

Persian*

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Abstract

There are elliptical constructions in Persian whose properties diverge from their better studied counterparts in other languages. A type of verb phrase ellipsis removes the nonverbal element and internal arguments of a complex predicate, though it can also strand a simple verb. Sluicing is derived through an information-structural movement operation, since the language does not have obligatory *wh*-movement. Gapping, stripping, and fragment answers may arise from the same operation: gapping and stripping allow for their antecedent to be embedded, and stripping and fragment answers are insensitive to island constraints.

Persian has several types of ellipsis familiar from other languages. These fall into three categories. First, there are elliptical constructions that occur exclusively in coordinations: gapping (1a), stripping (1b), and right node raising (1c). (The missing material is indicated by Δ .)¹

- (1) a. *Gapping*
Râdmehr diruz gusht xord va Giti Δ mâhi.
Rodmehr yesterday meat eat.PST.3SG and Giti fish
'Rodmehr ate meat yesterday, and Giti fish.' (Farudi 2013:58)
- b. *Stripping*
Farnâz qorme sabzi dorost kard=e yâ Maryam Δ ?
Farnaz *qorme sabzi* correct do.PTCP=be.PRS.3SG or Maryam
'Did Farnaz make *qorme sabzi* or Maryam?'
- c. *Right node raising*

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¹Any data not attributed to any source comes from two native speakers of Persian. Whether original or taken from elsewhere, all examples come from the variety of Persian spoken in Iran, which is called Farsi in the language itself. Other dialects are spoken in Afghanistan (Dari) and Tajikistan (Tajiki). Examples from other sources have been retranscribed, reglossed, and retranslated for uniformity.

The abbreviations used in the interlinear glosses are: ACC = accusative, ADJ = adjectivizer, CL = classifier, COMP = comparative, EZ = *ezafe*, IMP = imperative, IMPF = imperfective, IND = indefinite, NEG = negative, PST = past, PTCP = participle, PRS = present, SG = singular, SUB = subjunctive, SUP = superlative.

Ali dâstân=e kutâ Δ va Maryam român mi-xun-e.
 Ali story=EZ short and Maryam novel IMPF-read.PRS-3SG
 ‘Ali is reading a short story, and Maryam is reading a novel.’ (Shabani 2013a:152)

Second, there are elliptical constructions that can occur outside of coordination structures and whose antecedents can freely be located across sentence boundaries: verb phrase ellipsis (2a), sluicing (2b), and noun phrase ellipsis (2c).

- (2) a. *Verb phrase ellipsis*
 Sohrâb piran=â=ro otu na-zad vali Rostam Δ zad.
 Sohrab shirt=PL=ACC iron NEG-hit.PST.3SG but Rostam hit.PST.3SG
 ‘Sohrab didn’t iron the shirts, but Rostam did.’ (Toosarvandani 2009:61)
- b. *Sluicing*
 Râmin ye chiz=i xarid. Hads be-zan chi Δ.
 Ramin one thing=IND buy.PST.3SG guess SUB-hit what
 ‘Ramin bought something. Guess what.’ (Toosarvandani 2008:679)
- c. *Noun phrase ellipsis*
 Q: Xodkâr=e sabz dâr-i?
 pen=EZ green have.PRS-2SG
 ‘Do you have a green pen?’
 A: Δ Sabz na-dâr-am. Δ Âbi mi-xâ-y?
 green NEG-have.PRS-1SG blue IMPF-want.PRS-2SG
 ‘I don’t have a green one. Do you want a blue one?’ (Ghaniabadi 2010:68)

Finally, there are fragment answers, which are found in a different utterance from their antecedent.

- (3) *Fragment answer*
 Q: Ali chi xarid?
 Ali what buy.PST.3SG
 ‘What did Ali buy?’
 A: Δ Shalvâr Δ.
 pants
 ‘Pants.’ (Shabani 2013b:82)

In what follows, each of these constructions in Persian will be examined in turn. Several of them—namely, gapping and stripping, fragment answers, verb phrase ellipsis, and sluicing—turn out to have properties quite different from their counterparts in better studied languages.

There are a few other elliptical constructions, which either do not exist in Persian or cannot easily be distinguished from other kinds of null anaphora. Comparative deletion and subdeletion fall into this first category. While the language has phrasal comparatives (4a), any type of clausal comparative is strictly ungrammatical (4b–c). The requisite structure is simply not available: the preposition *az* ‘from’ does not take clausal complements, cf. Hindi (Bhatt and Takahashi 2011).

- (4) a. Sohrâb **az** Râmin boland-tar=e.
 Sohrab **from** Ramin tall-COMP=be.PRS.3SG
 ‘Sohrab is taller than Ramin.’

- b. * Sohrâb az Râmin $\Delta=e$ boland-tar=e.
 Sohrab from Ramin =be.PRS.3SG tall-COMP=be.PRS.3SG
 Intended: ‘Sohrab is taller than Ramin is.’
- c. * Sohrâb az mâshin derâz $\Delta=e$ boland-tar=e.
 Sohrab from car long =be.PRS.3SG tall-COMP=be.PRS.3SG
 Intended: ‘Sohrab is taller than the car is long.’

On the other hand, conjunction reduction and null complement anaphora look like run-of-the-mill null arguments. The subject in a coordination (5) or a clausal complement (6) can go missing.

- (5) Sohrâb mi-r-e farânse yâ Δ irân mi-mun-e?
 Sohrab IMPF-go.PRS-3SG France or Iran IMPF-stay.PRS-3SG
 ‘Will Sohrab go to France or stay in Iran?’
- (6) Q: Sohrâb=o Râmin mi-dun-an ke emtehân emruz=e?
 Sohrab=and Ramin IMPF-know.PRS-3PL that exam today=be.PRS.3SG
 ‘Do Sohrab and Ramin know that the exam is today?’
- A: Râmin mi-dun-e Δ .
 Ramin IMPF-know.PRS-3SG
 ‘Ramin knows.’

But in general, any argument can be null in Persian, including subjects (7a), direct objects (7b), and indirect objects (7a).

- (7) a. Dotâ xanum be man âb dâd-an. $\Delta \Delta$ Nun=ham dâd-an.
 two woman to me water give.PST-3PL bread=also give.PST-3PL
 ‘Two women gave me water. They gave me bread, too.’
- b. Râmin român=e engelisi xarid. Parhâm Δ barâ=sh tarjome kard.
 Ramin novel=EZ English buy.PST.3SG Parham for=3SG translation do.PST.3SG
 ‘Ramin bought an English novel. Parham translated it for him.’

It may not be impossible to isolate conjunction reduction and null complement anaphora in Persian as distinct elliptical constructions, but this challenging work remains to be done.

1 Gapping and stripping

In English, gapping removes the finite verb and possibly more in the second and subsequent coordinates of a coordination, leaving behind two remnants. Persian has an elliptical construction like this: just the main verb goes missing in (8a), and it goes missing with additional material in (8b).

- (8) a. Ânâhitâ mâhi xord va Râd gusht Δ .
 Annahita fish eat.PST.3SG and Rod meat
 ‘Annahita ate fish, and Rod meat.’
- b. Râtâ bastani=ro be Pari dâd va Mehrân Δ be Farmehr Δ .
 Rata ice.cream=ACC to Pari give.PST.3SG and Mehran to Farmehr
 ‘Rata gave ice cream to Pari, and Mehran to Farmehr.’ (Farudi 2013:57–59)

As discussed in §1.4, it is possible to strand a single remnant, a construction often called stripping. But leaving behind three remnants is degraded (9), likely for the same reasons it is in English.

- (9) ?? Ârtur be Giti pul dâd va Pari be Ânâhitâ kârt Δ.
 Arthur to Giti money give.PST.3SG and Pari to Annahita card
 ‘Arthur gave money to Giti, and Pari (gave) a card to Annahita.’ (Farudi 2013:61)

In English, gapping can remove just the finite auxiliary, leaving the main verb behind in a nonfinite form, e.g. *Kim can play bingo, and Sandy Δ stay at home*. This is not possible in Persian.

- (10) a. * Sâra be Giti pul dâde bud va Mahin az Mâzyâr ketâb
 Sara to Giti money give.PTCP be.PST.3SG and Mahin from Maziar book
 gerefte Δ.
 take.PTCP
 Intended: ‘Sara had given money to Giti, and Mahin taken a book from Maziar.’
 (Farudi 2013:68)
- b. * Sohrâb be bâshgâh xâh-ad raft va Râmin xune Δ mund.
 Sohrab to gym want.PRS-3SG go and Ramin home stay
 Intended: ‘Sohrab will go to the gym, and Ramin stay home.’

Neither the perfect aspect auxiliary *budan* ‘be’ (10a) nor the future tense auxiliary *xâstan* ‘want’ (10b) can go missing in gapping all by itself.

1.1 Three properties of gapping

Moving beyond this surface characterization, Johnson (2009) identifies three properties of gapping that distinguish it from other elliptical operations in English, such as verb phrase ellipsis. First, gapping is restricted to coordinate structures, a property that gapping in Persian shares. It appears with both simple coordinators, such as *va* ‘and’ (11a), and complex ones, such as *na...na* (11b), cf. *either...or* (Schwarz 1999). But gapping is not permitted in a subordinate clause, such as a temporal adjunct (12a)² or the antecedent of a conditional (12b).

- (11) a. Man mâhi xord-am va Giti gusht Δ.
 I fish eat.PST-1SG and Giti meat
 ‘I ate fish, and Giti meat.’ (Farudi 2013:66)
- b. Na Farnâz qorme sabzi dorost kard=e na Maryam qeyme.
 NEG Farnaz qorme sabzi correct do.PTCP=be.PRS.3SG NEG Maryam qeyme
 ‘Neither Farnaz made *qorme sabzi*, nor Maryam *qeyme*.’
- (12) a. * Ânâhitâ mâhi xord [bad az in ke Giti gusht Δ].
 Annahita fish eat.PST.3SG after from this that Giti meat
 Intended: ‘Annahita ate fish after Giti ate meat.’

²The clausal complements of prepositions, such as *az* ‘from’, must be introduced by the determiner *in* ‘this’.

- b. * Dâryush be Giti pul mi-d-e [agar Râtâ be Ânâhitâ Δ].
 Daryush to Giti money IMPF-give.PRS-3SG if Rata to Annahita
 Intended: ‘Daryush will give money to Giti if Rata will to Annahita.’
 (Farudi 2013:64)

Gapping in Persian does not, however, share the other two properties that Johnson identifies.

In English, the material that goes missing in gapping cannot be contained within an embedded clause, e.g. **Some had eaten mussels, and she claims that others shrimp* (Johnson 2009:293). In Persian, Farudi (2013:81f.) observes that this is possible.

- (13) Mahsâ in ketâb=ro dust dâr-e vali hichkas bâvar ne-mikon-e
 Mahsa this book=ACC friend have.PRS-3SG but no.one belief NEG-do.PRS-3SG
 [mâmân=esh un ketâb=ro Δ].
 mother=3SG that book=ACC
 ‘Mahsa likes this book, but nobody believes that her mother likes that book.’

The antecedent of the missing material also cannot be contained in an embedded clause in English, e.g. **She’s said Peter has eaten his peas, and Sally her green beans, so now we can have dessert* (Johnson 2009:239). But again, Farudi demonstrates (pp. 82–85) that this is possible in Persian. (The antecedent material is bolded in the examples below.)

- (14) Fekr mi-kon-am [ke Ânâhitâ châyî=ro **xord**] vali Giti qahva=ro Δ.
 thought IMPF-do.PRS-1SG that Annahita tea=ACC **eat.PST.3SG** but Giti coffee=ACC
 ‘I think that Annahita drank tea, but Giti drank coffee.’
 ‘I think that Annahita drank tea but that Giti drank coffee.’ (Farudi 2013:84)

Crucially, in (14), the antecedent is embedded in the first coordinate only under the first interpretation. The second interpretation, where the entire coordination structure is embedded, is irrelevant. This confound is avoided by embedding the gap and the antecedent separately in each coordinate.

- (15) Ajib nist [ke Râdmehr mâhi=ro **xord=e**] vali
 strange NEG.be.PRS.3SG that Rodmehr fish=ACC **eat.PTCP=be.PRS.3SG** but
 ajib=e [ke Ânâhitâ gusht=ro Δ].
 strange=be.PRS.3SG that Annahita meat=ACC
 ‘It’s not strange that Rodmehr ate fish, but it is strange that Annahita ate meat.’³
 (Farudi 2013:85)

This contrasts strikingly with the parallel gapping sentence in English — **It’s not strange that Rodmehr ate fish, but it is strange that Annahita Δ meat* — which is decidedly ungrammatical.

1.2 Towards an analysis

The derivation of gapping in Persian can use some of the same ingredients that it does in English. Since gapping does not have to remove a constituent, e.g. (8b), it is usually derived through movement of the remnants, followed by either deletion (Sag 1976:189–300, Jayaseelan 1990:73–78,

³Farudi assigns ‘?’ as the judgment for (15), but both speakers I consulted with judged it fully grammatical.

a.o.) or across-the-board movement (Johnson 2004b). There are two arguments that the remnants in gapping also undergo movement in Persian. First, as Farudi observes (pp. 71–74), a remnant cannot originate inside an island. (The islands in these examples are bracketed.)

(16) a. *Complex NP Constraint*

*Giti [mard=hâ=yi ke **futbâl** bâzi mi-kon-an] dust dâr-e va
Giti man=PL=IND that **soccer** game IMPF-do.PRS-3PL friend have.PRS-3SG and
Sârâ Δ **tenis** Δ.
Sara **tennis**

Intended: ‘Giti likes men who play soccer, and Sara likes men who play tennis.’

b. *Coordinate Structure Constraint*

*Râmin [kabâb xord va **ruznâme** xund] va Sohrâb Δ **român** Δ.
Ramin kebab eat.PST.3SG and **newspaper** read.PST.3SG and Sohrab **novel**

Intended: ‘Ramin ate kebab and read the newspaper, and Sohrab ate kebab and read a novel.’

c. *Adjunct Constraint*

*Moallem [chon **Râmin** sar=e kelâs dir umad] az=ash nomre kam
teacher since **Ramin** head=EZ class late come.PST.3SG from=3SG grade little
kard va man Δ **Sohrâb** Δ.
do.PST.3SG and I **Sohrab**

Intended: ‘The teacher took off points because Ramin was late coming to class, and I took off points because Sohrab was late coming to class.’

Second, remnants exhibit the same case marking they would have if they had occupied a case position at some point in the derivation.

(17) Ânâhitâ mâhi=ro xord va Râd **gusht(=ro)** Δ.
Annahita fish=ACC eat.PST.3SG and Rod **meat=ACC**

‘Annahita ate the fish, and Rad the meat.’

(Farudi 2013:57)

While the accusative case marker is only optionally present in (17), the fact that it is possible at all suggests that the remnant originates as the complement of a verb that has gone missing.

1.3 No low coordination in Persian

If the remnants in gapping undergo movement in Persian, where do they move to? The answer to this question depends in part on how large the coordination structure in gapping is. Building on earlier work by Siegel (1987), Johnson (2004b, 2009) proposes for English that gapping always involves low coordination: a single T head is shared by more than one vP coordinate. There is thus never a finite verbal element inside the second and subsequent coordinates. Additional material is removed through across-the-board movement, or possibly deletion (Coppock 2001, Lin 2002).

Johnson (2009:296–300) argues that the syntax of low coordination accounts for at least two of the properties of gapping (see also Toosarvandani 2016). The missing material cannot be embedded because a single T head cannot be shared both with the first coordinate and a vP that is embedded

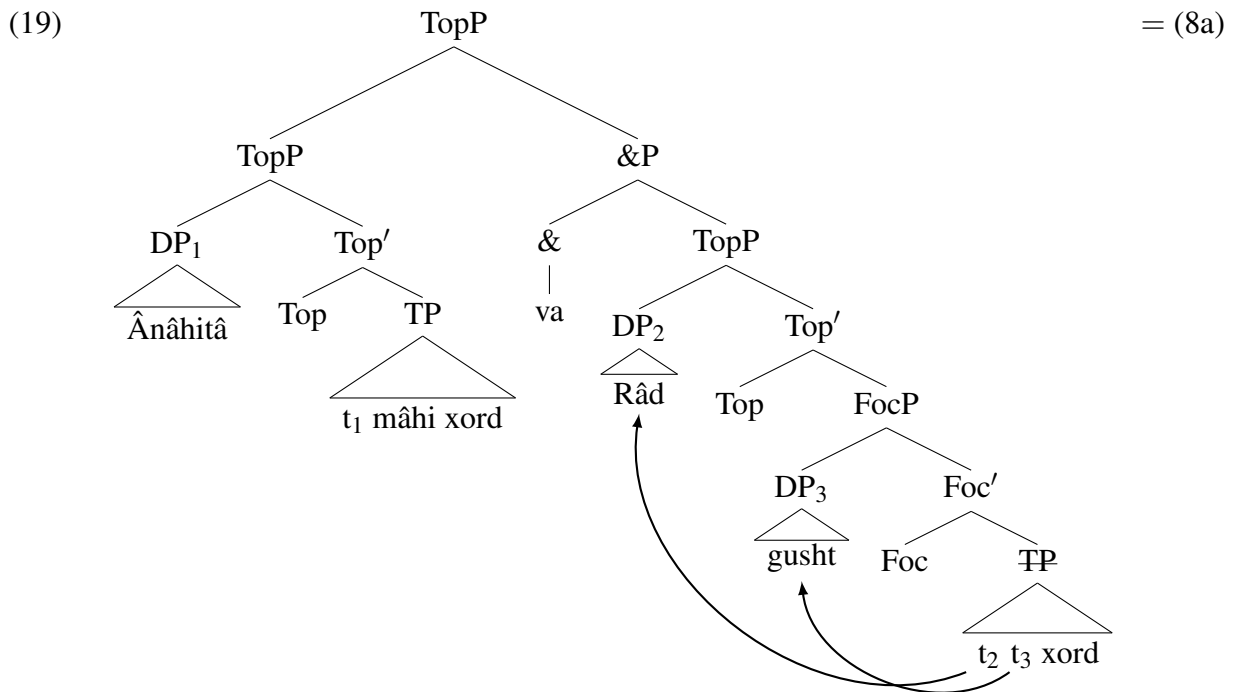
inside a coordinate. Similarly, the antecedent cannot be embedded because a single T head cannot be shared both with the second vP coordinate and a vP embedded inside the first coordinate.

But gapping in Persian does not exhibit these two properties. This is plausibly, as Farudi argues (pp. 101–189), because it does not use low coordination. In English, negation can take wide scope over conjunction in gapping, e.g. *Ward can't eat caviar, and his guest Δ beans* (Siegel 1987:53). In Persian, however, this wide scope interpretation is never possible.

- (18) Bizhan xâvyâr ne-mi-xor-e va Maryam noxod Δ.
 Bijan caviar NEG-IMPF-eat.PRS-3SG and Maryam chickpea
 ‘Bijan doesn’t eat caviar, and Maryam doesn’t eat chickpeas.’ $\neg p \wedge \neg q$
 Not possible: ‘It’s not the case Bijan eats caviar and Maryam eats chickpeas.’ $\neg(p \wedge q)$
 (Farudi 2013:105)

Since negation can only take narrow scope within each conjunct, gapping in Persian must coordinate full clauses.

In this clausal coordination structure, Farudi proposes that the remnants move to left-peripheral positions dedicated to topic and focus (see §5.1 for discussion of these positions). As a consequence, across-the-board movement cannot be responsible for removing material in Persian, as Johnson (2004b, 2009) proposes for English. Instead, TP in the second coordinate must be deleted.



This derivation for gapping in Persian accounts for why it allows both the gap (12) and its antecedent (14a–b) to be embedded: T is not shared across coordinates. In addition, it accounts for why finite auxiliaries cannot go missing all by themselves (10a–b). If they are located in T and cannot move, they will always be contained in the elided constituent.

Since gapping in Persian does not involve low coordination, one property—the restriction to coordinations—remains unexplained. Farudi conjectures (pp. 211–235) that it derives from the inventory of heads available in Persian to license ellipsis. Coordinators, but not subordinators,

possess a version of Merchant’s (2001) E-feature that can trigger deletion of TP. If this is correct, then it must be possible for a head to license ellipsis of a phrase that is not its complement, *pace* Lobeck (1995) and others. This might happen through agreement (Aelbrecht 2010), or as Farudi suggests, through movement of TP into the specifier of the coordinator that licenses ellipsis.

1.4 When there is just one remnant

It is also possible for just one remnant to be left behind in Persian. Sometimes this elliptical construction is called stripping, though it exhibits many of the same properties as gapping. To start, stripping is available in coordination structures with simple (20a) and complex (20b) coordinators.⁴

- (20) a. Farnâz *qorme sabzi dorost kard=e* **yâ** Maryam Δ?
 Farnaz *qorme sabzi* correct do.PTCP=be.PRS.3SG **or** Maryam
 ‘Did Farnaz make *qorme sabzi* or Maryam?’
- b. **Ham** Farnâz *qorme sabzi dorost kard=e* **ham** Maryam Δ.
also Farnaz *qorme sabzi* correct do.PTCP=be.PRS.3SG **also** Maryam
 ‘Both Farnaz made *qorme sabzi* and Maryam did.’

Stripping is ungrammatical in temporal adjuncts (21a) and in the antecedents of conditionals (21b).

- (21) a. * Ânâhitâ mâhi xord [baad az in ke Giti Δ].
 Annahita fish eat.PST.3SG **after from** this that Giti
 ‘Annahita ate fish after Giti ate fish.’
- b. * Dâryush be Giti pul mi-d-e [age Râtâ Δ].
 Daryush to Giti money IMPF-give.PRS-3SG **if** Rata
 Intended: ‘Daryush will give money to Giti if Rata will give to money to her.’

In addition, the gap can be embedded (22), as can its antecedent in the first coordinate (23). Both the gap and the antecedent also can be embedded separately in each coordinate (24).

- (22) Mâmân savâr=e charxfalak shod vali hichkas fekr
 mom aboard=EZ roller.coaster become.PST.3SG but no.one thought
 ne-mi-kon-e ke bâbâ=ham.
 NEG-IMPF-do.PRS-3SG that dad=also
 ‘Mom got on a roller coaster, but nobody believes that dad did, too.’
- (23) Shenid-am [ke pedar mâdar=et **irân raft-an**] vali xâhar=et na Δ.
 hear.PST-1SG that father mother=2SG **Iran go.PST-3PL** but sister=2SG NEG
 ‘I heard that your parents went to Iran, but your sister didn’t.’
 ‘I heard that your parents went to Iran but that your sister didn’t.’
- (24) Sam fekr mi-kon-e [ke espânyâ **World Cup=ro be-bar-e**] va John
 Sam thought IMPF-do.PRS-3SG that Spain **World Cup=ACC SUB-win-3SG** and John
 fekr mi-kon-e [ke **porteqâl** Δ].
 thought IMPF-do.PRS-3SG that **Portugal**

⁴There may be some interspeaker variation in the coordinators that are permitted with stripping. In certain contexts, one reviewer did not allow stripping with *va* ‘and’, though other speakers I consulted with found it perfectly fine.

‘Sam thinks that Spain will win the World Cup, and John thinks that Portugal will win the World Cup.’ (Farudi 2013:85)

Farudi’s account of gapping can be extended straightforwardly to stripping. The sole remnant moves to a left-peripheral position, while the rest of the clause is elided. There is some evidence for this movement: the remnant can bear the accusative case marker when it is the direct object.

- (25) Pardis piran=**â=ro** otu zad=**e** vali na Δ **shalvâr=**â=ro**** Δ .
 Pardis shirt=PL=ACC iron hit.PTCP=**be.PRS.3SG** but NEG **pant=PL=ACC**
 ‘Pardis ironed the shirts, but not the pants.’

Stripping does not, however, exhibit the same sensitivity to islands that gapping does. This is in fact expected if stripping involves deletion of TP in Persian. Sluicing, another elliptical operation that removes full clauses, is similarly island insensitive (Ross 1969:276f.).

- (26) a. *Complex NP Constraint*
 Giti [mard=**â=yi** ke **futbâl** bâzi mi-kon-an] dust dâr-e yâ Δ
 Giti man=PL=IND that **soccer** game IMPF-do.PRS-3PL friend have.PRS-3SG or
tenis Δ ?
tennis
 ‘Does Giti like men who play soccer or tennis?’
- b. *Coordinate Structure Constraint*
 Moqe=**ye** nâhâr harruz Râmin [kabâb mi-xor-e va **ruznâme**
 time=EZ lunch every.day Ramin kebab IMPF-eat.PRS-3SG and **newspaper**
 mi-xun-e] yâ Δ **român** Δ .
 IMPF-read.PRS-3SG or **novel**
 ‘Every day for lunch, Ramin eats kebab and reads the newspaper, or he eats kebab and reads a novel.’
- c. *Adjunct Constraint*
 Moallem [chon **Râmin** sar=**e** kelâs dir umad] asabâni
 teacher since **Ramin** head=EZ class late come.PST.3SG angry
 shod yâ Δ **Sohrâb** Δ ?
 become.PST.3SG or **Sohrab**
 ‘Did the teacher get angry because Ramin came to class late, or did she get angry because Sohrab came to class late?’

It is the island sensitivity of gapping in Persian that is more surprising (16a–c), if it has the same derivational source. It may be tempting to attribute this to an independent constraint on remnants straddling a finite clause boundary, e.g. **Charles decided that 20 boys are coming along, and Harrie 30 girls* (Neijt 1979:142). But remnants in gapping also cannot originate inside a coordinate structure (16b), where there is no clause boundary to separate them. It remains an open question why leaving behind two remnants, as opposed to just one remnant, is sensitive to islands.

2 Fragment answers

Fragment answers in Persian involve ellipsis, as in other languages (Merchant 2004). Shabani (2013b:84–86) shows that they occur in an argument position at some level of representation. A direct object fragment, for instance, bears accusative case.

- (27) Q: Diruz chi=ro xarid-i?
 yesterday what=ACC buy.PST-2SG
 ‘What did you buy yesterday?’
 A: Mashin*(=o) Δ.
 car=ACC
 ‘The car.’ (Shabani 2013b:84)

In addition, fragment answers interact with the binding principles—Condition A (28a), Condition B (28b), and Condition C (28c)—as if they have occupied an argument position.

- (28) a. Q: Ali₁ ki=ro dust dâr-e?
 Ali who=ACC friend have.PRS-3SG
 ‘Who does Ali₁ like?’
 A: Xod=esh=o₁ Δ.
 self=3SG=ACC
 ‘Himself₁.’
 b. Q: Ali₁ sa’y mi-kon-ad ki=ro gij kon-ad?
 Ali trying IMPF-do.PRS-3SG who=ACC confused do.PRS-3SG
 ‘Who is Ali trying to confuse?’
 A: *U=ro₁ Δ.
 him=ACC
 Intended: ‘Him₁.’
 c. Q: U₁ kojâ zendegi mi-kon-ad?
 he where life IMPF-do.PRS-3SG
 ‘Where does he₁ live?’
 A: *Dar xâne=ye Ali₁ Δ.
 in house=EZ Ali
 Intended: ‘In Ali₁’s house.’ (Shabani 2013b:85)

Following Merchant (2004), Shabani proposes (pp. 95–98) that fragments in Persian move to a position in the left-periphery before TP is elided, though this is not the same position as in English.

There is a striking difference between fragment answers in Persian and other languages. While fragments are sensitive to islands in English (29), they are not in Persian (30a–b).

- (29) Q: Does Abbey speak [the same Balkan language that **Ben** speaks]?
 A: *No, **Charlie** Δ. (Merchant 2004:708–711)
 (30) a. *Complex NP Constraint*

Q: [Har âdam=i ke **che kas=i=sh** kotak be-zan-ad]
 every person=IND that **what person=IND=3SG** beating SUB-hit-3SG
 divâne ast?
 crazy be.PRS.3SG
 ‘Who does every person who is crazy beat?’

A: **Zan=esh=o** Δ.
wife=3SG=ACC
 ‘Their wife.’ (Shabani 2013b:95)

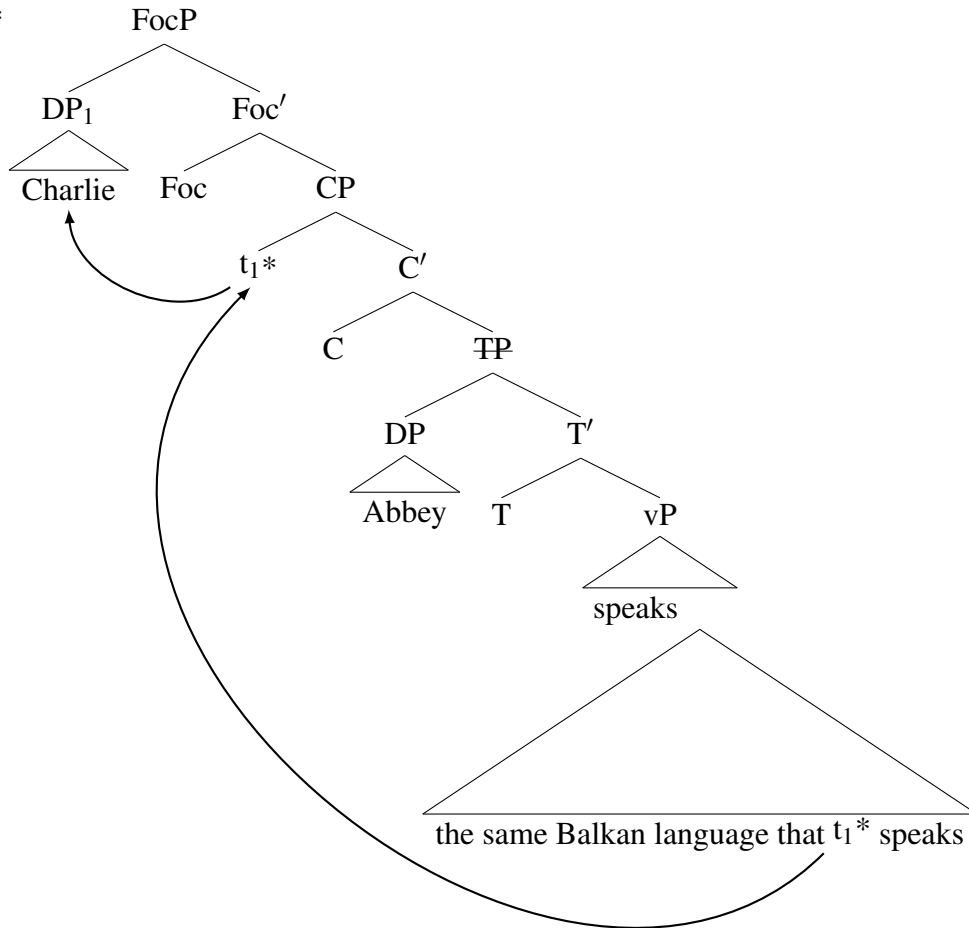
b. *Adjunct Constraint*

Q: Har âdam=i xeyli azyat mi-sh-e [vaqt=i]
 every person=IND very annoyed IMPF-become.PRS-3SG time=IND
kojâ=sh dard mi-gir-e]?
where=3SG pain IMPF-get.PRS-3SG
 ‘Where does every person become annoyed when it hurts?’

A: Qalb=esh Δ.
 heart=3SG
 ‘Their heart.’ (Shabani 2013b:96)

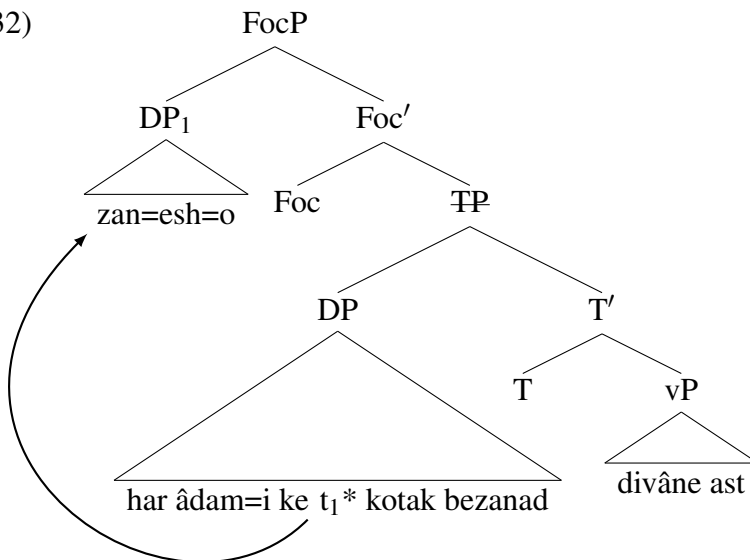
For English, Merchant (2004) argues that the remnant raises to a focus projection located above CP. When it originates inside an island, the traces it leaves behind are marked as uninterpretable at PF: they crash the derivation unless they are deleted (see also Fox and Lasnik 2003 and Merchant 2008). The fragment answer in (29) is ungrammatical, then, because the trace that the remnant leaves as it moves cyclically through Spec-CP is not deleted.

(31) * = (29)



For Persian, Shabani proposes that the remnant only raises as high as a focus position that is located immediately above TP (see §5.1 for the properties of this position). This derives the island insensitivity of fragment answers: when the TP is deleted, all traces of the remnant are also deleted.

(32) = (30a)



This derivation for fragment answers parallels the derivation of stripping in Persian, which accounts for their shared insensitivity to island constraints. But, while stripping is restricted to coor-

If right node raising used only ellipsis, the relational adjective would be present once inside each coordinate, and neither occurrence would have a plural subject, which is needed to license the internal reading.

From Shabani’s perspective, it is surprising that inflectional mismatches are never allowed between the pivot and the gap in the first coordinate in Persian. In (36), the verb *mixune* ‘read’ is in the imperfective aspect, satisfying the selectional requirements of the progressive auxiliary *dâshtan* ‘have’, but not the verb *xâstan* ‘want’, which selects for an embedded verb in the subjunctive mood, cf. (55). Person-number agreement also has to match between the two coordinates (37) (Farudi 2013:66f.).

- (36) *Maryam tu=ye dâneshgâh mi-xâ-d Δ va Râmin alân dê-e
 Maryam tu=EZ university IMPF-want.PRS-3SG and Ramin now have.PRS-3SG
fizik mi-xun-e.
physics IMPF-read.PRS-3SG
 ‘Maryam wants to study physics at university, but Ramin is doing so now.’
- (37) *Man mâhi Δ va Giti gusht **xord.**
 I fish and Giti meat **eat.PST.3SG**
 Intended: ‘I ate fish, and Giti ate meat.’ (Farudi 2013:66f.)

If both ellipsis and multidominance are possible sources for right node raising in Persian, then such mismatches should be possible. Ellipsis does not usually require identity in inflectional form between the material that goes missing and its antecedent.

There has not been a lot of crosslinguistic investigation of right node raising. But there is some evidence that different languages may use different strategies for deriving right node raising. Irish has been argued not to use movement to derive right node raising (McCloskey 1986), while Tagalog does (Sabbagh 2008). Sabbagh (2012) observes that this crosslinguistic variation is not surprising if multiple strategies can coexist alongside one another in a single language. This may be the case in Persian, just as it is in English.

4 Verb phrase ellipsis

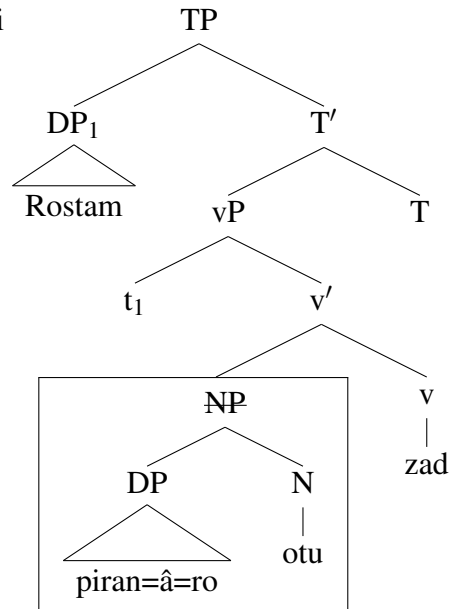
Persian does not have verb phrase ellipsis of the same kind found in English. It is not possible to elide the entire verb phrase, leaving behind an auxiliary (38). But part of a complex predicate (or light verb construction) can go missing. In (39), the direct object *piran=â=ro* ‘the shirts’ and the nominal nonverbal element *otu* ‘iron’ are elided, leaving the light verb *zadan* ‘hit’ behind.⁵

- (38) *Rostam be dandun-pezeshk rafte bud va Sohrâb=ham Δ bud.
 Rostam to tooth-doctor go.PTCP be.PST.3SG and Sohrab=also be.PST.3SG
 Intended: ‘Rostam had gone to the dentist, and Sohrab had, too.’
- (39) Sohrâb piran=â=ro otu na-zad vali Rostam Δ zad.
 Sohrab shirt=PL=ACC iron NEG-hit.PST.3SG but Rostam hit.PST.3SG
 ‘Sohrab didn’t iron the shirts, but Rostam did.’ (Toosarvandani 2009:61)

⁵Complex predicates are formed productively in Persian. The class of simple verbs, which numbers some 115 members, is mostly closed (Mohammad and Karimi 1992:195).

According to one theory of complex predicates (Folli et al. 2005), the light verb is the overt realization of *v*, selecting for the external argument (see also Megerdooian 2002, Pantcheva 2009). The nonverbal element, which selects for any internal arguments, heads its complement. It is this phrase, Toosarvandani (2009) proposes, that is elided.

(40) Sohrâb piran=â=ro otu nazad vali = (39)



In English, verb phrase ellipsis gives rise to pseudogapping when it leaves behind a remnant. This is not possible with ellipsis in Persian complex predicates (see also Farudi 2013:149).

- (41) a. Rostam mâshin=esh=o be man neshun dâd va Sohrâb=ham Δ
 Rostam car=3SG=ACC to me showing give.PST.3SG and Sohrab=also
 dâd.
 give.PST.3SG
 ‘Rostam showed his car to me, and Sohrab did, too.’
- b. *Rostam mâshin=esh=o be man neshun dâd va Sohrâb
 Rostam car=3SG=ACC to me showing give.PST.3SG and Sohrab
motor=esh=o Δ dâd.
motorcycle=3SG=ACC give.PST.3SG
 Intended: ‘Rostam showed his car to me, and Sohrab did his motorcycle.’
- c. *Rostam mâshin=esh=o be man neshun dâd va Sohrâb **be dust=emun**
 Rostam car=3SG=ACC to me showing give.PST.3SG and Sohrab **to friend=1PL**
 Δ dâd.
 give.PST.3SG
 Intended: ‘Rostam showed his car to me, and Sohrab did to our friend.’

In (41a), the nonverbal element *neshun* ‘showing’ is elided along with the direct and indirect objects. Neither of the internal arguments can be left behind (41b–c).

4.1 Not just a null argument

Since DPs and PPs go missing freely in Persian (7a–c), the missing nonverbal element and internal argument in (39) might also just be null arguments. There are two arguments that seem initially to preclude this conclusion. First, the missing object in (41a) can have a strict reading (it is Ramin’s car that Sohrab showed me) or a sloppy reading (it is his own car). This ambiguity is a well-known property of elliptical operations, such as verb phrase ellipsis (Ross 1967:348). Second, the missing nonverbal element in (39) receives an indefinite interpretation: it describes a novel ironing event of which Rostam is the agent. In English, an elided verb phrase has the same indefinite interpretation.

But as Shafiei (2015:11) observes, null arguments in Persian also exhibit the strict-sloppy ambiguity, a property it shares with Chinese, Japanese, and Korean (Otani and Whitman 1991). In (42), the null object can refer to either Rostam or Ramin’s car.

- (42) Rostam mâshin=esh=ro be Sohrâb neshun dâd, vali Râmin Δ neshun
 Rostam car=3SG=ACC to Sohrab showing give.PST.3SG but Ramin showing
 na-dâd.
 NEG-give.PST.3SG
 ‘Rostam₁ showed his₁ car to Sohrab, but Ramin₂ didn’t show his_{1/2} car to him.’
 (Shafiei 2015:11)

Shafiei also observes that null arguments can have a quantificational interpretation in Persian, like their counterparts in Japanese (Takahashi 2008). In (43), the missing object is interpreted as an indefinite, since the sentence is compatible with Sohrab showing the speaker two or fewer cars.

- (43) Râmin be man se-tâ mâshin neshun dâd ammâ Sohrâb be man Δ
 Ramin to me three-CL car showing give.PST.3SG but Sohrab to me
 neshun na-dâd.
 showing NEG-give.PST.3SG
 ‘Ramin showed me three cars, but Sohrab didn’t show me three cars.’

Since these properties are shared by verb phrase ellipsis and null arguments, they are not useful for settling whether the ellipsis in complex predicates can be reduced to one or more null arguments.

But there are some more decisive arguments (Toosarvandani 2009:66–68). In Persian, null arguments exhibit properties of deep anaphora (Hankamer and Sag 1976). They can have an antecedent that is present solely in the nonlinguistic context (44a). It is also not possible to extract out of them (44b).

- (44) a. Context: A child picks up a broom to sweep the carpet. Her mother says:
 Movâzeb bâsh xub (**farsh=o**) jâru be-zan-i!
 careful be.IMP.2SG good **carpet=ACC** broom SUB-hit-2SG
 ‘Be careful to sweep the carpet well!’
 b. *Rostam qasam xord ke piran=o otu zad=e, va
 Rostam oath eat.PST.3SG that shirt=ACC iron hit.PTCP=be.PRS.3SG and
shalvâr=o=ham qasam xord Δ .
pants=ACC=also oath eat.PST.3SG
 Intended: ‘Rostam swore he ironed the shirt, and the pants, too.’

By contrast, the ellipsis in complex predicates exhibits the properties of a surface anaphor. Like verb phrase ellipsis (Hankamer and Sag 1976:414), it cannot have a nonlinguistic antecedent (45a). It is also possible to extract out of the ellipsis site (45b), again just like verb phrase ellipsis (Schuyler 2002).

- (45) a. Context: A child picks up a broom to sweep the carpet. Her mother says:
 Motmaen bâsh xub #(farsh-o jâru) be-zan-i!
 sure be.IMP.2SG well carpet=ACC broom SUB-hit-2SG
 ‘Be sure to sweep the carpet well!’ (Toosarvandani 2009:67)
- b. Rostam piran=o otu na-zad=e vali shalvâr=o
 Rostam shirt=ACC iron NEG-hit.PTCP=be.PRS.3SG but pants=ACC
 mi-dun-am ke Δ zad=e.
 IMPF-know.PRS-1SG that hit.PTCP=be.PRS.3SG
 ‘Rostam didn’t iron the shirt, but I know that he ironed the pants.’
 (Toosarvandani 2009:68)

When the nonverbal element and internal arguments go missing in a complex predicate, they are not simply null arguments. They are removed by an operation like verb phrase ellipsis.

4.2 Evidence for low ellipsis

On the surface, this ellipsis in complex predicates resembles verb phrase ellipsis in languages with verb raising. In Hebrew, Irish, and Swahili, V raises to T, so that when vP is deleted, the main verb is stranded (McCloskey 1991, Ngonyani 1996, Doron 1999, Goldberg 2005). This raises the possibility that the light verb raises to T and the entire vP is elided in complex predicates. It is difficult to demonstrate where Persian has verb raising since the language is verb final: head movement of the verb to a (right-headed) T would be string vacuous. The interpretation of certain adverbs, however, shows that just the complement of v goes missing.

The adverb *dobâre* ‘again’ is semantically ambiguous when it modifies a transitive causative verb, like its counterpart in English. Under the repetitive reading, it presupposes a previous occurrence of the entire causative event, while under the restitutive reading, it presupposes only a previous occurrence of the result state. Under one analysis, these readings correspond to different adjunction sites for the adverb in the extended verbal projection (von Stechow 1996, Rapp and von Stechow 1999). As Johnson (2004a:7–9) shows for verb phrase ellipsis in English, this ambiguity can be used to probe the size of a constituent that has gone missing.

In the complex predicate *pâk kardan* ‘clean’, the adjective *pâk* ‘clean’ encodes the result state of being clean. If just the constituent headed by this adjective is elided, then *dobâre* ‘again’ should be able to survive ellipsis and have a restitutive reading.

- (46) Dishab âshpazxune pâk bud. Leylâ umad kasif=esh kard.
 last.night kitchen clean be.PST.3SG Leila come.PST.3SG dirty=3SG do.PST.3SG
 Kes=i na-raft pâk=esh bo-kon-e. Emshab mi-xâ-m
 person=IND NEG-go.PST.3SG clean=3SG SUB-do-3SG tonight IMPF-want.PRS-1SG
dobâre Δ bo-kon-am.
again SUB-do-1SG

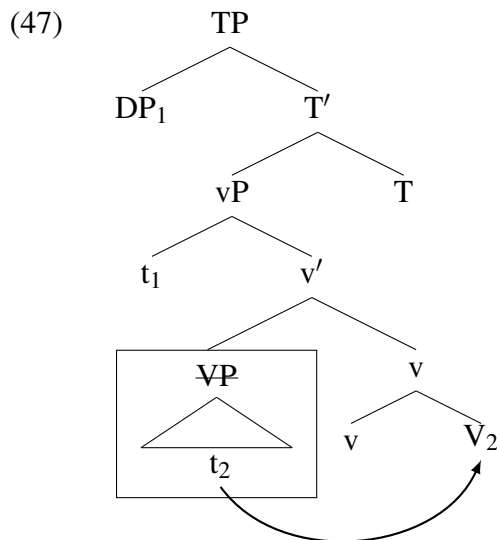
‘Last night, the kitchen was clean. Leila came and dirtied it. Nobody went to clean it.
Tonight, I will clean it again.’ (Toosarvandani 2009:76)

Indeed, the sentence in (46) has the restitutive reading: the preceding context only entails that the kitchen was clean earlier, not that the speaker cleaned it before.

In Persian complex predicates, ellipsis removes the complement of *v*, a constituent smaller than the *vP* that is removed by verb phrase ellipsis in English (Johnson 2004a, Merchant 2013). At the same time, both operations appear to be licensed locally by an inflection bearing verbal element. In English, this is an auxiliary or modal (Lobeck 1995:40, Merchant 2001:60), while in Persian it can be a light verb, which bears tense, aspect, and mood morphology, in addition to agreement.

4.3 Stranding a simple verb

While Persian may not have verb raising all the way to T, *V* presumably raises to *v* outside of complex predicates. If the complement of *v* can be elided, it might be possible to strand a simple verb, as in Hebrew, Irish, and Swahili. But in Persian, it would be stranded in *v*.



Sailor (2009:59–62) proposes that the answer in (48) has precisely this derivation (see also Rasekhi 2014). The simple verb raises to *v* before VP is elided. Just the internal argument goes missing.

- (48) Q: Naysan ketâb=o xund?
Naysan book=ACC read.PST.3SG
‘Did Naysan read the book?’
A: Na, Δ **na-xund**.
no NEG-read.PST.3SG
‘No, he didn’t read it.’ (Sailor 2009:61)

Of course, since Persian has null arguments, the answer in (48) has another derivation in which the direct object is simply not pronounced.

Sailor contends that there are some contexts where only the derivation with ellipsis is available. When there is a manner adverbial like *bâ deqqat* ‘carefully’ in the antecedent clause, it seems to be interpreted inside the site of ellipsis as well.

- (49) Naysan ketâb=ro **bâ deqqat** xund. Nasim=ham Δ xund.
 Naysan book=ACC **with attention** read.PST.3SG Nasim=also read.PST.3SG
 ‘Naysan read the book carefully. Nasim also read it carefully.’ (Sailor 2009:60)

But this sentence would be true in a situation where Nasim reads the book carefully, even if the adverbial was not contained in the elided constituent. It would have the weaker entailment that Nasim reads the book in *any* manner. To eliminate this confound, the elided constituent must occur in a downward entailing environment.

- (50) Context: Maysam read the book carefully; Nasim read it, too, but very quickly.
 Maysam ketâb=o **bâ deqqat** xund ammâ Nasim Δ na-xund.
 Maysam book=ACC **with attention** read.PST.3SG but Nasim NEG-read.PST.3SG
 ‘Maysam read the book carefully, but Nasim didn’t read it carefully.’

The sentence in (50) is true in a situation where Nasim reads the book but does not do so carefully. Assuming that adverbs cannot simply be null, this interpretation must arise through ellipsis of a constituent that contains the adverb. In Persian, not only can verb phrase ellipsis remove the phrase headed by the nonverbal element in a complex predicate, it can also elide a VP, stranding a simple verb.

5 Sluicing

Persian has a sluicing construction that superficially resembles its counterpart in other languages. In (51), everything in a constituent question is elided except for the *wh*-phrase.

- (51) Râmin ye chiz=i xarid. Hads be-zan chi Δ.
 Ramin one thing=IND buy.PST.3SG guess IMP-hit.2SG what
 ‘Ramin bought something. Guess what.’ (Toosarvandani 2008:679)

In English, sluicing is a product of obligatory *wh*-movement, which strands the remnant outside the constituent that is deleted (Merchant 2001). But Persian is a *wh*-in-situ language: in a fully pronounced constituent question, the *wh*-phrase does not have to move.

- (52) Râmin ye chiz=i xarid. Hads be-zan Râmin **chi** xarid.
 Ramin one thing=IND buy.PST.3SG guess IMP-hit.2SG Ramin **what** buy.PST.3SG
 ‘Ramin bought something. Guess what Ramin bought.’ (Toosarvandani 2008:679)

But *wh*-phrases are not completely immobile in Persian. There are several scrambling operations that have different information structural consequences. One of these—focus fronting—moves a phrase into a left-peripheral position.

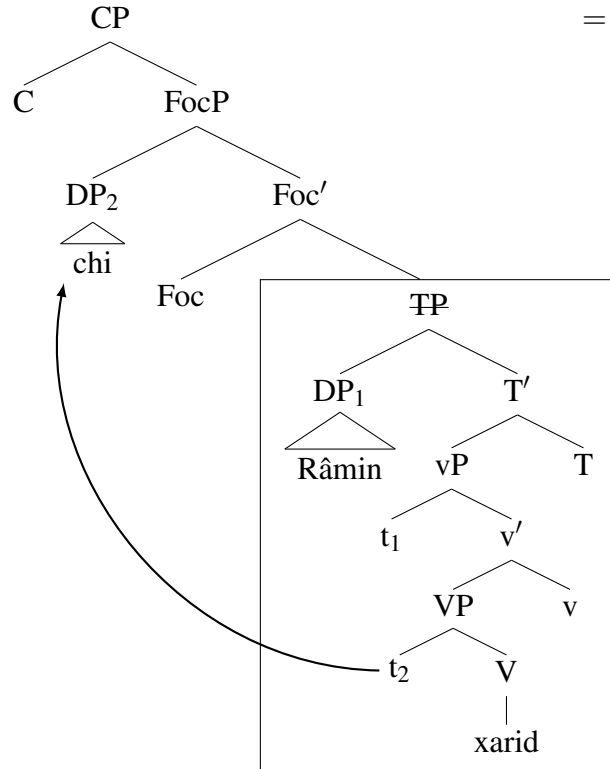
- (53) Râmin ye chiz=i xarid. Hads be-zan **chi**₁ Râmin t₁ xarid.
 Ramin one thing=IND buy.PST.3SG guess IMP-hit.2SG **what** Ramin buy.PST.3SG
 ‘Ramin bought something. Guess what Ramin bought.’

Toosarvandani (2008) proposes that focus fronting allows the *wh*-phrase to escape deletion, so that the sentence in (53) is the underlying source for the sluice in (51).

5.1 Deriving sluicing in Persian

When a phrase undergoes focus fronting, Karimi (2005:134–160) argues that it moves into the specifier of a focus projection that is located above TP but below CP. Under Toosarvandani’s account of sluicing, this is the position the wh-phrase moves into in order to escape ellipsis of TP.

(54) Râmin ye chiz=i xarid. Hads bezan = (51)



While focus fronting is optional—compare (52) and (53)—it must apply obligatorily when TP is elided. This follows, Toosarvandani argues (p. 708), if ellipsis is licensed by Merchant’s (2001) E-feature, located on Foc. If this head is only present in the extended verbal projection when it projects a specifier, there will always be something that undergoes focus fronting in sluicing.

In languages where the wh-phrase in sluicing occupies Spec-CP, it is not usually possible to strand a complementizer (Merchant 2001:61–82). But in Persian, it is possible to leave one behind.

(55) Mahin mi-xâ-d ye chiz=i be-xar-e vali yâd=esh
 Mahin IMPF-want.PRS-3SG one thing=IND SUB-buy-3SG but memory=3SG
 ne-mi-yâ-d **ke** chi.
 NEG-IMPF-come.PRS.3SG **that** what
 ‘Mahin wants to buy something, but she doesn’t remember what.’

(Toosarvandani 2008:701)

This follows from Toosarvandani’s proposal: the complementizer is located outside the constituent that is elided. Similarly, topics can also be stranded in sluicing, as in the first answer in (56). As the second answer shows, they scramble to a position above FocP (Karimi 2005:128–131).

(56) Q: Sohrâb ketâb=o film=â=ro be kes=i dâd.
 Sohrab book=and movie=PL=ACC to person=IND give.PST.3SG
 ‘Sohrab gave the books and movies to someone.’

- A1: Mi-dun-am ke **ketâb=â=ro** be ki Δ.
 IMPF-know.PRS-1SG that **book=PL=ACC** to who
 ‘I know who Sohrab gave the books to.’
- A2: Mi-dun-am ke **ketâb=â=ro**₁ be Râmin₂ Sohrâb t₁ t₂ dâd.
 IMPF-know.PRS-1SG that **book=PL=ACC** to Ramin Sohrab give.PST.3SG
 ‘I know that Sohrab gave the books to Ramin.’

All by itself, this account cannot explain why the remnant in sluicing is always a wh-phrase. Noninterrogative phrases are able to undergo focus fronting, but they cannot be stranded by ellipsis.⁶

- (57) Kes=i dar mi-zan-e. *Fekr mi-kon-am **bâbâ** Δ.
 person=IND door IMPF-hit.PRS-3SG thought IMPF-do.PRS-1SG **dad**
 Intended: ‘Someone is knocking. I think it’s dad.’

To prevent this overgeneration, Toosarvandani proposes (pp. 708–712) that the E-feature only appears on a Foc head that requires a wh-phrase in its specifier (Foc_[+Q]). It is not clear whether this restriction can be motivated or whether it must remain a stipulation.

5.2 The properties of focus fronting

If the wh-remnant in sluicing undergoes focus fronting, it should exhibit the prosodic and semantic effects of this process. According to Karimi (2005:134–150), a constituent that has been focus fronted is prosodically prominent and has a contrastive interpretation.

- (58) Man **divân=e** HÂFEZ=O₁ barâ Kimeâ t₁ xarid-am.
 I **Divan=EZ Hafez=ACC** for Kimea buy.PST-1SG
 ‘It was the *Divan* of Hafez that I bought for Kimea.’ (Karimi 2005:135)

For wh-phrase remnants in sluicing, Toosarvandani (2008:703) observes that “[j]ust like the nonelliptical examples of focus fronting[...they] all bear a pitch accent,” pointing to sentences like (59).

- (59) Faqat mi-dun-am kojâ Sohrâb dustdoxtar=esh=o did.
 only IMPF-know.PRS-1SG where Sohrab girlfriend=3SG=ACC see.PST.3SG
 Ne-mi-dun-am KEI.
 NEG-IMPF-know.PRS-1SG when
 ‘I only know where Sohrab saw his girlfriend. I don’t know when.’
 (Toosarvandani 2008:703)

In terms of semantics, focus fronting a wh-phrase is clearly not information structurally neutral, since it is infelicitous in an out-of-the-blue context.

- (60) # **CHI**₁ Sohrâb t₁ âvord?
what Sohrab bring.PST.3SG
 ‘What did Sohrab bring?’ (Toosarvandani 2008:697)

⁶Persian appears to violate van Craenenbroeck and Lipták’s (2006) generalization that all and only the phrases that undergo a movement operation can serve as the remnant in a sluicing construction derived through that operation.

Unâ mi-xâ-n [ye nafar=ro ke **yek=i az**
they IMPF-want.PRS-3PL one person=ACC that **one=IND from**
zabun=â=ye urupâyi=ro balad bâsh-e] estexdâm
language=PL=EZ European=ACC knowledgeable be.SUB-3SG hiring
kon-an. Yâd=et mi-yâ-d **kodum zabun Δ?**
do.SUB-3PL memory=2SG IMPF-come.PRS-3SG **which language**
‘They want to hire someone who knows one of the European languages. Do you remember which language?’

b. *Adjunct Constraint*

Râmin [chon ye **doxtar=i=ro** dust dâr-e] raft gol
Ramin since **one girl=IND=ACC** friend have.PRS-3SG go.PST.3SG flower
be-xar-e. Be mâ na-goft **kodum doxtar Δ.**
SUB-buy-3SG to us NEG-say.PST.3SG **which girl**
‘Ramin went to buy flowers since he likes a girl. He didn’t tell us which girl.’
(Toosarvandani 2008:718)

When the correlate is implicit, sluicing in Persian is sensitive to islands (64a–b). It shares this property with sluicing in other languages (Chung et al. 1995:279f.), which may arise from the identity condition on ellipsis (Chung 2006).

(64) a. *Complex NP Constraint*

*Unâ mi-xâ-n [ye nafar=ro ke âlmâni balad
they IMPF-want.PRS-3PL one person=ACC that German knowledgeable
bâsh-e] estexdâm kon-an. Yâd=et mi-yâ-d **az**
be.SUB-3SG hiring do.SUB-3PL memory=2SG IMPF-come.PRS-3SG **from**
kojâ Δ?
where

Intended: ‘They want to hire someone who knows German. Do you remember where they want that person to know it from?’

b. *Adjunct Constraint*

*Moallem [chon Râmin sar=e kelâs dir umad] az=ash nomre kam
teacher since Ramin head=EZ class late come.PST.3SG from=3SG grade little
kard. Yâd=et mi-yâ-d **cherâ Δ?**
do.PST.3SG memory=2SG IMPF-come.PRS-3SG **why**

‘The teacher took off points because Ramin came late to class. Do you remember why Ramin came late to class and because of that the teacher took off points?’

But in general, ellipsis of TP remedies island violations when a remnant undergoes movement to a focus projection in sluicing, just as it does in stripping and fragment answers.

6 Noun phrase ellipsis

Persian has noun phrase ellipsis: the head noun, and possibly more material, can go missing inside DPs.

- (65) Q: Xodkâr=e sabz dâr-i?
pen=EZ green have.PRS-2SG
'Do you have a green pen?'
A: [DP Δ Sabz] na-dâr-am. [DP Δ Âbi] mi-xâ-y?
green NEG-have.PRS-1SG blue IMPF-want.PRS-2SG
'I don't have a green one. Do you want a blue one?' (Ghaniabadi 2010:68)

Ghaniabadi (2010) identifies a wide range of elements that are able to license noun phrase ellipsis. This includes various prenominal expressions, including demonstrative determiners (66a), interrogative determiners (66b), and superlatives (66c).⁷

- (66) a. Q: Kudum ketâb gerun-tar=e?
which book expensive-COMP=be.PRS.3SG
'Which book is more expensive?'
A: [DP **Un** Δ] gerun-tar=e.
that expensive-COMP=be.PRS.3SG
'That one is more expensive.'
- b. Kodum ketâb barâ man=e; [DP **kodum** Δ] barâ shomâ?
which book for me=be.PRS.3SG **which** for you
'Which book is mine, and which is yours?' (Ghaniabadi 2010:63)
- c. Gâh=i to fekr mi-kon-i kâr=i ke anjâm
time=IND you thought IMPF-give.PRS-2SG work=IND that completed
mi-d-i [DP **dorost-tar-in** Δ]=e.
IMPF-do.PRS-2SG **correct-COMP-SUP** =be.PRS.3SG
'Sometimes you think that whatever you do is the best.' (Ghaniabadi 2010:64)

But not all determiners are able to license noun phrase ellipsis. In particular, with the indefinite determiner *ye* 'a', the head noun cannot go missing.

- (67) Q: Piran mi-xâ-y?
shirt IMPF-want.PRS-2SG
'Do you want a shirt?'
A: Âre, [DP **ye** *(piran)] mi-xâ-m.
yeah **a** shirt IMPF-want.PRS-1SG
'I want a shirt.'

While determiners and other functional elements precede the noun, modifiers and arguments follow. Some of these can license noun phrase ellipsis without the presence of a prenominal element. This is most clear for attributive adjectives, such as *qermez* 'red'. (The dependents of a noun are linked to other elements within the DP by the *ezafe* clitic =e; Samiiian 1983).

- (68) Q: Che piran=i mi-xa-y?
what dress=IND IMPF-want.PRS-2SG
'What dress do you want?'

⁷The antecedent of the ellipsis in (66c) is the noun *kâr* 'work'.

A: [DP Δ **Qermez**] mi-xâ-m.
red IMPF-want.PRS-1SG
 ‘I want a red one.’

This is not simply a pronominal form of the adjective, since multiple adjectives can be stranded.

(69) Q: Kudum piran=o mi-xâ-y?
 which dress=ACC IMPF-want.PRS-2SG
 ‘Which dress do you want?’

A: [DP Un Δ **qermez=e gerun**]=o mi-xâ-m.
 that **red=EZ expensive=ACC** IMPF-want.PRS-1SG
 ‘I want that red expensive one.’

In addition, the missing material can be a constituent that is larger than just a noun, such as a noun and a modifying adjective.

(70) Sinâ kif=e charm=i=ye kuchik=o bâ [DP Δ bozorg] avaz kard.
 Sina bag=EZ leather=ADJ=EZ small=ACC with big exchange do.PST.3SG
 ‘Sina exchanged the small leather bag for a big one.’ (= ...a big leather bag.)

(Ghaniabadi 2010:71)

Ghaniabadi claims (p. 69f.) that several types of nominal dependents cannot license noun phrase ellipsis. There is some variation in judgments here, since for another speaker modifying nouns (71) and prepositional phrases (72) can be stranded.

(71) Q: Che kif=i tu=ye irân gerun=e?
 which bag=IND in=EZ Iran expensive=be.PRS.3SG
 ‘Which bags are expensive in Iran?’

A: [DP (Kif=e) **charm**] gerun=e.
 bag=EZ **leather** expensive=be.PRS.3SG
 ‘Leather ones are expensive.’

(72) Q: Kudum kafsh=â qashang-tar=e?
 which shoe=PL beautiful-COMP=be.PRS.3SG
 ‘Which shoes are prettier?’

A: [DP (Kafsh=â=ye) **tu=ye vitrin**] qashang-tar=e.
 shoe=PL=EZ **in=EZ window** beautiful-COMP=be.PRS.3SG
 ‘The ones in the window are prettier.’

By contrast, an internally complex adjective phrase (73) or possessor (74) can never license noun phrase ellipsis.

(73) Baz=i az keshvar=â negarân=e afzâyesh=e qeymat=e naft=and. [DP
 some=IND from country=PL worried=EZ increase=EZ price=EZ oil=be.PRS.3PL
 *(Keshvar=â=ye) **negarân=e afzâyesh=e qeymat=e naft**] ettelâ’iyye=i sâder
 country=PL=EZ **worried=EZ increase=EZ price=EZ oil** statement=IND out
 kard-and.
 do.PST-3PL

‘Some countries are worried about the increase in the price of oil. The countries worried about the increase in the price of oil issued a statement.’

- (74) Q: Kif=e ki peydâ shod=e?
bag=EZ who found become.PTCP=be.PRS.3SG
‘Whose bag has been found?’
- A: [DP *(Kif=e) **un khânom**] peydâ shod=e.
bag=EZ **that woman** found become.PTCP=be.PRS.3SG
‘That woman’s bag has been found.’

It remains to be seen how these data from Persian are relevant, if at all, for a more general theory of noun phrase ellipsis.

7 Summary

Persian has several elliptical constructions that resemble their counterparts in better described languages. Many of these turn out to have surprisingly different properties with different syntactic derivations. Stripping and gapping, which allow for the elided material and the antecedent to be embedded, involve the coordination of full clauses. Further, in both these constructions, a full TP is elided, accounting for the island insensitivity of stripping. Fragment answers are also insensitive to islands, because the remnant raises to a focus position located immediately above the elided TP. This focus position is also implicated in the derivation of sluicing in Persian, which otherwise does not have obligatory wh-movement. Finally, verb phrase ellipsis removes the complement of v: either the constituent headed by the nonverbal element in a complex predicate or a VP out of which the simple verb has escaped.

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