Adverbial and attributive modification of Persian separable light verb constructions[1]

JENS FLEISCHHAUER

Heinrich-Heine Universität Düsseldorf

MOZHGAN NEISANI

Heinrich-Heine Universität Düsseldorf

Persian makes extensive use of light verb constructions (LVCs) consisting of a non-verbal preverb and a semantically light verbal element. The current paper concentrates on LVCs with nominal preverbs (e.g. *sedâ dâdan* 'produce a sound', lit. 'sound give') which license an attributively used adjective intervening between the two components of the construction. Such LVCs are idiomatically combining expressions, in the sense of Nunberg, Sag & Wasow (1994: 496). The individual components of idiomatically combining expressions have an identifiable meaning and combine in a non-arbitrary way. Thus, they are conceived as being formed compositionally. Evidence for this view can be taken from the fact that the attributively used adjectives function as internal modifiers, targeting only the nominal component of the LVC.

As adjectives can also be used adverbially, two modification patterns emerge: The nominal preverb is modified by an attributive modifier, or the same adjective can be used as an adverbial modifier of the whole LVC. Two corresponding interpretation patterns arise: Attributive and adverbial modification either both result in the same, or in different interpretations.

The paper makes the following claims: First, only compositionally derived LVCs license attributive modification of their nominal preverb; and second, different interpretations of the two modification patterns only result if the light verb and the preverb each license a suitable property as a target for the modifier. If, on the other hand, such a property is only licensed by the preverb, adverbial and attributive modification result in the same interpretation.

KEYWORDS: adverbial modification, attributive modification, complex predicates, compositionality, light verb constructions, Persian

---

45

1. INTRODUCTION

In a paper on idioms, Nunberg et al. (1994) argue that although idioms have a conventionalized and sometimes figurative meaning, they can be compositionally derived. The authors introduce the term 'idiomatically combining expressions' for idioms such as English *pull strings, take advantage* and *take a bath*. The different components of such idiomatically combining expressions have identifiable meanings, which are combined in a non-arbitrary way. One piece of evidence supporting this view is that a number of idiomatic expressions allow for internal modification (Ernst 1981, Gazdar et al. 1985, Nunberg et al. 1994). Thus, a modifier – which is not an obligatory component of the expression – is inserted into the idiom, as in *pull political strings*. Some authors (e.g. Everaert & Hollebrandse 1995, Nicolas 1995, Glatz 2006, Megerdoomian 2012) argue that the internal modifier always modifies the whole idiom and not just one of its components. This holds true for *pull political strings*, which can be paraphrased as 'politically pull strings' (Ernst 1981: 51). But such an analysis is doubtful for cases like those in (1). The two examples in (1) are instances of so-called light verb constructions (LVCs), which are complex predicates formed by a semantically light verbal element and a second predicational component. In the English example in (1a), *warm* functions as an internal modifier, only targeting the nominal component of the LVC. Thus, the adjective specifies the temperature of the water of the bath and (1a) resists paraphrasing into an expression like 'bath warmly'. In the Persian example in (1b), the adjective *boland* 'loud' functions as an internal modifier of the nominal preverb *sedâ* 'sound'. The adjective modifies the loudness of the produced sound, but not the loudness of the event of producing a sound. Thus, (1b) does not mean 'producing a sound loudly' or 'doing something loudly which produces a sound'.

(1)   (a)   take a warm bath
       (b)   sedâ   ye   boland dâdan
             sound   EZÂFE loud   give
             'produce a loud sound'

Various examples that Nunberg et al. discuss under the notion of 'idioms' and 'idiomatically combining expressions' are in fact LVCs. In the current paper, we explore Persian LVCs from the perspective of attributive and adverbial modification. We essentially argue that (i) internal (attributive) modifiers do not modify the whole LVC but only the nominal preverb, and (ii) interesting asymmetries can be found by comparing adverbial and attributive modification of LVCs. In (2), the adjective *boland* 'loud' is used as an adverbial modifier of the LVC *sedâ dâdan* 'produce a sound'; the interpretation of (2) is the same as for (1b). The adverbial modifier is again interpreted as indicating the loudness of the resulting sound.

(2) boland sedâ   dâdan
     loud   sound give
     'produce a loud sound' (lit. 'loudly producing a sound')

Thus, there is no semantic difference in the interpretation of adverbial and attributive modification in this particular case. As shown in (3) with respect to the LVC *mesâl zadan* 'give an example' (lit. 'example hit'), attributive and adverbial modification can result in different interpretations. In (3a), *xub* 'good' specifies the manner of giving an example, whereas the attributive modifier in (b) specifies the quality of the example.

(3) (a) xub mesâl   zadan
          good example hit
          'give an example in a good way'
     (b) mesâl   e   xub-i   zadan
          example EZÂFE good-INDEF hit
          'give a good example'[2]

A natural question resulting from the brief discussion of these examples is the following: Under which conditions do adverbial and attributive modification result in the same interpretation, and when do different interpretations arise? The paper addresses this question for a number of Persian LVCs.

Nunberg et al. take the possibility of internal modification of idiomatically combining expressions as one piece of evidence in favor of a compositional analysis of certain idiomatic expressions. We follow this route and propose a compositional analysis of those Persian LVCs licensing internal modifiers. The possibility of the internal modification lends support to such a compositional treatment of at least a subset of Persian LVCs. We are not the first to advocate for a compositional analysis of Persian LVCs (e.g. Karimi 1997, Müller 2010, Samvelian & Faghiri 2014), but our approach strengthens this proposal by demonstrating the usefulness of modification as a diagnostic of compositionality.

The paper is structured as follows: In Section 2, we introduce the notion of LVCs with a special emphasis on their compositionality. The section has a special focus on Persian LVCs and introduces the distinction between separable and non-separable ones. In Section 3, we focus on functional morphology realized at the nominal preverb. It will be shown that nominal preverbs behave essentially like other nouns but resist case marking. This is, as we will argue, due to the fact that preverbs are not the object of the light verb. Section 4 focusses on adverbial and attributive modification and introduces the different interpretation patterns mentioned above. A basic claim we defend in the paper is that attributive

---

[2] We follow the Leipzig Glossing Rules and use the following abbreviations in the paper: ACC = accusative, ADV = adverbial, ARG = argument extension, ATTR = attributive, CL = classifier, DEM = demonstrative, IMPF = imperfective, INDEF = indefinite, INF = infinitive, NEG = negation, PST = past, PL = plural, POSS = possession, REL = relative marker, SG = singular.

modification of the nominal preverb of LVCs proves that separable LVCs are semantically compositional. In Section 5.1, we develop a compositional analysis of LVCs. Section 5.2 introduces the data we use in our case study on the modification of Persian LVCs. In the case study, we investigate verbs of emission (e.g. English *bleed, drone, shatter*). The relevant background on this semantic verb class is introduced in this section as well. Section 6 presents our analysis of how the different interpretation patterns arise with respect to the examples introduced in Section 5. Finally, we will provide a general discussion of the approach presented in the paper in Section 7.

2. LIGHT VERB CONSTRUCTIONS

Light verb constructions are a special type of complex predicates (see, e.g. Amberber, Baker & Harvey 2010 for various types of complex predicates). Butt (2010: 49) defines the notion 'complex predicate' as a construction consisting of 'two or more predicational elements (e.g. nouns, verbs and adjectives) which predicate as a single unit, i.e. their arguments map onto a monoclausal syntactic structure'. In LVCs, the complex predicate consists of a semantically light verb and a second component, which provides the major semantic contribution to the joint predication. This second component, as it precedes the light verb in Persian, is termed 'preverb'. Light verb constructions have been extensively discussed from an argument structure perspective (see, for an overview, the literature cited in Butt 2010, 2013, Butt & Lahiri 2013). With respect to the semantics of LVCs, a central question is whether the light verb is semantically bleached or not. In the latter case, it is assumed to add a semantic contribution to the complex predicate. The first position is, for example, advocated in Jespersen (1942), Cattell (1984) and Grimshaw & Mester (1988). Butt especially (e.g. Butt & Geuder 2001; Butt 2010, 2013) has been explicit in assuming that light verbs are not semantically empty, but contribute a, probably hard to clearly define, semantic meaning (e.g. volitionality, agentivity). A similar view is adopted by other authors as well, e.g. Isoda (1991) and Brugman (2001). This view is supported by diachronic analyses (Bowern 2008, Butt & Lahiri 2013) which demonstrate that light verbs do not result from a process of semantic bleaching. In Section 5, we present evidence that Persian light verbs make a semantic contribution to the complex predicate.

Persian makes extensive use of LVCs as the language only has a very limited set of lexical verbs; according to Mohammad & Karimi (1992: 195) only 115 full verbs exist. In Persian, the preverb of an LVC can either be a noun (4a), a participle (b), an adjective (c) or a prepositional phrase (d). The light verbal element is taken from the set of lexically full verbs, but not all full verbs are (productively) used as light verbal elements (see Dabir-Moghaddam 1997 for an overview of Persian light verbs).

(4) (a) telefon   kardan
          telephone do
          'to telephone'

    (b)   delxor   kardan
           annoyed do
           'to annoy'

    (c)   pish   raftan
           forward go
           'to progress'

    (d)   be donya amādān
           to world come
           'to be born'
           (Dabir-Moghaddam 1997: 31 (a/b/d); Ghomeshi & Massam 1994: 184 (c))

To avoid confusion, a note on the terminology used in the paper is in order. We are conceiving of LVCs as complex predicates consisting of a verbal head, which is called 'light verb', and a preverb. We use the term 'full verb' to denote elements of the lexical category 'verb'. The terms 'light verb' and 'heavy verb' designate uses of full verbs. The term 'light verb' designates a semantically reduced usage of a full verb. In such a use, the verb requires a preverb to express a full-fledged predication. 'Heavy verb', on the other hand, signifies a usage of a verb, in which it has full predicational content. In its heavy use, *dadân* 'give' denotes an event of giving (a transfer of a theme from an agent to a recipient). In its light use, the verb does not denote an event of giving. Rather, the denoted event is dependent on the preverb. For example, the LVC *jâvab dadân* literally means 'answer give' and is interpreted as meaning 'to answer'. The LVC does not denote a literal transfer of an answer from an agent to a recipient but an event of answering. The type of denoted event crucially depends on the preverb but not on the light verb.

Two major issues with regard to LVCs are (i) their idiomaticity and (ii) whether they show lexical or phrasal properties. Light verb constructions have a conventionalized and often figurative interpretation. In an influential paper, Nunberg et al. (1994: 499ff) argue that idiomatically combining expressions are compositional, even though they have conventionalized and possibly figurative meaning. One of Nunberg et al's (1994: 504) examples is the English LVC *pull strings*, which, as a complex predicate, cannot simply be interpreted literally. *Pull* is not used in its 'heavy' sense and *strings* is interpreted metaphorically. Nevertheless, as Nunberg et al. argue, the two components of the LVC have an identifiable meaning and combine in a non-arbitrary way. One piece of evidence in favor of such a compositional approach is internal modification (Ernst 1981, Gazdar et al. 1985, Nunberg et al. 1994). An English example is given in (5) below. In it, the adjective *immediate* modifies the nominal component (*point*) of the idiomatically combining expression *beside the point*. Nunberg et al. reason that if a modifier can target only one component of an idiomatically combining expression rather than the whole idiom, the parts need to have an identifiable meaning.

(5)   That's beside the immediate point.

                                          (Ernst 1981: 52)

49

Various authors (e.g. Everaert & Hollebrandse 1995, Nicolas 1995, Glatz 2006, Megerdoomian 2012) propose that in cases of internal modification, it is always the whole expression which is in the scope of the modifier rather than just one of its parts. These authors claim that although *immediate* is syntactically realized as a modifier of the noun *point*, it scopes over the whole idiom, rather than just the noun. Under such a view, an idiom like *beside the point* shows syntactic flexibility – elements can be placed within – but it does not necessarily follow that its parts have an identifiable meaning. With respect to (5), Ernst (1981: 52) states that *immediate* 'adds the information that the point which someone is not addressing is the one immediately at hand'. External modifiers, like *political* in *He came apart at the political seams* (Ernst 1981: 51), modify the whole idiom. Ernst (1981: 51) calls them 'domain delimiters' as they specify the domain to which the idiom applies. Thus, the above mentioned idiom can be paraphrased as 'as far as politics is concerned, he came apart at the seams' (cf. Ernst 1981: 55). A similar paraphrase does not work for the internal modifiers; *immediate* does not specify a domain with respect to which the idiom is restricted. This demonstrates, on the one hand, that an interpretational difference between internal and external modifiers exists, and, on the other hand, that *immediate* does not behave like an external modifier. Thus, we follow Ernst's analysis and propose that internal modifiers do not modify the whole expression but just part of it. One of the paper's goals is to demonstrate that attributive modifiers of nominal preverbs are internal modifiers and therefore present evidence in favor of a compositional analysis of (at least some) Persian LVCs. The property of internal modification only shows that the preverb has an identifiable meaning; it does not show that the components not targeted by the modifier (e.g. the light verb) do as well.

A property showing that the light verb has a regular contribution is that compositional LVCs come in families (Nunberg et al. 1994, Sag et al. 2002). Members of a family are headed by the same light verb, whereas only the preverb differs. The different members of a family exemplify the same interpretational pattern. Two LVC families headed by the same light verb *keʃidæn* 'pull' are (Family 2011: 13): (i) the combination of the light verb with a noun denoting a smokeable substance results in the interpretation 'to smoke N' (e.g. *sigar keʃidæn* 'smoke cigarettes', lit. 'cigarette pull'), (ii) in combination with a noun denoting a building or another type of built object, the LVC means 'to build N' (e.g. *jâde keʃidæn* 'build a road'. lit. 'road pull'; *divâr keʃidæn* 'build a wall', lit. 'wall pull'). The existence of such LVC families, as Nunberg et al. claim, would be surprising, if the LVCs were not the outcome of a compositional process. In the current paper, we will not go into the discussion of LVC families (see Family 2006, 2011, Samvelian & Faghiri 2014 for that issue), but rather only concentrate on the modification of LVCs.

The issue of internal modification is related to the debate of whether LVCs have lexical or phrasal properties (see, for example, Ghomeshi & Massam 1994, Goldberg 1996 and Müller 2010 for this topic). Light verb constructions licensing internal modification are called 'separable LVCs' since a lexical element

Type of noun	refers to . . .	nominal features?	Example
Eventive noun	Eventuality	yes	(7a)
Verbal noun	Eventuality	no	(7b)
Non-eventive noun	Object	yes	(7c)

Table 1
Classification of Persian nouns (based on Karimi-Doostan 2011).

separates the two components of the LVC. In the Persian example in (6), an adjective separates both elements and crucially, the adjective does not take part in the formation of the complex predicate. The complex predicate is *sedâ dâdan* 'produce a sound' and *boland* 'loud' is used as an attributive modifier of the preverb *sedâ* 'sound'. Its status as an attributive modifier is clearly indicated by the *ezâfe*-construction, which is triggered by attributive modification, but not by adverbial (we will discuss this issue in Section 4). Thus, we have attributive modification within an LVC, rather than an LVC consisting of two preverbs (a nominal and an adjectival one) and a light verb. Evidence for this view is that *sedâ ye bolandi* 'a loud sound' always receives the same interpretation, irrespective of whether *sedâ* functions as the preverb of an LVC or is used outside of one.

(6) Sedâ ye   boland-i   dâd.
     sound EZÂFE loud-INDEF gave
     'It/s/he produced a loud sound.'

Non-separable LVCs, such as *bayân kardan* 'to state' (lit. 'expression do'), do not license an attributive modifier of the nominal preverb. Separable LVCs show a greater syntactic flexibility than non-separable ones, as elements like modifiers can be placed between the preverb and the light verb. LVCs licensing internal modification are always separable and therefore display phrasal properties (e.g. Müller 2010 and references therein). Thus, compositionality of LVCs (in the sense of Nunberg et al. 1994) goes along with displaying phrasal properties.

Karimi-Doostan (2011) argues for a relationship between the separability of Persian LVCs and the respective type of nominal preverb. He distinguishes three types of nominals, as shown in Table 1. An eventive noun like *taxrib* 'destruction' refers to an eventuality – the destruction of something – and displays nominal features. As (7a) reveals, the noun is compatible with a demonstrative determiner. Verbal nouns (e.g. *anjâm* 'performing') also refer to eventualities – the performance of something – but do not show nominal features as they are not compatible with demonstrative determiners (7b).

(7) (a) in/ân taxrib
          DEM destruction
          'this/that destruction'
     (b) *in/ân anjâm
           DEM performing

51

(c) in/ân guš
    DEM ear
    'this/that ear'

Karimi-Doostan mentions further properties with respect to which verbal nouns differ from 'ordinary' nouns: verbal nouns cannot be pluralized, they cannot be selected by determiners and preposition and they cannot function as subject or object (Karimi-Doostan 2011: 83). One property verbal nouns share with non-eventive nouns is that they license attributive modifiers (8), at least as long as they are not realized as the preverb of an LVC. Non-eventive nouns, finally, do not refer to an eventuality – rather they refer to (abstract) objects – and do show nominal features.[3] An example is *guš* 'ear', which licenses a demonstrative determiner (7c) but clearly does not refer to any eventuality. In Section 3, we turn to a deeper discussion of the nominal morphology licensed by preverbs.

(8) anjâm   e   sarii e   mohâsebât
    performing EZÂFE fast EZÂFE calculations
    'a quick performance of (the) calculations'

Fabregas & Marín (2012: 36) argue that the eventuality denoted by eventive nouns can be located either in space or time. Thus, such nouns can be subject to predicates like English *take place* or its Persian correspondent *surat gereftan*. In addition, eventive nouns take temporal or aspectual modifiers like English *constant*. We make use of the first criterion to illustrate that Karimi-Doostan's eventive nouns and verbal nouns are eventive.[4] In (9) and (10) the nouns *taxrib* and *anjâm* are realized as the subject of the predicate *surat gereftan* which temporally locates the eventuality denoted by them. The noun *guš* 'ear', on the other hand, cannot be subject of that predicate and therefore it cannot be temporally located. Thus, *guš* does not refer to an eventuality.

(9) Taxrib   e   pol   dar tul e   tâbestân surat gereft.
    destruction EZÂFE bridge in length EZÂFE summer form got
    'The destruction of the bridge took place during the summer.'

(10) Anjâm   e   tarh dar tul e   vaqt e   esterâhat
    performance EZÂFE sketch in length EZÂFE time EZÂFE rest
    surat gereft.
    form got
    'The performance of the sketch took place during the break (of the game).'

---

[3] Karimi-Doostan uses the terms 'predicate noun' and 'non-predicate noun' instead of 'eventive noun' and 'non-eventive noun' respectively.

[4] The second criterion – combination with temporal or adverbial modifiers – works for Persian as well, but for reasons of space we only illustrate the first criterion.

Karimi-Doostan claims that a nominal preverb is separable if it is an eventive noun (i.e. if it refers to an eventuality and shows nominal features). The reason he proposes is that eventive nouns independently refer to an eventuality and therefore are more independent from the light verb than non-eventive nouns are. Following Karimi-Doostan's (2011: 91) analysis, verbal nouns cannot be separated from the light verb since they cannot function as a lexical head of a DP. Karimi-Doostan relates separability basically to the nominal type of the preverb, but not to the LVCs' compositionality. If he is right, it follows that only LVCs which have an eventive noun as preverb are compositional in Persian. The separable LVCs investigated in the current paper do have eventive nouns as preverbs. But we would like to be cautious with respect to the claim that only eventive nouns can be separated from the light verb. One particular reason is that Mohammad & Karimi (1992: 197) present an example in which a non-predicative nominal preverb is separated from its light verb by the future tense auxiliary *xâhad* (11). The auxiliary is placed immediately in front of the main verb, which results in the separation of preverb and light verb in examples like (11).

(11)   Be man guš xâhad kard.
       to me ear will do
       'S/he will listen to me.'

The example in (11) demonstrates only that LVCs like *guš kardan* 'listen' (lit. 'ear give') also show some degree of syntactic flexibility, which indicates that the LVC does not function as a single word. The example does not show that the different components of the LVC have an identifiable meaning since *xâhad* does not modify one of the LVC's components individually. This shows that not every element intervening between the two components of an LVC can be counted as evidence for the compositional nature of that LVC. In the remainder, we only conceive of LVCs as being compositionally derived if they can be separated by internal modifiers. A question, which we cannot address within the current paper, is, whether separability and compositionality always go hand in hand or whether some LVCs are separable (by e.g. the future auxiliary) but not compositionally derived. In the next section, we will keep discussing functional morphology used within an LVC, but therein turn to grammatical categories of the nominal acting as preverb.

3. PREVERBS AND NOMINAL MORPHOLOGY

In the discussion of the separability of LVCs, it is usually mentioned that functional morphemes such as the negation marker *ne-*, the imperfective aspect marker *mi-*, auxiliaries, modals and object clitics can be placed between the preverb and the light verb. One example (11) of the future auxiliary separating the preverb and the light verb was shown in the previous section. These functional morphemes realize grammatical categories of the verb like tense, aspect and modality, but also agreement. Such data figure crucially into the discussion of the phrasal status

of LVCs (Müller 2010). The debate usually focusses on functional morphology realizing grammatical categories of the verb, but the preverb licenses its own functional morphology as well. The current section presents a brief discussion of some aspects of Persian nominal morphology and how it is employed in LVCs.

In Persian, nouns can be marked for number (singular vs. plural), indefiniteness and case. Before turning to a discussion of nominal preverbs, we will briefly mention some general characteristics of Persian nouns. In contrast to languages like English and German, all Persian nouns can be easily used bare. Bare nouns in object position are transnumeral (e.g. Lazard 1992: 62; Wiese 1997: 137; Ghomeshi 2008: 90f), which means that count nouns, which are not marked for plurality, allow (at least in certain contexts) a plural interpretation (12a). Depending on the context, a bare noun can be non-referential, which frequently gives rise to pseudo-incorporation (Dayal 2011, Modarresi 2015). In such cases, the noun acts like an event modifier (12a). We will argue later in Section 5.1 that pseudo-incorporation and LVCs result from different types of compositional processes.

(12) (a) Ketâb mi-foruxt-am.
           book IMPF-sell.PST-1SG
           'I sold a book/books.' or 'I was book-selling.'
      (b) Nâme nevešt-am.
           letter write.PST-1SG
           'I wrote a letter/letters' or 'I was letter-writing.'

Adding a plural marker to a noun results in an unambiguously referential and plural interpretation (13), e.g. Ghomeshi (2003: 58).

(13) Ketâb-hā foruxt-am.
      book-PL   sell.PST-1SG
      'I sold books.'

Persian has two indefinite articles, a free form *yek* – identical to the numeral for 'one' – and a phrase-final suffix *-i*. The two markers can be used alone ((14a) and (b)) but they can also co-occur within the same NP (c).

(14) (a) Ahmad yek   mâšin xarid.
           Ahmad INDEF car   bought
           'Ahmad bought a/one car.'
      (b) Ahmad mâšin-i   xarid.
           Ahmad car-INDEF bought
           'Ahmad bought a car.'
      (c) Ahmad yek   mâšin-i   xarid.
           Ahmad INDEF car-INDEF bought
           'Ahmad bought a/one car.'

Lyons (1999: 90f) argues that *yek* as well as *-i* are quasi-indefinite articles, which indicate cardinality. Ghomeshi (2003: 60, 65), on the other hand, posits

54

that -*i* does not express cardinality, whereas *yek* can do so. Since *yek* is identical to the numeral 'one', the expression of cardinality is not surprising. Support for Ghomeshi's view that -*i* does not express cardinality is its compatibility with plural morphology (15).

(15) Ahmad mâšin-hâ-i   xarid.
      Ahmad car-PL-INDEF bought
      'Ahmad bought some [specific] cars.'

Ghomeshi (2003: 65) – similarly Paul (2008: 322) – shows that -*i* and *yek* do not have the same distribution, since -*i* can, for example, be used in negative contexts, whereas *yek* cannot (16). In (16a), it is negated that Ali bought any car, whereas in (b) *yek* is interpreted as the numeral 'one' rather than an expression of indefiniteness. It is negated that Ali bought just one car, rather, as (16b) shows, he bought several. A specification that Ali bought more than one car is only compatible with the use of *yek* (16b) but not with -*i* (16a).

(16) (a) Ali mâšin-i   na-xarid   #balke do tâ.
           Ali car-INDEF NEG-bought but   two CL
           'Ali did not buy any car (#but two).'
      (b) Ali yek mâšin na-xarid   balke do tâ.
           Ali one car   NEG-bought but   two CL
           'Ali did not buy one car, but two.'

A second relevant difference between *yek* and -*i* is that only the first, but not the second, can be used with generic nouns (Paul 2008: 314, 322). The sentence in (17) requires a generic interpretation of the noun *morabbaʔ* 'square'. *Yek*, although it is optional, can be used with the noun, whereas -*i* cannot.

(17) (yek) morabbaʔ(*-i) šekl-i-st   ke   čahâr zel dâr-ad.
       INDEF square-INDEF shape-REL-is DEM four side have-3SG
       'A square is a shape which has four sides.'

<div align="right">(slightly adapted from Paul 2008: 315)</div>

Ghomeshi (2003: 63) claims that -*i* marks referentially specific nouns. Such an analysis is supported by (18a), in which -*i* is suffixed to the postnominal adjective modifying the noun *zan* 'woman'. The noun refers to a specific woman which left Ahmad.

(18) (a) Ahmad mi-xâst   bâ   zan e   puldâr-i   ezdevâj
           Ahmad IMPF-want.PST with woman EZÂFE rich-INDEF marry
           kon-ad ammâ u   tark-aš   kard.
           do-3SG but   she leave-3SG did
           'Ahmad wanted to marry a rich woman but she left him.'

<div align="center">55</div>

(b) Ahmad mi-xâst   bâ   zan   e   puldâr-i   ezdevâj
    Ahmad IMPF-want.PST with woman EZÂFE rich-INDEF marry
    kon-ad ammâ na-tavânest kas-i   râ peidâ kon-ad.
    do-3SG but   NEG-could one-INDEF ACC find do-3SG
    'Ahmad wanted to marry a rich woman but he could not find one.'

As (18b) shows, -*i* can also be used in referentially opaque contexts. In (18b), Ahmad wanted to marry a specific woman but could not find her. The specific woman Ahmad wanted to marry does not need to exist at all and therefore *zan e puldâr-i* 'a [specific] rich woman' is not (necessarily) referential. In this particular example, -*i* signals epistemic specificity (for a general discussion of the different types of specificity see, e.g. von Heusinger 2011).[5] We treat -*i* as a marker of specificity, in line with Ghomeshi (2003), but reject the view that the respective noun has to be referential. Further support for the analysis that the noun marked by -*i* does not need to be referential is the fact that -*i* is also used under negation (cf. example (16)). In the remainder, we keep glossing -*i* as expressing indefiniteness but meaning 'indefinite specific'. As far as we can determine, a standard analysis of indefiniteness in terms of choice functions is compatible with the Persian data. For details of such an analysis, we refer the reader to the relevant literature (e.g. Heim 1982; von Heusinger 1997, 2000, 2011).

Turning now to nominal preverbs, there is some debate about whether they are always indefinite and non-referential (e.g. Mohammad & Karimi 1992, Goldberg 1996, Megerdoomian 2012), or whether they can be referential and even definite (e.g. Karimi-Doostan 2011: 74). Nominal preverbs of LVCs are not different from other nouns in licensing functional morphology. As (19) shows, plural marking of nominal preverbs is admissible. The use of the plural marker -*hâ* on *sedâ* 'sound' results in the interpretation that the car is not only producing one (type of) sound but different (types of) sounds.

(19) In mâšin šab-hâ   sedâ-hâ-i   mi-dah-ad.
     DEM car   night-PL sound-PL-INDEF IMPF-give-3SG
     'This car produces some (specific) sounds at night.'

Also shown in (19) is that the nominal preverb *sedâ* 'sound' licenses the specificity marker -*i*. It has the same effect on nominal preverbs as it has on other nouns: The preverb receives a specific and sometimes also referential interpretation. The referentiality of *sedâ-i* is shown in (20). Adding the specificity marker -*i* to the nominal preverb licenses a discourse anaphor referring back to the preverb's referent (20a). Without -*i*, the preverb does not license such an anaphor (20b). One could assume that the anaphor refers back to the event rather than to the referent of *sedâ*. But then, the licensing of the anaphor should be independent of

---

[5] The free form *yek* can only substitute -*i* in referential contexts (like (18a)) but not in referentially opaque ones (18b). The referential context is compatible with the cardinality interpretation of *yek*, whereas the referentially opaque context is not.

the presence of the specificity marker, which – as (20) shows – is not the case. Thus, we have reason to claim that the anaphor truly does pick up the referent of *sedâ-i* and the nominal preverb is referential.

(20) (a) Âbgarmkon sedâ-i   dâd. Ân (sedâ) boland bud.
       boiler   sound-INDEF gave DEM sound loud   was
       'The boiler produced a [specific] sound. That (sound) was loud.'
   (b) #Âbgarmkon sedâ dâd. Ân (sedâ) boland bud.
       boiler   sound gave DEM sound loud   was

A further piece of evidence showing that the anaphor refers back to the preverb is shown by the agreement facts in (21). The preverb takes the plural marker, and the verb in the second sentence shows plural agreement. Plural agreement can only be triggered by the plural marker on the preverb since no other nominal component is marked for plurality.

(21) Âbgarmkon sedâ-hâ-i   dâd. Xeili boland bud-and.
    boiler   sound-PL-INDEF gave very loud   is.PST-3PL
    'The boiler produced some [specific] sounds. They were loud.'

The difference in specificity in (20) is corroborated by the fact that *sedâ-i* allows adding a specification on the type of sound produced within the event (22a), whereas sedâ does not (b).

(22) (a) Âbgarmkon sedâ-i   dâd, sedâ-i   mesle raadobarq.
       boiler   sound-INDEF gave sound-INDEF like   thunderstorm
       'The boiler produced a sound like a thunderstorm.'
   (b) #Âbgarmkon sedâ dâd, sedâ mesle raadobarq.
       boiler   sound gave sound like   thunderstorm

It seems that modified preverbs preferentially take the indefiniteness suffix *-i*, although it is not mandatory, as seen in (23). Without *-i*, a generic reading obtains. A functional motivation for the use of the indefiniteness marker in the context of modification is that the modifier narrows down the reference of the nominal concepts, which very likely results in a specific interpretation of the modified noun.

(23) Sedâ ye   boland dâdan nešân az   qodrat nist.
    sound EZÂFE loud   give sign from strength not_is
    'Producing a loud sound/loud sounds is not a sign of strength.'

Persian does not have a grammaticalized definite article, but one way of expressing definiteness is by the use of a demonstrative determiner.[6] As (24) shows, a nominal preverb can take a demonstrative determiner. The LVC is *be*

---

[6] Several authors (e.g. Lazard 1992: 73f; Ghomeshi 2008: 93f) mention the existence of a definiteness marker (*-e*) in colloquial Persian. It is not entirely clear whether this suffix can be considered to be a grammaticalized definite article or not.

natije residan 'to conclude' (lit. 'to conclusion arrive'), the preverb is a PP and the determiner is positioned in between the preposition and its complement. The sentence in (24) expresses that the government arrived at a unique conclusion, which licenses the demonstrative's use.

(24) Dolat baad az mozakerat be in natije resid ke [...].
     government after of negotiations to DEM conclusion arrived that
     'After negotiations, the government concluded that ...'

A further example is given by Karimi-Doostan (2011: 89) and shown in (25). The preverb *râhnamâʔi* 'advice' is modified by the demonstrative. In addition, the preverb takes the accusative case marker *-râ*. Persian displays definiteness-based differential object marking and basically restricts the case marker *-râ* to direct object arguments which are conceived as having definite reference (see Bossong 1985, Lazard 1992, Ghomeshi 1997b; Aissen (2003) shows that definiteness is not the only feature relevant in determining the use of *-râ*).

(25) Ali in râhnamâʔi-râ be Sasan kard.
     Ali DEM advice-ACC to Sasan did
     'Ali gave Sasan this advice.'

<div align="right">(adapted from Karimi-Doostan 2011: 89)</div>

The occurrence of the case marker allows us distinguishing between NPs functioning as preverbs and NPs functioning as the object of a verb. As we will show below, *-râ* does not show up on preverbs – as also stated by Megerdoomian (2012: 194) – and therefore *in râhnamâʔi-râ kardan* 'give this/the advice' is not an LVC. The native speakers we consulted also expressed the view that *in râhnamâʔi-râ kardan* 'give this/the advice' is not a complex predicate. The reasoning is based on the native speakers' intuition that *in râhnamâʔi-râ kardan* 'give this/the advice' has a different predicational meaning than *râhnamâʔi-râ kardan* 'give (an) advice'. A somewhat clearer example is given in (26), which indicates that the use of the accusative marker requires a non-light interpretation of the verb. *Šir dâdan*, in (26a), is an LVC meaning 'to breastfeed'. The LVC puts selectional restrictions on the subject argument, as only women can breastfeed a child. If *šir* is case marked, the predication as well as the selectional restrictions on the subject referent change. In the second sentence, *dâdan* 'give' is used as a heavy verb, the interpretation is simply that the father gives the milk to his daughter, but not that he is (necessarily) feeding the milk to her. Thus, *šir* functions as a preverb of the LVC *šir dâdan* in (26a) but it is the object of the verb *dâdan* in (b).

(26) (a) Mâdar doxtar-aš-râ šir dâd.
         mother daughter-3SG.POSS-ACC milk gave
         'The mother breastfed her daughter.'
     (b) In šir-râ pedar be doxtar-aš dâd.
         DEM milk-ACC father to daughter-3SG.POSS gave
         'The father gave the milk to his daughter.'

<div align="center">58</div>

That (26b) does not mean 'feeding the daughter with milk' is indicated by the example in (27). In this sentence, it is explicitly stated that the father gave the milk to the daughter, but she did not drink it; rather using it for making a cake. A similar example based on the sentence in (26a) is odd, which is expected given that *šir dâdan* means 'to breastfeed'.

(27) In šir-râ   pedar be doxtar-aš   dâd va doxtar
      DEM milk-ACC father to daughter-3SG.POSS gave and daughter
      ân-râ   barâye poxt e   yek keik estefâde kard.
      DEM-ACC for   cook EZÂFE one cake use   did
      'The father gave the milk to his daughter and the daughter used it for making a cake.'

Thus, in difference to, for example, Vahedi-Langrudi (1996), we do not analyze the preverb as being an object of the light verb for the following reasons: First, use of *-râ* enforces a heavy interpretation of the verb (as discussed above). Second, an element other than the preverb takes the accusative marker in examples like (28). This – as also mentioned by Megerdoomian (2012: 198) – indicates that *došmæn* 'enemy' (a) and *tækalif* 'homework' (b) function as direct objects of the respective LVCs.[7]

(28) (a) ân-hâ   došman-râ šekast dâd-and.
           DEM-PL enemy-ACC defeat give.PST-3SG
           'They defeated the enemy.'
      (b) doxtar-am   takalif-aš-râ   anjam dad.
           daughter-1SG homework-3SG-ACC doing give.PST-3PL
           'My daughter did her homework.'

(Saeedi 2017: 385)

Third, the preverb does not become the subject under passivization (29). Sentence (29a) is the passivized form of (26a), whereas (29b) is the passivized form of (26b). *Šir dâdan* is used as an LVC in (26a) and accordingly, the nominal preverb does not become the subject of the passive sentence. In (26b), *dâdan* is used as a heavy verb and *šir* is its direct object. In this configuration, *šir* does become the subject of the passive sentence.

(29) (a) Doxtar šir   dâde šod.
           daughter milk given became
           'The daughter was breastfed.'
      (b) In   šir be doxtar-aš   dâde šod.
           DEM milk to daughter-3SG.POSS given became
           'The milk was given to the daughter.'

---

[7] Persian licenses multiple realizations of *-râ*, as it is used with various adjuncts, as well as functioning as a topic marker (e.g. Karimi 1990; Dalrymple & Nikolaeva 2011: 107ff). As a case marker, *-râ* can only occur once per sentence (Lazard 1992: 75).

59

The preverb is also not an indirect object (in opposition to a claim made by Tabaian 1979: 199), since those require the preposition *be* 'to' (30).

(30) Pesar gol-râ   be doxtar dâd.
     boy   flower-ACC to girl   gave
     'The boy gave the flower to the girl.'

We are now in a position to give a summary on the behavior of nominal preverbs with respect to nominal functional morphology. Nominal preverbs behave like other nouns in the expression of number and (in)definiteness. A crucial difference is only found with respect to case marking, which can be explained by the fact that nominal preverbs cannot be realized as the object of the verb. This aspect is crucial for the analysis of the semantic composition of LVCs to which we turn in Section 5. In the next section, we turn to the attributive modification of nominal preverbs, which we will compare to adverbial modification of LVCs.

4. MODIFICATION

Persian has a lexical class of adjectives and most adverbials are either overtly or non-overtly (zero derivation) derived from them. Examples of adjectives and corresponding adverbials are given in (31). The adverbial *šadidan* 'severely' is derived from the adjective *šadid* 'severe' by the addition of the adverbializer *-an*. In the case of *boland*, the adverbial is not overtly derived from the adjective. We speak of *šadidan* as a derived adverb, but assume that *boland* is an adjective, irrespective of whether it functions attributively or adverbially. Thus, we clearly take the syntactic function (attributive vs. adverbial modifier) and lexical class (adverb vs. adjective) as distinct. Nevertheless, we propose different semantic representations for the attributive and the adverbial use of adjectives, as we will make clear below.

(31) (a) šadid   → šadidan
           'severe'   'severely'
      (b) boland → boland   (zero derivation)
           'loud'   'loudly'

Attributively used adjectives are usually realized postnominally and trigger the *ezâfe*-morpheme. The *ezâfe*-morpheme is a linking element, which links the modifier and its head (32a).[8] Adverbial modification, on the other hand, does not require the *ezâfe*-morpheme and the adverbial – irrespective of whether it is a (derived) adverb or an adjective – mostly precedes the LVC (32b).

---

[8] The *ezâfe*-morpheme does not only license attributive modifiers, but appears in possessive constructions and other grammatical contexts as well (e.g. Ghomeshi 1997a, Ortmann 2002).

60

(32) (a) Nafas e   amiq-i   kešid.
           breath EZÂFE deep-INDEF pulled
           'S/he took a deep breath.'
      (b) Amiq nafas   mi-kešid.
           deep   breath IMPF-pulled
           'S/he was taking a deep breath.'

For the analysis of the *ezâfe*-morpheme, we follow Ortmann (2002: 66) in viewing it as an overt realization of the operation of argument extension (Wunderlich 1997: 98).[9] The abstract representation for argument extension is shown in (33). ARG (for argument extension) operates on a noun and introduces a further predicate which shares its argument with the nominal predicate.

(33) (a) $[\![\text{ARG}]\!] = \lambda P \lambda Q \lambda x (P(x) \wedge Q(x))$
      (b) $[\![\text{dog}]\!] = \lambda x (\text{dog}(x))$
      (c) $[\![\text{dog}_{\text{ARG}}]\!] = \lambda Q \lambda x (\text{dog}(x) \wedge Q(x))$

The *ezâfe*-morpheme is a language-specific instantiation of the argument extension operator.[10] The semantic composition for a simple example like *sag-e bozorg* 'big dog' (lit. 'dog-EZÂFE big') is shown in (34). The combination of the noun with the adjective – after argument extension – proceeds via function composition.

(34) (a) $[\![\text{sag}]\!] = \lambda x (\text{dog}(x))$
      (b) $[\![\text{bozorg}]\!] = \lambda x (\text{tall}(x))$
      (c) $[\![\text{sag-e}]\!] = \lambda Q \lambda x (\text{dog}(x) \wedge Q(x))$
      (d) $[\![\text{sag-e bozorg}]\!] = \lambda x (\text{dog}(x) \wedge \text{tall}(x))$

Whereas morphology speaks in favor of argument extension in case of intersective attributive modification, the morphological evidence points to a different licensing process as far as adverbial modification is concerned. Adverbial modifiers – at least in some cases – are overtly derived from non-adverbially used adjectives. Thus, adverbial modification is licensed by the process of modifier extension (Wunderlich 1997: 98). Modifier extension is similar to argument extension, but operates on a modifier and introduces a predicate variable, which shares an argument with the modifier (35). In the process of creating an adverbial modifier – by adding the MOD operator – the individual argument is converted into an event argument. In cases of zero derivation, there is no morphological exponent of the process and we simply assume that it takes place if two expressions can otherwise not combine (see Wunderlich 1997: 97).

_____

[9] A different but related view on the function of the *ezâfe*-morpheme is put forward by Samvelian (2007).
[10] In the remainder, we gloss the *ezâfe*-morpheme as ARG to indicate its semantic function.

61

(35) (a) $\llbracket\text{MOD}\rrbracket = \lambda Q\lambda P\lambda e(P(e) \wedge Q(e))$
    (b) $\llbracket\text{loud}\rrbracket = \lambda x(loud(x))$
    (c) $\llbracket\text{loud}_{\text{MOD}}\rrbracket = \lambda P\lambda e(P(e) \wedge loud(e))$

For illustration, we use the example *amiq nafas kešid* 'breathe deeply' from (32b). In (36), the adjective *amiq* is converted into an adverbial modifier by the covert process of modifier extension, and after that combines with the LVC *nafas kešid*. Note that for the moment, we left out the individual argument of the LVC to keep the representation as simple as possible. But we will include the individual arguments in the later representations.

(36) (a) $\llbracket\text{nafas kešid}\rrbracket = \lambda e(breathe(e))$
    (b) $\llbracket\text{amiq}\rrbracket = \lambda x(deep(x))$
    (c) $\llbracket\text{amiq}_{\text{MOD}}\rrbracket = \lambda P\lambda e(P(e) \wedge deep(e))$
    (d) $\llbracket\text{amiq}_{\text{MOD}}\text{ nafas kešid}\rrbracket = \lambda e(breathe(e) \wedge deep(e))$

Besides the different licensing of attributive and adverbial modification, we also assume different semantic representations for attributive and adverbial modifiers. There is, for example, no morphological difference between the adverbial and attributive use of *boland*; nevertheless, we propose two semantic representations. There are two reasons for this assumption: (i) Not all LVCs which take a certain adverbial modifier license the corresponding attributive modifier, and (ii) attributive and adverbial modifiers contribute differently to the predication. (i) can be illustrated by the examples in (37). *Eʔterâz kardan* 'to protest' licenses *boland* as an adverbial (37a), but not as an attributive modifier (b).

(37) (a) Mardom e   Kermân boland eʔterâz kard-and.
        people ARG Kerman loud   protest do-3PL
        'The people of Kerman protested loudly.'
    (b) *Mardom e   Kermân eʔterâz e   boland-i   kard-and.
         people ARG Kerman protest ARG loud-INDEF do-3PL

Generally, *eʔterâz kardan* is a separable LVC, as (38) shows. The use of *boland* as an attributive modifier in (37a) is prohibited due to the fact that the noun *eʔterâz* 'protest' does not license it as such, irrespective of whether the noun is used as the preverb of an LVC or not. Thus, the modification construction *eʔterâz e bolandi* 'loud protest' is invalid.

(38) Ân   doxtar-ân eʔterâz e   namâdin-i   be hejâb e   ejbâri
    DEM girl-PL   protest ARG symbolic-INDEF to hijab ARG mandatory
    kard-and.
    did-3PL
    'Those girls made a symbolic protest against the mandatory hijab.'

The second point, that the adverbial and attributive modifiers contribute differently to a predication, can be seen by comparing (39a) and (b). The property

62

specified by *sarii* 'fast' in (39a) is speed and it can be said that speed is a property of the individual denoted by *xodro* 'car'. But speed is not a property of the event denoted by *kâr kardan* 'work' (39b). This can be illustrated by the fact that (39b) cannot be paraphrased as 'the event of working was fast'. Thus, speed is not a property of the event directly but it relates to the manner of working. The sentence in (39b) can be paraphrased as 'he worked in a fast manner'.

(39)   (a)   yek   xodro e   sarii
                  INDEF car   ARG fast
                  'a fast car'
        (b)   Mâ sarii kâr   kard-im.
                  we fast   work did-1PL
                  'We worked fast.'

An appropriate semantic representation for attributive *sarii* is given in (40a), whereas the semantic representation for the adverbial use is given in (b).

(40)   (a) $[\![\text{sarii}_{\text{ATTR}}]\!] = \lambda x(\text{SPEED}(x)=\text{high})$[11]
        (b) $[\![\text{sarii}_{\text{ADV}}]\!] = \lambda P \lambda f \lambda e(P(e) \wedge \text{SPEED}(f(e))=\text{high})$

The semantic representations in (40) differ from those given above; we analyze *sarii* not as a predicate of an individual or an event, but rather as a measure function assigning an individual (or event) a value with respect to a certain property. The relevant property in case of *sarii* is SPEED and we represent measure functions by small caps in the semantic representation. In (40a), SPEED is a property of an individual, whereas in (b) SPEED is not a property of the event. Rather it is related to the event by some mediating function f.[12] Thus, adverbial *sarii* comes with a functional argument f which has to be contributed by the event description. An appropriate function could for example be the attribute MANNER, if adverbial *sarii* specifies the speed of executed activity. An analysis of *sarii kâr kardan* 'work fast' is sketched in (41). The activity predicate has a manner component, which is analyzed as 'MANNER(e)=working'; the value 'working' is clearly a shortcut for the actual analysis of the manner component, but it is sufficient for illustrating this instance of adverbial modification (see Morzycki 2016: Chapter 5.4 for a discussion of the notion of 'manner'). MANNER is a mediating function between the event and SPEED, and saturates the f argument.

---

[11] The lexical meaning of *sarii* is more complex than the representations in (40) indicate, as it is a gradable adjective and therefore introduces a context-dependent standard of comparison. We leave this part aside, but see the analysis of gradable adjectives in Kennedy (1999) among others.

[12] In a neo-Davidsonian analysis (Parsons 1990), *sarii* would be represented as an event predicate ('fast(e)') similarly to a verbal predicate like work ('work(e)'). We think that such an analysis does not represent the meaning of modification construction appropriately, as we argued with respect to the paraphrase of (39b) above.

(41) ⟦sarii kâr kardan⟧ = λxλe(work(e) ∧ AGENT(e) = x ∧ MANNER(e)=working
      ∧ SPEED(MANNER) = high)

To keep attributive and adverbial *sarii* as similar as possible, we also introduce a
mediating function *f* in case of the attributive modifier – λfλx(SPEED(f(x))=high)
– and assume that *f* can simply be the identity function (e.g. Partee, ter Meulen
& Wall 1990: 34). For reasons of simplicity, we ignore the functional argument in
cases where it is instantiated in this way.

After discussing the modification strategies, we now turn to the interpretation
of adverbial and attributive modification of LVCs. We only focus on modifica-
tion constructions where an LVC licenses one and the same adjective both as
attributive and as adverbial modifier. This, for example, has been illustrated for
nafas kešidan 'breathe' shown in (32) and is repeated for convenience in (42).
With the adjective *amiq* as a modifier of the LVC *nafas kešidan*, attributive
modification (42a) and adverbial modification (b) result in the same interpretation.
Both sentences in (42) convey the meaning that the subject referent took a deep
breath.

(42) (a) Nafas e   amiq-i   kešid.
           breath ARG deep-INDEF pulled
           'S/he took a deep breath.'
      (b) Amiq nafas mi-kešid.
           deep breath IMPF-pulled
           'S/he was taking a deep breath.'

A further example exemplifying this interpretation pattern is shown in (43).
Irrespective whether *surii* is used adverbially (43a) or attributively (b), it is
specified that the marriage was an official one. Which, for example, consists in
signing of the relevant documents.

(43) (a) Ânha surii   ezdevâj kard-and.
           they formal marriage did-3PL
           'They married formally.'
      (b) Ânha ezdevâj e   surii kard-and.
           they marriage ARG formal did-3PL
           'They practiced a formal marriage.'

Megerdoomian (2012: 196) mentions the same fact, but states that attributive
modifiers always modify the whole LVC. According to Megerdoomian, the
attributive constructions in (42a) and (43b) thus receive an interpretation as
adverbial modifiers as well. However, this is too simplistic, since the attributive
modification of a nominal preverb can result in a different interpretation than
the adverbial modification of the whole LVC. In (44a), the adjective *xub* is used
adverbially and precedes the LVC *mesâl zadân* 'give an example' (lit. 'example
hit'). The sentence means that the teacher gave the example in a good way, so it is
the manner of giving the example which is specified by *xub*. In (44b), on the other

hand, *xub* is used as an attributive modifier of the preverb *mesâl* 'example', and it specifies the quality of the example but not the manner of giving it.

(44) (a) Moâlem e âlmâni ye mân xub mesâl zad.
teacher ARG German ARG 1PL.POSS good example hit.PST
'Our German teacher gave examples in a good way.'
(b) Moâlem e âlmâni ye mân mesâl e xub-i
teacher ARG German ARG 1PL.POSS example ARG good-INDEF
zad.
hit.PST
'Our German teacher gave a good example.'

That the two sentences in (44) have different interpretations is shown in (45). Adding a subordinated sentence, expressing that the manner of giving the example was bad, results in a contradiction for the sentence in (45a), but it is non-contradictory for the sentence in (b).

(45) (a) #Moâlem e âlmâni ye mân xub mesâl zad,
teacher ARG German ARG 1PL.POSS good example hit.PST
ammâ šive ye mešal zadan aš bad bud.
but way ARG example hit.INF 3SG.POSS bad was
'Our German teacher gave examples in a good way but the way s/he gave the example was bad.'
(b) Moâlem e âlmâni ye mân mesâl e xub-i
teacher ARG German ARG 1PL.POSS example ARG good-INDEF
zad, ammâ šive ye mešal zadan aš bad bud.
hit.PST but way ARG example hit.INF 3SG.POSS bad was
'Our German teacher gave a good example but the way s/he gave the example was bad.'

We take this as clear evidence that attributively used adjectives truly act as attributive modifiers and do not – contrary to Megerdoomian's assumption – function as adverbial modifiers. Following our analysis, adverbial and attributive modifiers have different scope. The modifier's scope depends on its syntactic use (46).

(46) (a) ADJ$_{adv}$ [PREVERB VERB]
(b) [[PREVERB ADJ$_{attr}$] VERB]

If used as an adverbial modifier, the adjective has scope over the whole LVC. In its attributive use, it has scope over the preverb only. This is in line with the syntactic fact that the attributive adjective is licensed by the noun it modifies via the *ezâfe*-morpheme. Licensing of a modifier is possible if head and modifier are semantically compatible. In the examples under discussion, the attributive modifiers behave as internal modifiers (in the sense of Ernst 1981) and modify a single component of the LVC rather than the LVC as a whole. This gives support

65

for a compositional analysis – in the sense of Nunberg et al. (1994) – for the LVCs under discussion.

Based on the brief discussion above, we arrive at two different possible interpretation patterns for adverbial and attributive modification of separable LVCs (with nominal preverbs):

(a) The attributive and the adverbial modifier can result in the same interpretation;

(b) the attributive and the adverbial modifier can result in different interpretations.

Since an attributive modification of the nominal preverb is possible, the attributive adjective needs to combine with the noun before the LVC is composed. Syntactically, this requires an analysis in which the complex NP, which functions as the preverb, is build up before it combines with the light verb. A syntactic analysis of Persian LVCs compatible with that requirement is presented in Müller (2010). We do not aim at providing a syntactic analysis of the data under discussion but turn to a deeper discussion of the compositional semantics of Persian LVCs. In the next section, we propose a compositional analysis of Persian LVCs, based on which we will show how the patterns in (a) and (b) are achieved in Section 6.

5. COMPOSING LVCs

The last section has demonstrated that attributive modifiers function as internal modifiers and target the preverb only. Nunberg et al. (1994: 503) propose that modification of just a part of an idiomatic expression is 'powerful evidence that the pieces of idioms have identifiable meanings' which interact with each other. Thus, the modification data gain evidence for a compositional analysis of those LVCs, which license internal modifiers.

Light verb constructions have been extensively analyzed from a syntactic perspective within different grammatical frameworks. Among the questions addressed in this strand of work are: (i) whether and how the argument structure of the complex predicate is derived from its components (e.g. Grimshaw & Mester 1988, Butt 2010, Müller 2010), and (ii) whether LVCs show lexical or phrasal properties (e.g. Goldberg 1996, Müller 2010). The semantic composition of LVCs has only rarely been addressed explicitly in the semantics literature. Notable exceptions come from work on the composition of the complex predicate's event structure (e.g. Karimi 1997, Folli, Harley & Karimi 2005, Pantcheva 2009). The analysis presented in the current section is only partial as it leaves out some aspects (e.g. event structure and argument structure) which are not crucial for our examination of the attributive and adverbial modification in Section 6. The schematic analysis in Section 5.1 is applied to the formation of LVCs expressing events of substance and sound emission in Section 5.2. This set of LVCs will serve as a case study in Section 6.

66

5.1 *The semantic composition of light verb constructions*

Various authors working on Persian (e.g. Ghomeshi & Massam 1994, Vahedi-Langrudi 1996, Ghomeshi 2008) do not distinguish between LVCs and other types of complex predicates. The mentioned authors explicitly claim that the two constructions in (47) are of the same type.

(47)   (a)   šafâ dâdan
              cure give
              'to cure'
       (b)   qazâ xordan
              food eat
              'to eat food'

Šafâ dâdan 'to cure', in (47a), is an LVC. In (47a), *dâdan* 'give' does not denote a process of giving, rather the main predicational content is provided by the noun *šafâ* 'cure'. The light verb adds information to the main event predication (Butt & Lahiri 2013: 23). (47b), on the other hand, is an instance of pseudo-incorporation. The verb *xordan* 'eat' retains its full lexical meaning in (47b), *qazâ* 'food' functions more like a modifier of the verb.

LVCs and pseudo-incorporation have in common that the grammatical head of the construction is a verb. It is either the incorporating verb in case of pseudo-incorporation or the full verb in light use in case of an LVC. The verbs take, for instance, tense, aspect and agreement morphology. Thus, the two constructions are superficially syntactically similar.[13] The crucial difference between LVCs and pseudo-incorporation is that the main predication is contributed by the noun in (47a) but by the verb in (b). From a semantic perspective, the two constructions cannot be analyzed analogously. Chung & Ladusaw (2004) argue that functional application is not the right mode of composition in case of incorporation constructions. Instead, they propose a compositional mode they call 'restrict'. 'Restrict' is defined as an operation, which composes a predicate with a property denoting expression. The result of this process is that the domain of the original function denoted by the predicate is restricted to a subdomain. (48a) shows the composition

---

[13] Authors like Ghomeshi & Massam (1994) attribute the same syntactic structure to LVCs and pseudo-incorporations. They argue that in both cases, the noun is in the same structural position. Megerdoomian (2012), on the other hand, argues that the two constructions only look similar at the surface. She argues – working in the framework of Hale & Keyser (2002) – that the nominal elements occupy different structural positions in LVCs and pseudo-incorporation constructions. The current paper does not propose a syntactic analysis of the two constructions but we are only concerned with the superficial syntactic similarity of the two constructions. We agree in principle with Megerdoomian's (2012: 188f) view that 'the distinct interpretations in the two constructions clearly point to a difference in structure [. . .]'. Notwithstanding, we do not adopt here analysis as we disagree with Megerdoomian regarding basic facts concerning Persian LVCs (e.g. with respect to the scope of attributive modifiers as discussed in Section 4). A next analytical step should consist in working out the corresponding syntactic structures for the two different semantic structures.

of the predicate *feed* and a predicate denoting indefinite noun. 'Restrict' is a non-saturating process, the *y* argument is saturated by existential closure (48b). The meaning of (48b) is that John fed a dog or that John was dog-feeding.

(48) (a) $\lambda y \lambda x[\text{feed'}(y)(x) \wedge \text{dog'}(y)]$
      (b) $\exists y[\text{feed'}(y)(\text{john}) \wedge \text{dog'}(y)]$

<div align="right">(Chung & Ladusaw 2004: 5)</div>

Such an analysis does not work for LVCs. The nominal preverb of an LVC does not restrict the domain of the predicate represented by the light verb. An analysis for *šafâ dâdan* 'to cure' in terms of 'restrict' would require that *šafâ* 'cure' provides a restriction on the domain of the function denoted by *dâdan* 'give'. But this is not the case as *šafâ dâdan* does not denote a specific type of giving.

Our compositional analysis of LVCs builds on Butt & Geuder's (2001) examination of LVCs in English and Urdu. The authors mainly assume that light verbs differ from their corresponding heavy verbs in not being able to denote events of their own. One piece of evidence supporting this view is that light verbs cannot be used to refer anaphorically to an LVC. Thus, light verbs cannot be used to pick up an event introduced before. In (49), the light verb *dâdan* 'do' cannot be used to refer back to the LVC *safâ dâdan* 'to cure'. If a light verb is used outside of an LVC, as in the second sentence in (49), it is interpreted as a heavy verb.

(49) doktor mariz râ   safâ dâd. #U in   kâr   râ   bâ dâdan anjâm
      doctor patient ACC cure did   he DEM affair ACC via give   perform
      dâd [...].
      did [...]
      'The doctor cured the patient. He did this by [...]'

Butt & Geuder conceive of light verbs as being semantically similar to modifiers. Within the framework of neo-Davidsonian event semantics, Butt & Geuder treat light verbs as predicates of events, which are conjoined with the main event predication. The analysis sketched by Butt & Geuder (2001: 356) is shown in (50). The eventive noun *wash* introduces an event predication, whereas the light verb *give* contributes an event predicate that is conjoined with the main event predication. In the case of light *give*, Butt & Geuder (2001: 356) postulate the event predicate GIVE-TYPE(e), which is intended to cover the meaning contributed by the light verb. The event predicate GIVE-TYPE(e) can be expanded as outlined in (50b).

(50) (a) John gave the car a wash.
           wash(e)(John, the car) & GIVE-TYPE(e)
      (b) GIVE-TYPE(e) = e has beneficial effects on THEME(e);
           or e involves the force transmission pattern AGENT(e) – THEME(e);
           etc.

<div align="center">68</div>

The semantic contribution of light verbs is often very subtle and a given light verb shows a high degree of meaning flexibility. Thus, the exact semantic contribution a light verb makes is determined – following Butt & Geuder (2001: 356) – through contextual factors. Nevertheless, the meaning contributed by the light verb should somehow be constrained by the meaning of the corresponding heavy verb. Butt & Lahiri (2013: 23) propose that a light verb and its heavy verb are synchronically united within a single underspecified lexical entry. The authors propose that the light verbs predicate 'a subset of lexical semantic information associated with the main verb', thus meaning components active in the verb's heavy use are deactivated in the light use of a verb.[14] We argued above that the light verb does not have the same meaning than its corresponding heavy verb since the light verb does not denote an event of its own. However, it is a still unresolved question which meaning components – associated with the heavy verb – are deactivated in a particular light use and which not. Answering this question requires a deep going investigation of the meaning contributed by a light verb (in a particular LVC) and the meaning of its corresponding heavy verb. This question goes beyond the limits of the current paper but we turn to a discussion of the semantic contribution of some Persian light verbs in the next section.

We adopt the view that '[l]ight verbs make no independent reference to a class of events' (Butt & Geuder 2001: 358) and require the composition with an event-denoting expression to yield a full-fledged event description. The eventive noun, as the main predicational component of the LVC, provides the event predicate. (51) shows the basic semantic representation we propose for a light verb like *dâdan* 'give'.

(51) $\llbracket$dâdan$\rrbracket$ = $\lambda P \lambda \text{TR} \lambda e \lambda x$ (P(e) $\land$ TR(e) = x $\land$ GIVE-TYPE(e))

The light verb does not denote an event of its own, which we cover by the fact that it also introduces a property variable *P*, representing a property of events. The variable needs to be saturated by an eventive expression, which is contributed by the preverb. As the preverb specifies the event property, it does not end up as an object of the LVC, which is in line with the grammatical facts discussed in Section 3. Furthermore, we assume that the light verb also introduces an individual argument, but the exact thematic relation between the event denoted by the verb and the individual argument is underspecified. TR is a variable for an attribute of the type 'thematic role'. As we show in the next section, the variable is saturated within the compositional process. The lexical contribution of the light verb is – in line with Butt & Geuder's account – represented as a 'GIVE-TYPE'-event predicate. A more detailed analysis of particular LVCs should be able to provide a more nuanced representation of the light verb's lexical contribution.

---

[14] A formalization of Butt & Geuder's analysis in an approach using Petri Nets is given in Butt & Tantos (2004).

69

We present a detailed discussion of the composition of the light verb and its nominal preverb after having introduced the relevant data in the next subsection.

5.2 *Case study: Verbs of emission*

The current subsection focusses on Persian LVCs denoting the emission of substances (e.g. *blood*) or sounds. The focus is on this particular class of predicates as they are well analyzed and we can thus build on previous work.

Verbs of emission, quite generally, denote a process of emitting a stimulus out of an emitter. The stimulus can either be a smell (e.g. English *smell*, German *duften* 'emit a pleasant smell'), light (e.g. *sparkle, light*), a sound (e.g. *drone, bark*) or a substance (e.g. *bleed, fester*). Verbs of emission do not only vary concerning the emitted stuff but also with respect to aktionsart. Following Rappaport Hovav & Levin (2000: 283), English verbs of smell and light emission are rather stative-like, whereas verbs of sound and substance emission are more dynamic (see Fleischhauer 2016b: Chapter 7 for an extensive discussion of German verbs of emission). Emission verbs are usually, at least in English and German, intransitive and their single argument is the emitter, which is the entity emitting the stuff. Only a few verbs of emission allow a transitive use, such as English *clatter* as in *I clattered the tea-cups* (Potashnik 2012: 263; see also Levin & Rappaport Hovav 1995 on the issue of transitivity of emission verbs). The transitive uses have a causative interpretation and the added argument is interpreted as a causer of the emission process. The emittee, which is the emitted stimulus, is – at least in English and German – semantically incorporated into the verb (Goldberg 2005: 20ff). Many verbs of emission – especially verbs of substance emission – are derived from nouns denoting the emitted stimulus (*blood – bleeding, rain – to rain*).

The various processes of emission are denoted by LVCs in Persian. Two such examples are shown in (52) and as they reveal, there is not a single light verb uniquely related to the expression of emission processes. Like in English and German, the single argument of the predicates is the emitter, whereas the emittee – the sound or substance emitted – is contributed by the preverb.

(52) (a) sedâ   dadân
           sound give
           'produce a sound'
      (b) xunrizi   kardan
           bleeding do
           'bleed'

Our analysis of the two LVCs in (52) will be only programmatic and some aspects need to be fleshed out in much more detail in future work. Especially the composition of argument structure deserves closer discussion but cannot be done within the current paper. Before we proceed to a compositional analysis of

the examples, it needs to be noted that the nouns *sedâ* and *xunrizi* also combine with other light verbs forming semantically similar LVCs. Examples of different LVCs using these two nominal preverbs are given in (53) and (54). The LVCs differ in various respects. The examples in (53e) and (54d) are causative, whereas the others are not. The light verb *oftâdan* 'fall' contributes the meaning component of 'suddenness' and 'unexpectedness' to the LVCs in (53d) and (54c). The LVCs in (53a) and (53b), on the one hand, and those in (54a) and (54b), on the other, seem to be very similar to each other. Focusing on the first two, the LVC means 'to produce a sound'. But the two show subtle semantic differences, as shown in (55). They differ with respect to the licensing of the adverbial *amdan* 'intentionally', showing that only *sedâ kardan* (lit. 'sound do') can be used for situations in which a sound is intentionally produced, but *sedâ dâdan* (lit. 'sound give') cannot.

(53) (a) sedâ   dâdan
           sound give
           'to produce a sound'
      (b) sedâ   kardan
           sound do
           'to produce a sound'
      (c) sedâ   zadan
           sound hit
           'to call someone'
      (d) be sedâ   oftâdan
           to sound fall
           'to produce a sound suddenly'
      (e) be sedâ   dar âvardan
           to sound in bring
           'to cause someone to produce a sound'

(54) (a) xunrizi   kardan
           bleeding do
           'to bleed'
      (b) xunrizi   dâštan
           bleeding have
           'to bleed'
      (c) be xunrizi   oftâdan
           to bleeding fall
           'to bleed suddenly/unexpectedly'
      (d) be xunrizi   andâxtan
           to bleeding throw
           'to cause someone to bleed'

(55) (a) #Bačče amdan   sedâ dâd.
            child   intentionally sound gave
            'The child produced a sound intentionally.'

71

(b) Bačče amdan   sedâ kard.
    child intentionally sound did
    'The child produced a sound intentionally.'

The examples in (53) and (54) indicate that the choice of the light verb affects the meaning of the resulting LVC and therefore it is reasonable to conclude that the light verb makes a semantic contribution to the complex predication. In the compositional analysis, we represent *kardan* 'do' and *dâdan* 'give' simply as DO-TYPE(e) and GIVE-TYPE(e) respectively. This is merely a shortcut for the meaning contributed by the respective light verbs.

Our analysis of compositional LVCs starts with *xunrizi kardan* 'to bleed'. We basically assume that the Persian LVC has the same semantic representation as the corresponding English or German verbs *to bleed* and *bluten* respectively. The representation of German *bluten* 'bleed', taken from Fleischhauer (2016b: 254), is shown in (56). The verb is decomposed into an event predicate 'emit' and two thematic roles, the EMITTER and the EMITTEE. Small caps are intended to represent functional attributes. A functional attribute assigns a unique value to the bearer of the attribute (see Löbner 2014: 26).[15] The *y* argument – the EMITTEE – is existentially bound, as it is lexically specified as being blood.

(56) $[\![$bluten$]\!]$ = λxλe∃y (emit(e) ∧ EMITTER(e) = x ∧ EMITTEE(e) = y ∧ blood(y))

With respect to Persian, the crucial question is how we arrive at a semantic representation like the one in (56) from the two components *xunrizi* 'bleeding' and *kardan* 'do'. A representation for the light verb *kardan* 'do', based on our discussion in Section 5.1, is shown in (57).

(57) $[\![$kardan$]\!]$ = λPλTRλeλx (P(e) ∧ TR(e) = x ∧ DO-TYPE(e))

That *xunrizi* is eventive is indicated in (58), which shows that the nominal referent can be temporally located. Thus, *xunrizi* refers to an event of bleeding. The emitter can be realized as an adjunct to the nominal (*xunrizi ye jân* 'bleeding of John'), as shown in (58) as well.

(58) Xunrizi ye   jân diruz   dar tul e   mosâbeqe ye   futbâl
      bleeding ARG John yesterday in length ARG match   ARG football
      ettefâq   oftâd.
      happening fell
      'The bleeding of John took place during the football match yesterday.'

The emittee – *blood* – cannot be realized as an adjunct; a construction such as *xunrizi ye xun* 'bleeding of blood' is odd. This is due to the fact that the emittee

---

[15] For a discussion of thematic/semantic roles in terms of attributes, see Löbner (2014: 42f).

is already lexically specified. Support for this view is gained by the fact that a cognate object construction comparable to English *The insect bleeds green blood* is judged as being unacceptable by Persian native speakers (59).

(59) #Ân   hašare xun e   sabz xunrizi mi-kon-ad.
     DEM insect blood EZÂFE green bleeding IMPF-do-3SG
     'This insect bleeds green blood.'

We propose the semantic representation in (60) for the eventive noun *xunrizi*. The referential argument is *e*, whereas the emittee argument is existentially bound. The emitter argument is optional, it can be realized – in which case it requires the *ezâfe*-morpheme – but can also be left out. In such a case, we assume that it becomes existentially bound.

(60) $\llbracket$xunrizi$\rrbracket$ = $\lambda e(\lambda x)\exists y$(emit(e) $\wedge$ EMITTER(e) = x $\wedge$ EMITTEE(e) = y $\wedge$ blood(y))

In the composition of *kardan* and its nominal preverb *xunrizi*, the preverb saturates the predicate variable (61). As the eventive noun only provides one suitable argument – the emittee argument is lexically specified – there is no question of which argument gets unified with the TR argument of the light verb. It is this argument which gets unified with the thematic role argument of the light verb.[16] Since the TR argument of the light verb is non-optional, the emitter becomes a non-optional argument of the LVC as well and finally gets realized as its subject argument.

(61) $\llbracket$xunrizi kardan$\rrbracket$ = $\lambda x \lambda e \exists y$(emit(e) $\wedge$ EMITTER(e) = x $\wedge$ EMITTEE(e) = y $\wedge$ blood(y) $\wedge$ DO-TYPE(e))

Our second example is the LVC *sedâ dâdan* 'produce a sound'. *Sedâ* 'sound' is also an eventive noun, as (62) indicates. It seems that the noun does not only refer to the emitted sound but also denotes the process of emitting it.

(62) Sedâ ye tir   andâzi dar âsemân e   tehrân sobh   e
     sound ARG bullet shooting in sky   ARG Teheran morning ARG
     jomʔe ettefâq oftâd.
     friday happen fell
     'The sound of shooting in the sky of Teheran occurred on Friday morning.'[17]

---

[16] We are not aiming to present an analysis of the composition of argument structure, which is definitely required to handle further cases of compositional LVCs. In the syntactic literature, different accounts on the formation of argument structure of complex predicates are discussed, e.g. theta unification (Everaert & Hollebrandse 1995) and argument structure fusion/merging (e.g. Butt 1995, Alsina 1996). We believe that those accounts are basically compatible with our semantic approach to LVCs.

[17] Source of the example: http://khabarfarsi.com/u/30151434; retrieved January, 10. 2017.

73

The composition of *sedâ* 'sound' and *dâdan* 'give' (63) works like the composition of *xunrizi kardan* sketched above. *Sedâ dâdan* and *xunrizi kardan* mainly differ with respect to the emittee argument and the lexical contribution of the light verb, sketched as GIVE-TYPE(e) in the representation. The resulting semantic representation for the LVC is shown in (63).

(63) $[\![$sedâ dâdan$]\!]$ = $\lambda x \lambda e \exists y($emit$(e) \land$ EMITTER$(e)=x \land$ EMITTEE$(e)=y \land$ sound$(y) \land$ GIVE-TYPE$(e))$

Having discussed the relevant background on verbs of emission and the compositional derivation of the relevant verbs, we turn now to an analysis of the modification constructions in the next section.

6. MODIFIED LIGHT VERB CONSTRUCTIONS

In Section 4, we showed that two different interpretational patterns with respect to modification arise. In the first, adverbial and attributive modification result in the same interpretation, whereas in the second, different interpretations are obtained. We start our discussion with the first pattern in Section 6.1 and turn to the second one in Section 6.2.

6.1 *Getting the same interpretations*

To illustrate the pattern of achieving the same interpretation for adverbial and attributive modification, we use the sound emission LVC *sedâ dâdan* 'produce a sound' in (64). In the examples, the adjective *boland* 'loud' is used as a modifier; in (64a) this use is attributive and in (b) it functions adverbially. Both sentences have the same interpretation: The sound produced by the subject referent is loud. Both sentences can be used to describe the same situation: Someone was holding a cup and let it fall down onto the floor. *Boland* indicates the loudness of the sound produced by the cup crashing on the floor. In its adverbial use, *boland* does not indicate the loudness of the action producing the sound. Such a scenario makes it obvious that adverbial *boland* does not specify the loudness of the sound's production, but only that of the resulting sound.

(64) (a) Sedâ ye boland-i dâd.
          sound ARG loud-INDEF gave
          'It/(s)he produced a loud sound.'
    (b) Boland sedâ dâd.
          loudly sound gave
          'It/(s)he produced a loud sound.'

We start with discussing the attributive use of *boland*. The attributive modifier combines with *sedâ* before the LVC is formed. The semantic composition of

74

sedâ ye bolandi is shown in (65).[18] In (65a), the representation of the eventive noun *sedâ* is provided. In the next step, the process of argument extension is applied. This introduces a predicate variable Q which is saturated in the third step by *boland*. The adjective introduces the loudness specification and the resulting representation for the attributive modification construction is shown in (65c). 'high' is used for indicating the value of LOUDNESS, meaning that it is a context-dependent high degree of the respective property. *Boland* modifies the loudness of the emittee since (a) as an attributive modifier it predicates about an individual rather than an event and (b) the only obligatory individual is the semantically incorporated emittee.

(65)   (a) $[\![sedâ]\!] = \lambda e(\lambda x) \exists y (emit(e) \wedge$ EMITTER$(e) = x \wedge$ EMITTEE$(e) = y \wedge$ sound$(y))$

       (b) $[\![sedâ\ ye]\!] = \lambda Q \lambda e(\lambda x) \exists y (emit(e) \wedge$ EMITTER$(e) = x \wedge$ EMITTEE$(e) = y \wedge$ sound$(y) \wedge Q(y))$

       (c) $[\![sedâ\ ye\ boland]\!] = \lambda e(\lambda x) \exists y (emit(e) \wedge$ EMITTER$(e) = x \wedge$ EMITTEE$(e) = y \wedge$ sound$(y) \wedge$ LOUDNESS$(y) =$ high$)$

The LVC is now formed by the combination of the light verb *dâdan* and the modified preverb *sedâ ye boland*. The composition of the (modified) preverb and the light verb proceeds as described in the last section, resulting in the representation shown in (66).

(66) $[\![sedâ\ ye\ boland\ dâdan]\!] = \lambda x \lambda e \exists y (emit(e) \wedge$ EMITTER$(e) = x \wedge$ EMITTEE$(e) = y \wedge$ sound$(y) \wedge$ LOUDNESS$(y) =$ high $\wedge$ GIVE-TYPE$(e))$

The adverbial modification by *boland* proceeds differently, as adverbial boland modifies the whole LVC and not just the preverb. Before the adverbial modifier applies to the LVC, the process of modifier extension is required. Modifier extension of *boland* has already been discussed above but is repeated in (67) to sketch the complete compositional process.

(67)   (a) $[\![boland]\!] = \lambda f \lambda x ($LOUDNESS$(f(x)) =$high$)$

       (b) $[\![boland_{ADV}]\!] = \lambda P \lambda f \lambda e (P(e) \wedge$ LOUDNESS$(f(e)) =$high$)$

After modifier extension, adverbial *boland* can combine with *sedâ dâdan*, which saturates the predicate argument of the modifier (68). The functional argument *f* – mediating between the LOUDNESS attribute and the event – is saturated by the EMITTEE attribute.

(68) $[\![boland\ sedâ\ dâdan]\!] = \lambda x \lambda e \exists y (emit(e) \wedge$ EMITTER$(e) = x \wedge$ EMITTEE$(e) = y \wedge$ sound$(y) \wedge$ LOUDNESS$($EMITTEE$(e)) =$high $\wedge$ GIVE-TYPE$(e))$

---

[18] We leave out the semantic representation of the indefiniteness suffix, as it does not affect the essential part of our analysis.

Comparing (66) and (68) shows that in both cases, the same interpretation results as LOUDNESS is an attribute of the emittee. The way the interpretation is achieved differs in both sentences. In (66) *boland* directly modifies the individual, whereas in (68) LOUDNESS indirectly modifies the individual by being applied to the EMITTEE attribute, which in turn has the individual as its value. The crucial question is why EMITTEE is an appropriate function saturating the f argument introduced by the adverbial modifier, but EMITTER is not. *Boland sedâ dâdan* means producing a loud sound and not that someone who is loud produces a sound. As we are dealing with predicate modifiers, it is not surprising that the EMITTEE rather than the EMITTER is targeted by the adverbial modifier, since the EMITTEE is lexically encoded in the complex predicate. The EMITTER, as the subject of the construction, is not part of the complex predicate and therefore not in the scope of predicate modifiers.

6.2 *Getting different interpretations*

After showing how the same interpretation for adverbially and attributively used modifiers is obtained, we now turn to cases where uses of the same adjective result in different interpretations. The relevant examples we are going to analyze are given in (69). In both sentences, the LVC is *xunrizi kardan* 'to bleed'. The modifier used in the examples is *ziyâd* 'much', which specifies the quantity of emitted blood in its attributive use (69a). The sentence can be paraphrased as 's/he emitted a large quantity of blood'. In its adverbial use, *ziyâd* indicates the frequency or temporal duration of the event. One possible paraphrase of (69a) is 's/he bled often'.

(69) (a) U   xunrizi   ye   ziyâd-i   kard.
           3SG bleeding ARG much-INDEF did
           'S/he bled a lot.' (= S/he emitted a large quantity of blood.)
      (b) U   ziyâd   xunrizi   kard.
           3SG much   bleeding did
           'S/he bled a lot.' (= S/he bled often.)

That (69b) really does not mean 'S/he emitted a large quantity of blood' but only 'S/he bled often' is indicated by the example in (70). The subordinated sentence in (70) specifies the quantity of the emitted blood as being small. Thus, if (69b) meant that a large quantity of blood has been emitted, the sentence would be contradictory. (70) is not judged as being contradictory by native speakers; instead it has the interpretation that the subject referent bled often but each time s/he emitted a small quantity of blood. The interpretation that a large quantity of blood has been emitted is only an implicature in the case of adverbially used *ziyâd*. It is an expectation that bleeding often results in the emission of a large quantity of blood. Nevertheless, in each single event of bleeding, it can be a small quantity of blood that is emitted (see Fleischhauer 2015, 2016a, b, 2018 and Fleischhauer,

Gamerschlag & Petersen 2017 for a discussion of related data from German, Russian and French).

(70) U ziyâd xunrizi mi-kon-ad ammâ har bâr tanhâ meqdâr e
S/he much bleeding IMPF-do-3SG but each time only amount ARG
kam-i xun az-aš xârej mi-šav-ad.
small-INDEF blood from-3SG.POSS outside IMPF-become-3SG
'S/he bled a lot but each time s/he emitted only a small amount of blood.'

The semantic representation of attributive and adverbial *ziyâd* is given in (71). We only assume one attribute QUANTITY, which is reinterpreted as frequency or duration with respect to events.

(71) (a) $\llbracket \text{ziyâd} \rrbracket = \lambda f \lambda x (\text{QUANTITY}(f(x))=\text{high})$
(b) $\llbracket \text{ziyâd}_{ADV} \rrbracket = \lambda P \lambda f \lambda e (P(e) \wedge \text{QUANTITY}(f(e))=\text{high})$

Our analysis starts with the adverbial use of *ziyâd*. After the process of modifier extension, the adverbial modifier can combine with the LVC *xunrizi kardan* (72a). The LVC saturates the *P* argument of the modifier; in the next step, the *f* argument needs to be saturated. Since the interpretation is not that a lot of blood has been emitted but that the subject referent bled often, *f* can only be the identity function. This results in the interpretation in (72b). In this case, *ziyâd* specifies the quantity of the event, which is exactly what (69b) means.

(72) (a) $\llbracket \text{ziyâd xunrizi kardan} \rrbracket = \lambda f \lambda x \lambda e \exists y (\text{emit}(e) \wedge \text{EMITTER}(e)=x \wedge \text{EMIT-}$
TEE(e)=y $\wedge$ blood(y) $\wedge$ QUANTITY(f(e))=high $\wedge$ DO-TYPE(e))
(b) $\llbracket \text{ziyâd xunrizi kardan} \rrbracket = \lambda x \lambda e \exists y (\text{emit}(e) \wedge \text{EMITTER}(e)=x \wedge \text{EMIT-}$
TEE(e)=y $\wedge$ blood(y) $\wedge$ QUANTITY(e)=high $\wedge$ DO-TYPE(e))

The application of the identity function is licensed by the fact that all non-stative predicates allow for a quantity specification (this quantity specification is also called extent gradation by Bolinger 1972, Löbner 2012 and Fleischhauer 2016b; see also Doetjes 1997 on this issue).

Next, we turn to an analysis of *ziyâd* as an attributive modifier of *xunrizi*. As discussed in Section 5, *xunrizi* is an eventive noun, for which the semantic representation is repeated in (73).

(73) $\llbracket \text{xunrizi} \rrbracket = \lambda e (\lambda x) \exists y (\text{emit}(e) \wedge \text{EMITTER}(e) = x \wedge \text{EMITTEE}(e) = y \wedge$
blood(y))

The noun is referring to a bleeding event and therefore it could be expected that attributive modification of *xunrizi* by *ziyâd* would result in the same interpretation as adverbial modification. However, *xunrizi ye ziyâd* does not mean 'the frequent bleeding' but 'the bleeding of a large quantity of blood'. As (74) shows, *xunrizi ye ziyâd* can be combined with a sentence negating a high frequency of bleeding

77

events (a), but not with a sentence expressing that the amount of blood has only been small (b).[19]

(74) (a) Xunrizi ye ziyâd-i   dâšt, ammâ tanhâ yek dafeʔ.
           bleeding ARG much-INDEF had but   only one time
           'S/he had a strong bleeding but only once.'
      (b) #Xunrizi ye ziyâd-i   dâšt, ammâ tanhâ meqdâr
            bleeding ARG much-INDEF had but   only amount
           kam-i.
           little-INDEF
           'S/he had a strong bleeding but only of a small quantity.'

One needs to explain why *ziyâd* specifies a property of the existentially bound emittee argument, but not of the referential argument of the eventive noun. A straightforward explanation is that *ziyâd* only scopes over the preverb but not the whole LVC. This is plausible, given that the adjective modifies the preverb before it combines with the light verb. With respect to the interpretation of the adverbial use of *ziyâd*, we assumed that QUANTITY as a property of events is licensed by the eventiveness of the LVC. Following this assumption, only QUANTITY as a property of the existentially bound emittee argument is a suitable target for the attributively used modifier. Going this route gives us the semantic representation in (75) for the modified preverb.

(75) ⟦xunrizi ye ziyâd⟧ = λe(λx)$\exists$y(emit(e) $\wedge$ EMITTER(e) = x $\wedge$ EMITTEE(e) = y $\wedge$ blood(y) $\wedge$ QUANTITY(y)=high)

After applying the attributive modifier to *xunrizi*, the composition of the LVC goes straightforwardly as discussed above. The resulting semantic representation is shown in (76).

(76) ⟦xunrizi ye ziyâd kardan⟧ = λxλe$\exists$y(emit(e) $\wedge$ EMITTER(e) = x $\wedge$ EMIT-TEE(e) = y $\wedge$ blood(y) $\wedge$ QUANTITY(y)=high $\wedge$ DO-TYPE(e))

7. GENERALIZING THE PATTERNS

The current section aims to generalize the interpretation patterns of adverbial and attributive modification. Our analysis is based on the following – as we believe – uncontroversial assumptions:

(a) An attributive modifier within an LVC has scope over the nominal preverb to which it is linked by the *ezâfe*-morpheme.
(b) An adverbial modifier has scope over the whole LVC.

---

[19] One could alternatively assume that the frequency interpretation is blocked due to the fact that *dâštan* 'have' is a stative predicate. But this would similarly result in the claim that this interpretation is licensed by the light verb.

Assumption (a) is justified by the fact that an attributive modifier within an LVC always specifies a property of the nominal preverb, but not a property of the event. Since the attributive modifier applies to the noun, it only has access to properties licensed by the noun. Even further, the attributive modifier cannot have access to eventive properties of the LVC (e.g. frequency or temporal duration) since it modifies the noun before the LVC is formed. This means that the respective eventive properties are not licensed when the attributive modifier and the nominal preverb combine.

Assumption (b) is justified by the fact that adverbial modifiers do have access to eventive properties. The nominal preverb – as part of the LVC – is also within the scope of an adverbial modifier, as the discussion of *boland sedâ dadân* in Section 6.1 revealed. Since adverbial modifiers modify an LVC and not just one of its constituents, they have access to all properties licensed by the LVC, including those licensed by the preverb. A further example illustrating this is shown in (77). *Xeili* roughly corresponds to German *sehr* 'very' and can be used for modifying adjectives as well as verbs. The interpretation of the sentence in (77) is that the subject referent emitted a large quantity of blood, which is the same interpretation we get with attributively used *ziyâd*. Unlike adverbial *ziyâd*, *xeili* does not specify a property of the event such as its frequency or duration.[20]

(77) U   xeili xunrizi   kard.
      3SG very bleeding did
      'S/he bled a lot.' (= S/he emitted a large quantity of blood.)

Xeili could not directly modify *xunrizi*, as *xunrizi* is a noun and does not fulfill *xeili*'s selectional requirements. Thus, we get the same interpretation, namely 'emitting a large quantity of blood', by use of two different morphosyntactic constructions. It is either possible to modify the preverb directly, as with attributively used *ziyâd*, or to modify the LVC as a whole by use of *xeili*.

One issue in need of an explanation is under which conditions adverbial and attributive modification result in the same interpretation and when they lead to different ones. Attributive modifiers modify properties of individuals; adverbial modifiers are derived from the attributive use by the process of modifier extension. The process turns a modifier of individuals into a modifier of events. Thus, having different interpretations for attributive and adverbial modification should be the default, as each type of modifier applies to a different ontological type. An explanation is needed for those cases in which both modifiers result in the same interpretation.

---

[20] Fleischhauer (2016a, b) proposes a syntactic explanation for the fact that *xeili* is not able to specify the event's quantity. The basic argumentation is that *xeili* is a predicate modifier but event quantity is a property only represented at a syntactically higher layer (for reasons of space we cannot repeat the details of the analysis here, but refer the reader to the mentioned literature).

Compare the semantic representations for adverbial *ziyâd* in (78a) and adverbial *boland* in (b). Adverbial *ziyâd* applies to an event description like *xunrizi kardan* and looks for a function *f* which relates the QUANTITY attribute to the event argument. As any non-stative event description licenses quantity specification, *f* can be instantiated by the identity function. In its attributive use, *ziyâd* only scopes over the nominal preverb and therefore does not have access to properties of the event description. Thus, different interpretations for adverbial and attributive *ziyâd* result.

(78) (a) $\llbracket ziyâd_{ADV} \rrbracket = \lambda P \lambda f \lambda e(P(e) \land \text{QUANTITY}(f(e))=high)$
     (b) $\llbracket boland_{ADV} \rrbracket = \lambda P \lambda f \lambda e(P(e) \land \text{LOUDNESS}(f(e))=high)$

In case of modification constructions like *boland sedâ dâdan* 'lit. loudly produce a sound', LOUDNESS is not an attribute of the event itself. Thus, *f* cannot be instantiated by the identity function. In this case, a different attribute mediating between the LOUDNESS attribute and the event is required. In the example under discussion, the emittee licenses modification by *boland* – as evidenced by the fact that attributively used *boland* is licensed by *sedâ* – and can therefore mediate between the LOUDNESS attribute and the event.

Based on our analysis, we predict that if the adverbial and the attributive use of an adjective result in the same interpretation, the attributive use should be preferred. This preference should be reflected by a higher token frequency of attributively modified preverbs compared to the (token) frequency of adverbially modified LVCs. A second indication should be that constructions with attributively modified preverbs should be processed easier than constructions with adverbially modified LVCs. Both predictions are empirically testable by corpus analysis or psycholinguistic experiments. The predictions are based on the assumption that the attributive modifier directly modifies the nominal preverbs, whereas the attributive modifier does only indirectly by modifying the LVC as a whole.

Based on our discussion, we would like to propose the claims in (79). They predict under which circumstances the adverbial and the attributive use of an adjective result in the same or different interpretations. It is relevant to mention that we are always referring to pairs of adjectives and LVCs, and we do not want to claim that the adverbial and attributive use of an adjective such as *ziyâd* always result in different interpretations, whereas in the case of *boland* they never do.

(79) (a) The attributive and the adverbial use of an adjective result in the same interpretation (with one and the same LVC), iff the property specified by the modifier is only licensed by the preverb.
     (b) The attributive and the adverbial use of an adjective result in different interpretations (with one and the same LVC), iff both the LVC and the preverb license the property specified by the modifier.

80

It is a future task to explore which attributes are licensed by the different light verbs. In Section 6, we argued that event properties like frequency are licensed by the light verb, depending on whether it is an eventive or a stative one. In Section 5, we have shown that volitionality is also a property licensed by the light verb as the two LVCs *sedâ dâdan* (lit. 'sound give') and *sedâ kardan* (lit. 'sound do') differ with respect to that feature. Quite generally, manner seems to be a property licensed by the light verb as well. In Section 4 we discussed the example repeated in (80). In its adverbial use, *xub* 'good' specifies the manner of giving an example, which is in contrast to its attributive use.

(80) (a) xub   mesâl   zadan
           good example hit
           'give an example in a good way'
      (b) mesâl e   xub-i   zadan
           example ARG good-INDEF hit
           'give a good example'

We think that exploring the adverbial modification of LVCs in more detail will help to answer the question which meaning components of an LVC are contributed by the light verb. This seems to be a promising way of determining the exact semantic contribution of the event predicate introduced by the light verb in our semantic representations.

8. CONCLUSION

In this paper, we proposed an analysis of attributive and adverbial modification of Persian LVCs. Our approach is intended to account for two cases; the first being that the adverbial and the attributive modifier result in the same interpretation, and the second occurring when both result in different interpretations. We argued that whether the first or the second option holds depends on whether the respective attribute is licensed by the preverb only (which results in the first interpretation pattern) or by the LVC as well as the preverb (resulting in the second interpretation pattern).

Our analysis of separable LVCs builds on Gazdar et al.'s (1985) and Nunberg et al.'s (1994) proposal that compositionally combining idiomatic expressions show greater syntactic flexibility than non-compositional ones. Thus, we analyze separable LVCs as being compositional and propose compositionality as being the crucial factor determining whether a preverb and a light verb can be separated by attributive modifiers – meaning internal modification is licensed – or not. In this regard, our analysis differs from Karimi-Doostan's (2011), who relates separability to the nominal type of the preverb and who has a broader notion of separability than we do. For us, only attributive modifiers intervening between the nominal preverb and the light verb count as evidence for the compositionality of the LVC, rather than any intervening functional element.

81

A fundamental question in the semantic analysis of LVCs is which part of the overall meaning is contributed by which component. A related question is whether the meaning of the LVCs is only dependent on the (probable figurative) meaning of its components, or whether the construction has a particular semantic contribution as well. We propose that these questions can – at least partially – be answered by systematic analysis of adverbial and internal modification, as we have done in the analysis presented in this paper. We would like to conclude with the programmatic claim that adverbial and internal modification can serve as a way of getting access to the meaning of the different components of an LVC.

REFERENCES

Aissen, Judith. 2003. Differential object marking: Iconicity vs. economy. *Natural Language & Linguistic Theory* 21.3, 435–483.

Alsina, Alex. 1996. *The role of argument structure in grammar*. Stanford: CSLI Publications.

Amberber, Mengistu, Brett Baker & Mark Harvey (eds.). 2010. *Complex predicates: Cross-linguistic perspectives on event structure*. Cambridge: Cambridge University Press.

Bolinger, Dwight. 1972. *Degree words*. The Hague: Mouton.

Bossong, Georg. 1985. *Empirische Universalienforschung: Differentielle objektmarkierung in den neuiranischen Sprachen*. Tübingen: Gunter Narr.

Bowern, Claire. 2008. The diachrony of complex predicates. *Diachronica* 25.2, 161–185.

Brugman, Claudia. 2001. Light verbs and polysemy. *Language Sciences* 23.4-5, 551–578.

Butt, Miriam. 1995. *The structure of complex predicates in Urdu*. Stanford: CSLI Publications.

Butt, Miriam. 2010. The light verb jungle: Still hacking away. In Amberber, Baker & Harvey (eds.), 48–78.

Butt, Miriam. 2013. Control vs. complex predication: Identifying non-finite complements. *Natural Language & Linguistic Theory* 32.1, 165–190.

Butt, Miriam & Wilhelm Geuder. 2001. On the (semi)lexical status of light verbs. In Norbert Corver & Henk van Riemsdijk (eds.), *Semilexical categories: On the content of function words and the function of content words*, 323–370. Berlin: Mouton.

Butt, Miriam & Aditi Lahiri. 2013. Diachronic pertinacity in light verbs. *Lingua* 135, 7–29.

Butt, Miriam & Alexandros Tantos. 2004. Verbal semantics via petri nets. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG04 Conference*, 123–139. Stanford: CSLI Publications.

Cattell, Ray. 1984. *Composite predicates in English*. Sydney: Academic Press.

Chung, Sandra & William Ladusaw. 2004. *Restriction and saturation*. Cambridge, MA: MIT Press.

Dabir-Moghaddam, M. 1997. Compound verbs in Persian. *Studies in the Linguistic Sciences* 27.2, 25–59.

Dalrymple, Mary & Irina Nikolaeva. 2011. *Objects and information structure*. Cambridge: Cambridge University Press.

Dayal, Vaneeta. 2011. Hindi pseudo-incorporation. *Natural Language & Linguistic Theory* 29.1, 123–167.

Doetjes, Jenny. 1997. *Quantifiers and selection*. Dordrecht: Holland Institute of Generative Linguistics.

Ernst, Thomas. 1981. Grist for the linguistics mill: Idioms and 'extra' adjectives. *Journal of Linguistic Research* 1, 51–68.

Everaert, Martin & Bart Hollebrandse. 1995. The lexical representation of light verb constructions. In *Proceedings of the Twenty-First Meeting of the Berkeley Linguistics Society: General section and parasession on historical issues in sociolinguistics/social issues in historical linguistics*, 94–104. Berkeley: Berkeley Linguistics Society.

Fabregas, Antonio & Rafael Marín. 2012. The role of Aktionsart in deverbal nouns: State nominalizations across languages. *Journal of Linguistics* 48.1, 35–70.

Family, Neilou. 2006. *Explorations of semantic space: The case of light verb constructions in Persian*. Ph.D. dissertation, Ecole des Hautes Etudes en Science Sociales.

Family, Neilou. 2011. Verbal islands in Persian. *Folia Linguistica* 45.1, 1–30.

Fleischhauer, Jens. 2015. Activation of attributes in frames. In Vito Pirrelli, Claudia Marzi & Marcello Ferro (eds.), *Word Structure and word usage: Representations and processes in the mental Lexicon*, 58–62. http://ceur-ws.org.

Fleischhauer, Jens. 2016a. Degree expressions at the syntax-semantics interface. In Jens Fleischhauer, Anja Latrouite & Rainer Osswald (eds.), *Explorations of the syntax-semantics interface*, 209–246. Düsseldorf: Düsseldorf University Press.

Fleischhauer, Jens. 2016b. *Degree gradation of verbs*. Düsseldorf: Düsseldorf University Press.

Fleischhauer, Jens. 2018. Graduierung nicht skalarer Verben. *Zeitschrift für germanistische Linguistik* 46.2, 221–247.

Fleischhauer, Jens, Thomas Gamerschlag & Wiebke Petersen. 2017. A frame-analysis of the interplay of grammar and cognition in emission verbs. In Stefan Hartmann (ed.), *Yearbook of the German cognitive linguistics association*, vol. 5, 177–194. Berlin/Boston: Mouton de Gruyter.

Folli, Raffaella, Heidi Harley & Simin Karimi. 2005. Determinants of event type in Persian complex predicates. *Lingua* 115.10, 1365–1401.

Gazdar, Gerald, Ewan Klein, Geoffrey Pullum & Ivan Sag. 1985. *Generalized phrase structure grammar*. Cambridge, MA: Harvard University Press.

Ghomeshi, Jila. 1997a. Non-projecting nouns and the Ezâfe construction in Persian. *Natural Language & Linguistic Theory* 15.4, 729–788.

Ghomeshi, Jila. 1997b. Topics in Persian VPs. *Lingua* 102.2-3, 133–167.

Ghomeshi, Jila. 2003. Plural marking, indefiniteness, and the noun phrase. *Studia Linguistica* 57.2, 47–74.

Ghomeshi, Jila. 2008. Markedness and bare nouns in Persian. In Simin Karimi, Vida Samiian & Donald Stilo (eds.), *Aspects of Iranian linguistics*, 85–111. Cambridge: Cambridge Scholars Publishing.

Ghomeshi, Jila & Diane Massam. 1994. Lexical/syntactic relations without projections. *Linguistic Analysis* 24.3-4, 175–217.

Glatz, Daniel. 2006. Funktionsverbgefüge – semantische Doubletten von einfachen Verben oder mehr? In Kristel Proost, Gisela Harras & Daniel Glatz (eds.), *Domänen der lexikalisierung kommunikativer konzepte*, 129–178. Tübingen: Gunter Narr.

Goldberg, Adele. 1996. Words by default: Optimizing constraints and the Persian complex predicate. *Annual Proceedings of the Berkeley Linguistics Society*, vol. 22, 132–146. Berkeley: Berkeley Linguistics Society.

Goldberg, Adele. 2005. Argument realization: The role of constructions, lexical semantics and discourse factors. In Jan-Ola Ostman & Mirjam Fried (eds.), *Construction grammars: Cognitive grounding and theoretical extensions*, 17–43. Amsterdam: John Benjamins.

Grimshaw, Jane & Armin Mester. 1988. Light verbs and θ-marking. *Linguistic Inquiry* 19.2, 205–232.

Hale, Kenneth & Samuel Jay Keyser. 2002. *Prolegomena to a theory of argument structure*. Cambridge, MA: MIT Press.

Heim, Irene. 1982. *The semantics of definite and indefinite noun phrases*. Ph.D. dissertation, University of Massachusetts.

von Heusinger, Klaus. 1997. *Salienz und Referenz. Der Epsilonoperator in der Semantik der Nominalphrase und anaphorischer Pronomen*. Berlin: Akademie Verlag.

von Heusinger, Klaus. 2000. The reference of indefinites. In Klaus von Heusinger & Urs Egli (eds.), *Reference and anaphoric relations*, 247–265. Dordrecht: Kluwer.

von Heusinger, Klaus. 2011. Specificity. In Klaus von Heusinger, Angelia Maienborn & Paul Portner (eds.), *Semantics. An international handbook of natural language meaning*, vol. 2, 1025–1058. Berlin: de Gruyter.

Isoda, Michio. 1991. The light verb construction in Japanese. In L. Dobrin, L. Nichols & R. M. Rodriguez (eds.), *The 27th Regional Meeting of the Chicago Linguistics Society*, 261–275.

Jespersen, Otto. 1942. *A modern English grammar on historical principles, part VI, morphology*. Cogenhagen: Ejnar Munksgaard.

Karimi, Simin. 1990. Obliqueness, specificity, and discourse functions: Râ in Persian. *Linguistic Analysis* 20.3-4, 139–191.

Karimi, Simin. 1997. Persian complex verbs: Idiomatic or compositional. *Lexicology* 3, 273–318.

Karimi, Simin, Vida Samiian & Donald Stilo (eds.). 2007. *Aspects of Iranian linguistics*. Cambridge: Cambridge Scholars Press.

Karimi-Doostan, Gholamhossein. 2011. Separability of light verb constructions in Persian. *Studia Linguistica* 65.1, 70–95.

Kennedy, Christopher. 1999. *Projecting the adjective: The syntax and semantics of gradability and comparison*. New York: Garland.

Lazard, Gilbert. 1992. *A grammar of contemporary Persian*. Costa Mesa, Cal./New York: Mazda Publishers.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity*. Cambridge, MA: MIT Press.

Löbner, Sebastian. 2012. Sub-compositionality. In Markus Werning, Wolfram Hinzen & Edouard Machery (eds.), *The Oxford handbook of compositionality*, 221–241. Oxford: Oxford University Press.

Löbner, Sebastian. 2014. Evidence for frames from natural language. In Thomas Gamerschlag, Doris Gerland, Rainer Osswald & Wiebke Petersen (eds.), *Frames and concept types: Applications in language and philosophy*, 23–68. Dordrecht/Heidelberg/New York: Springer.

Lyons, Christopher. 1999. *Definiteness*. Cambridge: Cambridge University Press.

Megerdoomian, Karine. 2012. The status of the nominal in Persian complex predicates. *Natural Language & Linguistic Theory* 30.1, 179–216.

Modarresi, Fereshteh. 2015. *Bare nouns in Persian: Interpretation, grammar and prosody*. Ph.D. dissertation, Humboldt-Universität zu Berlin.

Mohammad, Jan & Simin Karimi. 1992. Light verbs are taking over: Complex predicates in Persian. In J. A. Nevis & V. Samiian (eds.), *Proceedings of the Western Conference on Linguistics*, vol. 5, 195–212. Fresno: California State University.

Morzycki, Marcin. 2016. *Modification*. Cambridge: Cambridge University Press.

Müller, Stefan. 2010. Persian complex predicates and the limits of inheritance-based analyses. *Journal of Linguistics* 46.2, 601–655.

Nicolas, Tim. 1995. Semantics of idiom modification. In Martin Everaert, Erik-Jan van der Linden, André Schenk & Rob Schreuder (eds.), *Idioms: Structural and psychological perspectives*, 233–252. Hillsdale: Lawrence Erlbaum.

Nunberg, Geoffrey, Ivan Sag & Thomas Wasow. 1994. Idioms. *Language* 70.3, 491–538.

Ortmann, Albert. 2002. *Kategorien des Nomens. Schnittstellen und Ökonomie*. Tübingen: Niemeyer.

Pantcheva, Marina. 2009. First phase syntax of Persian complex predicates: Argument structure and telicity. *Journal of South Asian Linguistics* 2.1, 53–72.

Parsons, Terence. 1990. *Events in the semantics of English*. Cambridge, MA: MIT Press.

Partee, Barbara, Alice ter Meulen & Robert E. Wall. 1990. *Mathematical methods in linguistics*. Dordrecht: Kluwer.

Paul, Daniel. 2008. The individuating function of the persian 'indefinite suffix'. In Karimi, Samiian & Stilo (eds.), 309–328. Cambridge Scholars Press.

Potashnik, Joseph. 2012. Emission verbs. In Martin Everaert, Marijana Marelj & Tal Siloni (eds.), *The theta system*, 251–278. Oxford: Oxford University Press.

Rappaport Hovav, Malka & Beth Levin. 2000. Classifying single argument verbs. In Peter Coopmans, Martin Everaert & Jane Grimshaw (eds.), *Lexical specification and insertion*, 269–304. Amsterdam/Philadelphia: John Benjamins.

Saeedi, Zari. 2017. Nominal predication in Persian. In Brian Nolan & Elke Diedrichsen (eds.), *Argument realization in complex predicates and complex events*, 373–412. Amsterdam/Philadelphia: John Benjamins.

Sag, Ivan, Timothy Baldwin, Francis Bond, Ann Copestake & Dan Flickinger. 2002. Multiword expressions: A pain in the neck for NLP. In Alexander Gelbukh (ed.), *Computational linguistics and intelligent text processing*, 1–15. Berlin: Springer.

Samvelian, Pollet. 2007. The Ezâfe as a head-marking inflectional affix: Evidence from Persian and Kurmanji Kurdish. In Karimi, Samiian & Stilo (eds.), 339–361.

Samvelian, Pollet & Pegah Faghiri. 2014. Persian complex predicates: How compositional are they? *Syntax-Semantics Interface* 1.1, 43–74.

Tabaian, Hessam. 1979. Persian compound verbs. *Lingua* 47.2-3, 189–208.

Vahedi-Langrudi, Mohammad-Mehdi. 1996. *The syntax, semantics and argument structure of complex predicates in modern Farsi*. Ph.D. dissertation, University of Ottawa.

Wiese, Heike. 1997. Semantics of nouns and nominal number. *ZAS Papers in Linguistics* 8, 136–163.

Wunderlich, Dieter. 1997. Argument extension by lexical adjunction. *Journal of Semantics* 14.2, 95–142.

Authors' addresses: *(Fleischhauer)*
Abteilung für Allgemeine Sprachwissenschaft,
Heinrich-Heine Universität Düsseldorf, Universitätsstraße 1,
40225 Düsseldorf, Germany
fleischhauer@phil-fak.uni-duesseldorf.de

(Neisani)
Sonderforschungsbereich 991, Heinrich-Heine Universität Düsseldorf,
Universitätsstraße 1, 40225 Düsseldorf, Germany
mozhgan.neisani@gmail.com

85