed topic during the past decades. On the one hand complex predicates behave like words since they undergo morphological derivations and on the other hand complex predicates behave like syntactic objects. For instance their parts can be separated by scrambling or by clitics or morphological material like the imperfective prefix or negation (Mohammad and Karimi, 1992).

Often proposals were made that treat the complex predicates entirely in syntax or entirely in the morphology component. Depending on the theoretical assumptions that are made the respective proposals run into problem with some of the data. However, as Megerdooian (2002, p. 66) observed, *the duality problem witnessed in Persian light verbs is a theory-internal problem. [...] any theory that does not distinguish between the component responsible for word-formation and the component for creating phrases will not face a problem.* Megerdooian suggest an approach in the framework of Distributed Morphology, but this is not the only option. I will show in my talk that a lexicalist analysis of the Persian data is possible as well. There is a common misunderstanding of the term *lexicalist* and of what it means to be licensed in the lexicon. For instance Embick (2004, p. 389) assumes that lexical analyses of resultative predicates imply that the predicate *hammer flat* is formed in the lexicon component and rejects such analyses on the basis of (1), which shows that the resultative phrase can be syntactically complex. An alternative lexical analysis would assume that resultative constructions are licensed by a lexical rule that licenses a lexical item that selects for a result predicate (see Simpson, 1983; Wunderlich, 1992, p. 45; Verspoor, 1997; Wechsler, 1997; Wechsler and Noh, 2001; Müller, 2002 for analyses of English, German, and Korean resultative constructions). So in addition to the usual *hammer* there is a lexical item that selects for a result predicate. If such a lexical item is used in syntax, it can be combined with *flat* or with *flatter than . . .*

I suggest a lexical analysis for Persian complex predicates that uses the technique of argument attraction that was formalized by Hinrichs and Nakazawa (1994) in the framework of HPSG. I assume that the light verbs select their respective preverbs (parallel to the analysis of *hammer flat*, in which a special lexical entry for *hammer* selects the result predicate). Depending on the class of the preverb, arguments of the preverb are attracted by the light verb and can be realized as arguments of the preverb light verb combination. Since subcategorization is a property of stems, subcategorization information can be accessed in the morphological component and affixes can access both the valence information contributed by the light verb and the valence information that is contributed by the preverb. This solves the bracketing paradox that would otherwise exist for morphological analyses (see also Müller, 2003 on the morphology of German particle verbs).

As Vahedi-Langroudi, 1996, p. 6, p. 202–203, 211 and Karimi-Doostan (1997) observed many light verbs do not allow derivation if they are not realized together with the preverb (2). Karimi-Doostan (1997, p. 196) therefore suggests the analysis in Figure 1b rather than the one in Figure 1a. Following Müller's approach I assume that a version of *kardan* is used that selects for a light verb and attracts its arguments, that is, *kon-* contains all information that is necessary for the derivation to apply. Hence, I assume the structure in Figure 1a. The grammar rule that combines *konande* with the preverb shares crucial aspects with the rule that licenses predicate complexes in syntax. In HPSG this sharing of properties between several grammar rules can be achieved by using inheritance hierarchies for the compact representation of linguistics information. It is therefore possible to distinguish morphology from syntax and to capture the commonalities of the respective combinations.

Since preverb light verb combinations are not formed in the lexicon, but are licensed by the lexical item for the light verb + argument attraction, the syntactic properties of Persian complex predicates can be explained as well: the preverb is an argument of the light verb and as such can be fronted or separated from the light verbs by auxiliaries (See Bouma and van Noord, 1998 for an analysis of the Dutch predicate complex that allows particles to occur before auxiliary verbs).

The analysis assumes that all information is projected from the lexical head (which attracts both syntactic and semantic information of its preverb). The idiomatic cases that were discussed by Karimi (1997) and by Goldberg (2003) can be accounted for by a variant of the so-called idiomatic argument analysis (Nunberg, Sag and Wasow, 1994; Sag, 2007).

The analysis is part of a fragment of a Persian HPSG grammar that was implemented in the TRALE system. The fragment covers (among other things) various types of complex predicates (causatives, noun incorporation of the *telefon kardan* type, verbal nouns as preverbs, process nouns as preverbs, active/inchoative alternations), passive, adjectival participles, nominalization, *-i* derivation (Vahedi-Langroudi, 1996, p. 204), inflection, cliticization, negation, scrambling and nonlocal dependencies (Karimi, 2005), (optional) agreement (Karimi, 2005, p. 97), copula constructions.

- (1) The metal is [hammered [_{AP} flatter than a pancake that has been run over by a steamroller and stomped on by elephants]].
- (2) a. pazirâ?i konande
 entertainment do-er
 ‘entertainer’
 b. *konande
 do-er

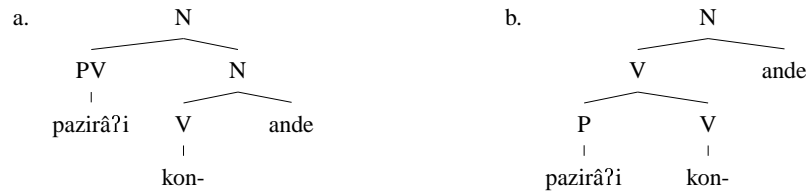


Figure 1: Alternative Structures for *pazirâ?i konande* ('entertainer')

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