On the Syntax of Why-stripping in Persian

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1. Introduction

- The goal is to provide an account of why-stripping in Persian.

(1) Why-stripping in English
   John ate natto but I wonder *why* NATTO (but not something else).
   (Yoshida, et al. 2013)

(2) Why-stripping in Persian
   Ayda chips khord, vali ne-midoon-am   *cherā* CHIPS
   Ayda chips ate.3SG but NEG-know-1SG why   chips
   'Ayda ate chips but I don't know why chips (but not something else).'

- In why-stripping, we have the *wh*-phrase *why* and a non-*wh*-phrase (e.g. *natto*, *chips*).[1]

- The non-*wh*-phrase contrasts with another element and receives a focal stress (represented by capital letters).

- Why-stripping looks similar to 'why'-sluicing, in which there is only a *wh*-phrase remnant 'why'.

(3) Sluicing in English
   John insulted Jack, but I don't know *why*.

(4) Sluicing in Persian
   Ayda chips khord, vali ne-midoon-am   *cherā*
   Ayda chips ate.3SG but NEG-know-1SG why
   'Ayda ate chips but I don't know why.'

(5) a. No Ellipsis
   Ayda chips khord, vali ne-midoon-am   cherā chips khord
   Ayda chips ate.3SG but NEG-know-1SG why   chips ate.3SG

b. Why-stripping
   Ayda chips khord, vali ne-midoon-am   **cherā CHIPS**
   Ayda chips ate.3SG but NEG-know-1SG why   chips

c. Sluicing
   Ayda chips khord, vali ne-midoon-am   **cherā**
   Ayda chips ate.3SG but NEG-know-1SG why

- **Questions**:
  o Does 'why' in why-stripping and sluicing have the same/different properties?
  o What is the syntax of why-stripping in Persian?

- **Claims & proposals:**
  o *Why* in sluicing and why-stripping has different properties.
  o *Why* in why-stripping functions as 'how come'.
  o Adopting Rizzi (2001), I propose that in why-stripping, *why* is base-generated in Int(errogative)P, in the CP level (6).

(6) Ayda chips khord vali ne-midoon-am [$_{IntP}$ cherā [$_{FocP}$ CHIPS$_i$ [$_{TP}$ ~~t_i khord~~]]]

  o *Why* in sluicing functions as a regular *wh*-phrase in *wh*-questions and is moved to the CP domain (7).

(7) Ayda chips khord vali ne-midoon-am [$_{FocP}$ cherā$_i$ [$_{TP}$ ~~chips khord t_i~~]]

- **Roadmap of this presentation:**
2. Distinctive characteristics of why-stripping and sluicing
3. Evidence for ellipsis in why-stripping and sluicing
4. Evidence for the base-generation of *why* in why-stripping and the movement of *why* in sluicing
5. Analysis
6. Cross-linguistic implications and predictions
7. Conclusion
8. Challenges

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[1] In Persian, it is possible for the *wh*-phrase 'why' to follow the non-*wh*-phrase remnant. For the discussion on this construction, please refer to Rasekhi (2018).

2. Distinctive characteristics of why-stripping and sluicing

2.1. Compatibility with a focalized element

- Why-stripping is compatible with a focalized element (5b) while sluicing is not (5b).

2.2. Compatibility with different *wh*-phrases

(8) Sluicing
Ayda be Araz ketāb dād   vali ne-midoon-am **key/cherā/kojā**
Ayda to Araz book gave.3SG but NEG-know-1SG when/why/where
'Ayda gave a book to Araz but I don't know when/why/where.'

(9) Why-stripping
a. Ayda be Araz ketāb dād   vali ne-midoon-am **cherā AYDA**
  Ayda to Araz book gave.3SG but NEG-know-1SG why Ayda
  'Ayda gave a book to Araz but I don't know why Ayda (but not someone else).'

b.*Ayda be Araz ketāb dād   vali ne-midoon-am **chi Ayda**
  Ayda to Araz book gave.3SG but NEG-know-1SG what Ayda

c.*Ayda dirooz   be Araz ketāb dād   vali ne-midoon-am
  Ayda yesterday to Araz book gave.3SG but NEG-know-1SG
  key Ayda
  when Ayda

3. Evidence for Ellipsis
Based on Merchant's (2001) FORM-IDENTITY GENERALIZATIONS, if the remnant arrives at its surface position via movement, it should behave like its non-elliptical counterpart, that is, it should obey the usual constrains on movement.

3.1. Case-matching effect: if a DP/interrogative phrase in a non-elliptical structure carries a case marking, it should also have the same case marking in its corresponding elliptical structure.

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² English belongs to this category. In English, preposition can be stranded in a regular question (i) and in an elliptical structure (ii).

- Persian has the object marker *–ro*, which appears on animate nouns and specific DPs in object position.
- When a DP with *–ro* marker undergoes movement, it must have the same case-marking (10).

(10) **[Araz*(-ro)]ᵢ** Ayda *t*ᵢ be mehmooni davat   kard?
   Araz-ACC Ayda   to party   invitation did.3SG
   'Did Ayda invite Araz to the party?'

- The case-matching effect also holds in why-stripping (11).

(11) Why-stripping in Persian
   Ayda *Araz-ro*   be mehmooni davat   kard   vali
   Ayda Araz-ACC to party   invitation did.3SG but
   ne-midoon-am   cherā **[ARAZ*(-ro)]ᵢ**
   NEG-know-1SG why   Araz-ACC
  'Ayda invited Araz to the party but I don't know why Araz (but not someone else).'

- Similar to DPs, when an interrogative phrase carries *–ro* (12a), its corresponding sluice should also have *–ro* marking (12b).

(12) a. **ki*(-ro)** Mahin *t*ᵢ davat   karde?
    who-ACC Mahin   invitation did.3SG
    'Who did Mahin invite?'

   b. Mahin ye nafar-i-ro   davat   karde vali
    Mahin one person-IND-ACC invitation did.3SG but
    be Sohrab ne-mige   **ki*(-ro)**
    to Sohrab NEG-say.3SG   who-ACC
    'Mahin invited someone, but she won't tell Sohrab who.'

                              (Toosarvandani 2008: 690)

3.2. Preposition-stranding: if a language does not allow preposition stranding, when the correlate in an elliptical structure is a PP, the preposition must be piedpiped. On the other hand, if a language allows preposition stranding, a DP remnant can have a PP correlate.²

(i) Whoᵢ was Peter talking with *t*ᵢ?
(ii) Peter was talking with someone but I don't know (with) who.   (Merchant 2001:92)

- Persian doesn't allow preposition stranding but rather preposition must always be piedpiped (13).

(13) a. cherā [**be** Araz]$_i$ Ayda t_i chips dād?
    why to Araz Ayda   chips gave.3SG
    'Why did Ayda give chips to Araz?'

    b. *cherā Araz$_i$ Ayda **be** t_i chips dād?
      why Araz Ayda to   chips gave.3SG

- Why-stripping (14) and sluicing (15) are also grammatical only when the preposition of the remnant is piedpiped.

(14) Why-stripping
  Ayda be Araz chips dād   vali ne-midoon-am
  Ayda to Araz chips gave.3SG but NEG-know-1SG
  cherā ***(BE) ARAZ**
  why   to   Araz
  'Ayda gave chips to Araz but I don't know why to Araz (but not to someone else).'

(15) Sluicing
  Ali bā   kesi   harf   mizad, ammā ne-midoon-am ***(bā) ki**
  Ali with someone speech hit.3SG but   NEG-know-1SG with who
  'Ali was speaking with someone, but I don't know who.'
                              (Merchant 2001: 96)

Summary: The case-matching effect and the P-stranding generalization follow if the mechanism of deriving remnant is the same as that of its correlate, and if the remnant arrives at its surface position via movement.

(16) Summary of the characteristics of why-stripping and sluicing

	Allows a focalized element	Requires case-marking	Allows preposition stranding
Why-stripping	✓	✓	X
Sluicing	X	✓	X

4. Evidence for the base-generation of *why* in why-stripping and the movement of *why* in sluicing

- *Why* in interrogatives has a scope ambiguity with the quantifier in the subject position (17a); however, *how come* does not (17b), (Collins 1991).

(17) a. Why does everyone hate John?   (why>every, every>why)
  b. How come everyone hates John? (how come>every, *every>how come)

- This can be explained if *why* in (17a) has a trace below *every* while *how come* in (17b) does not.

- This indicates that *how come,* but not *why,* is base-generated in its surface position and doesn't arrive at its surface position via movement.

We find the same pattern in Persian sluicing with *why* (18) and why-stripping (19).

(18) Sluicing
  hame   az Ali badeshoon miyād   (why>every, every>why)
  everyone from Ali dislike   come.3SG
  vali ne-midoon-am cherā
  but NEG-know-1SG why
  'Everyone hates Ali but I don't know why.'
  a. There is one reason for the whole group of people that hate Ali.
  b. For each person x, there is a reason that x hates Ali.

(19) Why-stripping
  hame   az Ali badeshoon miyād   (why>every,*every>why)
  everyone from Ali dislike   come.3SG
  vali ne-midoon-am cherā az   ALI
  but NEG-know-1SG why   from Ali
  'Everyone hates Ali but I don't know why ALI (but not someone else).'

- Sluicing with *why* (18) allows pair-list interpretation while why-stripping (19) does not.

- The fact that why-stripping (19) doesn't have a scope ambiguity with the quantifier indicates that *why* in this structure behaves similar to *how*

come (17b) and is base-generated in its surface position while *why* in sluicing (18) arrives at its surface position via movement, as shown in (7), repeated in (20).

(20) Ayda chips khord vali ne-midoon-am [_FocP cherā_i [_TP ~~chips khord~~ _t_i]]

- Another Scope Ambiguity

(21) A: Ali dar morede safar-esh be berezil be man goft
     Ali about   trip-his to Brazil to me said.3SG
     'Ali told me about his trip to Brazil.'

   B: āre, yād-am-e   goft rafte berezil vali ne-midoon-am cherā
      yes, remember-I said gone Brazil but NEG-know-1SG why
      'Yes, I remember he said he went to Brazil but I don't know why.'
      Can mean: *why he said [he went t]*

   B': āre, yādame   goft rafte berezil vali ne-midoon-am cherā berezil
       yes, I remember said gone Brazil but NEG-know-1SG why   Brazil
       'Yes, I remember he said he went to Brazil but I don't know why
       Brazil.'
       Can't mean: *why he said [he went to Brazil t]*

- The characteristics of sluicing with *why* and why-stripping are as follows:

| (22)	**Focused non-*wh*-phrase**	**Source of *why***	**Interpretation**
Why-stripping	Compatible	Base-generation	Disallows pair-list interpretation
Sluicing	Incompatible	Movement	Allows pair-list interpretation

5. Analysis

5.1. Sluicing

- Persian is a *wh*-in-situ language (Karimi 2005); however, it allows focus fronting of the *wh*-phrase (Karimi 2005, Toosarvandani 2008).

- In sluicing (23a), the *wh*-phrase moves to the Spec of FocP, prior to TP ellipsis, as illustrated in (23b) (Toosarvandani 2008).

(23) a. Ramin ye chizi   kharide,   hads bezan [_FocP chi
       Ramin one thing-IND bought.3SG guess hit.2SG   what
       [_TP ~~Ramin <chi> kharide~~]]
       Ramin what bought.3SG
       'Ramin bought something. Guess what.'

   b.
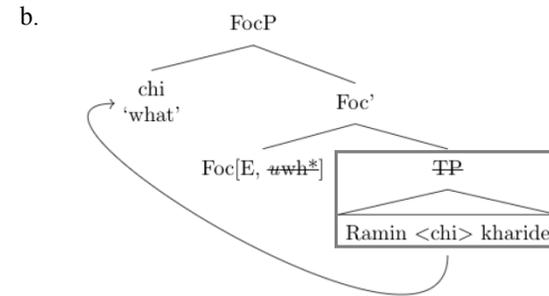
(Toosarvandani 2008: 700)

5.2. Why-stripping

- We have already seen that:
  - The non-*wh*-phrase receives a contrastive focus interpretation.
  - The *wh*-phrase is base-generated.

- I propose that the non-*wh*-phrase remnant survives ellipsis by moving to the Spec of FocP.

- Since *why* precedes the non-*wh*-phrase remnant, it should be in a position higher than FocP.

- Adopting Rizzi's (2001) split-CP hypothesis (24), I propose that *why* is base-generated in Int(errogative)P.

(24) [ForceP [TopP [**IntP** [TopP [FocP [TopP [FinP [TP]]]]]]]]

- Based on my proposal, the structure of the why-stripping in (25a) would be as illustrated in (25b).

(25) a. Ayda chips khord, vali ne-midoon-am   cherā CHIPS
     Ayda chips ate.3SG but NEG-know-1SG why   chips
   'Ayda ate chips but I don't know why chips (but not something else).'

   b.
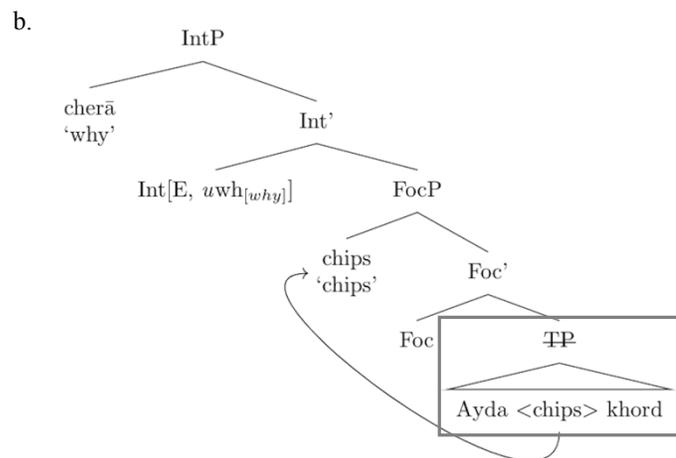
- Further support that *why* is base-generated comes from locality effects.

- *Why* (unlike other *wh*-phrases) obeys strict locality constrains under sluicing (Merchant 2001).

- Long-distance *why*-sluicing cannot escape a finite clause (26).

(26) *Mary said [that John left **for a certain reason**], but I don't know **why**.
   [Intended reading: … but I don't know what Mary says is the reason
   why John left].   (Merchant 2001: 129)

- On the other hand, why-stripping does not have such a restriction (27). This indicates that *why* in this structure does not undergo *wh*-movement.

(27) A: Mary denied [that John was eating **natto**].
    B: Why **NATTO**?   (Yoshida, et al. 2015: 29)

- Sluicing (28) and why-stripping (29) in Persian also show the same pattern regarding locality.

(28) Sluicing
   *Maryam goft   [ke Ayda **be ye dalil-e   khāsi** raft]
    Maryam said.3SG that Ayda for one reason- EZ specific went.3SG
    vali ne-midoon-am   **cherā**
    but NEG-know-1SG why

(29) Why-stripping
   Maryam enkār kard   [ke Ayda **chips-ro**   khord-e]
   Maryam denial did.3SG that Ayda chips-ACC ate-3SG
   vali ne-midoon-am   cherā **chips-ro**
   but NEG-know-1SG why   chips-ACC
   'Maryam denied that Ayda ate chips but I don't know why she denied
    that Ayda ate chips (but not something else).'

6. Cross-linguistic implications and predictions

- The proposal that the non-*wh*-phrase remnant in why-stripping moves to the Spec of FocP is in line with the previous studies on English and Romance languages (Nakao et al. 2012, Ortega-Santos et al. 2014, Yoshida et al. 2015).

- However, my analysis diverges from their proposal in that *why* in why-stripping is base-generated in ForceP (Nakao et al. 2012, Ortega-Santos et al. 2014) or it can be either in ForceP or Int(errogative)P (Yoshida et al. 2015).

- My proposal that *why* in Persian why-stripping is base-generated in Int(errogative)P is supported by examples such as (30) in which we can have an overt complementizer *ke* 'that' preceding *why*.

(30) Ayda chips khord   vali ne-midoon-am [ForceP **ke** [IntP cherā [FocP
    Ayda chips ate.3SG but NEG-know-1SG   that   why
    CHIPS_i [TP t_i khord]]]]
    chips   ate.3SG
   'Ayda ate chips but I don't know why chips (but not something else).'

- Unlike Persian (30), in English and Romance languages, it is not possible for the complementizer to precede *why,* as the English example in (31) illustrates.

(31) John ate chips, but I wonder (*that) why chips.

- This indicates that *why* in English (and Romance languages) can't be base-generated in Int(errogative)P but rather it has to be in ForceP (32).

(32) John ate chips, but I wonder [ForceP why [FocP chips$_i$ [TP ~~John ate t_i~~]]]

- We can say that (dis)allowing the complementizer to precede *why* helps determine the exact position in which *why* is base-generated.

  o In languages (e.g. English, Romance languages) that it is not possible to have a complementizer with an embedded *wh*-phrase, *why* is base-generated in ForceP.

  o In language (e.g. Persian) that it is possible to have a complementizer with an embedded *wh*-phrase, *why* is base-generated in IntP.

Question: Why is this construction limited to *why* and is incompatible with other *wh*-phrases?

(33) a.*Ayda be Araz ketāb dād   vali ne-midoon-am **chi** Ayda
    Ayda to Araz book gave.3SG but NEG-know-1SG what Ayda

  b.*Ayda dirooz   be Araz ketāb dād   vali ne-midoon-am
    Ayda yesterday to Araz book gave.3SG but NEG-know-1SG
    key dirooz/Ayda
    when yesterday/Ayda

Answer: *why* has a special property of focus association (Bromberger 1992). For instance, the answer to a *why*-question changes according to the focus (34).

(34) a. A: Why did Adam eat the apple?
    B: Because God intended that to happen.

  b. A: Why did ADAM eat the apple?
    B: Because he (Adam) is the one that Eve worked on.

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c. A: Why did Adam EAT the apple?
   B: Because he couldn't think of anything else to do with it.

 d. A: Why did Adam eat the APPLE?
   B: Because it was the only food around.
                         (Bromberger 1992: 160-161)

- However, other *wh*-phrases don't have this property (35). The different placement of emphatic stress doesn't change the answer.

(35) A: a. When did Adam eat the apple?
    b. When did ADAM eat the apple?
    c. When did Adam EAT the apple?
    d. When did Adam eat the APPLE?

 B: At 4p.m. on July 7, 24,000,000 B.C.
                       (Bromberger 1992: 161)

7. Conclusion

- In why-stripping, the *wh*-phrase *why* is base-generated in the CP domain while the non-*wh*-phrase remnant, which carries a contrastive focus interpretation, moves to the Spec of FocP.

- Persian provides cross linguistic support for the proposal that there are two types of *why*.

- One functions as a regular *wh*-phrase in *wh*-questions (e.g. in sluicing) and undergoes movement, while the other functions as 'how come' (e.g. in why-stripping) and is base generated in the CP domain.

- In languages that allow the complementizer to precede *why* in why-stripping (e.g. Persian), *why* is base-generated in Int(errogative)P, while in languages that disallow this (e.g. English), *why* is base-generated in ForceP.

8. Challenges

- In some languages such as Persian *that* and *why* are compatible while in other languages such as English *that* and *why* are not compatible.
- What does this tell us about the grammar?
  - Int(errogative)P doesn't project in some language?
  - Int(errogative)P doesn't get filled in some languages?
  - Int(errogative)P is filled but then it moves to ForceP?

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