

Ellipsis in Farsi Complex Predicates

Maziar Toosarvandani

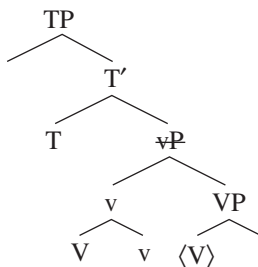
Abstract. In this paper, I introduce a novel ellipsis construction from Farsi, v-stranding VPE, in which part of a complex predicate goes missing, leaving behind the light verb. Under an analysis of complex predicates where the light verb is the overt realization of *v*, this type of ellipsis can be construed as deletion of the complement of *v*. I give evidence that this phenomenon patterns with English verb phrase ellipsis (VPE) in a number of important respects. The same licensing conditions that must be satisfied in English VPE, including an inflectional checking requirement and an antecedence condition, must also be satisfied in Farsi v-stranding VPE.

1. Introduction

English was long considered the only language to possess verb phrase ellipsis (VPE), a process in which a verb phrase, identified in standard accounts as *vP*, goes missing under identity with the *vP* of an antecedent clause. An example of VPE in English is given in (1), where the constituent struck through is not pronounced. A schematization of the relevant structure is given in (2).

(1) Jasper likes pistachios, and Mona does [~~VP like pistachios~~] too.

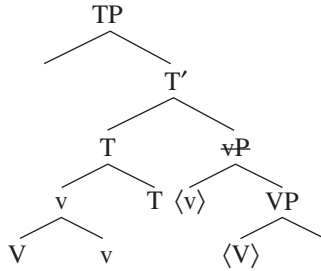
(2)



Recent research has shown, however, that VPE does exist in other languages, though in a slightly different guise. Some verb-raising languages, Hebrew, Irish, and Swahili to be exact, possess a variety of VPE that is called V-stranding VPE by Goldberg (2005b) in her extensive survey of the phenomenon (see also Doron 1999 for Hebrew, McCloskey 1991 for Irish, and Ngonyani 1996 for Swahili). In these languages, only the internal arguments go missing, as shown schematically in (3), since the main verb raises into a higher functional projection before *vP* is deleted.

I am much indebted to Lotus Goldberg for giving me the original inspiration to work on ellipsis in Farsi. I also thank Annahita Farudi, Nicholas Fleisher, Michael Houser, Kyle Johnson, Simin Karimi, Jason Merchant, Line Mikkelsen, the participants of the Berkeley Syntax and Semantics Circle, the audience at NELS 36, and three anonymous reviewers for their insightful suggestions and comments. I am grateful to Mahin Azimian, Maryam Azimian, Massy Azimian, and Abbas Toosarvandani for their native speaker judgments.

(3)



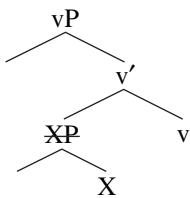
The existence of VPE in these languages suggests that it may occur in yet other languages as well, though in a similarly nontransparent manner.

In this paper, I examine an ellipsis construction found in Farsi, in which part of a complex predicate goes missing. As the construction is, to my knowledge, the first attested instance of ellipsis targeting part of a complex predicate, the first aim of this paper is to contribute the basic data to the general linguistic knowledge base. In the example of the construction in (4), the nominal component of the complex predicate, *otu* ‘iron’, goes missing along with the internal argument *piranā-ro* ‘the shirts’.¹

- (4) *sohrāb piranā-ro otu na-zad vali rostam*
 Sohrab shirt.PL-OBJ iron NEG-HIT.PAST.3SG but Rostam
~~[piranā-ro otu]~~ *zad.*
 shirt.PL-OBJ iron HIT.PAST.3SG
 ‘Sohrab didn’t iron the shirts, but Rostam did.’

Following Folli, Harley, and Karimi’s (2005) analysis of Farsi complex predicates, I treat the light verb of the complex predicate as an overt *v* head. In this type of ellipsis, then, it is the complement of *v*, *XP* in (5), that is deleted. I call this type of ellipsis *v*-stranding VPE.

(5)



v-stranding VPE

¹ The abbreviations I use are: 1, first person; 2, second person; 3, third person; ACC, accusative; ADV, adverbial suffix; F, feminine; INTER, interrogative; M, masculine; NEG, negation; OBJ, Farsi differential object marker *rā*; PART, participle; PL, plural; PRES, present; SG, singular; SUBJ, subjunctive.

The judgments presented here were obtained from several native speakers of Farsi residing in Iran and the United States. Their speech represents the colloquial variety of the language spoken in Tehran. Farsi examples from other sources have been cited as such, though I have taken the liberty of retranscribing and reglossing them.

Unlike English, Hebrew, Irish, or Swahili, ellipsis in Farsi targets a constituent smaller than vP.

My second aim is to show that v-stranding VPE, despite showing surface differences with English VPE, does not differ significantly in its licensing requirements. Just like English VPE, v-stranding VPE requires: 1) the presence of an overt, tense inflecting head (Zagona 1982, Lobeck 1995), and 2) the satisfaction of an antecedence condition that enforces identity of the target and antecedent phrases, which I assume, following much current research, to be Merchant's (2001) e-GIVENNESS constraint.

This paper is structured as follows: First, in section 2, I provide some background on the phrase structure of Farsi. Section 3 advances the primary purpose of this paper, presenting the diagnostics that show that the gap in (4) is produced by the same process that derives English VPE. In section 4, I show how v-stranding VPE obeys the same licensing requirements as English VPE. In section 5, I discuss a number of problematic examples involving light verb alternations that suggest, at least at first, that v-stranding VPE might be constrained by additional requirements not found in English VPE. Finally, in section 6, I provide a short conclusion.

2. Farsi Phrase Structure

Farsi is a *pro*-drop language that allows scrambling but has basic SOV word order. Most of the predicates in the language are complex predicates comprising two parts, a light verb and a nonverbal element. The formation of complex predicates is productive, and they comprise an ever expanding segment of the verbal system. The class of simplex verbs is mostly closed and numbers some 115 members (Mohammad & Karimi 1992:195).

The light verbs are homophonous with simplex verbs that bear a full, lexical meaning (the heavy meaning). A partial list of light verbs, glossed with their heavy interpretations in small caps, is given in (6). The light verbs themselves do not contribute to the core semantics of complex predicates, though, as we will see, they play a crucial role in determining their argument structure.

- (6)
- | | | |
|----|----------|-------------|
| a. | kardan | 'TO DO' |
| b. | dādan | 'TO GIVE' |
| c. | zadan | 'TO HIT' |
| d. | gereftan | 'TO TAKE' |
| e. | keshidan | 'TO PULL' |
| f. | raftan | 'TO GO' |
| g. | āvordan | 'TO BRING' |
| h. | bordan | 'TO TAKE' |
| i. | dāshtan | 'TO HAVE' |
| j. | shodan | 'TO BECOME' |
| k. | xordan | 'TO EAT' |
| l. | āmadan | 'TO COME' |

Possible nonverbal elements include nouns,² adjectives, and PPs, as illustrated in (7), (8), and (9), respectively. The meaning of the entire complex predicate is often idiomatic, for example (7a), though it can also be quite transparent, for example (8a).

- (7) Noun
- a. chune zadan
chin HIT
'to bargain'
 - b. edāme dādan
continuation GIVE
'to continue'
- (8) Adjective
- a. bāz kardan
open DO
'to open'
 - b. bidār shodan
awake BECOME
'to wake up'
- (9) Prepositional phrase
- a. be kār bordan
to work TAKE
'to be of use'
 - b. az dast dādan
from hand GIVE
'to lose'

The argument structure of complex predicates is highly predictable. The choice of light verb determines whether the complex predicate selects for an external argument. The minimal pair in (10) displays a transitive-unaccusative alternation that is achieved solely by substituting one light verb for another.³ The light verb *zad* 'HIT' in (10a) selects for an external argument, *rostam*

² The reader may perhaps notice that many of the nominal nonverbal elements are glossed with deverbal forms in English. This does not imply that these forms are deverbal in Farsi; most in fact are not. The source of nominal nonverbal elements includes loanwords from Arabic and other languages, as well as nouns native to the language. Some nominals formally resemble deverbal forms, but can only be considered such diachronically, as the verbs from which they are derived no longer exist. The nonverbal element *gerye* 'crying' (*gerye kardan* 'to cry') is derived historically from the simplex verb *geristan* 'to cry', which is no longer used in the colloquial language (having been replaced by *gerye kardan*). The necessary translation of these nouns as deverbal forms is simply the result of these nouns being the more basic in Farsi and the opposite situation obtaining in English.

³ As argued convincingly by Moyne (1974), Farsi does not possess a passive construction. In the unaccusative construction, the agent (if one exists) cannot be expressed except through extremely circumlocutory means.

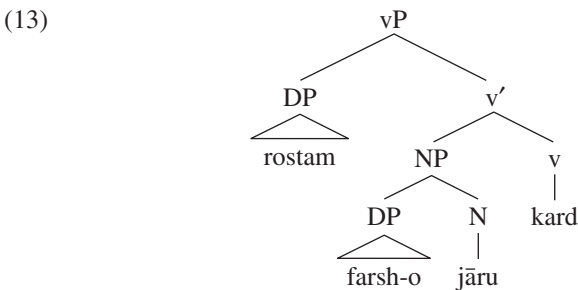
'Rostam', while *xord* 'ATE' in (10b) does not. The internal argument DP of *laqat xordan* 'to get kicked' is the subject and so cannot receive the differential object marker *rā* (realized as *ro* or *o* in the colloquial language). Nor can a different subject simply be inserted, as in (11).

- (10) a. rostam sohrāb-o laqat **zad**.
 Rostam Sohrab-OBJ kick HIT.PAST.3SG
 'Rostam kicked Sohrab.' Transitive
- b. sohrāb(*-o) laqat **xord**.
 Sohrab-OBJ kick EAT.PAST.3SG
 'Sohrab got kicked.' Unaccusative
- (11) *rostam sohrāb(-o) laqat **xord**.
 Rostam Sohrab-OBJ kick EAT.PAST.3SG

The nonverbal element selects for the complex predicate's internal arguments. If we keep the light verb constant, the complex predicate can be made to alternate between unergative and transitive structures by choosing different nonverbal elements, as in (12a–b). Complex predicates can also be ditransitive, for example *daavat kardan* 'to invite' in (12c), which I take to involve a bivalent nonverbal element.

- (12) a. rāmin **gerye** kard.
 Ramin crying DO.PAST.3SG
 'Ramin cried.' Unergative
- b. rāmin farsh-o **jāru** kard.
 Ramin carpet-OBJ broom DO.PAST.3SG
 'Ramin swept the carpet.' Monotransitive
- c. rāmin vis-o be mehmuni **daavat** kard.
 Ramin Vis-OBJ to party invitation DO.PAST.3SG
 'Ramin invited Vis to the party.' Ditransitive

On the basis of this division of labor between the light verb and the nonverbal element in determining the complex predicate's argument structure, Folli, Harley, and Karimi (2005) posit the structure in (13) for Farsi complex predicates, such as the one in (12b).



Under this analysis, the complex predicate resembles an unconflected Hale and Keyser-style structure (1993), in which, unlike in English, movement of the nonverbal element to *v* does not take place, and *v* instead receives a phonological realization as the light verb. Thus, for the complex predicate in (12b), the light verb *kard* ‘DID’ takes the phrase headed by the nonverbal element *jāru* ‘iron’ as its complement. The internal argument *farsh-o* ‘the carpet’, which is selected for by the nonverbal element, is contained within its maximal projection.

The structure in (13) allows us to understand *v*-stranding VPE as deletion of a single constituent, the nonverbal element phrase, which contains the complex predicate’s internal arguments. As predicted, when the nonverbal element is elided, so are all of the internal arguments, as shown in (14)–(16).⁴

- (14) rostam hamishe harf mizan-e vali sohrāb hichvaxt
 Rostam always speech HIT.PRES-3SG but Sohrab never
 [_{NP} harf] ne-mizane.
 speech NEG-HIT.PRES.3SG
 ‘Rostam always talks, but Sohrab never does.’
- (15) sohrāb pīranā-ro otu na-zad vali rostam
 Sohrab shirt.PL-OBJ iron NEG-HIT.PAST.3SG but Rostam
 [_{NP} pīranā-ro — otu] zad.
 shirt.PL-OBJ iron HIT.PAST.3SG
 ‘Sohrab didn’t iron the shirts, but Rostam did.’
- (16) rostam māshin-esh-o be sohrāb neshun dād
 Rostam car-his-OBJ to Sohrab showing GIVE.PAST.3SG
 vali rāmin [_{NP} māshin-esh-o be sohrāb neshun] na-dād
 but Ramin car-his-OBJ to Sohrab showing NEG-GIVE.PAST.3SG
 ‘Rostam showed his car to Sohrab, but Ramin didn’t.’

⁴ I assume Karimi’s (1999a,b) analysis of the position of objects in Farsi, in which bare object DPs and DPs bearing the differential object marker *rā* are assigned distinct structural positions within the VP or nonverbal element phrase. Bare DPs follow a PP goal (i), while *rā*-marked ones appear before the PP (ii).

- (i) rāmin **be vis gol** dād.
 Ramin to Vis flower give.PAST.3SG
 ‘Ramin gave flowers to Vis.’
- (ii) rāmin **gol-o be vis** dād.
 Ramin flower-OBJ to Vis give.PAST.3SG
 ‘Ramin gave the flower to Vis.’

Karimi (2005) offers an alternate interpretation of these data in which all direct object DPs are merged as the complement of the nonverbal element or *V*. *rā*-marked DPs subsequently raise to Spec,vP to check Case, while bare objects stay in situ, since they do not bear Case. I believe that *v*-stranding VPE, as a test for constituency, will be useful in deciding which of these two analyses is the correct one.

Having laid out the basic facts of Farsi, I now move on to diagnose the construction in (14)–(16) as a type of ellipsis.

3. Diagnosing Ellipsis

Ellipsis is distinguished from other types of null anaphora by a number of well-established diagnostics that all rely on ellipsis being a type of surface anaphora in Hankamer and Sag's (1976) terms. Surface anaphors have a fully articulated syntactic structure, constructed in the usual way, that is deleted under identity with a linguistic antecedent at a later point in the derivation. Earlier work in the generative tradition achieved this through a transformation (Ross 1967), but more recently, Merchant (2001) has argued that VPE, along with sluicing, is derived by nonpronunciation of syntactic structure at PF. I will return to how this deletion is triggered formally, as well as how the identity requirement is defined. First, however, I will show that Farsi v-stranding VPE patterns with English VPE with respect to two diagnostics for surface anaphora that have been proposed in the literature: pragmatic control and extraction.⁵

3.1 Pragmatic Control

Hankamer and Sag (1976) argue that the relationship between a surface anaphor and its antecedent is a syntactic one. VPE, as a type of surface anaphora, cannot have a purely contextual antecedent (it does not allow what they call pragmatic control), as illustrated in (17a). Deep anaphors like null complement anaphora, in contrast, receive their interpretation in a discourse model, and so can have a purely pragmatic antecedent, as shown in (17b).

- (17) [Observing Hankamer attempting to stuff 12" ball through 6" hoop]
 Sag:
 a. #I don't see why you even try to. VPE
 b. I don't see why you even try. Null complement anaphora
 (Hankamer & Sag 1976:414)

Similarly, v-stranding VPE does not allow pragmatic control, as illustrated in (18) and (19) for the complex predicates *jāru zadan* 'to sweep' (lit. broom + TO HIT) and *dush gereftan* 'to take a shower' (lit. shower + TO

⁵ Hankamer and Sag propose two additional tests for surface anaphora, the Missing Antecedent Phenomenon and syntactic parallelism. I do not include these here since their diagnostic abilities have been broadly challenged in the literature.

TAKE). The nonverbal element and internal arguments cannot be elided with a solely nonlinguistic antecedent.⁶

(18) [Child picks up broom to sweep the carpet]

Mother:

- a. motma'en bāsh xub farsh-o jāru be-zani.
 sure be well carpet-OBJ broom SUBJ-HIT.2SG
 'Be sure to sweep the carpet well.'
- b. #motma'en bāsh xub [~~NP farsh-o~~ jāru] be-zani.
 sure be well carpet-OBJ broom SUBJ-HIT.2SG

(19) [Sohrab is getting ready to take a shower]

Rostam (to Sohrab):

- a. ne-mituni dush be-giri chon āb nist.
 NEG-can.PRES.2SG shower SUBJ-TAKE.2SG since water NEG.is
 'You can't take a shower since there isn't any water.'
- b. #ne-mituni [~~NP dush~~] be-giri chon āb nist.
 NEG-can.PRES.2SG shower SUBJ-TAKE.2SG since water NEG.is

3.2 Extraction

If v-stranding VPE is a surface anaphor like VPE then we expect to be able to extract from the elided constituent (Schuyler 2002). This is illustrated for English in (20), where an object DP, *cake*, has been topicalized.

⁶ An anonymous reviewer points out that Hankamer and Sag's original generalization has been questioned in the literature starting with Schachter 1977. In response, Hankamer (1978) and Pullum (2000) argue that all the exceptions to the generalization might instead be profitably analyzed as conventionalized collocations with nondeclarative illocutionary force. More recently, Merchant (2004: 716–732) abandons the view that surface anaphora cannot have a nonlinguistic antecedent, but acknowledges that speakers' judgments for examples like (17) vary (I personally find the contrast to be quite strong). He accounts for the variability by positing the deep anaphor *do it* as the verb phrase that has gone missing in (17a). Speakers differ as to how readily they accommodate the antecedent of *do it* so that VPE can be licensed. See Stainton 2006:139–143 for a rebuttal of Merchant's arguments with respect to fragment answers.

Although the judgments I obtained for the examples in (18)–(19) were strong, I have observed one instance of v-stranding VPE without an apparent linguistic antecedent:

- (i) A: ne-mixād bā man sohbat bokone? pesar-esh-am.
 NEG-want.PRES.3SG with me speech SUBJ.DO.3SG son-his-am
 'Doesn't he want to talk to me? I'm his son.'

B: mixāy, bezan!
 want.PRES.2SG IMPER.HIT.2SG
 'If you want to, call him!'

(Massy Azimian, January 19, 2007)

What has ostensibly gone missing here is the nonverbal element of the complex predicate *zang zadan* 'to call' (lit. bell + TO HIT) and any internal arguments. The target clause in this example is a command, thus conforming to the generalization of Hankamer and Pullum that cases of pragmatically controlled VPE always involve nondeclarative illocutionary force.

(20) Jason will eat shrimp, but squid, I know he won't [eat-~~squid~~].

In Farsi (a *wh*-in-situ language), we can extract something from the ellipsis site by scrambling the object DP to a position in the matrix clause, where it receives a contrastive focus interpretation (this parallels Schuyler's observations for English), as illustrated in (21).

(21) rostam PIRAN-O otu na-zade vali SHALVĀR-O
 Rostam shirt-OBJ iron NEG-HIT.PART.3SG but pants-OBJ
 midunam ke [~~shalvār-o~~ otu] zade.
 know.PRES.1SG that iron HIT.PART.3SG
 'Rostam didn't iron the shirt, but the pants, I know he did.'

The scrambling can also be more local, as in (22), with a DP raising to a position just outside the elided constituent.

(22) rostam PIRAN-O otu zade va sohrāb
 Rostam shirt-OBJ iron NEG-HIT.PART.3SG and Sohrab
 SHALVĀR-O [~~shalvār-o~~ otu] zade.
 pants-OBJ iron HIT.PART.3SG
 'Rostam ironed the shirt, and Sohrab did the pants.'

In this case, the ellipsis looks a lot like pseudogapping in English, which is typically analyzed as a subtype of VPE (Jayaseelan 1990, *inter alia*).

3.3 *v*-stranding VPE Is Not a Null Argument

Before moving on, I want to set aside an alternate analysis of *v*-stranding VPE as a null argument (which I tentatively analyze as *pro*).⁷ I focus here on internal arguments of the verb, though it should be noted that subjects can also

⁷ The possibility that *v*-stranding VPE could be the realization of a null argument (*pro*) is reflective of a deeper confound. Intransitive complex predicates with a nominal nonverbal element, such as (i), look a lot like simplex verbs taking a bare nominal object, such as (ii).

- (i) rāmin harf zad.
 Ramin speech HIT.PAST.3SG
 'Ramin spoke.' Complex predicate
- (ii) rāmin qazā xord.
 Ramin food eat.PAST.3SG
 'Ramin ate food.' Simplex verb + bare nominal object

I know of no diagnostics that are able to distinguish between (i) and (ii). As a result, some authors, most prominently Ghomeshi and Massam (1994), have proposed that the two classes be conflated. But while the boundaries of the class of complex predicates may be fuzzy, such an independent class must exist for two simple reasons: 1) transitive complex predicates with nominal nonverbal elements can take their own internal arguments, and 2) many complex predicates have nonverbal elements that are adjectives or PPs. I refer the reader to Farudi 2005 for further discussion of this issue.

be null. In (23), the DP object of the verb has gone missing, in (24), a PP argument has gone missing, and in (25), both have.

- (23) rostam kādo-sh-o ruye miz gozāsht va
 Rostam present-his-OBJ on table put.PAST.3SG and
 sohrāb *pro* ruye televizyun gozāsht.
 Sohrab on television put.PAST.3SG
 ‘Rostam put his present on the table, and Sohrab put it on the television.’

- (24) rostam shirini-ro ruye miz gozāsht va sohrāb
 Rostam sweets-OBJ on table put.PAST.3SG and Sohrab
 toxmemorq-o *pro* gozāsht.
 eggs-OBJ put.PAST.3SG
 ‘Rostam put the sweets on the table, and Sohrab put the eggs there.’

- (25) rostam kādo-sh-o ruye miz gozāsht vali
 Rostam present-his-OBJ on table put.PAST.3SG but
 sohrāb *pro pro* na-zāsht.
 Sohrab NEG-put.PAST.3SG
 ‘Rostam put his present on the table, but Sohrab didn’t put it there.’

Objects of complex predicates, like simplex verbs, can also be null, as shown in (26).

- (26) rostam xuna-ro jāru mizane vali man *pro* jāru
 Rostam house-OBJ broom HIT.PRES.3SG but I broom
 ne-mizanam.
 NEG-HIT.PRES.1SG
 ‘Rostam sweeps the house, but I don’t sweep it.’

It’s conceivable that the phrase headed by the nonverbal element could also be a null argument—that is, realized as *pro*. There are three facts that suggest v-stranding VPE is, in fact, derived by a different mechanism. First, the nonverbal element of a complex predicate can be an adjective (see section 2) and, as shown in (27), v-stranding VPE is able to target APs containing the nonverbal element and internal argument.

- (27) rostam piran-esh-o xoshk kard vali sohrāb
 Rostam shirt-his-OBJ dry DO.PAST.3SG but Sohrab
~~[_{AP} piran-esh-o xoshk]~~ na-kard.
 shirt-his-OBJ dry NEG-DO.PAST.3SG
 ‘Rostam dried his shirt, but Sohrab didn’t.’

Since APs are not arguments of the verb, however, they should not be able to be replaced by *pro* in the same way that DP and PPs arguments of the verb are.

Second, sentences with null arguments are ambiguous between two readings. The gap can be interpreted as coreferring with a previously introduced discourse referent, or it can receive a nonspecific interpretation. The sentence in (28) has both interpretations.

- (28) rostam piranā-ro otu mizane. man *pro* otu
 Rostam shirt.PL-OBJ iron HIT.PRES.3SG I iron
 ne-mizanam.
 NEG-HIT.PRES.1SG
 ‘Rostam will iron the shirts. I won’t iron them.’
 ‘Rostam will iron the shirts. I won’t iron anything.’

In contrast, v-stranding VPE only allows an interpretation “identical” to its antecedent, as illustrated by the grammatical ellipsis in (29). The gap cannot be interpreted as referring to an event in which pants are ironed, as in (30), or a nonspecific event, as in (31).

- (29) sohrāb piranā-ro otu mizane vali rostam
 Sohrab shirt.PL-OBJ iron HIT.PRES.3SG but Rostam
~~[NP piranā-ro otu]~~ ne-mizane.
 shirt.PL-OBJ iron NEG-HIT.PRES.3SG
 ‘Sohrab will iron the shirts, but Rostam won’t iron the shirts.’

- (30) *sohrāb piranā-ro otu mizane vali rostam
 Sohrab shirt.PL-OBJ iron HIT.PRES.3SG but Rostam
~~[NP shalvār-o otu]~~ ne-mizane.
 pants-OBJ iron NEG-HIT.PRES.3SG
 Intended: ‘Sohrab will iron the shirts, but Rostam won’t iron the pants.’

- (31) *sohrāb piranā-ro otu mizane vali rostam
 Sohrab shirt.PL-OBJ iron HIT.PRES.3SG but Rostam
 [NP] ne-mizane.
 NEG-HIT.PRES.3SG
 Intended: ‘Sohrab will iron the shirts, but Rostam won’t do anything.’

A formal treatment of the identity requirement on v-stranding VPE will be given in section 4.2.

Finally, null arguments can have a nonlinguistic antecedent (they can be pragmatically controlled), as shown in (32). In contrast, v-stranding VPE must have a linguistic antecedent to be well formed (see section 3.1). Notice that the example in (32) forms a near minimal pair with (18).

- (32) [A mother sees her daughter pick up a stick to beat a carpet]
 Mother:
- a. motma'en bāsh mohkam farsh-o be-zani!
 sure IMPER.be.2SG hard carpet-OBJ SUBJ-hit.2SG
 'Be sure to hit the carpet hard!'
- b. motma'en bāsh mohkam *pro* be-zani!
 sure IMPER.be.2SG hard SUBJ-hit.2SG
 'Be sure to hit it hard!'

3.4 Summary

In this section, I have shown that v-stranding VPE in Farsi exhibits some of the same properties as VPE in English—those properties, specifically, that are characteristic of surface anaphora: the inability to be pragmatically controlled and the availability of extraction from the missing constituent. I have also argued that the gap in v-stranding VPE cannot simply be a null argument on par with null DP and PP objects.

4. Licensing Ellipsis

4.1 Inflectional Checking Requirement

It has been generally accepted since Zagana 1982 and Lobeck 1987 that ellipsis only occurs in the presence of an inflection-bearing head. For English VPE, this is the tense inflection on an auxiliary or *to*, and for sluicing the [+wh, +Q] features on C. I will argue that the same inflectional licensing requirement must be satisfied in Farsi v-stranding VPE as well. Only a light verb bearing tense morphology can license elision of the nonverbal element and its internal arguments. In (33), this is *mikonam*, the present tense form of the light verb *kardan* 'TO DO'. If the light verb goes missing, as in (34), the ellipsis is ungrammatical.

- (33) nilufar be mehmuni dāneshju daavat ne-mikone
 Nilufar to party student invitation NEG-DO.PRES.3SG
 vali man [_{NP} ~~be mehmuni dāneshju daavat~~] mikonam.
 but I to party student invitation DO.PRES.1SG
 'Nilufar doesn't invite students to the party, but I do.'
- (34) *nilufar be mehmuni dāneshju daavat ne-mikone
 Nilufar to party student invitation NEG-DO.PRES.3SG
 vali man [_{NP} ~~be mehmuni dāneshju daavat~~] ~~mikonam~~.
 but I to party student invitation DO.PRES.1SG

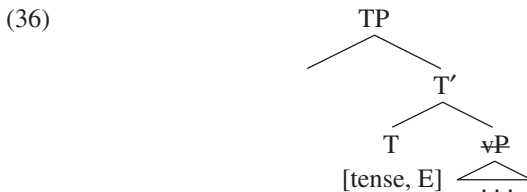
Lobeck (1995), who analyzes the silent element in ellipsis as a null pronominal, formalizes this requirement as the licensing condition in (35). It

states that *pro* must be properly governed by a head bearing strong agreement features.

- (35) Licensing and identification of *pro*
 An empty, non-arbitrary pronominal must be properly head-governed, and governed by an X^0 specified for strong agreement.
 (Lobeck 1995:40)

Merchant (2001) captures this same insight within a minimalist framework through feature checking. He posits a feature E, which for VPE triggers nonpronunciation of the vP at PF. Under earlier minimalist assumptions (Chomsky 1995), the E feature occurs on v and then moves, via the operation Attract, onto an auxiliary, where it is checked by the tense feature present there.⁸

At PF, the E feature instructs that its complement, vP, be skipped for the purposes of pronunciation. Under more current assumptions that dispense with Attract, the E feature originates on the tense inflecting auxiliary itself, as illustrated in (36). The checking requirement must necessarily also be restated. Merchant suggests that this might be achieved by a “feature compatibility requirement” (2001:60, fn. 12) on the cocurrence of E and tense features. I interpret this to be a constraint on the feature bundles that can exist in the lexicon.

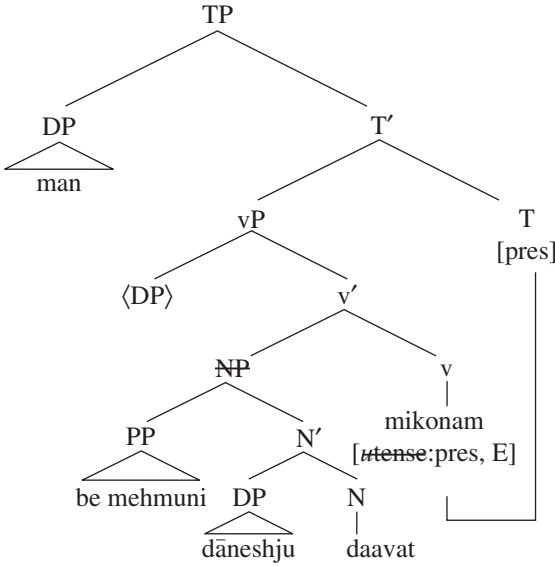


Extending Merchant’s account of English VPE to Farsi is problematic, as it has been assumed since Chomsky (2001) that verbs do not enter the derivation with any inflectional morphology. Rather, they possess uninterpretable inflectional features that must be valued by interpretable features on T. This can occur in one of two ways. The first possibility is that the uninterpretable tense feature on v is valued by the operation Agree, as illustrated in (37) for the sentence in (33), thereby satisfying the inflectional checking requirement of the E feature located on v.

⁸ Auxiliaries may not originate in T. Instead, each auxiliary could originate in its own projection and the highest one could undergo head movement to T. In cases where VPE is not licensed by the first in a sequence of auxiliaries, as in (i), it cannot be the actual tense feature on T then that checks the E feature.

(i) Mary will have already seen the movie, but John shouldn’t have ~~already seen the movie~~.
 Perhaps it is the interpretable category feature located on each auxiliary (Perf, Prog, etc.) that values the uninterpretable Infl feature on the verb (Adger 2003:171–175).

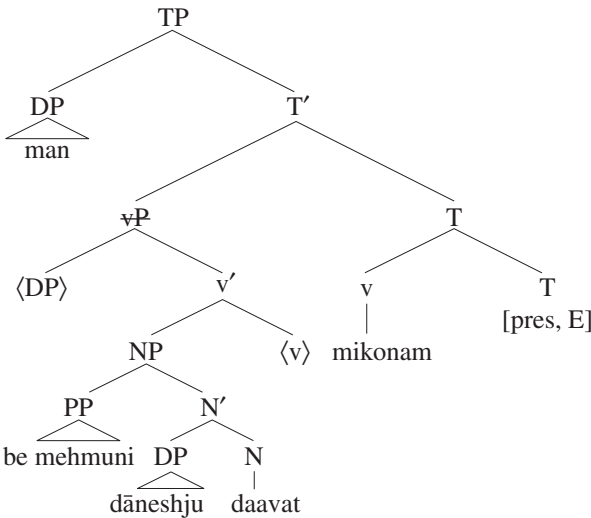
(37)



What goes missing under this analysis is the complement of *v*, the phrase headed by the nonverbal element—here, an NP.

Alternately, *v* could raise to head adjoin to *T*, with the complex head that results being pronounced as a tense inflecting verb. Under this analysis, *E* satisfies its inflectional checking requirement by originating on *T*, where it is local to the interpretable tense features on that head. This analysis is illustrated in (38).

(38)



In contrast to the first approach, what is going missing here is the complement of *T*, or the entire *vP*.

Assuming that subjects raise to Spec,TP,⁹ these two possibilities are hard to distinguish empirically, as v-to-T movement in a right-headed language like Farsi is string vacuous.¹⁰ There is one piece of evidence that suggests that v does not in fact raise to T. It comes from the variable interpretation of the modifier *again*. When *again* modifies a transitive verb phrase, as in (39), it has at least two readings: a repetitive reading and a restitutive one.

- (39) She closed the door again.
- a. She closed the door, and somebody had closed it before. Repetitive
- b. She closed the door, and it had been in that state before. Restitutive
- (Johnson 2008:(24))

Von Stechow (1996) and Rapp and von Stechow (1999) argue that this ambiguity arises from a difference in the structural position of *again*, which introduces a presupposition that the constituent it modifies have a previous

⁹ This assumption is not an innocent one. Karimi (2005) argues that Spec,TP is reserved for topics in Farsi. The subject only raises to that position in the absence of any other topic-marked elements in the sentence.

¹⁰ Karimi (2005) offers the following argument against v-to-T movement: While Farsi is SOV, sentential complements of all verbs occur postverbally:

- (i) rostam **goft** [ke kiyā biyād xune].
Rostam say.PAST.3SG that Kiya SUBJ.come.3SG home
'Rostam said that Kiya should come home.' Simplex verb
- (ii) dowlat e'lām **kard** [ke musiq mamnu-e].
government announcement DO.PAST.3SG that music forbidden-is
'The government announced that music is forbidden.' Complex predicate

If the verb raises to a right-headed T to be spelled out with tense morphology, then the verb would be linearized after the embedded CP, a result that is clearly ungrammatical:

- (iii) *[_{TP} dowlat [_{VP} <dowlat e'lām <kard> [_{CP} ke musiq
government announcement that music
mamnu-e]] kard].
forbidden-is DO.PAST.3SG

The force of this argument against an analysis positing verb movement to T is mitigated, however, by uncertainty about where exactly the sentential complement is merged. It cannot be merged as the complement of the nonverbal element, below v, since then, in complex predicates, the light verb would be located linearly after the CP:

- (iv) *[_{TP} dowlat [_{VP} <dowlat [_{NP} e'lām [_{CP} ke musiq mamnu-e]] kard]].
government announcement that music forbidden-is DO.PAST.3SG

It must therefore be adjoined higher up in the structure. But if the sentential complement were adjoined as high as TP, v-to-T movement would yield a grammatical linear string:

- (v) [_{TP} [_{TP} dowlat [_{VP} <dowlat e'lām <kard>] kard] [_{CP} ke musiq
government announcement DO.PAST.3SG that music
mamnu-e]].
forbidden-is

I refer the reader to Taleghani 2006:204–220, for discussion of a number of possible solutions to this problem.

occurrence. The repetitive reading results when *again* modifies the entire vP since it denotes an action event resulting in the door being in a closed state. When *again* modifies only the VP, it gives rise to the restitutive reading since the VP just denotes the resulting state of the door being closed.

Johnson (2008) shows that this ambiguity can be used to diagnose the size of the constituent that goes missing in English VPE. On the basis of the contrast in (40)–(41), he argues that the entire vP is deleted and not just VP. (The extra sentences provide a context favoring one of the two readings.)

- (40) Jane closed the door, and then Maribel did [_{VP} [~~VP~~ <Maribel> close the door] again].
- (41) The wind blew the door open, and no one closed it. *Finally, Maribel did [_{VP} <Maribel> [_{VP} [~~VP~~ closed it] again]]. (Johnson 2008:(28)–(30))

Sentences with VPE only have the repetitive reading of *again* available. This is what we expect if VPE in English deletes the entire vP. *Again* can only be stranded when it modifies something larger than VP, as in (40). When it is adjoined to VP, it must be deleted; otherwise, as shown in (41), the sentence is ungrammatical.

The same test can be used to distinguish between the two possible analyses for v-stranding VPE given above. Some complex predicates in Farsi show a transparent composition of stative and eventive components. These include *qofl kardan* ‘to lock’ (42) and *pāk kardan* ‘to clean’ (43). The nonverbal elements of these predicates, whether nominal, in the case of the former, or adjectival, in the case of the latter, denote states, as illustrated by their ability to occur with the copula in the (b) examples below. When these nonverbal elements are combined with the light verb *kardan* ‘TO DO’, as shown in the (a) examples, they denote events.

- (42) a. dar-o qofl kardam.
door-OBJ lock DO.PAST.ISG
‘I locked the door.’
b. dar qofl bud.
door lock was
‘The door was locked.’
- (43) a. āshpāzxūna-ro pāk kardam.
kitchen-OBJ clean DO.PAST.ISG
‘I cleaned the kitchen.’
b. āshpāzxūne pāk bud.
kitchen clean was
‘The kitchen was clean.’

When *dobāre* ‘again’ modifies one of these predicates, *pāk kardan* ‘to clean’ in (44)–(45) for instance, two readings are available: the repetitive reading, which presupposes the existence of a previous cleaning event (44), and the restitutive reading, which only presupposes that the kitchen was previously in a state of cleanliness (45).

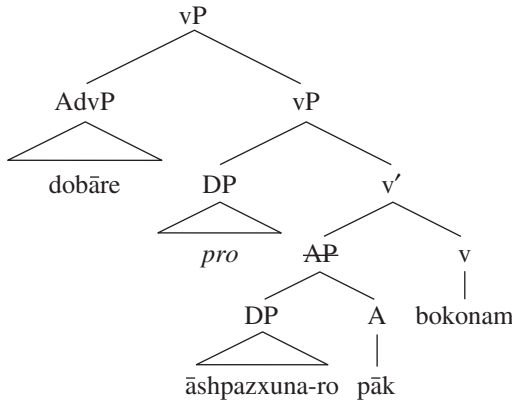
- (44) dishab āshpazxuna-ro pāk kardam. emshab-am
 last.night kitchen-OBJ clean DO.PAST.1SG tonight-also
 mixām **dobāre** āshpazxuna-ro pāk bo-konam.
 want.PRES.1SG again kitchen-OBJ clean SUBJ-DO.1SG
 ‘Last night, I cleaned the kitchen. Tonight, I will clean it again.’
 Repetitive

- (45) dishab āshpazxune pāk bud. leylā omad
 last.night kitchen clean was Leila come.PAST.3SG
 kasif-esh kard. kasi na-raft pāk-esh
 dirty-it DO.PAST.3SG nobody NEG-go.PAST.3SG clean-it
 bo-kone. emshab mixām **dobāre** āshpazxuna-ro
 SUBJ-DO.3SG tonight want.PRES.1SG again kitchen-OBJ
 pāk bo-konam.
 clean SUBJ-DO.3SG
 ‘Last night, the kitchen was clean. Leila came and dirtied it.
 Nobody went to clean it. Tonight, I will clean it again.’ Restitutive

Now, if the first of the analyses for v-stranding VPE is the correct one, then we predict that both the repetitive and restitutive readings will be available under ellipsis. Since it is the phrase headed by the nonverbal element that is deleted, *dobāre* ‘again’ should be stranded even when it modifies just the nonverbal element phrase. If, however, the second of the two analyses is correct, where it is vP that is deleted, then we predict that only the repetitive reading will be possible. What we find, in fact, is that both readings are available:

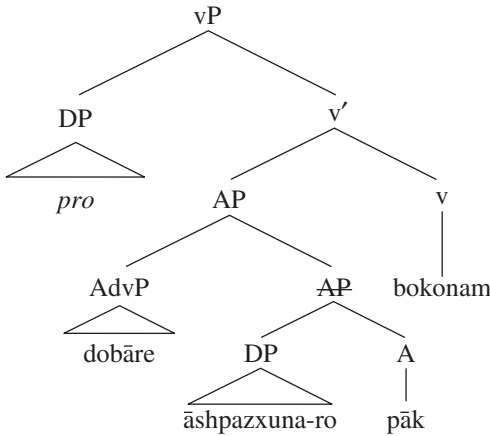
- (46) a. dishab āshpazxuna-ro pāk kardam. emshab-am
 last.night kitchen-OBJ clean DO.PAST.1SG tonight-also
 mixām **dobāre** [_{VP} [_{AP} ~~āshpazxuna-ro pāk~~]] bo-konam].
 want.PRES.1SG again kitchen-OBJ clean SUBJ-DO.1SG
 ‘Last night, I cleaned the kitchen. Tonight, I will clean it again.’

b.



- (47) a. dishab āshpazxune pāk bud. leylā omad
 last.night kitchen clean was Leila come.PAST.3SG
 kasif-esh kard. kasi na-raft pāk-esh
 dirty-it DO.PAST.3SG nobody NEG-go.PAST.3SG clean-it
 bo-kone. emshab mixām
 SUBJ-DO.3SG tonight want.PRES.1SG
 [_{vP} dobāre [_{AP} āshpazxuna-ro pāk] bo-konam].
 again kitchen-OBJ clean SUBJ-DO.3SG
 ‘Last night, the kitchen was clean. Leila came and dirtied it.
 Nobody went to clean it. Tonight, I will clean it again.’

b.



In the absence of any evidence to the contrary, these facts are sufficient reason to proceed with the first analysis in which v bears an uninterpretable tense

feature that satisfies the E feature's inflectional checking requirement by agreeing with T.¹¹

4.2 Identity Requirement

Ellipsis is also constrained by an antecedence condition, which requires that the elided constituent be identical, in some sense, to its antecedent. Merchant (2001) argues for a semantic identity requirement that he calls e-GIVENNESS, stated in (49). As shown in (48), the E feature, which also triggers nonpronunciation at PF, includes a presupposition that its complement be e-GIVEN.

(48) $[[E]] = \lambda p : p$ is e-GIVEN. p

(49) *e-GIVENNESS*.

An expression E counts as e-GIVEN iff E has a salient antecedent A and, modulo \exists -type shifting,¹²

1. A entails F-clo(E), and
2. E entails F-clo(A).¹³

(Merchant 2001:26)

To see how e-GIVENNESS applies in Farsi, the interpretation of complex predicates must first be elaborated. Following Kratzer (1996), I take the nonverbal element and light verb to denote independent predicates that take their own arguments and are combined by the noncompositional rule Event Identification, defined in (50).

(50) Event Identification

$$\begin{array}{ccc} f & g & \rightarrow h \\ \lambda x \lambda e [f(x)(e)] & \lambda e [g(e)] & \lambda x \lambda e [f(x)(e) \wedge g(e)] \\ \langle e, \langle s, t \rangle \rangle & \langle s, t \rangle & \langle e, \langle s, t \rangle \rangle \end{array} \quad (\text{Kratzer 1996:122})$$

Event Identification takes two functions as its input, f and g , of types $\langle e, \langle s, t \rangle \rangle$ and $\langle s, t \rangle$, respectively. If e is the type of individuals, s the type of events, and t the type of truth values, $\langle e, \langle s, t \rangle \rangle$ is the type of functions from individuals to

¹¹ Under this scenario, restating the checking requirement on E as a feature compatibility requirement in the Lexicon, as suggested by (Merchant 2001:60, fn. 12), would not be able to account for Farsi *v*-stranding VPE, since the E feature does not enter the derivation bundled with an *interpretable* tense feature. The checking requirement might instead be restated as a PF constraint on the possible spell-out of feature bundles containing E. That is, no legitimate spell-out would exist for feature bundles that include E, but not inflectional features of the appropriate type.

¹² \exists -type shifting is a type-shifting operation that raises an expression to type t by \exists -binding any open argument variables.

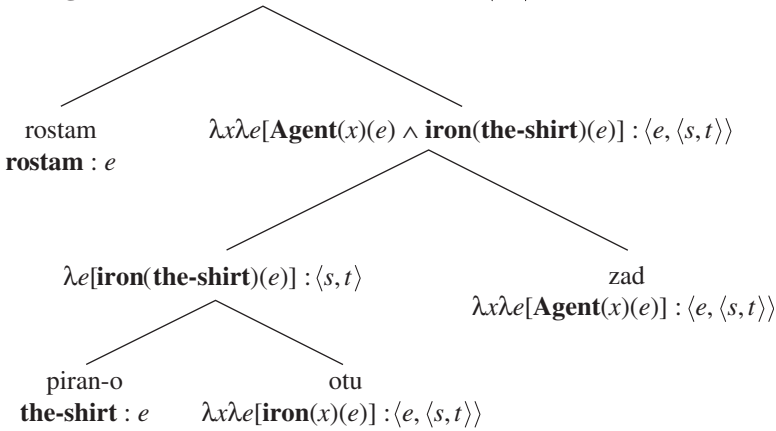
¹³ "The F-closure of α , written F-clo(α), is the result of replacing F-marked parts of α with \exists -bound variables of the appropriate type (modulo \exists -type shifting)" (Merchant 2001:14).

functions from events to truth values and $\langle s, t \rangle$ is the type of functions from events to truth values. The output of the rule is a function, h , of type $\langle e, \langle s, t \rangle \rangle$.

Applying this to Farsi, the meaning of a simple sentence like (51) can be derived as in (52), where e is a variable over events and x a variable over individuals.

- (51) rostam piran-o otu zad.
 Rostam shirt-OBJ iron HIT.PAST.3SG
 ‘Rostam ironed the shirt.’

- (52) $\lambda e[\mathbf{Agent}(\mathbf{rostam})(e) \wedge \mathbf{iron}(\mathbf{the-shirt})(e)] : \langle s, t \rangle$



The crucial step to be pointed out is the application of Event Identification, which takes the property of events denoted by the nonverbal element phrase, $\lambda e[\mathbf{iron}(\mathbf{the-shirt})(e)]$, and combines it with the predicate of events denoted by the light verb, $\lambda x\lambda e[\mathbf{Agent}(x)(e)]$.

We can now try the e-GIVENNESS identity check on the example in (53), in which the target and antecedent nonverbal element phrases are APs.

- (53) Q: sohrāb [_{AP} lebāsā-ro xoshk] kard?
 Sohrab clothes-OBJ dry DO.PAST.3SG
 ‘Did Sohrab dry the clothes?’
 A: na, rostam [~~_{AP} lebāsā-ro xoshk~~] kard.
 no Rostam clothes-OBJ dry DO.PAST.3SG
 ‘No, Rostam did.’

For the mutual entailment condition to apply, the target and antecedent phrases must be of type t . But per the discussion above, both the target and antecedent APs are of type $\langle s, t \rangle$, or functions from events to truth values. The event variable in both the target and antecedent phrases must be closed off through \exists -type shifting, yielding (54a–b). The first part of the definition of

e-GIVENness now requires that the antecedent AP, AP_A' , entail the F-closure of the elided AP, $F\text{-clo}(AP_E)$. This is clearly the case as they are identical.¹⁴

- (54) a. $AP_A' = \exists e[\text{dry}(\text{the-clothes})(e)] \models$
 b. $F\text{-clo}(AP_E) = \exists e[\text{dry}(\text{the-clothes})(e)]$

The second part of the definition for e-GIVENness requires that AP_E' entail $F\text{-clo}(AP_A)$, which we see in (55a–b) is also true.

- (55) a. $AP_E' = \exists e[\text{dry}(\text{the-clothes})(e)] \models$
 b. $F\text{-clo}(AP_A) = \exists e[\text{dry}(\text{the-clothes})(e)]$

Mutual entailment is satisfied, so the ellipsis is good.

5. Light-Verb Alternations

A potential problem arises for the e-GIVENness approach to identity when we consider the illicit instances of v-stranding VPE in (56)–(58). In (56), the complex predicate *dast kardan* ‘to put on the hand’ (hand+TO DO) in the antecedent clause is replaced by *dast zadan* ‘to touch’ (hand+TO HIT) in the target clause. Similarly, in (57), *xoshk shodan* ‘to become dry’ (dry+TO BECOME) alternates with *xoshk kardan* ‘to dry’ (dry+TO DO). And finally in (58), *dast zadan* ‘to touch’ (hand+TO HIT) alternates with *dast keshidan* ‘to pet’ (hand+TO PULL).

- (56) *sohrāb dastkesh-o dast **kard** vali rāmin faqat
 Sohrab glove-OBJ hand DO.PAST.3SG but Ramin only
~~[_{NP} dastkesh-o dast]~~ **zad.**
 glove-OBJ hand HIT.PAST.3SG
 Intended: ‘Sohrab put the glove on, but Ramin only touched it.’

- (57) Q: lebāsā xoshk **shodan?**
 clothes dry BECOME.PART.3PL
 ‘Have the clothes dried yet?’
 A: *na, vali rostam alān raft ~~[_{AP} lebāsā-ro xoshk]~~
 no but Rostam now go.PAST.3SG clothes-OBJ dry
bo-kone.
 SUBJ-DO.3SG
 Intended: ‘No, but Rostam just went to dry them.’

¹⁴ In these examples, F-closure plays no significant role, as nothing in the target or antecedent clauses is F-marked.

- (58) *arshyā aslan be sare sag dast **ne-mizane** vali
 Arshya not.at.all to head dog hand NEG-HIT.PRES.3SG but
 rostam qashang mishine [~~NP be sare sag dast~~]
 Rostam pretty sit.PRES.3SG to head dog hand
mikeshe.
 PULL.PRES.3SG
 Intended: ‘Arshya never touches a dog’s head, but Rostam sits right down and pets it.’

In all three cases, the nonverbal element and internal arguments of the target and antecedent clauses are superficially identical. Only their light verbs are different. With only the e-GIVENNESS identity constraint, we don’t expect the identity of the light verbs to matter for determining when ellipsis can occur. The light verb, as a *v*, is not contained within the domain of elision. The nonelliptical versions of (56)–(58) are given in (59)–(61) to show that the ban against light-verb alternations is not due to independent factors.

- (59) sohrāb dastkesh-o dast **kard** vali rāmin faqat
 Sohrab glove-OBJ hand DO.PAST.3SG but Ramin only
 dastkesh-o dast **zad.**
 glove-OBJ hand HIT.PAST.3SG
 ‘Sohrab put the glove on, but Ramin only touched it.’

- (60) Q: lebāsā xoshk **shodan?**
 clothes dry BECOME.PART.3PL
 ‘Have the clothes dried yet?’
 A: na, vali rostam alān raft lebāsā-ro xoshk
 no but Rostam now go.PAST.3SG clothes-OBJ dry
bo-kone.
 SUBJ-DO.3SG
 ‘No, but Rostam just went to dry them.’

- (61) arshyā aslan be sare sag dast **ne-mizane** vali
 Arshya not.at.all to head dog hand NEG-HIT.PRES.3SG but
 rostam qashang mishine be sare sag dast
 Rostam pretty sit.PRES.3SG to head dog hand
mikeshe.
 PULL.PRES.3SG
 ‘Arshya never touches a dog’s head, but Rostam sits right down and pets it.’

This restriction on the identity of light verbs bears a striking similarity to an effect that Goldberg (2005a,b) observes for V-stranding VPE. In Hebrew

and Irish (and perhaps Swahili as well), the main verb that has raised out of the elided verb phrase must be identical in everything but inflection to the main verb of the antecedent clause. This is a generalization that she calls the Verbal Identity Requirement and states as follows:

(62) Verbal Identity Requirement

The antecedent- and target-clause main Vs of VP Ellipsis must be identical, minimally, in their root and derivational morphology.

(Goldberg 2005b:187)

In Hebrew, varying the root of the stranded verb, as in (63), or the derivational morphology (*binyan*), as in (64), results in ungrammaticality. Similar facts are illustrated for Irish in (65).

(63) Q: Rivka hisi'a otax le-beit ha-sefer?
Rivka drive.PAST.3SG.F ACC.you.SG.F to-house the-book
'(Did) Rivka drive you to school?'

A: *Ken, hi hevi'a.

yes she bring.PAST.3SG.F

'Yes, she brought [~~me to school~~].'

(Goldberg 2005b:175)

(64) Q: Hisa'ta etmol et Li'ora le-Tel Aviv?
drive.PAST.2SG.M yesterday ACC Liora to-Tel Aviv
'(Did) you drive yesterday Liora to Tel Aviv?'

A: *Ken, hi nas'a.

yes she travel.PAST.3SG.F

'Yes, she traveled [~~to Tel Aviv yesterday~~].'

(Goldberg 2005b:180)

(65) *Léigh mé an dán ach níor thuig.
read.PAST I the poem but not.PAST understand.PAST
'Read I the poem, but not understood [~~the poem~~].'

(Goldberg 2005b:184)

Something like the Verbal Identity Requirement might be active in Farsi v-stranding VPE since substituting one light verb for another is ungrammatical. In the rest of this section, I argue, however, that the Verbal Identity Requirement is not a necessary constraint on ellipsis, at least for Farsi.

5.1 Nonverbal Element Homophony

The first type of light verb alternation, which is perhaps the easiest to deal with, is repeated in (66). The alternating complex predicates have what seems to be the same nonverbal element: *dast*.

- (66) *sohrāb [_{NP} dastkesh-o dast] kard vali rāmin
 Sohrab glove-OBJ hand DO.PAST.3SG but Ramin
 faqat [~~NP dastkesh-o dast~~] zad.
 only glove-OBJ hand HIT.PAST.3SG
 Intended: 'Sohrab put the glove on, but Ramin only touched it.'

When we consider the meaning of the antecedent and target complex predicates we see, however, that they mean two very different things. The complex predicate *dast kardan* means to put on the hand, while *dast zadan* means to touch. In the semantics for complex predicates outlined in section 4.2, the light verb serves only to introduce an agent argument, that is $[[kardan]] = [[zadan]] = \lambda x \lambda e [\mathbf{Agent}(x)(e)]$. The different meanings of the two complex predicates must accordingly be located somewhere else—I would like to suggest, in the nonverbal element. Thus, the two complex predicates in (66) are composed not only of two different light verbs, but also two different, but homophonous, nonverbal elements, the meanings of which are given in (67)–(68).¹⁵

- (67) $[[dast_1]] = \lambda x \lambda e [\mathbf{put-on-the-hand}(x)(e)]$

- (68) $[[dast_2]] = \lambda x \lambda e [\mathbf{touch}(x)(e)]$

If the nonverbal elements of the complex predicates in (66) are only morphologically identical then the e-GIVENNESS identity constraint, being semantic, will distinguish them. Taking the translations of the target and antecedent phrases in (66), modulo \exists -type shifting, the first part of the

¹⁵ Two anonymous reviewers take issue with putting the idiosyncratic part of a complex predicate's meaning entirely in the nonverbal element, as in (67)–(68), at the cost of creating massive lexical ambiguity. I share these concerns, but I do not see any immediately viable alternatives. One reviewer proposes that the difference in meaning between *dast kardan* 'to put on the hand' and *dast zadan* 'to touch' could be introduced by a null head that takes *dast* 'hand' as its argument. But this analysis strikes me as just relocating the idiosyncratic meaning from the nonverbal element to a null head without any empirical or theoretical gain. Another reviewer suggests that the noncompositional meaning of complex predicates might instead be due to "the underspecified nature of the meaning involved that is then further specified in interaction with the light verb, context, etc." This sounds promising, but I know of no concrete implementation of semantic underspecification in complex predicates on which to base the present study of ellipsis in Farsi.

The third anonymous reviewer points out that there might in fact be some diachronic support for the homophony account, at least in the case of *dast kardan* 'to put on the hand' and *dast zadan* 'to touch'. Historically, the nonverbal element component of *dast kardan* was not simply a noun but a PP, for example (i).

- (i) rostam dastkesh-rā be daste bachche kard.
 Rostam glove-OBJ to hand child DO.PAST.3SG
 'Rostam put the glove on the child.'

This makes positing two different lexical entries for the nonverbal element *dast* seem not so improbable. If one wished to pursue such an explanation, one would have to identify different historical sources for the other complex predicate doublets.

e-GIVENness definition is satisfied, as shown in (69). An event in which a glove is put on the hand (NP_A') entails that a glove is touched ($F\text{-clo}(NP_E)$). But the ellipsis fails on the second part of the definition (70). An event in which a glove is touched (NP_E') certainly does not entail that a glove is put on the hand ($F\text{-clo}(NP_A)$).

- (69) a. $NP_A' = \exists e[\text{put-on-the-hand}(\text{the-glove})(e)] \models$
 b. $F\text{-clo}(NP_E) = \exists e[\text{touch}(\text{the-glove})(e)]$
- (70) a. $NP_E' = \exists e[\text{touch}(\text{the-glove})(e)] \not\models$
 b. $F\text{-clo}(NP_A) = \exists e[\text{put-on-the-hand}(\text{the-glove})(e)]$

This type of light verb alternation thus reduces to a case of nonverbal element homophony.

5.2 *Argument Structure Alternations*

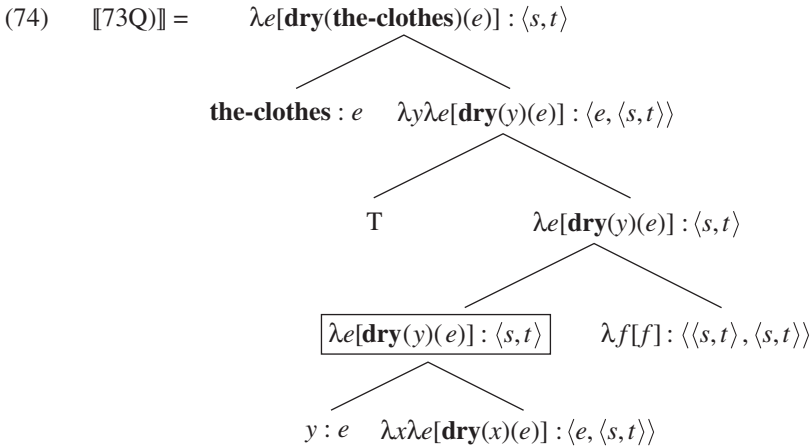
The second type of light-verb alternation is illustrated in (71), repeated from (56), and (72). Unlike the preceding case, the complex predicates of the target and antecedent clauses here mean the same thing. The English glosses show that they both denote drying events.

- (71) Q: *lebāsā xoshk shodan?*
 clothes dry BECOME.PART.3PL
 'Have the clothes dried yet?'
 A: **na, vali rostam alān raft*
 no but Rostam now go.PAST.3SG
~~[_{AP} *lebāsā-ro xoshk*]~~ *bo-kone.*
 clothes-OBJ dry SUBJ-DO.3SG
 Intended: 'No, but Rostam just went to dry them.'
- (72) **rostan lebāsā-ro xoshk na-kard vali xod-eshun*
 Rostam clothes-OBJ dry NEG-do.PAST.3SG but self-3PL
~~[_{AP} (*xod-eshun*) *xoshk*]~~ *shodan.*
 dry become.PAST.3PL
 Intended: 'Rostam didn't dry the clothes, but they dried themselves.'

The complex predicates of the target and antecedent clauses nonetheless differ in one important respect. The light verb of the antecedent clause, *shodan*, is unaccusative and does not select for an external argument. (I assume that it just denotes an identity function of type $\langle\langle s,t \rangle, \langle s,t \rangle\rangle$.) Accordingly, the internal argument, *lebāsā* 'the clothes', must raise out of the vP into subject position, leaving behind a copy, as shown in the question of (73).

- (73) Q: lebāsā [AP⟨lebāsā⟩xoshk] shodan?
 clothes dry BECOME.PART.3PL
 ‘Have the clothes dried yet?’
 A: *na, vali rostam alān raft
 no but Rostam now go.PAST.3SG
 [~~AP lebāsā ro xoshk~~] bo-kone.
 clothes-OBJ dry SUBJ-DO.3SG
 ‘No, but Rostam just went to dry them.’

At the point in the semantic derivation when the e-GIVENness check applies, the nonverbal element’s *e* type argument will have been saturated by the free variable that is the translation of the internal argument’s trace. The relevant node is boxed in the parsetree of (74). Both the event argument and free argument variable are \exists -bound to yield the expression in (75).¹⁶



(75) $AP_A' = \exists y \exists e [\mathbf{dry}(y)(e)]$

Notice, however, that the complex predicate of the target clause is transitive, so that the internal argument remains inside the nonverbal element phrase. When we compare AP_A' in (75) to $F\text{-clo}(AP_E)$ in (76), we see that the former does not entail the latter: that something dries does not entail that the clothes dry.

(76) $F\text{-clo}(AP_E) = \exists e [\mathbf{dry}(\mathbf{the-clothes})(e)]$

¹⁶ According to Merchant (2001), \exists -closure is a type-shifting operation that \exists -binds any open argument variables, thereby raising the expression to type *t* (see fn. 12). By this definition, \exists -binding the *y* variable in (75) is technically a different operation, since, previous to being bound, *y* is free. It consequently does not result in the type of the expression being shifted.

Under the second part of the definition for e-GIVENNESS, then, the ungrammatical ellipsis in (71) can be ruled out.¹⁷

5.3 *Event Structure Alternations*

In the third and final type of light-verb alternation, repeated in (77), the complex predicates of the target and antecedent clauses have essentially the same meaning. What differentiates them is their event structure, specifically their Aktionsart, or what Smith (1997) calls “situation aspect.”

- (77) *arshyā aslan be sare sag dast ne-mizane
 Arshya not.at.all to head dog hand NEG-HIT.PRES.3SG
 vali rostam qashang mishine [~~NP be sare sag dast~~]
 but Rostam pretty sit.PRES.3SG to head dog hand
 mikeshe.
 PULL.PRES.3SG
 Intended: ‘Arshya never touches a dog’s head, but Rostam sits right down and pets it.’

In the antecedent clause of (77), the complex predicate *dast zadan* ‘to touch’ (lit. hand+TO HIT) is an Achievement. The event described is instantaneous and telic. As such, the complex predicate *dast zadan* is incompatible with simple durational adverbs, as illustrated in (78a–b). In the progressive, which in Farsi is marked by the auxiliary *dāshtan* ‘to have’, it is interpreted as referring to the beginning stages of an event (78c).

- (78) a. #kimeā barāye ye sāʔat be qazā dast zad.
 Kimea for one hour to food hand HIT.PAST.3SG
 Intended: ‘Kimea touched the food for an hour.’
 b. #kimeā ye sāʔat-e be qazā dast zad.
 Kimea one hour-ADV to food hand HIT.PAST.3SG
 Intended: #‘Kimea touched the food in an hour.’
 c. kimeā dāre be qazā dast mizane.
 Kimea have.PRES.3SG to food hand HIT.PRES.3SG
 ‘Kimea is (about to) touch the food.’ (Folli et al. 2005: 1384)

¹⁷ Kyle Johnson points out that this argument does not go through if A-movement can reconstruct, as it has been argued to do for reasons of scope by May 1977:102–112 and subsequent work (contra Chomsky 1993:37). There are so many notions of reconstruction that I will not try to address the issue here. I should point out, however, that an *e* type DP like *lebāsā* ‘the clothes’ in (73) will always “reconstruct” to its base merge position in some sense, simply by virtue of the fact that it leaves behind a trace of the same type, which is later λ -abstracted over. Consequently, while *lebāsā* will eventually be interpreted as the first argument of the verb, at the point in the semantic derivation when the e-GIVENNESS identity constraint obtains (the boxed node in (74)), it has not yet been folded into the meaning of the sentence. Modulo \exists -closure, this results in the failure of mutual entailment found between transitive and unaccusative clauses.

In contrast, *dast keshidan* ‘to pet’ (lit. hand+TO PULL) is an Activity, a characteristically durative type of event. It can therefore occur with adverbs of duration, as in (79a), and in the progressive refers to the internal stages of an event (79c). It is infelicitous, however, with temporal adverbials that are translated in English with *in* (79b).

- (79) a. arshyā barāye ye sāʔat be sare sag dast
 Arshya for one hour to dog head hand
 keshid.
 PULL.PAST.3SG
 ‘Arshya petted the dog’s head for an hour.’
- b. #arshyā ye sāʔat-e be sare sag dast
 Arshya one hour-ADV to dog head hand
 keshid.
 PULL.PAST.3SG
 Intended: #Arshya petted the dog’s head in an hour.’
- c. arshyā dāre be sare sag dast mikeshe.
 Arshya have.PRES.3SG to head dog hand PULL.PRES.3SG
 ‘Arshya is petting the dog’s head.’

Given these data, it might be tempting at first simply to encode the situation aspect of the complex predicate solely in the light verb, since, in the examples above, the alternation between Achievement and Activity Aktionsarten correlates with an overt morphological alternation between the light verbs *zadan* and *keshidan*. We could accordingly assign the light verbs the meanings in (80)–(81), following Kratzer (1996:122–123) in formalizing event subtypes as a restriction on the domain of events. Thus, the light verb *zadan* expresses a partial function defined only for events that are Achievements. Similarly, *keshidan* expresses a partial function that is defined only for events that are Activities.

(80) $\llbracket \text{zadan} \rrbracket = \lambda x \lambda e : e \in \{e \mid e \text{ is an Achievement} \} [\mathbf{Agent}(x)(e)]$

(81) $\llbracket \text{keshidan} \rrbracket = \lambda x \lambda e : e \in \{e \mid e \text{ is an Activity} \} [\mathbf{Agent}(x)(e)]$

This is not quite the whole story, however. As Smith (1997:4) argues, situation aspect is not conveyed solely by the predicate but by the whole “verb constellation”, which includes the verb and its arguments. We expect that the nonverbal element will also contribute to the event semantics of the clause. Indeed, the complex predicate *be ātash keshidan* ‘to set on fire’, which has the same light verb as *dast keshidan* ‘to pet’ in (79), is an Accomplishment. It is accordingly infelicitous with adverbs of duration (82a), unless that adverb relates to the end state of the event (82b). The progressive presents the internal stages of the event (82c).

- (82) a. #kimeā xuna-ro barāye ye sā'at be ātash
 Kimea house-OBJ for an hour to fire
 keshid.
 PULL.PAST.3SG
 Intended: #'Kimea set the house on fire for an hour.'
- b. kimeā xuna-ro ye sā'at-e be ātash keshid.
 Kimea house-OBJ one hour-ADV to fire PULL.PAST.3SG
 'Kimea set the house on fire in an hour.'
- c. kimeā dāre xuna-ro be ātash mikeshe.
 Kimea have.PRES.3SG house-OBJ to fire PULL.PRES.3SG
 'Kimea is setting the house on fire.' (Folli et al. 2005:1386)

Given Smith's generalization that situation aspect is a property of the verbal complex, and the fact that, in Farsi, situation aspect may be realized overtly either on the light verb or the nonverbal element, the event variable of the nonverbal element should also be restricted. Thus, the nonverbal element *dast* can have either of the denotations in (83)–(84).

(83) $\llbracket \text{dast} \rrbracket = \lambda x \lambda e : e \in \{e \mid e \text{ is an Achievement}\} [\text{touch}(x)(e)]$

(84) $\llbracket \text{dast} \rrbracket = \lambda x \lambda e : e \in \{e \mid e \text{ is an Activity}\} [\text{touch}(x)(e)]$

As Kratzer (1996) points out, the Event Identification composition in (50) automatically ensures that each light verb will occur with the right nonverbal element. If the domains of the rule's two input functions are disjoint, as the set of Achievements and the set of Activities are, then Event Identification will be undefined.

Getting back to the ungrammatical case of ellipsis in (77), if, under the first part of the definition for e-GIVENNESS, we compare the antecedent phrase, NP_A' (85a), to the F-closure of the elided phrase, $\text{F-clo}(\text{NP}_E)$ (85b), mutual semantic entailment is not satisfied. That there is an Achievement event in which a dog's head is touched does not entail that there is an Activity event in which a dog's head is touched.

- (85) a. $\text{NP}_A' = \exists e : e \in \{e \mid e \text{ is an Achievement}\} [\text{touch}(\text{a-dog's-head})(e)] \neq$
 b. $\text{F-clo}(\text{NP}_E) = \exists e : e \in \{e \mid e \text{ is an Activity}\} [\text{touch}(\text{a-dog's-head})(e)]$

This type of light verb alternation, then, can also be ruled out because the elided constituent is not e-GIVEN.

5.4 Summary

I have argued that light-verb alternations in Farsi v-stranding VPE, which at first seem to require an additional constraint on ellipsis like Goldberg's Verbal

Identity Requirement, can actually be accounted for solely using e-GIVENness. Even though the light verb is never located inside the elided phrase, and so is not part of the mutual entailment calculation, alternations of the light verb can result in ellipsis being ungrammatical due to the various selectional and event semantic interactions between the light verb and the nonverbal element.

If the account I have given is on the right track, we predict that light-verb alternations that do not result in an argument or event structure alternation and that do not change the meaning of the complex predicate will be grammatical. There are only a few complex predicates that match this profile, but for *otu kardan* and *otu zadan* 'to iron' (lit. iron + TO DO/TO HIT), two variants of the same transitive verb, this prediction is borne out. As illustrated in (86), substituting one light verb for the other does not result in ellipsis being ungrammatical.

- (86) Q: *piran-o otu kardi?*
 shirt-OBJ iron DO.PAST.2SG
 'Have you ironed the shirt?'
 A: *āre, diruz [NP ~~piran-o otu~~] zadam.*
 yes, yesterday shirt-OBJ iron HIT.PAST.1SG
 'Yes, I did yesterday.'

This example is extremely important, as it shows that the Verbal Identity Requirement does not constraint Farsi v-stranding VPE. Instead, it makes clear that the ungrammaticality of the light-verb alternations detailed above comes from somewhere else. The source of that ungrammaticality, I have argued, is nothing more than the basic identity requirement on ellipsis (formulated as e-GIVENness).

Farsi contrasts in this respect with the V-stranding VPE languages, which prohibit all verb alternations, even those that do not affect meaning, argument structure, or event structure. In Irish, for example, McCloskey (2005) identifies verb doublets that comprise one native verb and one English loanword suffixed with *-eáil*:

- (87) a. *Mhiss-eáil mé é.*
 I him
 'I missed him.'
 b. *Chrothnaigh mé é.*
 miss.PAST I him
 'I missed him.' (McCloskey 2005:7)

These doublets are like the pair of complex predicates in (86) in that they do not differ in any semantically significant way. Nonetheless, as shown by the ungrammaticality of (88), it is not possible for one member of the doublet to serve as the antecedent for the other.

(88) A: A-r mhiss-eáil tú é?
 INTER-PAST you him
 'Did you miss him?'

B: *Chrothnaigh.
 miss.PAST
 'I did.'

(McCloskey 2005:7)

The reason V-stranding VPE in Hebrew and Irish is constrained by the Verbal Identity Requirement remains to be fully worked out (though see Goldberg 2005a and Goldberg 2005b:186–200 for some possible motivations). For Farsi, however, it can be safely set aside, as it plays no observable role in v-stranding VPE.

6. Conclusion

I have argued here for the existence of a type of ellipsis that targets the nonverbal half of a complex predicate. Like English VPE, v-stranding VPE obeys the same constraints on when ellipsis can occur. This includes an antecedence condition, which I have assumed to be the e-GIVENNESS constraint of Merchant (2001), that is correctly able to exclude ungrammatical instances of v-stranding VPE involving light-verb alternations. There is also an inflectional checking requirement, which in English VPE is satisfied by the presence of tense features on an auxiliary. In Farsi, it is the light-verb component of the complex predicate, which I have analyzed as an overt v head bearing tense inflection, that licenses the elision of its complement, the phrase headed by the nonverbal element.

Given the long-standing assumption that ellipsis applies to phrases of any category as long as its licensing requirements are met, we perhaps predict that a process like v-stranding VPE should exist. In Farsi, unlike other languages, v receives an independent morphological realization as a light verb. This property of the language enables ellipsis to target a constituent that does not include the v. The prevalence of light-verb constructions in the world's languages suggests that VPE, in the form of v-stranding VPE, may be much more common than had previously been thought.

References

- Adger, D. 2003. *Core syntax: A minimalist approach*. Oxford: Oxford University Press.
 Chomsky, N. 1993. A Minimalist Program for linguistic theory. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. K. Hale & S. J. Keyser, 1–52. Cambridge, MA: MIT Press.
 Chomsky, N. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
 Chomsky, N. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. M. Kenstowicz, 1–52. Cambridge, MA: MIT Press.

- Doron, E. 1999. V-movement and VP-Ellipsis. In *Fragments: Studies in ellipsis and gapping*, ed. S. Lappin & E. Benmamoun, 121–140. Oxford: Oxford University Press.
- Farudi, A. 2005. Complex verbs in Persian: Towards a nonderivational approach. Master's thesis, Oxford University.
- Folli, R., H. Harley & S. Karimi. 2005. Determinants of event type in Persian complex predicates. *Lingua* 115:1365–1401.
- Ghameshi, J. & D. Massam. 1994. Lexical/syntactic relations without projection. *Linguistic Analysis* 24:175–217.
- Goldberg, L. 2005a. On the Verbal Identity Requirement in VP Ellipsis. Workshop on Identity in Ellipsis, University of California, Berkeley.
- Goldberg, L. 2005b. Verb-Stranding VP Ellipsis: A cross-linguistic study. Ph.D. dissertation, McGill University, Montreal.
- Hale, K. & S. J. Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. K. Hale & S. J. Keyser, 53–109. Cambridge, MA: MIT Press.
- Hankamer, J. 1978. On the nontransformational derivation of some anaphors. *Linguistic Inquiry* 9:66–74.
- Hankamer, J. & I. A. Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7:391–426.
- Jayaseelan, K. A. 1990. Incomplete VP deletion and gapping. *Linguistic Analysis* 20:64–81.
- Johnson, K. 2008. How to be quiet. In *Proceedings of the 40th annual meeting of the Chicago Linguistic Society*, ed. N. Adams, A. Cooper, F. Parrill & T. Wier, 1–20. Chicago: Chicago Linguistic Society.
- Karimi, S. 1999a. A note on parasitic gaps and specificity. *Linguistic Inquiry* 30:704–713.
- Karimi, S. 1999b. Specificity effect: Evidence from Persian. *Linguistic Review* 16:125–141.
- Karimi, S. 2005. *A minimalist approach to scrambling: Evidence from Persian*. Berlin: Mouton de Gruyter.
- Kratzer, A. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, ed. J. Rooryck & L. Zaring, 109–137. Dordrecht: Kluwer.
- Lobeck, A. 1987. VP Ellipsis in infinitives: INFL as a Proper Governor. In *Proceedings of the North East Linguistics Society 17*, ed. J. McDonough & B. Plunkett, 425–442. Amherst, MA: GSLA Publications.
- Lobeck, A. 1995. *Ellipsis: Functional heads, licensing, and identification*. Oxford: Oxford University Press.
- May, R. C. 1977. The grammar of quantification. Ph.D. dissertation, MIT, Cambridge, MA.
- McCloskey, J. 1991. Clause structure, ellipsis and proper government in Irish. *Lingua* 85:259–302.
- McCloskey, J. 2005. On Goldberg. Workshop on Identity in Ellipsis, University of California, Berkeley.
- Merchant, J. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.
- Merchant, J. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27:661–738.
- Mohammad, J. & S. Karimi. 1992. 'Light' verbs are taking over: Complex verbs in Persian. In *Proceedings of the Western Conference on Linguistics*, ed. J. Nevins & V. Samiiian, 195–215. Fresno, CA: Department of Linguistics, California State University.

- Moyne, J. 1974. The so-called passive in Persian. *Foundations of Language* 12:249–267.
- Ngonyani, D. 1996. VP Ellipsis in Ndebele and Swahili applicatives. In *Syntax at sunset: UCLA working papers in syntax and semantics 1*, ed. E. Garrett & F. Lee, 109–128. Los Angeles: UCLA Department of Linguistics.
- Pullum, G. K. 2000. Hankamer was! In *Jorge Hankamer WebFest*, ed. S. Chung, J. McCloskey & N. Sanders. <http://ling.ucsc.edu/Jorge/pullum.html>.
- Rapp, I. & A. Von Stechow. 1999. *Fast* ‘almost’ and the visibility parameter for functional adverbs. *Journal of Semantics* 16:149–204.
- Ross, J. R. 1967. Constraints on variables in syntax. Ph.D. dissertation, MIT, Cambridge, MA.
- Schachter, P. 1977. Does she or doesn’t she? *Linguistic Inquiry* 8:763–767.
- Schuyler, T. 2002. *Wh*-movement out of the site of VP Ellipsis. Master’s thesis, University of California, Santa Cruz.
- Smith, C. S. 1997. *The parameter of aspect*. Dordrecht: Kluwer.
- Stainton, R. J. 2006. *Words and thoughts: Subsentences, ellipsis, and the philosophy of language*. Oxford: Clarendon Press.
- Von Stechow, A. 1996. The different readings of *wieder* ‘again’: A structural account. *Journal of Semantics* 13:87–138.
- Taleghani, A. 2006. The interaction of modality, aspect, and negation in Persian. Ph.D. dissertation, University of Arizona, Tucson.
- Zagona, K. 1982. Government and proper government of verbal projections. Ph.D. dissertation, University of Washington, Seattle.

Maziar Toosarvandani
University of California, Berkeley
Department of Linguistics
1203 Dwinelle Hall
Berkeley, CA 94720
USA

mtoosarvandani@berkeley.edu