

**Ellipsis and Information Structure:
Evidence from Persian**

A Dissertation Presented

by

Vahideh Rasekhi

to

The Graduate School

in Partial Fulfillment of the

Requirements

for the Degree of

Doctor of Philosophy

in

Linguistics

Stony Brook University

August 2018

Stony Brook University

The Graduate School

Vahideh Rasekhi

We, the dissertation committee for the above candidate for the
Doctor of Philosophy degree, hereby recommend
acceptance of this dissertation.

**John Bailyn – Dissertation Advisor
Professor, Department of Linguistics**

**Thomas Graf – Chairperson of Defense
Assistant Professor, Department of Linguistics**

**Daniel Finer – Committee Member
Professor, Department of Linguistics**

**Simin Karimi – Committee Member
Professor, Department of Linguistics
University of Arizona**

This dissertation is accepted by the Graduate School

Dean of the Graduate School

Abstract of the Dissertation
Ellipsis and Information Structure:
Evidence from Persian
by
Vahideh Rasekhi
Doctor of Philosophy
in
Linguistics
Stony Brook University
2018

In this dissertation, adopting Rizzi's (1997) Split-CP hypothesis, I provide a unified account for various elliptical structures in Persian on the basis of the interaction between information structure and ellipsis licensing feature bundles. I argue that ellipsis is constrained by information structure, in particular topic and focus. Only the elements that carry contrastive topic or contrastive focus features can survive ellipsis while the other elements are elided under identity with their corresponding elements in the antecedent clause.

I discuss Merchant's (2001) theory of ellipsis, in which the elements that survive ellipsis have a focus feature, and show that his approach cannot account for the Persian data. I argue that it is *contrast* that saves elements from being elided. Therefore, I propose the Identity Condition on the Remnant, stated in (1).

- (1) **Identity Condition on the Remnant**
- (i) There must be a contrastive relationship between the remnant and its correlate, and
 - (ii) They must have the same information structure, i.e. both of them must be topicalized or focalized elements.

Based on the identity condition in (1), not only there must be a contrastive relationship between the remnant and its correlate in the antecedent clause, but also they must have identical information structure, i.e. they both must be topicalized or focalized elements.

On the other hand, the elements that are already given are elided under identity with their antecedent. To account for elliptical constructions in Persian, I propose the Contrast Condition on Ellipsis, stated in (2).

(2) **Contrast Condition on Ellipsis**

(i) Ellipsis Condition: Ellipsis can occur iff there is an element α in XP_E that contrasts with an element α' in XP_A , in which

- a) α and α' have the same syntactic category, and
- b) XP_E and XP_A have the same syntactic structure.

(ii) Identity Condition on the Remnant: An element α in XP_E can survive ellipsis iff there is an element α' in an XP_A , in which α and α' are in a contrastive relationship and have identical information structure.

(iii) Identity Condition on the Elided Materials: An element β in XP_E can be elided iff there is an element β' in an XP_A , in which β and β' are identical. (The identity relation is sensitive to both semantic and syntactic forms)

Based on the first condition in (2), ellipsis is possible only in contexts in which an element in a sentence involving ellipsis contrasts with its corresponding element in the antecedent clause. The second condition, which is the Identity Condition on the Remnant, means that the element that survives ellipsis must be in a contrastive relationship with its correlate and they must have identical information structure. Based on the third condition, an element can be elided only if it is identical to its corresponding element in the antecedent clause.

Regarding licensing ellipsis, I propose that ellipsis in Persian is licensed by the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head and Int(errogative) head. The proposed licensing heads are the result of the restrictions on the feature bundles that are possible in Persian. The [E] feature (Merchant 2001), which licenses the deletion of its complement at the PF level, can bundle with i) a strong uninterpretable contrastive focus [ConF] feature, [E, uConF*], ii) a strong uninterpretable [wh] feature, [E, uwh*], and iii) an uninterpretable [Pol] feature, [E, uPol].

The [uConF*] and [uwh*] features trigger the movement of the elements with interpretable [wh] and [ConF] features out of the phrase that is specified for deletion. On the other hand, the [uPol] feature is satisfied by having a polarity marker in the Spec of

PolP. The polarity marker can be affirmative or negative, depending on the polarity of the preceding clause.

Based on the proposed theory, I study various elliptical structures in Persian. In chapters 2 and 3, I provide an in depth analysis of Verb-stranding and Stripping constructions with negation, respectively. In chapter 4, I provide an overview of Why-stripping, What-stripping, *Cherā*-stripping, Gapping, Sluicing, Fragment Answers, and Noun Phrase Ellipsis.

To my father

Who supported me, inspired me to work hard, be ambitious, and accomplish my goals,

Who taught me how to be dedicated, reliable, responsible, and humble,

Who would have been the proudest dad if he were alive.

To my mother

Who has taught me how to love, help those in need, and share what I have with others,

Who has inspired me with her compassion, wisdom, patience, and integrity,

Who has taught me to believe in myself and to be graceful and content.

Table of Contents

Acknowledgments.....	xi
Chapter 1: Ellipsis and Information Structure	1
1.1. Introduction.....	1
1.2. Overview of the Dissertation.....	4
1.3. The Proposal.....	5
1.3.1. Information Structure is Part of Syntax.....	5
1.3.2. The Role of Information Structure in Deriving Elliptical Structures	7
1.3.2.1. Identity Condition on the Elided Elements.....	7
1.3.2.2. Identity Condition on the Remnant.....	12
1.3.2.3. Licensing Ellipsis	21
1.4. Persian Phrase Structure	27
1.4.1. Topic Constructions.....	30
1.4.1.1. Background Topic vs. Contrastive Topic.....	31
1.4.2. Focus Constructions	34
1.4.2.1. Information Focus vs. Contrastive Focus.....	35
1.5. Feature Checking.....	40
1.6. Structure of the Dissertation.....	43
Chapter 2: Verb-stranding Constructions in Persian	46
2.1. Introduction.....	46
2.2. Null Arguments and Elliptical Constructions	51
2.3. Argument Ellipsis (AE) in Persian.....	55
2.4. Verb-stranding Verb Phrase Ellipsis (VVPE).....	58

2.4.1. VVPE in Persian.....	61
2.4.1.1. Toosarvandani's (2009) Analysis	61
2.4.1.2. Shafiei's (2016) analysis.....	63
2.5. Does Persian have AE or VVPE?.....	65
2.5.1. V to T movement.....	65
2.5.2. Adverbs.....	68
2.5.3. Verbal Identity.....	70
2.5.4. Extraction	74
2.5.5. Interim Conclusion	77
2.6. Proposal.....	78
2.6.1. The Evidence that We Deal with Focus in VVPE	79
2.6.2. The Evidence for the Existence of FocP in the TP Level.....	80
2.6.3. Analysis.....	83
2.7. Conclusion	89
2.8. Future Research	90
Chapter 3: Stripping Constructions with Negation in Persian	94
3.1. Introduction.....	94
3.2. Characteristics of Stripping Constructions with Negation.....	98
3.2.1. Context of Occurrence and Interpretation	98
3.2.2. Underlying Structure	102
3.2.3. (Un)boundedness	107
3.3. Proposal.....	110
3.3.1. Polarity Stripping and Negative Stripping	110
3.3.2. Pseudo-stripping	115

3.3.3. Information Structure	116
3.3.4. The Nature of the Negative Marker	120
3.3.4.1. Either-and Neither Conjoining.....	122
3.3.4.2. Adverbs.....	123
3.3.4.3. Focusing Adverb	124
3.4. Analysis.....	125
3.4.1. Evidence for Movement	125
3.4.1.1. Case-matching	125
3.4.1.2. Preposition Stranding.....	126
3.4.1.3. Islands.....	127
3.4.2. Analysis of Polarity Stripping	129
3.4.3. Analysis of Negative Stripping	137
3.4.4. Analysis of Pseudo-stripping	140
3.5. Conclusion	147
3.6. Future Research	150
Chapter 4: Ellipsis and Information Structure: A Unified Account	152
4.1. Introduction.....	152
4.2. Stripping Constructions with Wh-phrase	153
4.2.1. Characteristics of Stripping Constructions with Wh-phrase.....	155
4.2.1.1. Evidence for Ellipsis	155
4.2.1.2. Locality	159
4.2.1.3. Islands.....	160
4.2.1.4. Summary	161
4.2.2. Analysis.....	162

4.2.2.1. Analysis of Why-stripping and What-stripping.....	162
4.2.2.2. Analysis of <i>Cherā</i> stripping	169
4.3. Gapping	171
4.4. Sluicing	178
4.5. Fragment Answers.....	186
4.6. Noun Phrase Ellipsis	191
4.7. Conclusion	198
4.8. Future Research	198
Chapter 5: Conclusion.....	203
References.....	207

Acknowledgments

I am tremendously grateful to my advisor John Bailyn for his continuous support and guidance during my years in Stony Brook and throughout my dissertation writing process. Every time I met with John to discuss my work, I left his office feeling more motivated and confident that not only I can complete my dissertation but also my work is important. John always encouraged me to think big and make bold proposals. I am appreciative of all of his questions, comments, and suggestions which helped me complete my dissertation.

I would also like to thank my other committee members Simin Karimi, Dan Finer, and Thomas Graf. Their comments, suggestions, and insightful questions contributed greatly to my research and the writing of this dissertation. My especial thanks goes to Simin Karimi whose work on Persian syntax has inspired me beyond this dissertation. We had several Skype conversations which were crucial in the development of ideas in this dissertation. She always made me feel that what I was doing was important and interesting, which gave me the much-needed confidence to complete this dissertation.

I am thankful to every single member of the faculty in the department who helped me throughout my years at Stony Brook. I would also like to thank Sandra Brennan and Michelle Carbone for their constant support and help with all the administrative work.

I am truly thankful to the Roshan Cultural Heritage Institute, especially its Chair and President, Dr. Elahé Omidyar Mir-Djalali, for awarding me the Excellence in Persian Studies fellowship to complete my dissertation.

Writing this dissertation would not be possible without the support of my friends Sophie Moradi, Nazila Shafiei, and Paola Cépeda. Their continuous support and feedback helped me stay focused and work on this dissertation. Thank you for all your encouragement and for the support and help you gave me along this path. I am also thankful to Martin Smyth, Andrei Antonenko, Mozhgan Rahimi, and Mehdi Namazi for their constant help and support during my years in Stony Brook.

I would also like to thank all my friends inside and outside the department whose friendship I will always be grateful for. While there are too many people to name

individually, I am confident you each know how appreciative I am of your unwavering support and camaraderie.

I would like to thank President Stanley whom I had the pleasure of working with while I was given a privilege to lead the Graduate Student Organization (GSO). I appreciate his understanding of graduate students' needs and concerns, and taking actions to address them. His support of shared governance, approachability, and dedication to higher education made our efforts in GSO more effective and efficient.

I would like to express my appreciation to Judy Greiman for her continuous support and help. I have learned from her leadership, wisdom, compassion, and humility. Thank you Judy for being a role model and an inspiration for me.

I am grateful to Dexter Bailey for offering me a research position to work at the Stony Brook Advancement office this past year. Working on various projects related to data and analytics, and alumni relations has provided me with an opportunity to work on projects beyond linguistics. I am also thankful to Matt Colson and A.J. Nagaraj, my project managers, for their constant support and for showing me how to be a successful manager and a team leader.

I am thankful to Lauren Kaushansky and Liz Kelso for their support and friendship, and the collaboration we had organizing *Living Book Project* workshops for high school students. Your compassion, enthusiasm for learning more about other cultures, and caring for the community has been inspirational for me.

I would like to express my sincerest appreciation to Vida Samiian and Partow Hooshmandrad for their continuous support and help. You have been inspiring and motivating me to achieve my goals and succeed in everything I do, which I am truly grateful for.

I am thankful to Rouya Hashemi and Herta and Wolfgang Wulff for their constant support, encouragement, graciousness, and love. I feel fortunate to have you all in my life.

I would like to express my deepest gratitude and appreciation to Ann Berliner, who is like a mother for me. Thank you Ann for always being there for me and supporting me

at different stages of my life. Your wisdom, kindness, and generosity has taught me that love and family extends beyond the blood line.

Lastly and most importantly, I would like to thank my family. Even though I am not able to see them as often as I would like to, their endless and unconditional love and support makes all sacrifices worthwhile. I love you all for making me believe that I can do anything I want.

Chapter 1: Ellipsis and Information Structure

1.1. Introduction

The goal of this dissertation is to provide a unified syntactic analysis for elliptical structures in Persian¹, with an emphasis on the interaction between ellipsis licensing feature bundles and information structure. I discuss various elliptical structures in Persian and claim that ellipsis is constrained by information structure, in particular contrastive topic and contrastive focus.

Ellipsis refers to a phenomenon in which one or more elements are missing in a sentence; however, the sentence can be fully interpreted based on the linguistic context, which is shared between the speaker and hearer. For instance, consider the sentence in (1).² In the second clause of this sentence, the verb phrase *buy a book* is elided under identity with its antecedent in the preceding clause. Even though the verb phrase is not pronounced, the sentence receives a full interpretation.

- (1) Mary bought a book, John did (~~buy a book~~) too.

Ellipsis has been one of the great puzzles in linguistic theory because the elements that are phonologically unpronounced or are syntactically deleted can receive a full interpretation. This process involves integration of phonology, syntax, and semantics. In the last three decades, a fourth component, *information structure*, has been added to the study of ellipsis by various researchers (Rooth 1992a, 1992b, Kim 1997, Depiante 2000, Winkler and Schwabe 2003, Winkler 2005, Gengel 2007, Kolokonte 2008, Ghaniabadi 2010, Konietzko 2016, among others).

¹ In this work, Persian refers to the language spoken in Iran, in particular the dialect spoken in Tehran. The judgments presented here were obtained from several native speakers of Persian residing in Iran and in the United States.

² The strikethrough throughout this dissertation represents elided elements.

There are two main approaches for deriving elliptical structures: nonstructural and structural. Proponents of the nonstructural approach (Jacobson 2008, Culicover and Jackendoff 2005) believe that there is no syntactic structure in the ellipsis site. For instance, based on this proposal, in the Sluicing example in (2), the *wh*-phrase ‘what’ is the only element in the *S* node, which is the complement of ‘know’.

- (2) John can play something, but I don’t know [_S what].

Proponents of the structural approach can be divided into two groups: LF-copy/null anaphora and PF-deletion. Based on the former group, there is either a single null element (Lobeck 1995) or several null elements (Wasow 1972, Williams 1977, Fiengo and May 1994). This is represented in (3) for the example in (2).

- (3) a. I don’t know [_{CP} what [_{TP} *e*]]
b. I don’t know [_{CP} what₄ [_{TP} *e*₁ *e*₂ *e*₃ *t*₄]]]

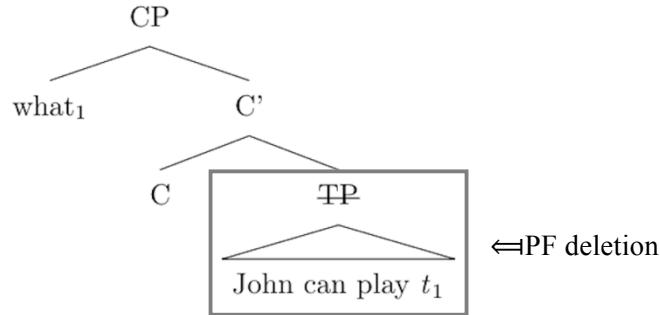
The null elements in (3) are interpreted by copying the antecedent into the ellipsis site at the LF level, as illustrated in (4).

- (4) I don’t know [_{CP} what₄ [_{TP} John can play *t*₄]].

On the other hand, proponents of the PF deletion approach (Ross 1969, Hankamer & Sag 1976, Merchant 2001, among others) believe that there is a full-fledged syntactic structure in the ellipsis site, which is not pronounced. Based on the PF deletion approach, which I pursue in this dissertation, the structure of the Sluicing in (4) would be as schematically illustrated in (5).³

³ The box includes the elements that are elided at the PF level.

(5)



Now that we are familiar with the PF deletion approach, let us consider the Persian examples in (6).⁴

- (6) a. AYDA ketāb kharid, vali ARAZ na (~~ketāb na-kharid~~)
 Ayda book bought.3SG but Araz NEG book NEG-bought.3SG
 ‘Ayda bought books, but Araz didn’t (buy books).’
- b. #Ayda KETAB kharid, vali ARAZ na (~~ketāb na-kharid~~)
 Ayda book bought.3SG but Araz NEG book NEG-bought.3SG

Even though the sentences in (6a) and (6b) are identical on the surface, only the sentence in (6a) is acceptable. The subject *Araz* in the second clause of these structures is a topicalized element. In (6a), *Araz* contrasts with its corresponding element *Ayda* in the preceding clause and the sentence is acceptable.⁵ However, in (6b), the subject *Araz* cannot establish a contrastive relationship with the direct object *ketāb* ‘book’; therefore, the result yields an infelicitous sentence.

Based on the PF deletion approach, we can say that in (6b), *ketāb na-kharid* ‘didn’t buy books’ in the second clause has been elided under identity with their antecedent in the preceding clause. Since the interpretation of the sentence is recoverable, it should be acceptable. However, it is not. The unacceptability of this sentence shows that in addition

⁴ Infelicitous sentences are marked by #.

⁵ Capitalization in these structures represents contrast, not focus.

to the identity of the elided elements, the identity of the remnants also plays a role in licensing ellipsis. This take us to the main claim of this dissertation that ellipsis is constrained by information structure, in particular contrastive topic and contrastive focus.

1.2. Overview of the Dissertation

In this dissertation, I study elliptical structures in Persian within the framework of Rizzi's (1997) Split-CP Hypothesis, in which CP is split up into several projections, and show how information structure, in particular contrastive topic and contrastive focus, affects deriving and interpreting elliptical structures.

In the framework that I adopt, information structure is part of syntax. This means that topic and focus, the two notions of information structure that I discuss in this dissertation, are features that project functional categories TopP and FocP, respectively. The [Top] and [Foc] features must be checked in syntax; otherwise, the derivation crashes.

I propose that the constituents that survive ellipsis carry contrastive topic or contrastive focus features; therefore, they move out of the ellipsis site to the Spec of TopP and FocP, respectively. On the other hand, constituents that are given information and redundant are elided under identity with their correlate in the antecedent clause.

In Persian declarative sentences, contrastive topic moves to the Spec of TopP while contrastive focus can either move to the Spec of FocP or stay in-situ (Karimi 2005). However, I propose that when there is ellipsis, contrastive focus must move to the Spec of FocP in order for the deletion to go through. This is done through the feature bundles that I propose.

I propose that ellipsis in Persian is licensed by the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head and Int(errogative) head. I present feature bundles that are possible in Persian and illustrate how they interact in licensing elliptical structures. Based on these feature bundles, I provide a unified analysis for different types of ellipsis in Persian.

I discuss Merchant's (2001) e-GIVENness theory of ellipsis, in which the elements that survive ellipsis have a focus feature, and show that his approach cannot account for Persian data. I argue that it is *contrast* that saves elements from being elided. Therefore, I propose Contrast Condition on Ellipsis. Based on this condition, ellipsis is possible only if there is an element in the ellipsis site that contrasts with its correlate in the antecedent clause. In addition, only the elements that are in a contrastive relationship with their correlate can survive ellipsis. On the other hand, the elements that are given are elided under identity with their antecedent.

1.3. The Proposal

The general questions of this dissertation are: i) Is information structure part of syntax? ii) What is the role of information structure in deriving elliptical structures? iii) Can we provide a unified syntactic analysis for elliptical structures? In the rest of this section, I present my proposal related to these questions.

1.3.1. Information Structure is Part of Syntax

In this dissertation, I adopt Rizzi's (1997) Split-CP Hypothesis (7), in which information structure directly relates to functional categories projected in the left periphery.

$$(7) \quad [\text{ForceP} [\text{TopP} [\text{FocP} [\text{TopP} [\text{FinP} [\text{TP}]]]]]] \quad (\text{Rizzi } 1997: 297)$$

My discussion of cartography, i.e. the functional projections in (7), in this work is limited to the two notions of information structure *topic* and *focus* that are needed to account for elliptical structures. Following Rizzi, I assume that topic and focus are formal features that project functional categories TopP and FocP, respectively. When they are present in the system, the [Top] and [Foc] features must be checked; otherwise, the derivation crashes.

There is also evidence from the scope of quantifiers in Persian that information structure has semantic effect. As illustrated in (8), movement of a quantificational element changes its scope.

- (8) a. har dāneshju-i tu in kelās ye ketāb-i-ro mi-khoon-e
 every student-IND in this class a book-IND-ACC DUR-read-3SG
 ‘Every student in this class reads a (different) book.’ $\forall > \exists ; * \exists > \forall$
- b. [ye ketābi-ro]_i har dāneshju-i tu in kelās _{t_i} mi-khoon-e
 a book-IND-ACC every student-IND in this class DUR-read-3SG
 ‘There is a (specific) book that every student reads.’ $\forall > \exists ; \exists > \forall$
 (Karimi 2005: 166)

In (8a), the universal quantifier scopes over the existential quantifier and the sentence has only one reading. It has a distributive reading: *each student reads a different book*. However, in (8b), the existential quantifier undergoes focus movement and the truth value of the sentence changes. This sentence is ambiguous; however, its main interpretation is a collective reading: *there is one specific book that every student reads*.

The examples in (8) show that information structure affects the semantic outcome of the derivation. To further support this claim, consider the examples in (9).

- (9) a. man ye she'r-i-ro barā har shāgerd-i mi-khoon-am
 I a poem-IND-ACC for each student-IND DUR-read-1SG
 ‘I read a (specific) poem for every student.’ * $\forall > \exists ; \exists > \forall$
- b. barā har shāgerd-i man ye she'r-i-ro mi-khoon-am
 for each student-IND I a poem-IND-ACC DUR-read-1SG
 ‘For each student, I read one poem.’ $\exists > \forall ; \forall > \exists$

The sentence in (9a) has only one interpretation; a collective reading. On the other hand, the sentence in (9b) is ambiguous; however, the primary reading is a distributive one: *for each student, I read a different poem*.

1.3.2. The Role of Information Structure in Deriving Elliptical Structures

A good theory of ellipsis should be able to account for i) the identity condition on the elided elements, ii) the identity condition on the remnant, and iii) the heads that can act as a licensor. There has been an extensive research on (i) and (iii) but (ii) has not received the same amount of attention. In the rest of this section, I discuss these three “pillars” of ellipsis.

1.3.2.1. Identity Condition on the Elided Elements

Ellipsis is licensed only in contexts in which the elided elements have an antecedent, which is identical to what is deleted. Some researchers have argued that the ellipsis site and its antecedent must be identical in structure (Chomsky 1965, Ross 1969, Hankamer and Sag 1976, Fiengo and May 1994, among others) while others have argued for semantic identity (Hardt 1993, Ginzburg and Sag 2000, Merchant 2001, and many others), and some have argued for a combination of both (Chung 2006, van Craenenbroeck 2009). Since, in this dissertation, I adapt Merchant’s theory of ellipsis, I mainly discuss his generalizations.

Merchant (2001: 26) proposes that semantic identity makes the right predictions for Sluicing and Verb Phrase Ellipsis (VPE) in English.⁶ He uses Focus condition as a condition on TP ellipsis and VPE. This condition is based on the definition of e-GIVENness in (10) and is stated in (11).

(10) **e-GIVENness**

- An expression E counts as e-Given iff E has a salient antecedent A and, modulo \exists -type shifting,
- (i) A entails F-clo(E), and
 - (ii) E entails F-clo(A).

(11) **Focus condition on VP-ellipsis/TP ellipsis**

- A VP or TP α can be deleted only if α is e-GIVEN.

⁶ Merchant’s proposal for Sluicing and VPE has been extended to other elliptical constructions, as well.

The existential type shifting is a type-shifting operation whose purpose is to existentially bind unfilled arguments and raise expression to type $\langle t \rangle$. Also, the F-closure of an expression α is defined as in (12).

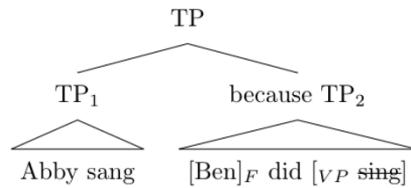
(12) **F-closure**

The F-closure of α , written $F\text{-clo}(\alpha)$, 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)

The first part of the condition in (10) is about identifying a proper antecedent. The antecedent A entails the F-closure of the elided phrase E. This means that the antecedent should entail the interpretation that the elided elements have. For instance, in (13), the antecedent *Abby sang* entails the VP that is elided, $\exists x.\text{sing}(x)$. Therefore, the elided VP is given and can be elided (Merchant 2001: 14-15).

- (13) a. Abby sang because [Ben]_F did.
 b.



The second condition in (10) means that the ellipsis site also has to entail the F-closure of the antecedent A. To make it clear what entailment means, consider the example in (14).

- (14) Abby called Chuck an idiot after BEN did.
 a. = ... after BEN did call Chuck an idiot.
 b. # ... after BEN did insult Chuck.

(Merchant 2001: 27)

In (14a), the verb phrase is elided and the sentence is acceptable. Therefore, we need to determine whether the deleted VP in this sentence is e-GIVEN. The antecedent of the elided

VP is *call Chuck an idiot* in the first clause. The VP has an open variable which is the subject. So, we can apply the \exists -type shifting, and the result yields (15).⁷

$$(15) \text{ VP}_A' = \exists x.x \text{ called Chuck an idiot.} \quad (\text{Merchant 2001: 27})$$

Now, we need to see whether the VP_A entails VP_E (first condition in (10)). For this, we need to replace the focus marked material in the ellipsis site by existentially bound variables. Merchant assumes that the trace of *Ben* inside the VP is F-marked and that we can replace it with a variable. The result of this replacement yields (16).

$$(16) \text{ F-clo}(\text{VP}_E) = \exists x.x \text{ called Chuck an idiot.} \quad (\text{Merchant 2001: 27})$$

Since (15) and (16) are identical, we can say that the first condition of (10) is satisfied, i.e. VP_A' entails $\text{F-clo}(\text{VP}_E)$. Now, we need to test the second condition of (10) to determine whether the elided VP_E' entails the $\text{F-clo}(\text{VP}_A)$.

$$(17) \text{ F-clo}(\text{VP}_A) = \exists x.x \text{ called Chuck an idiot.} \quad (\text{Merchant 2001: 28})$$

Since (16) and (17) are identical, we can say that VP_E' entails $\text{F-clo}(\text{VP}_A)$. Now, let us consider the sentence in (14b), which is infelicitous. In this example, the first condition is satisfied, i.e. VP_A' entails $\text{F-clo}(\text{VP}_E)$ since calling someone idiot is an instance of insulting someone. However, the second condition, i.e. VP_E' entails $\text{F-clo}(\text{VP}_A)$ is not satisfied, as illustrated in (18), since it is possible to insult someone without calling them an idiot. Therefore, the VP in (14b) is not e-GIVEN.

$$(18) \text{ VP}_E' = \exists x.x \text{ insulted Chuck.} \quad (\text{Merchant 2001: 28})$$

In Merchant's (2001) approach, which has been widely adopted, the only identity condition in ellipsis is semantic.⁸ His approach can account for the acceptability of the sentences in (19), in which we have voice-mismatches.

⁷ The apostrophe represents the result of \exists -type shifting.

⁸ Merchant (2005, 2007, 2013) proposes that the identity relation in ellipsis is sensitive to both semantic and syntactic forms.

- (19) a. The janitor must [_{VP} remove the trash] whenever it is apparent that it should be [_{VP} removed].
 b. The system can be [_{VP} used] by anyone who wants to [_{VP} use it].

Even though in these examples, the antecedent clause and ellipsis site are syntactically different, they are acceptable. This suggests that in these VPE constructions, we do not need to have syntactic identity and that having semantic identity is adequate. We find the same pattern of voice-mismatches in Persian, as well, as shown in (20).⁹

- (20) in ettela't mi-toonest pakhsh besh-e tavassote dolat
 this information DUR-could distribution become-3SG by government
 vali dolat tasmim gereft (*in—ettela't-ro*) pakhsh na-kon-e
 but government decision took.3SG this information-ACC distribute NEG-do-3SG
 ‘This information could have been released by the government but the government chose
 not to release (this information).’

The examples in (19) and (20) illustrate that these structures can be accounted for by semantic identity. However, it has been argued that semantic identity cannot account for some data and that the identity relation in ellipsis is also sensitive to syntactic forms (Chung 2006, 2013, Merchant 2005, 2007, 2013, van Craenenbroeck 2013). For instance, it has been shown in different languages including English (Chung 2006, 2013, Merchant 2007), Chamorro (Chung 2013), and German (van Craenenbroeck 2013) that Sluicing requires syntactic identity. For instance, consider the English examples in (21).

- (21) a. *Joe was murdered, but we don't know who.
 b. *Someone murdered Joe, but we don't know who by. (Merchant 2013: 81)

The examples in (21) show that Sluicing, unlike VPE, is not acceptable with active-passive alternations. These examples illustrate that Sluicing is sensitive to syntactic identity, not

⁹ Persian does not have VPE. However, it allows Verb-stranding constructions in which the verb is overt while its internal arguments are elided. I discuss Verb-stranding in chapter 2.

merely to semantic identity. This also holds in Persian, as the Sluicing examples in (22) show.¹⁰

- (22) a. *Ali koshte shod vali ne-mi-doon-am ki (Ali-ro—kosht)
Ali killed became.3SG but NEG-DUR-know-1SG who Ali-ACC killed.SG
'Ali was killed, but I do not know who (killed Ali).'
- b. *yeki Ali-ro kosht vali ne-mi-doon-am tavassote ki
someone Ali-ACC killed.3SG but NEG-DUR-know-1SG by who
(Ali-koshte-shod)
Ali killed became.3SG
'Someone killed Ali but I do not know by who (Ali was killed).'

(Adapted from Merchant 2013: 81)

We see that Sluicing does not tolerate active-passive mismatches. This means that a passive clause cannot antecede an active clause in the ellipsis site (22a), and vice versa (22b). These examples show that the recoverability condition based on only semantic identity would incorrectly predict these sentences to be well-formed. Other structures such as the examples in (23) also provide evidence against having only semantic identity.

- (23) a. We are donating our car, but it is unclear **to which** organization (~~we are donating our car~~).
b. *We are donating our car, but it is unclear **which** organization (~~we are donating our car to~~).

(Chung 2006: 80)

The examples in (23) are problematic for pure semantic identity. However, they can be accounted for by syntactic identity. The difference between the sentences in (23a) and (23b) is that in the former, the preposition has been pied-piped while in the latter it has been stranded. We find this pattern of preposition pied-piping/stranding in Persian, as well (24).

¹⁰ Note that these sentences are grammatical if ellipsis does not take place.

- (24) a. mā dār-im māshine-moon-ro ehdā mi-kon-im vali maloom nist
 we have-1PL car-our-ACC donation DUR-do-1PL but clear is.not
- [be **kodum**_i] sāzmān (māshine moon-ro *t_i* ehdā mi kon im)
 to which organization car-our-ACC donation DUR-do-1PL
 'We are donating our car, but it is not clear to which organization.'
- b. *mā dār-im māshine-moon-ro ehdā mi-kon-im vali maloom nist
 we have-1PL car-our-ACC donation DUR-do-1PL but clear is.not
- kodum**_i sāzmān (māshine moon-ro be *t_i* ehdā mi kon im)
 which organization car-our-ACC to donation DUR-do-1PL

The examples presented in ((19)-(24)) show that having only semantic or syntactic identity cannot account for the data but rather we need to have a combination of both. This hybrid identity has already been proposed by various researchers (Chung 2006, 2013, Merchant 2005, 2007, 2013, van Craenenbroeck 2013).

1.3.2.2. Identity Condition on the Remnant

In this section, I show that the identity of the remnant plays a crucial role in having acceptable elliptical structures. Recall that in Merchant's approach, the elements that are not e-GIVEN are focus-marked. He formally states this Focus condition as in (11), repeated in (25).

- (25) **Focus condition on VP-ellipsis/TP ellipsis**
 A VP or TP α can be deleted only if α is e-GIVEN.

The function of this condition is to make sure that the antecedent that corresponds to the remnant XP is focused. Let us consider the example in (26), in which there is no focus-marking in the antecedent.

- (26) She called Ben an idiot, but I do not know who else [_{TP} ~~she called *t* an idiot~~].
 (Merchant 2001: 35)

Based on the mutual entailment of antecedent and ellipsis clause, we expect the second clause in (26) to mean *I don't know who else she called an idiot*. However, since there is no F-marked element in the antecedent, we have $TP_E' = \exists x. \text{she called } x \text{ an idiot}$. This TP_E' does not entail the F-clo(TP_A)=*she called Ben an idiot*. Therefore, this should violate the second condition in (10) and the deletion should not be possible. However, despite the entailment violation, we see that the sentence is acceptable. Merchant resolves this issue by assigning focus marks to the antecedent, as in (27).

- (27) a. $ABBY_F$ called Ben an idiot, but I don't know who else.
- b. Abby called BEN_F an idiot, but I don't know who else. (Merchant 2001: 35)

The interpretation of the sluices in (27a) and (27b) are given in (28a) and (28b), respectively.

- (28) a. ... but I don't know who else called Ben an idiot.
- b. ... but I don't know who else Abby called an idiot.

According to Merchant, the Focus condition is satisfied in these structures since we have the correct form of entailment. For the example in (28a) in which *Ben* is not focused, we have the entailments in (29).

- (29) a. $TP_E' = \exists x. x \text{ called Ben an idiot}$.
- b. F-clo(TP_A)= $\exists x. x \text{ called Ben an idiot}$. (Merchant 2001: 36)

The same holds for the sentence in (28b), in which *Ben* is focus-marked, as illustrated in (30).

- (30) a. $TP_E' = \exists x. Abby \text{ called } x \text{ an idiot}$.
- b. F-clo(TP_A)= $\exists x. Abby \text{ called } x \text{ an idiot}$.

Now that we are familiar with Merchant's approach, we can discuss the Persian data. Let us consider the Persian Sluicing examples in (31), which are counterparts of the English Sluicing in (27).

- (31) a. Ayda Ali-ro ahmaq sedā zad vali ne-mi-doон-am
 Ayda Ali-ACC idiot call hit.3SG but NEG-DUR-know-1SG

dige **ki**

else who

‘Ayda called Ali an idiot, but I don’t know who else (called Ali an idiot).’

- b. Ayda **Ali-ro** ahmaq sedā zad vali ne-mi-doон-am
 Ayda Ali-ACC idiot call hit.3SG but NEG-DUR-know-1SG

dige **ki-ro**

else who-ACC

‘Ayda called Ali an idiot, but I don’t know who else (Ayda called an idiot).’

Unlike the English Sluicing in (26), which can have two interpretations, Persian Sluicing is never ambiguous. In the structures in (31), focus marking of the antecedent is not required since the subject and object are differentiated by a case marking; the object carries the accusative case marking *-ra*, which is pronounced as *-ro* or *-o*.¹¹ This raises the question of on what basis do we mark the elements that remain overt? I argue that, in Persian, what determines which elements can remain overt is *contrast* not *focus*. To illustrate the role of contrast, let us consider the Polarity Stripping examples in (6), repeated in (32).¹²

- (32) a. [Top AYDA] ketāb kharid, vali [Top ARAZ] na
 Ayda book bought.3SG but Araz NEG
 ‘Ayda bought books, but Araz didn’t (buy books).’

- b. #Ayda KETAB kharid, vali ARAZ na
 Ayda book bought.3SG but Araz NEG

¹¹ The analysis of *-ra* has been a controversial topic. *-ra* can be a case marker even though it can appear more than once in the same clause. It can also be a definite/specification marker; however, it can cooccur with the indefinite marker *-i*. For discussion on *-ra*, see Dabir-Moghaddam (1992), Ghomeshi (1997), and Karimi (1999a, 1999b, 2005).

¹² Recall that capitalization in these structures represents contrast.

Recall that the subject *Araz* in these structures is a topicalized element. The sentence in (32a) is acceptable because *Araz* contrasts with its corresponding element *Ayda*. On the other hand, the sentence in (32b) is not acceptable because the subject *Araz* cannot be in a contrastive relationship with the object *ketāb* ‘book’. However, this sentence becomes acceptable if the remnant in the second clause is an object, as shown in (33).

- (33) Ayda [Top KETAB] kharid, vali [Top MAJALLE] na
 Ayda book bought.3SG but magazine NEG
 ‘Ayda bought books, but (she) didn’t (buy) magazines.’

The examples in (32) and (33) show that the crucial factor in having acceptable structures is establishing a contrastive relationship between the remnant and its antecedent. These examples are a challenge to Merchant’s approach. If we apply his e-GIVENness condition in (10) to the sentence in (32a), the result yields (34).

- (34) a. $TP_E' = \exists x.x \text{ did not buy books.}$
 b. $F\text{-clo}(TP_A) = \exists x.x \text{ bought books.}$

We see that the relationship between the ellipsis clause and its antecedent in (34) is not a mutual entailment but rather a ‘contrastive entailment’. This means that the relationship between the ellipsis clause and the antecedent involves contrast.

Merchant, based on his study on English VPE and Sluicing, uses the term ‘focus’ for all the elements that survive ellipsis. However, this term is misleading since in Persian, the elements that survive ellipsis have either contrastive topic or contrastive focus features.¹³

¹³ We have already seen in (32a) and (33) that the remnant and its antecedent are topicalized elements, which contrast with each other. I refer to these constructions as Polarity Stripping. Persian also allows structures as in (i), which I refer to as Negative Stripping. In this construction, there is a contrastive focus relationship between the remnant *Araz* and its antecedent *Ayda*. I discuss Polarity Stripping and Negative Stripping in chapter 3.

- (i) [Foc AYDA] ketāb kharid, [Foc ARAZ] na
 Ayda book bought.3SG Araz NEG
 ‘AYDA bought books, ARAZ did not.’

Therefore, to be able to adequately account for the data, I propose that the term ‘contrast’ should replace ‘focus’. In addition, it is important to distinguish these two types of remnants, i.e. contrastive topic vs. contrastive focus, since they do not have equal roles in licensing ellipsis, as I discuss in subsection 1.3.2.3.

Merchant provides examples as in (35), which he calls ‘contrast-sluice’, to show that his approach can account for structures which involve contrast.

- (35) She has [five CATS]_F, but I don’t know how many DOGS [_{TP} ~~she has *t*~~]
 (Merchant 2001: 36)

The relevant computations are given in (36), which satisfy the second condition in (10), since (36a) and (36b) are identical.

- (36) a. $TP_E = \exists x. \text{she has } x$
 b. $F\text{-clo}(TP_A) = \exists x. \text{she has } x$ (Merchant 2001: 36)

It should be noted that the deletion in this sentence would not be possible if the material contrasting with *dogs* is considered in the computation of TP_A since TP_E doesn’t entail *she has five cats*. This structure illustrates the reason Merchant uses the abstraction process in computing the identity relation between the elided clause and its antecedent. Substituting the *cats* and *dogs* with a variable gives us what we want since the rest of the clause is identical, as shown in (36).

We have already seen that Persian examples such as (32) and (33), in which the remnant contrasts with its corresponding element in the preceding clause, are a challenge to Merchant’s theory. To provide another example of this sort, let us consider the Verb-stranding example in (37).¹⁴ The relevant computation of this sentence is given in (38).

¹⁴ Some speakers like this sentence better when the second clause is continued as shown below:

(i) vali emsāl yeho (~~un~~ khoona *re*) furukht, bejāsh āpārtemān kharid
 but this year suddenly that house-ACC sold.3SG instead apartment bought.3SG
 ‘But (she) suddenly sold (that house) this year and instead bought an apartment.’

- (37) Ayda pārsāl un khoona-ro KHARID,
 Ayda last year that house-ACC bought.3SG
 ‘Ayda bought that house last year.’
- vali emsāl yeho (~~un—khoona-ro~~) FURUKHT
 but this year suddenly that house-ACC sold.3SG
 ‘But (she) suddenly sold (that house) this year.’

- (38) a. $VP_E = \exists x.x$ sold a house
 b. $F\text{-clo}(VP_A) = \exists x.x$ bought a house

As shown in (38), VP_E does not entail $F\text{-clo}(VP_A)$ since (38a) and (38b) are not identical. Merchant’s theory cannot account for the sentence in (37) since his e-GIVENNESS condition depends on a mutual entailment relation to establish semantic identity between the ellipsis clause and the antecedent. However, in (38) we do not have a mutual entailment but rather we have a contrastive entailment; the relationship between the ellipsis clause and the antecedent involves contrast.

I propose that the first requirement for having acceptable elliptical structures is having a contrastive relationship between the remnant and its corresponding element. Otherwise, the result yields an ungrammatical sentence, as in (39).

- (39) A: dishab raft-im restoorān, Ayda kabāb khord
 last night went-1PL restaurant Ayda kebab ate.3SG
 ‘Last night, we went to a restaurant, Ayda ate kebab.’
- B: *na, JOOJE_i [TP Ayda ~~t_i~~ khord]
 no chicken Ayda ate.3SG
 Intended: ‘No, CHICKEN (Ayda ate).’

The structure in (39B) is not acceptable because there is not a contrastive relationship between the remnant *jooje* ‘chicken’ and its correlate *kabāb* ‘kebab’. This type of sentence that has a neutral intonation can only be corrected by uttering a full sentence but not by an elliptical one. As shown in (40), the non-elliptical equivalent of (39B) is acceptable.

- (40) B': na, JOOJE_i, [TP (Ayda) *t_i* khord]
no chicken Ayda ate.3SG
Lit: 'No, CHICKEN (Ayda) ate.'

The fact that the sentence in (40) is acceptable while the one in (39B) is not suggests that only in elliptical structures, we have such a restriction that the remnant and its correlate must be contrastive. To provide further evidence for this claim, let us have a look at the examples in (41), which show the same pattern.

- (41) A: hame jooje khord-an, vali Araz pitzā khord
all chicken ate.3PL but Araz pizza ate.3SG
'Everyone ate chicken but Araz ate pizza.'
- B: *na, AYDA [TP ~~t_i~~ pitzā khord]
no Ayda pizza ate.3SG
- B': na, AYDA, [TP *t_i* pitzā khord]
no Ayda pizza ate.3SG
'No, AYDA ate pizza.'

The second requirement for having acceptable elliptical structures is that the remnant and its correlate must have parallel structures regarding information structure. This means that they both must be topicalized (42a) or focalized elements (42b).¹⁵

- (42) a. [Top Ayda] ketāb kharid, vali [Top Araz] na
Ayda book bought.3SG but Araz NEG
'Ayda bought books but Araz did not.'
- b. [Foc AYDA] ketāb kharid, [Foc ARAZ] na
Ayda book bought.3SG Araz NEG
'AYDA bought books, ARAZ did not.'

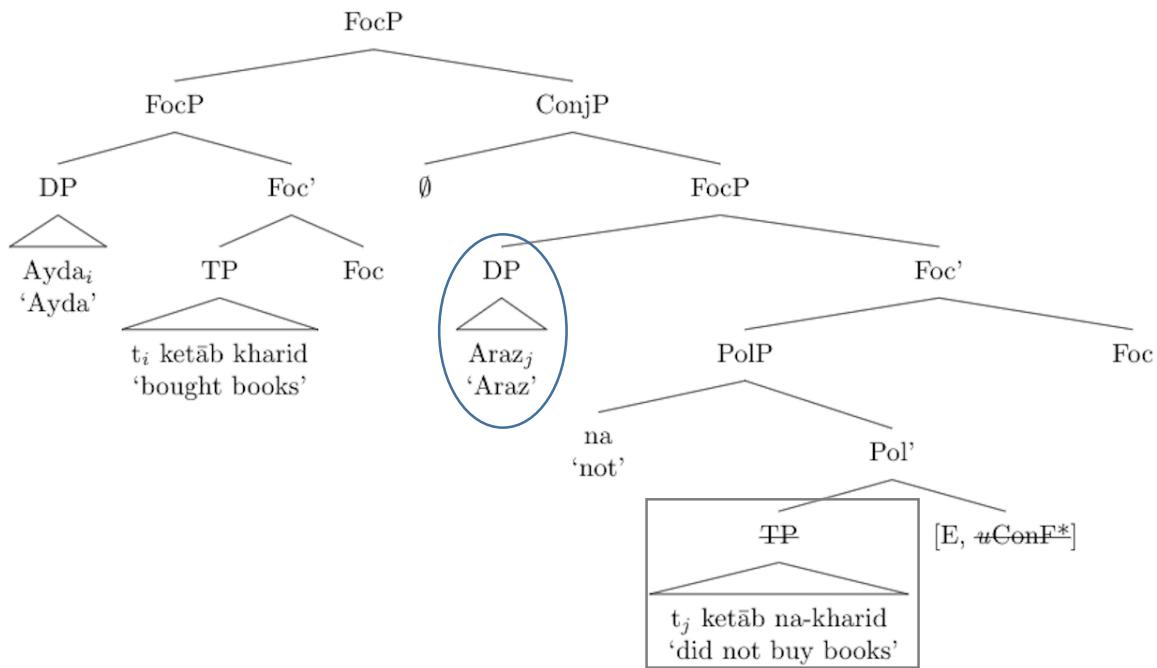
If the remnant and its correlate do not have the same information structure, the result yields infelicitous sentences, as shown in (43).

¹⁵ See chapter 3 for the discussion on the constructions in (42a) and (42b).

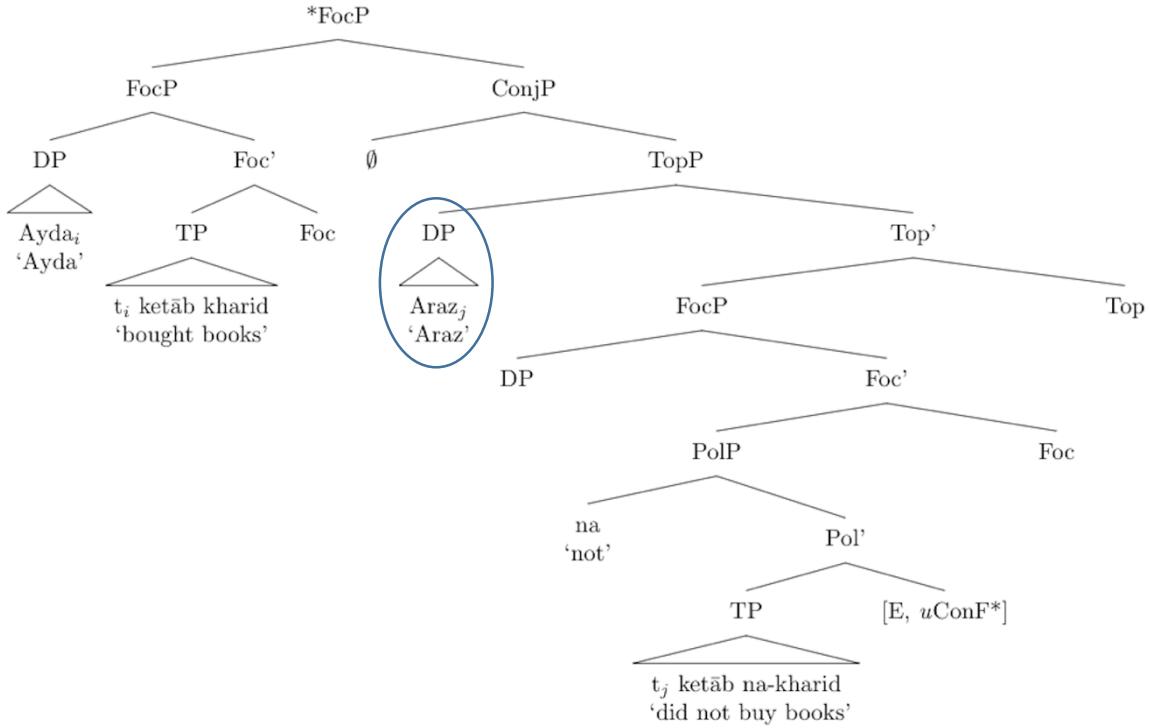
- (43) a. #_{[Top} Ayda] ketāb kharid, vali [Foc ARAZ] na
 Ayda book bought.3SG but Araz NEG
- b. #_{[Foc} AYDA] ketāb kharid, [Top Araz] na
 Ayda book bought.3SG Araz NEG

To demonstrate how this works, let us consider the schematic illustrations in (44), which represent the sentence in (43b).

- (44) a. Successful derivation of (42b)



b. Derivation of (42b) crashes



In (44a), the uninterpretable contrastive focus feature, i.e. $[u\text{ConF}^*]$, is checked and deleted by being in a local relationship with the DP *Araz* that has a matching feature.¹⁶ However, in (44b), the $[u\text{ConF}^*]$ feature is left unchecked since the DP *Araz* has moved to the Spec of TopP instead of FocP, which leads the derivation to crash.

Based on the examples provided in this section, we can conclude that there must be a contrastive relationship between the remnant and its correlate. In addition, they must have the same information structure, i.e. they must both be focalized or topicalized elements. Therefore, I define the identity condition on the remnant as in (45).

(45) **Identity Condition on the Remnant**

- (i) There must be a contrastive relationship between the remnant and its correlate, and
- (ii) They must have the same information structure, i.e. both of them must be topicalized or focalized elements.

¹⁶ The *u* means an uninterpretable feature. Features bearing an asterisk * are strong features that must be checked locally before Spell-Out. This requires the movement of an element with a matching feature.

We have so far seen that contrast plays a crucial role in having acceptable elliptical structures. In addition, we have already discussed the Identity Condition on the Elided Elements and the Identity Condition on the Remnant. Therefore, to account for elliptical structures in Persian, I propose the Contrast Condition in Ellipsis, as stated in (46).

(46) **Contrast Condition on Ellipsis**

(i) Ellipsis Condition: Ellipsis can occur iff there is an element α in XP_E that contrasts with an element α' in XP_A , in which

- a) α and α' have the same syntactic category, and
- b) XP_E and XP_A have the same syntactic structure.

(ii) Identity Condition on the Remnant: An element α in XP_E can survive ellipsis iff there is an element α' in an XP_A , in which α and α' are in a contrastive relationship and have identical information structure.

(iii) Identity Condition on the Elided Materials: An element β in XP_E can be elided iff there is an element β' in an XP_A , in which β and β' are identical. (The identity relation is sensitive to both semantic and syntactic forms)

The proposed contrast condition in (46i) means that ellipsis is possible only if there is an element in the ellipsis site that contrasts with its correlate in the antecedent clause. Based on the second condition, an element can survive ellipsis only if it is in a contrastive relationship with its antecedent and if they have identical information structure. Based on the third condition, an element can be elided only if it is identical to its corresponding element in the antecedent clause.

1.3.2.3. Licensing Ellipsis

We have already discussed the identity condition on the elided elements, the identity condition on the remnant and the contexts in which ellipsis is possible. The question that needs to be answered is what heads license ellipsis?

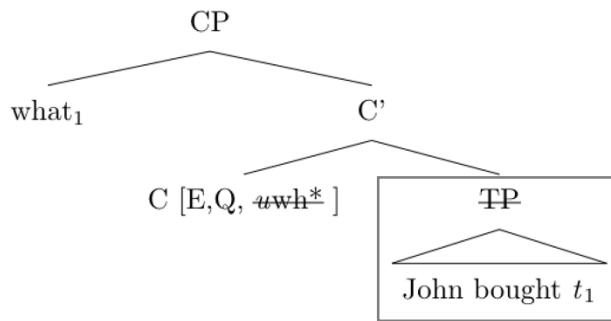
In Merchant's (2001) theory, a head that carries an [E] feature licenses the deletion of its complement at the PF level. The [E] feature instructs the grammar to elide the

elements that are below the head that has the [E] feature. The [E] feature was first used in his analysis of Sluicing, as in (47), but it was later extended to other elliptical structures.

- (47) John bought something, but I don't know what (~~John bought~~). (Merchant 2001: 3)

The schematic representation of the sluice in (47) is illustrated in (48). In this structure, the [E] feature is bundled with $C_{[Q, uwh^*]}$ which restricts TP deletion to *wh*-phrase questions. The [Q] feature makes sure that Sluicing is licensed only in interrogatives, while the [*uwh*^{*}] feature triggers the movement of the *wh*-phrase *what* to the Spec of CP.

- (48)



Even though Persian is a *wh*-in-situ language (Karimi 2005), it allows Sluicing, as shown in (49).

- (49) Ramin ye chiz-i kharid. hads bezan chi (~~Ramin kharid~~)
 Ramin a thing-IND bought.3SG guess hit.2SG what Ramin bought.3SG
 ‘Ramin bought something. Guess what (Ramin bought).’ (Toosarvandani 2008:679)

In Persian, a declarative sentence has unmarked SOV word order (50a). In *wh*-questions, the *wh*-phrase occupies the same position as its non-*wh*-counterpart (50b).

- (50) a. Sohrab moz-o khord
 Sohrab banana-ACC ate.3SG
 ‘Sohrab ate the banana.’

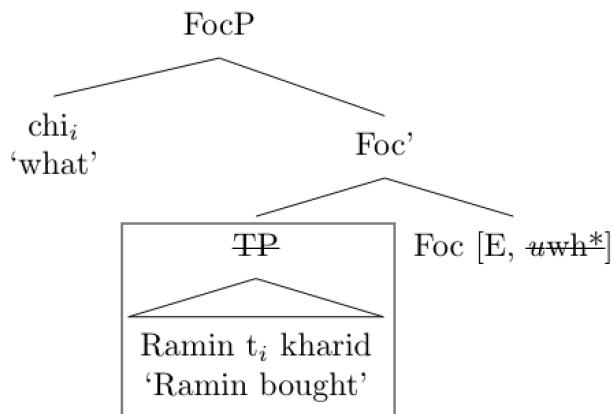
- b. Sohrab **chi-o** khord
 Sohrab what-ACC ate.3SG
 ‘What did Sohrab eat?’ (Toosarvandani 2008: 692)

However, the *wh*-phrase can undergo focus movement and move to the sentence initial position (Karimi 1999a, 2005, Kahnemuyipour 2001, Toosarvandani 2008), as shown in (51).

- (51) **chi-o** Sohrab khord?
 what-ACC Sohrab ate.3SG
 ‘What did Sohrab eat?’

Observing the examples in (50) and (51), Toosarvandani (2008) proposes that the *wh*-phrase in Sluicing undergoes focus movement. Based on his analysis, the structure of the sluice in (49) is as illustrated in (52).

(52)



As illustrated in (52), the [E] feature is bundled with the [uwh*] feature. The [uwh*] feature triggers the movement of the *wh*-phrase out of the ellipsis site while the [E] feature on the focus head licenses the deletion of its complement, TP.

As we have already seen, the licensing head varies from one language to another. This means that a head licensing ellipsis in one language might not do so in another language. This is why Sluicing in English is licensed by C while in Persian, it is licensed

by Foc. The question that needs to be answered is whether the licensing heads are construction-specific or we can have a generalization for a given language.

In this dissertation, I claim that ellipsis in Persian is licensed by the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head and Int(errogative) head. The table in (53) illustrates which elliptical constructions these heads license and the chapters in which they are discussed.

(53) Ellipsis Licensing Heads	Elliptical Constructions	Chapters
a. Foc(us) head	Verb-stranding	Chapter 2
	Gapping, Sluicing, Fragment Answers, NP Ellipsis, What-stripping	Chapter 4
b. Pol(arity) head	Polarity Stripping and Negative Stripping	Chapter 3
	<i>Cherā</i> -Stripping	Chapter 4
c. Int(errogative) head	Why-stripping	Chapter 4

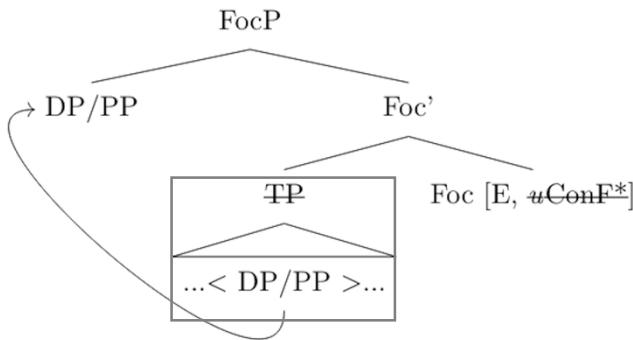
The licensing heads proposed in (53) are the result of the restrictions on the feature bundles that are possible in Persian. The [E] feature can in general bundle with i) a strong uninterpretable [wh] feature, [E, *uwh**], ii) a strong uninterpretable contrastive focus [ConF] feature, [E, *uConF**], and iii) an uninterpretable [Pol] feature, [E, *uPol*].

The [E, *uwh**] and [E, *uConF**] feature bundles mean that for ellipsis to go through, the elements that have a [wh] feature or a [ConF] feature must move out of the phrase that is specified for deletion. On the other hand, the [*uPol*] feature is satisfied by having a polarity marker in the Spec of PolP.

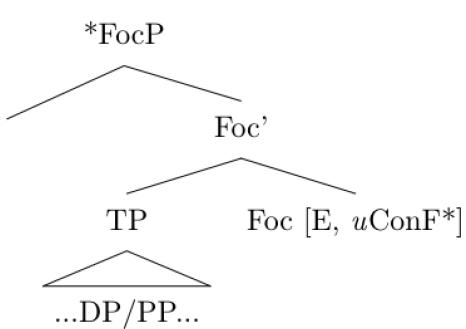
To illustrate how these features interact in deriving elliptical structures, let us consider the schematic illustrations in (54). The uninterpretable strong contrastive focus feature [*uConF**] is checked and deleted by being in a local relationship with an element that has a matching feature. After this feature is checked, the [E] feature licenses the

deletion of its complement, TP. However, if the [*uConF**] feature is left unchecked, as in (54b), the derivation crashes and ellipsis cannot take place.

(54) a. Successful derivation



b. Unsuccessful derivation

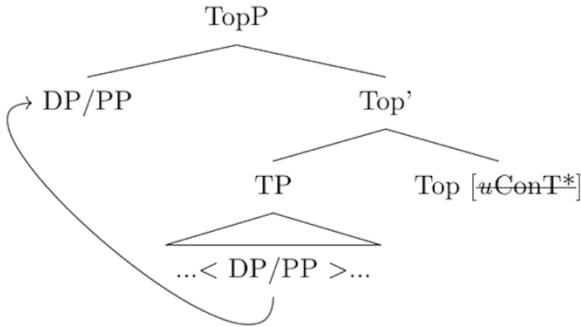


Recall that the elements that survive ellipsis must have a contrastive focus or contrastive topic feature. However, in our list of feature bundles, we do not have a combination of the [E] feature bundled with an uninterpretable strong contrastive topic feature, [E, *uConT**]. The fact that we do not have the [E, *uConT**] feature means that TopP, which hosts contrastive topic, cannot act as a licensor. This leads to the generalization that in an elliptical structure, the remnant can have a contrastive topic feature only if there is another element with a contrastive focus feature. This means that an element with a contrastive topic feature cannot be the sole survivor of ellipsis.¹⁷

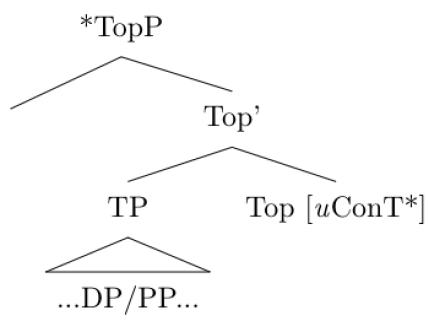
In subsection 1.4.1., I discuss that in Persian, an element that carries a contrastive topic feature always raises to the Spec of TopP, independent of ellipsis. This suggests that the contrastive topic feature on TopP is always strong, i.e. [*uConT**], which is checked by triggering the movement of an element that carries [*iConT*] feature to the Spec of TopP, as illustrated in (55a). If the [*uConT**] feature is left unchecked, the derivation crashes as shown in (55b).

¹⁷ If we have only one remnant in an elliptical structure, the remnant must have a focus feature, i.e. a *wh*-phrase or a focalized element.

(55) a. Successful derivation



b. Unsuccessful derivation



Since contrastive topic feature is always strong in Persian, it is not necessary to bundle it with the [E] feature. In this dissertation, I show that it is possible to provide a unified analysis for elliptical structures in Persian with the three feature bundles proposed in this section: [E, *uwh**], [E, *uConF**], and [E, *uPol*].

Before closing this section, it should be noted that even though I have argued that *contrast* is a crucial factor in having grammatical elliptical structures, I do not propose having a Con(tractive)P functional projection. In my approach, *contrast* is a sub-feature of focus and topic; therefore, it is not necessary to have a separate functional projection for ConP. Also, recall that elements with contrastive focus and contrastive topic features move to the Spec of FocP and the Spec of TopP, respectively. This shows that Persian already has dedicated positions for elements with these features.¹⁸

¹⁸ It should also be added that in some elliptical structures such as Gapping, we have two remnants; one carries a [ConT] feature while the other has a [ConF] feature. These two remnants cannot be in one ConP. One might suggest having two separate ConPs, one dedicated to topic and the other to focus. If this is possible at all, it raises the question of what their order should be with respect to TopP and FocP.

1.4. Persian Phrase Structure

Persian is a pro-drop language with unmarked SOV word order. It is also a topic prominent language, in which all elements can remain inside vP. Movement out of vP is triggered for topic or focus purposes (Karimi 2005), as demonstrated in the examples in (56).¹⁹

- (56) a. emrooz [vP Kimea ketāb-ro be Parviz mid-e]
today Kimea book-ACC to Parviz give-3SG
'Kimea will give the book to Parviz today.'
- b. **Kimea_i** emrooz [vP *t_i* ketāb-ro be Parviz mid-e]
Kimea today book-ACC to Parviz give-3SG
- c. **ketāb-ro_i** emrooz [vP Kimea *t_i* be Parviz mid-e]
book-ACC today Kimea to Parviz give-3SG
- d. **[be Parviz]_i** emrooz [vP Kimea ketāb-ro *t_i* mid-e]
to Parviz today Kimea book-ACC give-3SG

(Karimi 2005: 113)

In (56a), the subject and objects are in their base position. However, in (56b), (56c) and (56d), the subject, the direct object, and indirect object have been topicalized and moved to the sentence-initial position, respectively.

Karimi proposes the structure in (57) for Persian. In this structure, the Spec of TP²⁰ and the functional projections above it represent operator/discourse phase.

¹⁹ There are some limitations on the movement of the following elements out of vP: non-specific subjects and objects, non-verbal elements of complex predicates, and VPs (For further discussion, please refer to Karimi 2005: 18-20).

²⁰ According to Karimi, the Spec of TP is not an A-position but rather an A-bar position. She supports her claim by anaphoric binding relations, as shown in ((i)-(iii)).

- (i) Kimea [bache-hā-ro]_i be [hamdige]_i mo'arrefi kard
Kimea child-PL-ACC to each other introduction did.3SG
'Kimea introduced the children to each other.'
- (ii) *Kimea [hamdigar-o]_i be [bache-hā]_i mo'arrefi kard
Kimea each other-ACC to child-PL introduction did.3SG

- (57) [CP [TopP [FocP [NegP Neg [TP [vP]]]]]]

Operator/Discourse Phase Lexical Phase

Regarding head directionality, Persian does not have a unified pattern. VP is head final (58) while DP is head initial (59). Following Karimi (2005), I assume that TP is head initial and T is on the left side.²¹

- (iii) *be [bache-hā]_i Kimea [hamdigar-o] mo'arrefi kard
to child-PL Kimea each other-ACC introduction did.3SG (Karimi 2005: 123)

The sentence in (i) is acceptable as the anaphor *hamdige* ‘each other’ can be bound by its antecedent *bache-hā-ro* ‘the children’, which is interpreted at the edge of vP. The sentence in (ii) is not acceptable since the anaphor is not locally bound by its antecedent; therefore, it violates Principle A of the Binding Theory. In (iii), the indirect object *bache-hā* ‘children’ has moved to the Spec of TP. Since the anaphoric binding relationship cannot be established from this position, it means that the Spec of TP cannot be an A-position.

²¹ Karimi provides two pieces of evidence for this claim. First, sentential arguments of the verb appear in the post-verbal position, as illustrated in (iv).

- (iv) Kimea goft [CP ke Parviz khoone nist]
Kimea said.3SG that Parviz home not.be
'Kimea said that Parviz was not home.' (Karimi 2005: 8)

If T was on the right side, we would expect the verb *gofit* ‘said’ to appear in the right-most position of the sentence when it moves to T (e.g. when it undergoes topicalization). However, the ungrammaticality of the sentence in (v) shows that the sentential argument cannot occur in pre-verbal position.

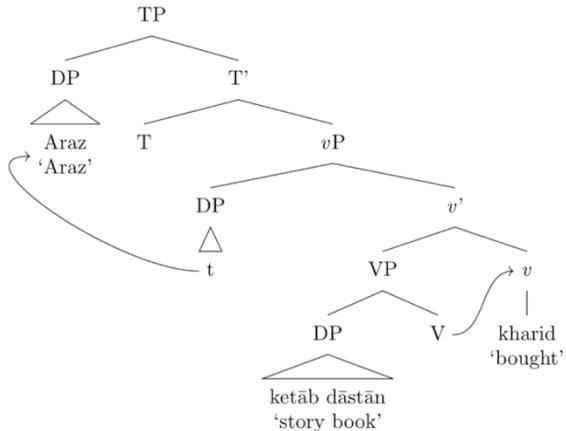
- (v) *man t_i [CP ke Kimea in kār-o migir-e] goft-am_i
I that Kimea this job-ACC get-3SG said-1SG
Intended: 'I said that Kimea will get this job.' (Karimi 2005: 8)

Second, it is possible to extract an argument out of CP, as in (vi). If the sentential argument had moved to its surface position, it would not be possible to extract the phrase *un ketāb-a-ro* ‘those books’ out of CP since it would be an island violation.

- (vi) [un ketāb-ā-ro]_i man midoon-am [CP ke Kimea t_i kharid-e]
that book-PL-ACC I know-1SG that Kimea bought-3SG
'As for those books, I know that Kimea has bought (them).' (Karimi 2005: 10)

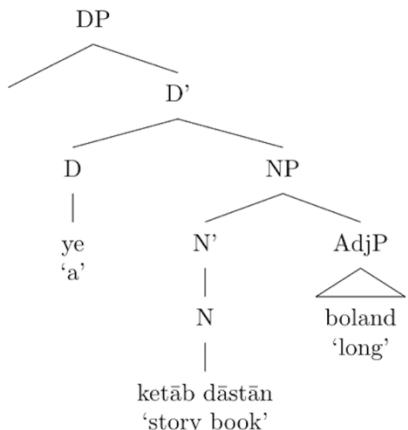
- (58) a. Araz ketāb dāstān **kharid**
 Araz book story bought.3SG
 ‘Araz bought a story book.’

b.



- (59) a. ye ketāb dāstān-e²² boland
 a book story-EZ long
 ‘A long story book’

b.



²² Ezafe, represented by EZ, refers to the morpheme [-e], which literally means ‘addition’. The Ezafe morpheme [-e] is attached to the head noun, and can be reiterated when there are multiple modifiers and complements. The nature of Ezafe in Persian has been controversial. Some of the proposals to account for Ezafe are as follows: Ezafe as a case marker (Samian 1983, 1994, Larson and Yamakido 2008, Larson and Samiian 2018), Ezafe as a marker of the syntactic movement of the head noun (Kahnemuyipour 2000, 2014), and Ezafe as a linker indicating subject-predicate inversion (Den Dikken 2006).

1.4.1. Topic Constructions

Topic has been generally defined as ‘aboutness’ and what the utterance is about (Strawson 1964, Gundel 1974, Reinhart 1982). For instance, consider the examples in (60) that are truth conditionally identical.

- (60) a. *John* saw the play yesterday.
b. *Yesterday* John saw the play.
c. *The play* John saw yesterday.

(Halliday 1967: 212, cited in Vallduví and Engdahl 1996)

In each of these examples, topic is assigned to a different constituent. These sentences can be embedded in the sentence ‘*He said about x that P*, where *x* stands for the appropriate topic phrase and *P* expresses the comment’ (Vallduví and Engdahl 1996: 165-466). In English, topic usually occurs in the sentence-initial position. In these examples, the speaker announces what the topic is and then says something about it.

We find a similar pattern in Persian as demonstrated in (61). In (61a), the specific direct object *piran-o* and in (61b) the indirect object *barā Araz* have moved to the sentence initial position.²³ As the translation of these sentences show, they are about *the shirt* and *Araz*, respectively.

- (61) a. piran-o_i Ayda _{t_i} barā Araz kharid
shirt-ACC Ayda for Araz bought.3SG
'As for the shirt, Ayda bought (it) for Araz.'

²³ It is also possible to have long distance movement for the topicalized element, as the following examples illustrate:

- a. Kimea_i pro midoon-am ke _{t_i} in film-ro did-e
Kimea know-1SG that this movie-ACC saw-3SG
'As for Kimea, I know that (she) has seen this movie.'
- b. be Kimea_i man fekr mikon-am ke Arezu un ketāb-ro _{t_i} dād-e
to Kimea I thought do-1SG that Arezu that book-ACC gave.3SG
'As for Kimea, I think that Arezu has given that book to her.'

(Karimi 2005: 17)

- b. barā Araz_i Ayda piran-ro _{t_i} kharid
 for Araz Ayda shirt-ACC bought.3SG
 ‘As for Araz, Ayda bought (him) the shirt.’

Persian has two types of topics that I discuss in the following subsection.

1.4.1.1. Background Topic vs. Contrastive Topic

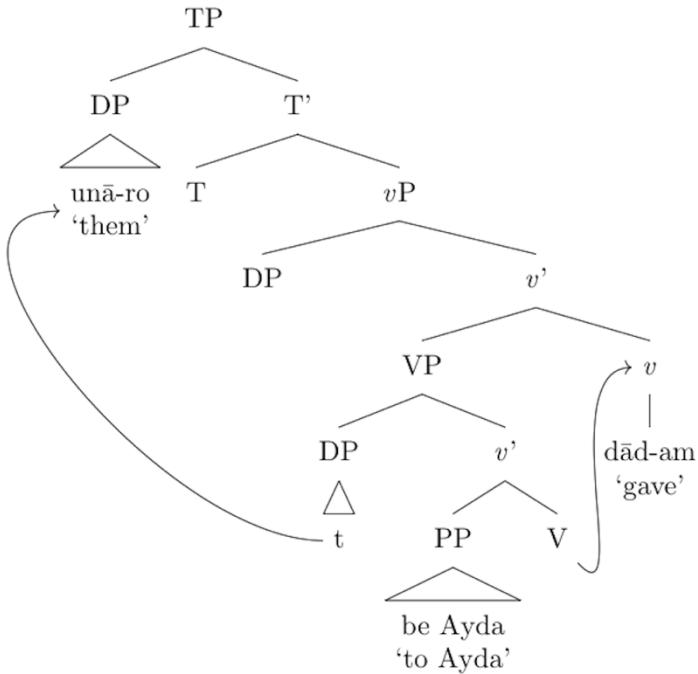
There are two topic positions in Persian: Spec of TP and Spec of TopP (Karimi 2005). These positions host *background topic* (adopting Karimi’s term) and *contrastive topic*, respectively.²⁴ To define background topic, let us consider the examples in (62).

- (62) Q: **ketāb-ā-ro** kojā gozāsh-i?
 book-PL-ACC where put-2SG
 ‘Where did you put the books?’
- A: **unā-ro** be Ayda dād-am
 them-ACC to Ayda gave-1SG
 ‘I gave them to Ayda.’

The speaker in (62Q) asks about specific books that the hearer knows about. Therefore, we can say that the information about *the books* in this example is shared between the interlocutors. In (62A), *unā-ro* ‘them’ is a background topic since it refers to ‘the books’ that has already been present in the context. In this structure, *unā-ro* ‘is in the Spec of TP, as illustrated in (63).

²⁴ Karimi refers to these topics as *background topic* and *shifted topic*.

(63)



Now, let us consider the examples in (64), which represent contrastive topic.

- (64) Q: zarf-ā kojā-n?
 dish-PL where-3PL
 'Where are the dishes?'

A: **boshqāb-ā** too cābinet-an vali [kāse-hā-ro_i] Ayda *t_i*
 plate-PL in cabinet-3PL but bowl-PL-ACC Ayda

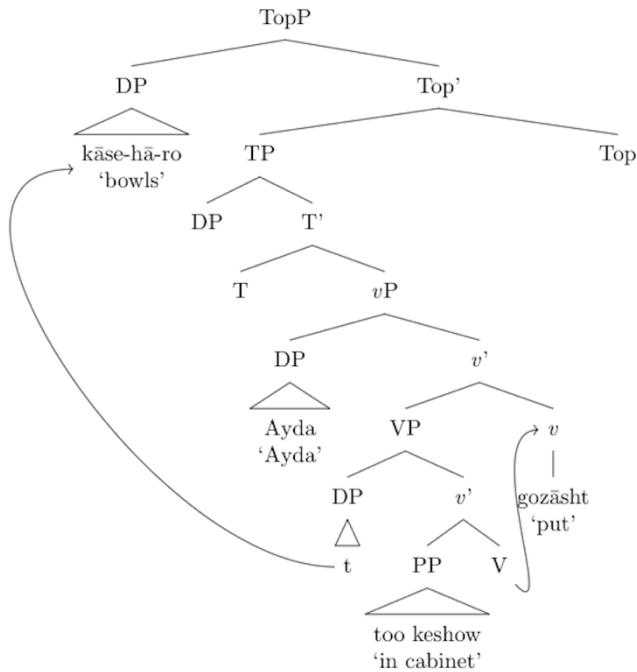
too keshow gozāsht]
 in drawer put.3SG
 'The plates are in the cabinet but [the bowls Ayda put them in the drawer].'

(Adapted from Vallduví and Engdahl 1996: 473)

In (64A), *kase-hā-ro* 'bowls' is topicalized and moved to the left of the clause, to the Spec of TopP. In this example, there is a contrastive interpretation between *bowls* and *plates*,

and they are selected from a set of dishes that are known to the speaker and hearer.²⁵ The schematic representation of the relevant parts of the sentence in (64A) is given in (65).

(65)



In summary, contrastive topic involves topicalized elements that are in a contrastive relationship and are selected from a set of alternatives. Therefore, we can define it as in (66).

- (66) Contrastive Topic refers to topicalized elements that have been selected from a set of alternatives that are known to the speaker and hearer.

²⁵ It should be noted that contrastive topic can also be used to shift the conversation from an entity given in the previous discourse (Büring 1999), as indicated in the following example. In this sentence, the speaker asks about *Fritz*; however, the hearer does not answer the question but instead makes a different but related statement. In this example, the constituent *I* that replaces *Fritz* functions as a contrastive topic.

- (i) Q: Do you think that Fritz would buy this suit?
 A: Well, [I]_{CT} certainly [WOULDN'T]_F.

(Büring 1999: 4)

1.4.2. Focus Constructions

Focus has been generally associated with the notion of new information, which is not shared between the speaker and hearer. This means that focused elements are not presupposed but rather asserted while the rest of the sentence is presupposed information (Chomsky 1971, 1976, Jackendoff 1972, Zubizarreta 1998). Focused element carries a high pitch accent, which is called *A accent* (Jackendoff 1972). For instance, consider the sentences in (67), in which capitalization represents focus. In (67a), *Mary* carries the prominent pitch accent while in (67b), *a car* has the focus pitch accent.

- (67) a. MARY bought a car.
b. Mary bought A CAR.

Even though these sentences have the same truth value, both of them mean that *Mary bought a car*, they are not felicitous in the same context. The sentence in (67a) can be uttered in response to the question *who bought a car?* In addition, it can also occur in contexts in which the speaker corrects a prior asserted utterance. For instance, if someone says that *JOHN bought a car*, the speaker can utter the sentence in (67b) to mean that *MARY, not JOHN, bought a car*. On the other hand, the sentence in (67b) is felicitous in response to the question *what did Mary buy?* or in contexts in which a prior utterance has been asserted which is not correct, for example, *Mary bought A HOUSE*.

Focus has also been proposed to represent a set of alternative propositions (Rooth 1992a, 1996, Molnár 2001). Suppose that *Mary* in (67b) has a set of items such as {a car, a house, a villa, a boat} that she can buy. In the set of items that are available to her, she buys *a car*. In this sentence, the focus of the sentence is on *a car*; therefore, it receives a heavy stress.

According to Molnár (2001), there are two types of alternatives; open alternatives (exhaustive) and closed alternatives (contrastive). In open alternatives, one element is selected from a contextually salient set to the exclusion of other items in the set while in closed alternative, the focused element contrasts with an alternative that is already

mentioned in the discourse. According to this approach, the focused element *a car* in (67b) has an exhaustive interpretation since all the alternatives that Mary could have bought have been excluded; therefore, it is an instance of open alternatives.

On the other hand, the focused element *John* in (68B) is an instance of close alternative since it contrasts with its alternative *Mary* in the preceding sentence. When focus involves a closed set of alternatives, it receives a corrective interpretation.

- (68) A: Mary bought a car.
B: No, JOHN did.

1.4.2.1. Information Focus vs. Contrastive Focus

Kiss (1998) divides focus into contrastive focus (also called identificaitonal focus) and information focus (also called presentational focus). Contrastive focus represents ‘a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold’ (Kiss 1998: 245) while information focus represents new and non-presupposed information.

Every sentence has information focus but contrastive focus is not present in every sentence. Information focus can be demonstrated in examples with question/answer pairs. As demonstrated in (69), the focused element in the answer must correspond with the wh-phrase in the question; otherwise, the result will not be acceptable. The sentence in (69A1) is a felicitous answer to the question in (69Q) while the sentence in (69A2) is infelicitous.

- (69) Q: Who bought a car?
A1: MARY bought a car.
A2: #Mary bought A CAR

Similarly, the sentence in (70A2), but not in (70A1), provides a felicitous answer to the question *what did Mary buy?*

- (70) Q: What did Mary buy?
 A1: #MARY bought a car.
 A2: Mary bought A CAR

On the other hand, contrastive focus can have a corrective interpretation. For instance, consider the examples in (71).

- (71) A: John bought a car.
 B: No, (you are wrong), MARY bought a car.

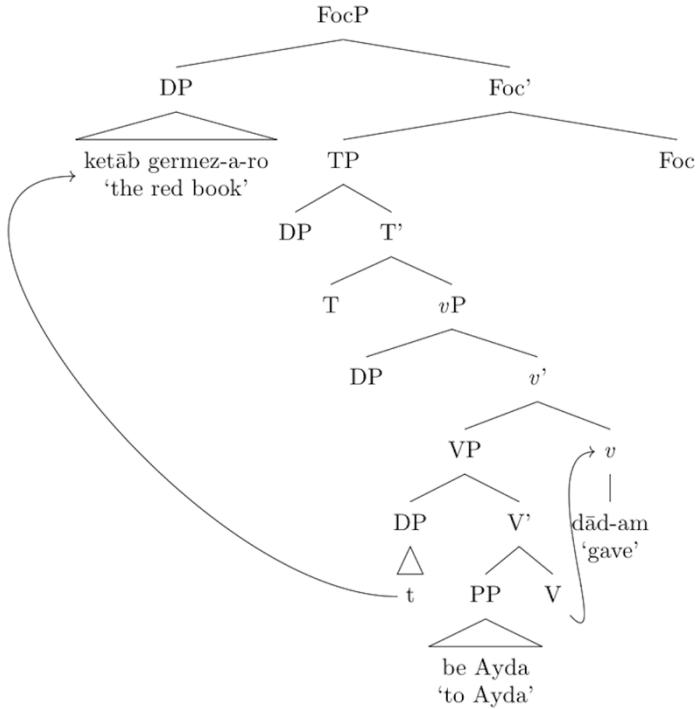
In (71A), the speaker makes an assertion that *John bought a car*. Suppose that this is not a true statement. In this context, the hearer can utter the sentence in (71B), in which *Mary* carries a heavy stress and contrasts with *John* in the preceding clause.

Now that we are familiar with contrastive focus, we can discuss the Persian data. In this section, I show that contrastive focus in Persian can have three functions: contrastive, corrective, and additive. Let us consider the example in (72), in which the DP *ketāb germez* ‘red book’ carries a heavy stress and receives a contrastive interpretation.

- (72) KETAB GERMEZ-A-RO be Ayda dād-am
 book red-DEF-ACC to Ayda gave-1SG
 ‘It was the red book that I gave Ayda (not the blue book).’

In this context, the ‘red book’ has been selected from a set of books that are known to the participants. In this structure, as illustrated in (73), the DP ‘red book’ has undergone focus movement to the Spec of FocP.

(73)



It should be noted that the direct object *ketāb germez* ‘red book’ can also stay in-situ and receive a contrastive interpretation, as shown in (74). This suggests that the focused direct object in (72) moves to the Spec of FocP in syntax while the one in (74) moves to this position in LF.

- (74) be Ayda KETAB GERMEZ-a-ro dād-am
 to Ayda book red-DEF-ACC gave-1SG
 ‘It was the red book that I gave Ayda (not the blue book).’

If the DP *ketāb germez* ‘red book’ in the in-situ position does not have a heavy stress, it would be interpreted as information focus. In this case, the sentence in (74) would be translated as *I gave Ayda the red book*.

The second function of contrastive focus is having a corrective interpretation, as illustrated in (75).

- (75) A: shenid-am Araz motor-esh-ro furukhte
 heard-1SG Araz motorcycle-his-ACC sold
 'I heard that Araz sold his motorcycle.'
- B1: na, MASHIN-ESH-RO fekr mi-kon-am Araz furukhte
 no car-his-ACC thought DUR-do-1SG Araz sold
 Lit: 'No, (you are wrong), his car I think Araz sold.'
- B2: na, fekr mi-kon-am Araz MASHIN-ESH-RO furukhte
 no thought DUR-do-1SG Araz car-his-ACC sold

The speaker in (75A) makes an assertion that *Araz has sold his motorcycle*. However, as shown in (75B1) and (75B2), the hearer corrects the speaker by saying *no, you are wrong, it is his car that I think Araz sold*. In (75B1), the direct object *māshin-esh* 'his car' has moved to the sentence initial position while in (75B2) it is in-situ.

The third function of contrastive focus is having an additive interpretation, as demonstrated in (76). In this context, we have the focal particle *ham* 'also' which follows the focalized elements. The DP *chai* 'tea' can either move to the sentence-initial position (76B1) or stay in-situ (76B2).

- (76) A: Ayda gahve doost dār-e
 Ayda coffee like have-3SG
 'Ayda likes coffee.'
- B1: CHAI HAM fekr mi-kon-am doost dār-e
 tea also thought DUR-do-1SG like have-3SG
 Lit: 'Tea also, I think she likes.'
- B2: fekr mi-kon-am CHAI HAM doost dār-e
 thought DUR-do-1SG tea also like have-3SG

(Adapted from Krifka 2006: 22)

We have so far seen that in Persian, the element carrying a contrastive focus feature has a heavy stress and can have three interpretations: contrastive, corrective, and additive. The definition of contrastive focus that I intend in this dissertation is provided in (77).

- (77) Contrastive focus operates on a set of alternatives that are known to the speaker and hearer, and it can have three interpretations: contrastive, corrective, and additive.

In this section, it was also shown that the focalized elements can either move to the sentence initial position or receive a contrastive interpretation in-situ. This suggests that the focalized element can undergo either overt focus movement in syntax or covert movement in LF.

The possibility of having both overt and covert focus movement is also found in Modern Greek. According to Tsimpli (1995), in modern Greek, contrastive focus can either occur in situ or in the left periphery, as shown in (78).

- (78) a. [FocP Ston Petro] dhansian to vivlio
 to.the Petro lent.3PL the.ACC book
 ‘It was to Petro that they lent the book.’
- b. Dhanisan to vivlio STON PETRO
 ‘They lent the book to Petro.’

Even though Tsimpli translates (78a) as a cleft and (78b) as a simple sentence, in her analysis, both focused elements occupy the Spec of FocP. The focused element in (78a) moves to the left periphery in syntax while the focused element in (78b) moves to the left-periphery in LF.

Unlike Persian and Modern Greek, in which focalized element can undergo both overt and covert movement, in some languages such as Hungarian (79) and Italian (80), the contrastively focused element must undergo overt focus movement in syntax. Let us compare the Hungarian examples in (79a) and (79b).

- (79) a. Tegnap este MARINAK mutattam be Pétert
 last night Mary.DAT introduced.II PERF Peter.ACC
 ‘It was to Mary that I introduced Peter last night.’
- b. Tegnap este be mutattam Pétert Marinak
 last night PERF introduced.II Peter.ACC Mary
 ‘Last night, I introduced Peter to Mary.’
- (Kiss 1998:247)

In (79a), the PP *to Mary* is in preverbal position and it means that in a set of individuals present in the discourse, it was *to Mary and no one else that I introduced Peter to*. However, in (79b), the PP *to Mary* is in post-verbal position and it presents nonpresupposed information. In these examples, we have different word order. We see that the movement of the PP *to Mary* to the pre-verbal position results in contrastive focus interpretation.

Italian shows a similar pattern. The focused elements can be found in the left-most (80) or right-most (81) position of the clause. However, when the focused element is on the left-most position, it must be contrastively focused (Rizzi 1997).

- (80) GIANNI ha parlato di questo libro, non Pietro
 Gianni has-3SG talked about this book, not Pietro
 ‘It is Gianni that has talked about this book, not Pietro.’

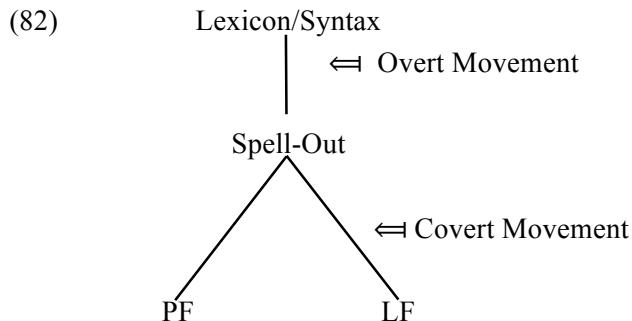
- (81) ha parlato di questo libro, GIANNI non Pietro
 has-3SG talked about this book, Gianni not Pietro

1.5. Feature Checking

Recall that in Persian, contrastive topic moves to the Spec of TopP. However, contrastively focused elements can move to the sentence initial position or stay in-situ. This type of micro-parameter raises the issue of variation within a single grammar, i.e. the “optionality” of focus movement. This does not mean that the [Foc] feature is optionally present in the grammar but rather it means that the [Foc] feature can be either weak or strong in a given language. This suggests that it is possible for a given grammar to have two strategies for deriving syntactic structures. In the first case, the focalized constituent moves to the Spec of FocP overtly in syntax, while in the second case, it moves to the Spec of FocP covertly in LF.

In Minimalist Program (Chomsky 1993, 1994, 1995), which I adopt in this dissertation, all syntactic relations involve feature checking.²⁶ Heads carry uninterpretable features that trigger movement operations. For instance, the C head with an uninterpretable *wh* feature [uwh] attracts an element that has a matching feature, i.e. an interpretable *wh* feature [iwh]. The uninterpretable features must be checked before they reach LF, the interface to semantic interpretation.

Uninterpretable features can be strong or weak. Strong features are visible at PF while weak features are invisible at PF; therefore, if a strong feature is not checked before Spell-Out, the derivation crashes (Chomsky 1993, 1994, 1995). This means that strong features probe downwards in the structure, looking for an element with a matching feature. A strong uninterpretable feature can be checked only when it is in a local relationship with an element bearing a matching interpretable feature. If the strong feature is not checked and deleted before Spell-Out, the derivation crashes. My take on the architecture of grammar looks as in (82).



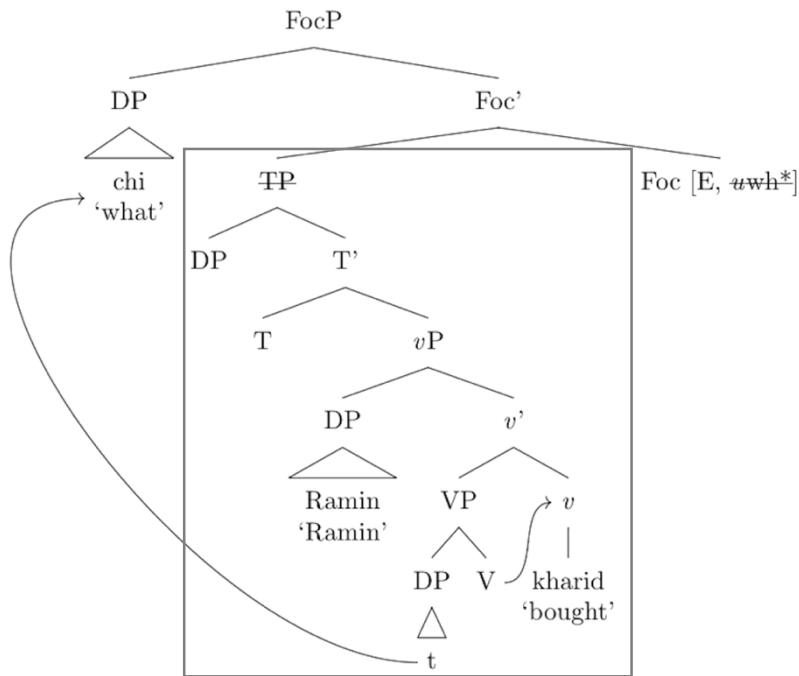
As illustrated in (82), overt movement has to be done before Spell-Out while covert movement can occur after Spell-Out at the LF. To demonstrate how feature checking and overt movement works, let us consider the Sluicing example in (49), repeated in (83).

²⁶ The feature checking mechanism that I adopt in this work is compatible with the other versions of Minimalist Program called *EPP Features* (Chomsky 2000) and *Edge Features* (Chomsky 2005).

- (83) Ramin ye chiz-i kharid. hads bezan chi_i (Ramin t_i-kharid)
 Ramin a thing-DEF bought.3SG guess hit.3SG what Ramin bought.3SG
 'Ramin bought something. Guess what (Ramin bought).'

In the second clause of this sentence, the *wh*-phrase has moved to the sentence-initial position while the rest of the sentence is elided. The schematic representation of the relevant parts of this sentence is given in (84).

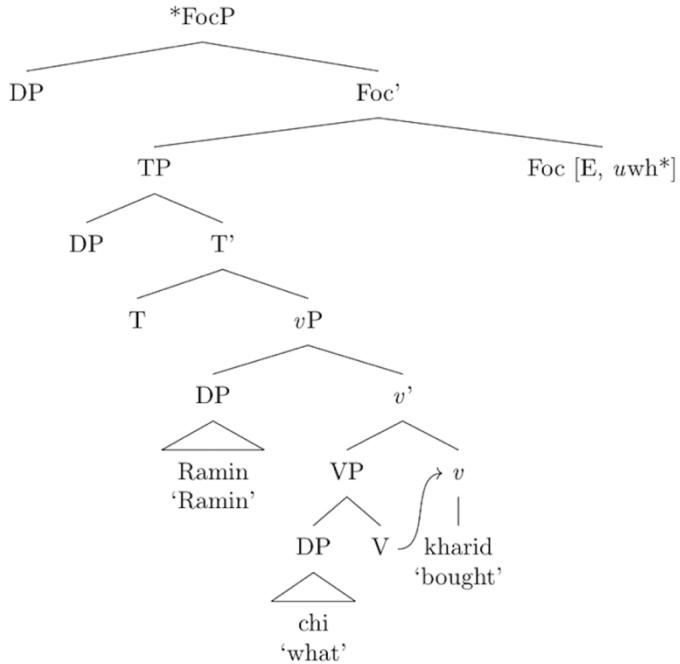
- (84) Successful derivation of (83)



In this structure, the focus head carries a strong uninterpretable [wh] feature, represented on the tree as [*uwh**], which looks down into the tree for an interpretable [wh] feature. When it finds *chi* 'what' that bears an interpretable [wh] feature, the *wh*-phrase moves to the Spec of FocP to eliminate the uninterpretable feature. After the [*uwh**] feature is checked and deleted, the [E] feature on the Foc head licences the deletion of TP.

If the *wh*-phrase *chi* 'what' does not move to the Spec of FocP, the [*uwh**] feature will be left unchecked, which will cause the derivation to crash and ellipsis cannot go through, as illustrated in (85).

(85) Unsuccessful derivation of (83)



1.6. Structure of the Dissertation

This dissertation is organized as follows. In Chapter 2, *Verb-stranding Constructions*, I study structures in which the verb is overt while its internal arguments are elided. Two approaches have been proposed to account for these structures in Persian: Verb-stranding Verb Phrase Ellipsis (VVPE) (Toosarvandani 2009, 2015, Shafiei 2015, 2016) and Argument Ellipsis (AE) (Rasekh 2014, 2016, Sato & Karimi 2016). I review these studies and show that none of the proposed approaches can fully account for all the Persian data. I propose a VVPE approach that is different from Toosarvandani's and Shafiei's approaches in terms of the structure of complex predicates and the landing site of the verb.

According to Goldberg's (2005) cross-linguistic study of VVPE, languages with VVPE structures independently allow V to T movement. Therefore, the verb moves to T before verb phrase ellipsis takes place. However, I claim that the verb has to move out of

the verb phrase prior to ellipsis but it does not have to move to T. I argue, following Kahnemuyipour (2001), that Persian has FocP, above vP, in the TP level. I propose that in VVPE, the verb moves to this focus head, prior to ellipsis. I also propose that the focus head carries an [E] feature (Merchant 2001), which licenses the deletion of vP at the PF level. In addition, I propose that the [E] feature is bundled with the [*uConF**] and [*uV**] features. The [*uConF**] feature triggers the movement of the internal argument that carries a contrastive focus feature to the Spec of FocP, which is immediately above vP, while the [*uV**] feature triggers the verb movement to the focus head.

In Chapter 3, *Stripping Constructions with Negation*, I study two types of Stripping that occur with negation: Polarity Stripping (PolS) and Negative Stripping (NegS). In both structures, we have XP NEG word order. I also study another structure which I refer to as Pseudo-stripping (PseS), in which we have NEG XP word order. Based on the evidence from Persian, I argue that PseS does not involve ellipsis despite what has been claimed for English (Kolokonte 2008). I argue that information structure plays a key role in licensing PolS, NegS, and PseS. I provide evidence that the XP in PolS involves topic while the XP in NegS and PseS is a focalized element.

I propose a PF deletion analysis for PolS and NegS. Adopting Rizzi's (1997) hierarchy of functional projections, I propose that the XP in these constructions moves to the Spec of TopP and FocP in the left periphery, respectively. In addition, adopting Kolokonte (2008), I propose that the negative marker in these structures functions as a focusing adverb and originates in the Spec of PolP. The Pol head carries an [E] feature (Merchant 2001) that licenses the deletion of TP at the PF level. In PolS and NegS, the [E] feature is bundled with the [*uPol_[+Neg]*] and [*uPol_[+Neg], uConF**] features, respectively.

On the other hand, I argue that PseS does not involve ellipsis but rather is derived via movement. I propose that the negative marker in this structure is constituent negation, and that in the underlying structure, the NEG XP constituent adjoins to the XP's corresponding element. Since the XP carries a contrastive focus feature, it has to move to FocP. I propose that it moves to the right and adjoins to FocP, above vP, in the TP level.

In Chapter 4, *Ellipsis and Information Structure: A Unified Account*, I provide an overview of several elliptical structures in Persian including Stripping structures with *wh*-phrase, Gapping, Sluicing, Fragment Answers, and NP Ellipsis. I show how the proposal made in this dissertation on the basis of the interaction between the ellipsis licensing feature bundles and information structure can be extended to different instances of ellipsis.

In Chapter 5, *Conclusion*, I provide a summary of the dissertation and suggestions for future research.

Chapter 2: Verb-stranding Constructions in Persian

2.1. Introduction

Verb-stranding refers to structures in which the main verb is overt while its internal argument(s) is elided. Verb-stranding occurs in many languages including Hebrew (1), Irish (2), Korean (3), Japanese (4) and Russian (5). In the following examples, the main verb must be obligatorily present while parts of the verb phrase are elided.

(1) Hebrew

Q: (ha'im) Tamar kanta kafe?
Q Tamar bought.3SG.FEM coffee
'(Did) Tamar buy coffee?'

A: ken, hi kanta
yes she bought.3SG.FEM
'Yes, she bought (coffee).' (Goldberg 2005: ex.24)

(2) Irish

dúirt mé go gceannóinn é agus cheannaigh
said I COMP buy[Condit].1SG it and bought
'I said that I would buy it and (I) bought (it).' (McCloskey 1991: ex. 27a)

(3) Korean

Q: ne nay cemsin mek-ess-ni?
you my lunch eat-Past-Q
'(Did) you eat my lunch?'

A: ung mek-ess-e
yes eat-Past-Dec
'Yes, (I) ate (your lunch).' (Cho 2001: ex. 13)

(4) Japanese

a. Ken-wa Erika-o saso-tta
Ken-TOP Erika-ACC invite-PAST
'Ken invited Erika.'

b. Dan-mo saso-tta.
Dan-also invite-PAST
'Dan also invited (Erika).' (Tomioka 1998: ex. 1)

(5) Russian

- Q: ty poznakomil Mašu s Petej?
 you.NOM introduce.SG.M Masha to Peter
 'Did you introduce Masha to Peter?'

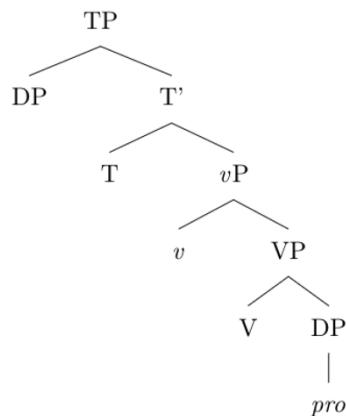
- A: konechno poznakomil
 of course introduce.SG.M
 'Of course, I introduced (Masha to Peter).' (Gribanova 2013: ex. 19)

Persian also allows Verb-stranding, as shown in (6b). In this structure, the verb *kharid* 'bought' is overt while its internal argument *gahve* 'coffee' is missing.

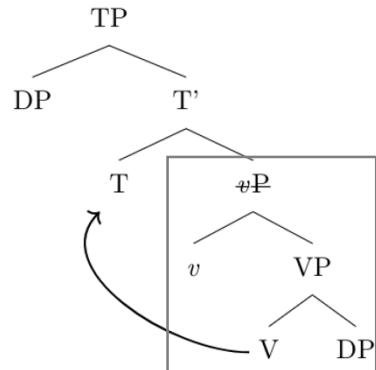
- (6) a. Ayda qahve kharid?
 Ayda coffee bought.3SG
 'Did Ayda buy coffee?'
 b. āre kharid.
 yes bought.3SG
 'Yes, (she) bought (coffee).'

There are three main strategies that can account for Verb-stranding constructions: i) Null Argument, ii) Verb-stranding Verb Phrase Ellipsis (VVPE), and iii) Argument Ellipsis (AE). The schematic representation of these strategies is illustrated in (7).

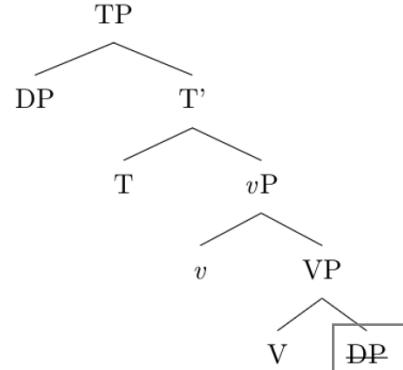
(7) a. Null Argument



b. VVPE



c. AE



In the null argument approach (7a), there is a null pronoun in the underlying structure that is not pronounced. In the VVPE approach (7b), the verb moves out of the verb phrase to a higher level, presumably to T, followed by the deletion of vP (Goldberg 2005). In the AE approach (7c), the verb does not need to move out of the verb phrase and the internal argument is elided independently.

In this chapter, I discuss Verb-stranding constructions in Persian and how we can account for them. First, we need to be able to distinguish structures that involve null argument vs. ellipsis. In section, 2.2., I provide three diagnostics to differentiate null argument from ellipsis: i) requiring a linguistic antecedent, ii) being acceptable inside an island, and iii) allowing sloppy and strict readings. The table in (8) presents a summary of these diagnostics and the compatibility of the Persian data with them. Since Persian Verb-stranding data patterns with elliptical structures, to make sure the structures we study involve ellipsis, I provide them with a linguistic antecedent and embed them inside an island.

(8) Diagnostics	Null Argument	Ellipsis	Persian
a. Requires a linguistic antecedent	No	Yes	Yes
b. Is acceptable inside an island	No	Yes	Yes
c. Allows sloppy and strict readings	No	Yes	Yes

In this chapter, I do not discuss null arguments but rather focus on elliptical structures. We already know that Verb-stranding constructions can involve either VVPE (7b) or AE (7c). This raises the question of how can we determine whether Persian has VVPE or AE? To answer this question, I use four diagnostics discussed in Rasekhi (2014, 2016) for Persian, which are adopted from Goldberg (2005), to determine the type of ellipsis Persian allows. The diagnostics include V to T movement, adverb interpretation in the ellipsis site, extraction of an argument out of the ellipsis site, and verbal identity. Based on these diagnostics, I discuss the predictions of AE and VVPE approaches and the behavior of Persian data, as illustrated in (9).

(9) Diagnostics	AE	VVPE	Persian
a. V to T movement	No	Yes	No
b. Adverb interpretation in the ellipsis site	No	Yes	Yes
c. Extraction of an argument out of the ellipsis site	No	Yes	Yes
d. Verbal identity	No	Yes	No

Both AE (Rasekhi 2014, 2016, Sato & Karimi 2016) and VVPE (Toosarvandani 2009, 2015, Shafiei 2015, 2016) approaches have been proposed for Persian Verb-stranding constructions. I review these previous analyses and discuss their predictions and issues. A summary of their predictions regarding our diagnostics is given in (10).

(10) Diagnostics	Rasekhi	Sato & Karimi	Toosarvandani	Shafiei
a. V to T movement	No	No	No	Yes
b. Adverb interpretation in the ellipsis site	No	No	No	Yes
c. Extraction of an argument out of the ellipsis site	No	No	Yes	No
d. Verbal identity	No	No	Yes	Yes

Even though it seems that Persian shows a mixed property of AE and VVPE (9), I propose a VVPE account for Verb-stranding constructions in Persian. Based on Goldberg's (2005) cross-linguistic study of VVPE, only languages that allow V to T movement can have VVPE. Since Persian does not have V to T movement, one can argue that Persian cannot have VVPE. However, in this dissertation, I propose that in VVPE, the verb must move out of vP but it does not necessarily need to move to T. I propose that in Persian, the verb moves to FocP, above vP, in the TP level, before vP deletion takes place.

There are two main arguments for proposing VVPE approach and focus movement: contrastive interpretation of the extracted argument out of the ellipsis site and verbal identity. First, an internal argument can survive ellipsis only if it carries a contrastive focus feature. I propose that the contrastively focused element moves to the Spec of FocP, above vP, prior to ellipsis. AE approach cannot account for this fact that the argument that remains overt receives a contrastive focus interpretation.

Second, the verbs in the ellipsis site and the antecedent clause must be either identical or lexically contrastive (e.g. ‘buy’ & ‘sell’, ‘give’ & ‘take’). The fact that ellipsis is possible in structures in which the verb has a contrastive focus feature supports the proposal that the verb moves to FocP. This verbal identity requirement cannot be accounted for by AE since in AE, the verb is not in the ellipsis site; therefore, the identity of the verb should not be a relevant issue at all. It should be noted that this verbal identity requirement is different from what has been proposed in Goldberg (2005), which requires the verbs in Hebrew to be identical in the root and derivational morphology.

Regarding licensing VVPE, I propose that the focus head carries an [E] feature (Merchant 2001) bundled with [$u\text{ConF}^*$] and [$u\text{V}^*$] features, i.e. [E, $u\text{ConF}^*$, $u\text{V}^*$]. This feature bundle has three functions. The [$u\text{ConF}^*$] and [$u\text{V}^*$] features trigger the movement of the contrastively focused element and the verb to the Spec of FocP and the Foc head, respectively. Then, the [E] feature licenses the deletion of its complement, vP, at the PF level.

The organization of this chapter is as follows. In Section 2, I briefly discuss null arguments and provide diagnostics for distinguishing them from the elided arguments, which can involve AE or VVPE. In Section 3, I discuss the AE strategy proposed for Persian by Rasekhi (2014, 2016) and Sato & Karimi (2016). In section 4, I review the VVPE approach proposed for Persian by Toosarvandani (2009, 2015) and Shafiei (2015, 2016). In Section 5, I discuss whether Persian has AE or VVPE. In section 6, I argue that VVPE can account for all Persian data in which the verb is overt while its internal argument(s) is elided. I propose a VVPE analysis that is different from Toosarvandani’s and Shafiei’s analyses in terms of the structure of complex predicates, the landing site of the verb, and the ellipsis licensing features. In section 7, I provide a summary of the chapter, followed by suggestions for future research in section 8.

2.2. Null Arguments and Elliptical Constructions

There has been a controversy in the literature with regard to the nature of missing arguments such as objects and subjects. Until 1980, the most dominant proposal was that the missing arguments are not empty but rather they are *pro*, a null pronoun. The existence of null arguments was believed to be related to rich agreement (Chomsky 1981, Rizzi 1982, 1986). However, having rich agreement cannot be the only explanation for null arguments since Japanese, Korean, and Chinese, which do not have rich agreement, allow null arguments (Huang 1982, Otani and Whitman 1991).

Huang (1987) and Otani and Whitman (1991) have argued that *pro* cannot account for some of the missing arguments in Japanese, Chinese, and Korean; therefore, they have proposed Verb Phrase Ellipsis (VPE) approach. The question of whether missing arguments involve *pro* or ellipsis continues to this day. In this chapter, I briefly discuss null arguments, then focus on AE and VVPE approaches. In order to be able to determine whether a structure involves ellipsis or null argument, I use three diagnostics that are assumed to be characteristics of elliptical structures: i) requiring a linguistic antecedent (Hankamer and Sag 1976), ii) being acceptable inside an island (Ross 1969, Merchnat 2001), and iii) allowing sloppy and strict readings (Ross 1967).

One of the main features of ellipsis is that it requires a linguistic antecedent (Hankamer and Sag 1976: 392). Hankamer and Sag argue that there are two types of anaphora: surface anaphora, in which the anaphora is derived transformationally, and deep anaphora, in which the anaphora is present in the underlying representation. One of the differences between these anaphors is their occurrence with a linguistic/contextual antecedent. For instance, VPE, which is a type of surface anaphora, cannot occur with a contextual antecedent (11a) but rather requires a linguistic antecedent (11b). However, this does not hold in deep anaphora such as ‘do it anaphora’. As shown in (11a), ‘do it anaphora’ is acceptable with a contextual antecedent.

(11) a. Deep Anaphora

Context: [Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop.]

Sag: # ‘It is not clear that you’ll be able to [VP].’ (VPE)
Sag: ‘It is not clear that you’ll be able to do it.’ (‘do it’ anaphora)

b. Surface Anaphora

Hankamer: I’m going to stuff this ball through this hoop.

Sag: ‘It is not clear that you’ll be able to [VP]’ (VPE)

The second feature of ellipsis is that it is possible to embed the ellipsis site inside an island, as in (12A). In this example, the ellipsis site *put the jam on the table* is embedded inside an adjunct island.

(12) Q: Did Sadie put the jam on the table?

A: Yes, and she left [after she did (~~put the jam on the table~~)] (Gribanova 2013: 15)

Now that we know English VPE requires a linguistic antecedent and is acceptable inside a syntactic island, we can apply these two diagnostics to Persian Verb-stranding structures to determine whether they involve ellipsis.

Let us have a look at the Persian example in (13). This sentence is acceptable with a contextual antecedent. However, we do not know whether it involves ellipsis or a null argument construction.

(13) Context: [A vase falls; no one wants to pick it up]

boland na-sho bābā ke umad az-ash
up NEG-become.2SG dad that came.3SG from-him

mi-khāy-im e bardār-e
IMPF-ask-1PL pick up-3SG

‘Don’t get up. When dad comes, we will ask him to pick up (the vase).’

(Adapted from Gribanova 2013)

In order to make sure that our structure involves ellipsis, we can use our two diagnostics: embedding the ellipsis site inside an island and providing a linguistic antecedent. If a sentence is acceptable inside an island and requires a linguistic antecedent, then we have a structure with ellipsis. Let us first apply the island test to the sentence in (13). We see that embedding the sentence in (13) inside an island yields an ungrammatical sentence (14).

- (14) Context: [A vase falls; no one wants to pick it up]
- *az in-ke kes-i e bar-na-dāsh̥t nārāhat shod-am
 from this-that person-INDF up-NEG-have.3SG upset become-1SG
 Intended: 'The fact that no one picked up (the vase) made me upset.'

(Adapted from Gribanova 2013)

The sentence in (14) shows that it is not possible to embed the sentence inside an island when we have a contextual antecedent. This suggests that embedding the sentence inside an island should be acceptable if we have a linguistic antecedent. This prediction is borne out, as shown in (15).

- (15) a. be nazar mi-res-e ke kes-i goldun-ro bar-na-dāsh̥t
 to view IMPF-arrive-3SG that person-INDF vase-ACC up-NEG-have.3SG
 'It seems that no one picked up the vase.'
- b. az in-ke kes-i e bar-na-dāsh̥t nārāhat shod-am
 from this-that person-INDF up-NEG-have.3SG upset become-1SG
 'The fact that no one picked up (the vase) made me upset.'

(Adapted from Gribanova 2013)

In the structure in (15b), the elided direct object 'vase' is embedded inside an island and the sentence is acceptable. Based on the evidence from English VPE, we know that ellipsis is acceptable inside an island and requires a linguistic antecedent. Therefore, we can say that the sentence in (15) involves ellipsis while the one in (13) involves a null argument construction.

To make sure we are dealing with elliptical structures rather than null argument constructions, all the relevant examples in this chapter are provided with a linguistic antecedent and are embedded inside an island.

The third feature that distinguishes ellipsis from null argument is that elliptical structures allow both sloppy and strict readings while null argument allows only strict reading. Sloppy/strict identity has been used since Ross (1967) who observed that in some instances of VPE, as in (16), the deletion of an identical VP involves less than full identity.

- (16) If John can stand on his head, I'm sure you can too.

In (16), the missing VP in the second clause has the interpretation of ‘stand on your head’ (sloppy reading) rather than ‘stand on John’s head’ (strict reading). The occurrence of sloppy reading involves having bound variable anaphora in the underlying structure.

Now that we know ellipsis allows two interpretations, we can apply this test to Persian Verb-stranding structures. If the sentence allows two interpretations, it means that we have ellipsis but if the sentence allows only one interpretation, it means that the sentence does not involve ellipsis.

Consider the Persian example in (17b), in which the direct object *be khāhar-esh* is missing. This sentence is ambiguous and can have two interpretations: *Araz did not give a gift to Ayda’s sister* (strict reading) or *Araz did not give a gift to his own sister* (sloppy reading). Since both strict and sloppy interpretations are possible, we can say that this sentence involves ellipsis.

- (17) a. az in-ke Ayda be khāhar-esh kādo dād ta’ajob na-kard-am
from this-that Ayda to sister-her gift gave.3SG surprise NEG-did-1SG
‘The fact that Ayda gave a gift to her sister did not surprise me.’
- b. vali az in-ke Araz kādo na-dād ta’ajob kard-am
but from this-that Araz gift NEG-gave.3SG surprise did-1SG
‘The fact that Araz did not give a gift to Ayda’s sister surprised me.’ (Strict reading)
‘The fact that Araz did not give a gift to his own sister surprised me.’ (Sloppy reading)

Now that we know the structure in (17b) involves ellipsis, the question that needs to be addressed is whether it has undergone AE or VVPE. As already mentioned in the previous section, both AE (Rasekhī 2014, 2016, Sato & Karimi 2016) and VVPE (Toosarvandani 2009, 2015, Shafiei 2015, 2016) approaches have been proposed for Persian Verb-stranding constructions. In the next two sections, I review the AE and VVPE approaches proposed for Persian.

2.3. Argument Ellipsis (AE) in Persian

AE refers to an operation in which an internal argument is elided while the rest of the clause remains overt. In Persian, it is possible for the direct object and indirect object to be elided independently, as the examples in (18) and (19) demonstrate. In (18b) the direct object ‘the phone’ is elided while the indirect object and verb are overt.

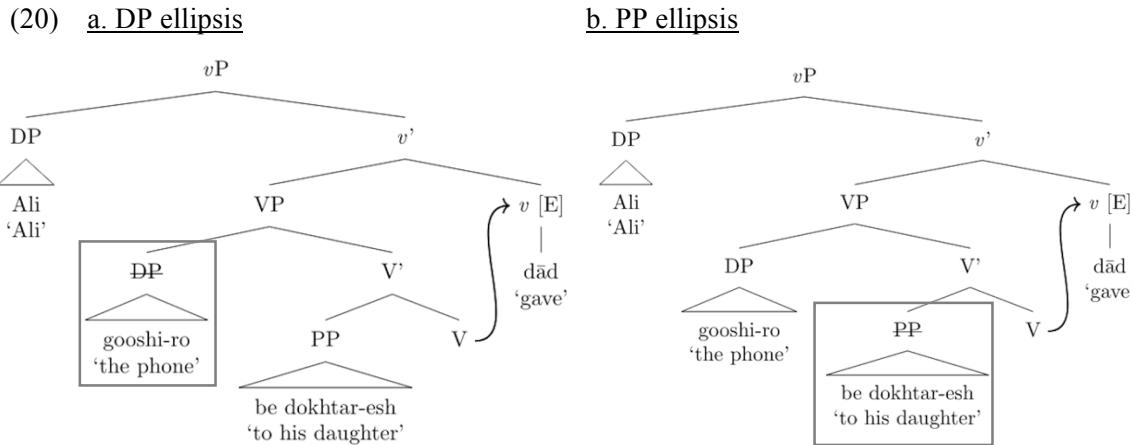
- (18) a. az in-ke Ali bā deqat gooshi-ro be dokhtar-esh
 from this-that Ali with care phone-ACC to daughter-his
 dād ta’ajob na-kard-am
 gave.3SG surprise NEG-did-1SG
 ‘The fact that Ali gave the phone to his daughter carefully did not surprise me.’
- b. vali az in-ke bā deqat (gooshi-ro) be pesar-esh
 but from this-that with care phone-ACC to son-his
 na-dād ta’ajob kard-am
 NEG-gave.3SG surprise did-1SG
 ‘But the fact that he did not give (the phone) to his son carefully surprised me.’

In (19), the indirect object ‘to his daughter’ is elided while the direct object ‘book’ and the verb are overt.

- (19) a. az in-ke Ali bā deqat ketāb-ro be dokhtar-esh
 from this-that Ali with care book-ACC to daughter-his
 dād ta’ajob na-kard-am
 gave.3SG surprise NEG-did-1SG
 ‘The fact that Ali gave the book to his daughter carefully did not surprise me.’
- b. vali az in-ke bā deqat gooshi-ro (~~be dokhtar esh~~)
 but from this-that with care phone-ACC to daughter-his
 na-dād ta’ajob kard-am
 NEG-gave.3SG surprise did-1SG
 ‘But the fact that he did not give the phone (to his daughter) carefully surprised me.’

(Rasekh 2014: 33)

Rasekhi (2014, 2016) and (Sato & Karimi 2016) have proposed that AE approach can account for structures such as (18) and (19). Based on their analysis, the internal arguments in these constructions are elided independently. For instance, according to Rasekhi's analysis, the verb carries an [E] feature (Merchant 2001), which licenses the deletion of the internal argument, as illustrated in (20). In (20a), it is the DP *gooshi-ro* 'the phone' that is elided while in (20b), it is the PP *be dokhtar-esh* 'to his daughter' that is elided.



AE approach predicts that each argument can be elided independently and we can have different types of ellipsis including DP ellipsis, PP ellipsis, and AP ellipsis. Based on this approach, in (21b) in which both the direct and indirect object are elided, we have to say that we have two independent ellipses: DP ellipsis and PP ellipsis.

- (21) a. az in-ke Araz kādo barā-ye dokhtar-esh kharid
from this-that Araz gift for-EZ daughter-his bought.3SG

ta'ajob na-kard-am
surprise NEG-did-1SG
'The fact that Araz bought a gift for his daughter did not surprise me.'

b. vali az in-ke Ayda (kādo) (barā-ye dokhtar-esh)
but from this-that Ayda gift for-EZ daughter-her

na-kharid ta'ajob kard-am
 NEG-bought.3SG surprise did-1SG
 Lit: 'But the fact that Ayda did not buy (a gift for her/his daughter) surprised me.'

In addition to eliding both internal arguments as in (21b), it is also possible to elide the nonverbal element in structures with Complex Predicates (CPr)¹, as in (22).

- (22) a. az in-ke Ayda ketāb-ro be dokhtar-esh hedye
 from this-that Ayda book-ACC to daughter-her gift
 dād ta'ajob na-kard-am
 gave.3SG surprise NEG-did-1SG
 'The fact that Ayda gifted a book to her daughter did not surprise me.'
- b. vali az in-ke Maryam (~~ketāb-ro~~) (~~be dokhtar-esh~~)
 but from this-that Maryam book-ACC to daughter-her
 (hedye) na-dād ta'ajob kard-am
 gift NEG-gave.3SG surprise did-1SG
 'But the fact that Maryam did not (gift a book to her daughter) surprised me.'

¹ CPr consists of a light verb (LV) and a non-verbal element (NV). The LVs are homophonous with simple verbs that have a full, lexical meaning, but do not contribute to the core semantics of CPrs. Their main role is to determine the CPrs' argument structure (Toosarvandani 2009). The data in (i) represents a sample of LVs.

- (i) a. kardan b. zadan c. dādan d. gereftan
 'to do' 'to hit' 'to give' 'to take'

The NV element can have different categories including noun, adverbial particle, adjective and past participle, and preposition or prepositional phrase (Vahedi-Langrudi 1996, Karimi 2005, Folli et al. 2005, Toosarvandani 2009, Shafiei 2015). The following examples represent each category, respectively.

- (ii) a. chune zadan b. biroon kardan
 chin hit.INF out do.INF
 'to bargain' 'to fire someone'

 c. bidār shodan d. az dast dādan
 awake becomes.INF from hand giveINF
 'to wake up' 'to lose' (Adapted from Toosarvandani 2009)

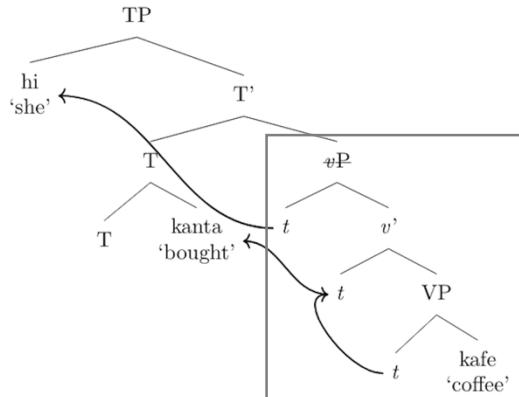
In (22b), the direct object ‘the book’, the indirect object ‘to his daughter’, and the nonverbal element ‘gift’ are elided under identity with their corresponding elements in (22a). Based on the AE approach, we have to say that the structure in (22b) has three independent types of ellipses: DP ellipsis, PP ellipsis, and NP ellipsis. There is another strategy that can account for Verb-stranding structures, i.e. VVPE, which I discuss in the next section.

2.4. Verb-stranding Verb Phrase Ellipsis (VVPE)

VVPE refers to an operation in which the verb moves out of vP before the verb phrase is elided, stranding the verb. According to Goldberg’s (2005) cross-linguistic study of VVPE constructions, VVPE is allowed only in languages that have V to T movement. For instance, in the Hebrew example in (1A), repeated in (23A), the direct object ‘coffee’ is elided under identity with its corresponding element in the preceding clause, while the verb is overt. Based on Goldberg’s analysis, there is independent evidence that Hebrew has V to T movement; therefore, we can say that in (23A), the verb survives ellipsis by moving to T, before vP is deleted. A schematization of the relevant structure is given in (24).

- | | |
|--|------------------------|
| <p>(23) Q: (ha’im) Tamar kanta kafe?
 Q Tamar bought.3SG.FEM coffee
 ‘(Did) Tamar buy coffee?’</p> <p>A: ken, hi kanta (kafe)
 yes she bought.3SG.FEM coffee
 ‘Yes, she bought (coffee).’</p> | (Goldberg 2005: ex.24) |
|--|------------------------|

(24)



According to Goldberg, in languages that allow for verb raising (e.g. Hebrew, Irish, Swahili), the verb is stranded by raising out of the verb phrase and moving to T, as shown in (24) for Hebrew. This means that languages that lack V to T movement (e.g. English, Persian) do not allow VVPE structures.

English does not allow Verb-stranding, as the ungrammaticality of the sentences in (25b) and (25c) show. However, it allows VPE in which the entire verb phrase, including the verb, is elided (25a).

- (25) Arthur brought a present to Hal.
 a. and Julia did (~~bring a present to Hal~~) too.
 b. *and Julia brought (~~a present to Hal~~), too.
 c. *and Julia will bring (~~a present to Hal~~), too.

(Goldberg 2005:1)

VPE in English is possible only when T is filled with an auxiliary verb, dummy *do*, or infinitival *to* (Lobeck 1995). For instance, in (25a), the verb phrase is elided and we have the auxiliary verb *do*. Thus, we can say that in this structure, VPE is licensed by *do*.

Unlike English, the verb in Persian must remain overt. As the ungrammaticality of the sentences in (26) show, deleting the verb renders the sentence ungrammatical.²

² When the verb is elided in structures such as (26a), the sentence would be acceptable if we have the polarity marker *-na* 'not' (i) or *cherā* 'why' (ii). I discuss these structures in chapters 3 and 4, respectively, and refer to them as Polarity Stripping and *Cherā*-stripping.

- (26) a. *Ayda ketāb kharid, vali Araz (**ketāb**) (**na-kharid**)
 Ayda book bought.3SG but Araz book NEG-bought.3SG
 Intended: ‘Ayda bought books, but Araz did not (buy books).’
- b. *Ayda ketāb kharid, Araz ham (**ketāb**) (**kharid**)
 Ayda book bought.3SG Araz too book bought.3SG
 Intended: ‘Ayda bought books, Araz did (buy books) too.’

As already mentioned, according to Goldberg (2005), the verb in VVPE escapes the ellipsis site by moving to T. However, there is independent evidence that in Persian, the verb does not move out of the verb phrase except for focus and topic purposes (Karimi 2005). Despite the lack of V to T movement, VVPE approach has been proposed for Persian by Toosarvandani (2009) and Shafiei (2015, 2016). Based on Toosarvandani’s proposal, the verb is stranded in *v*, while Shafiei proposes that the verb moves all the way up to C, where it is stranded. In the following section, I discuss Toosarvandani’s and Shafiei’s analyses and their predictions and issues.

- (i) Ayda ketāb kharid, vali Araz **na** (Polarity Stripping)
 Ayda book bought.3SG but Araz NEG
 ‘Ayda bought books, but Araz did not.’
- (ii) Ayda ketāb na-kharid, vali Araz **cherā** (*Cherā*-stripping)
 Ayda book NEG-bought.3SG but Araz why
 ‘Ayda did not buy books, but Ayda did.’

cherā literally means ‘why’; however, in (ii), it does not have an interrogative interpretation but rather functions as an affirmative polarity marker. The choice of *-na* vs. *cherā* depends on the polarity of the preceding sentence. If the preceding clause is affirmative, *-na* is used but if it is negative, then *cherā* is used.

On the other hand, when the verb is elided in examples such as (26b), the sentence would be acceptable if we have the adverb *hamintor* ‘also’, as illustrated in (iii). In this dissertation, I do not discuss this construction.

- (iii) Ayda ketāb kharid, Araz ham **hamintor**
 Ayda book bought.3SG Araz too also
 ‘Ayda bought books, Araz did too.’

2.4.1. VVPE in Persian

2.4.1.1. Toosarvandani's (2009) Analysis

Toosarvandani (2009) studies ellipsis in structures with Complex Predicates (CPr), in which it is possible to elide the internal arguments and the non-verbal (NV) element, while the light verb (LV) remains overt, as shown in (27b).

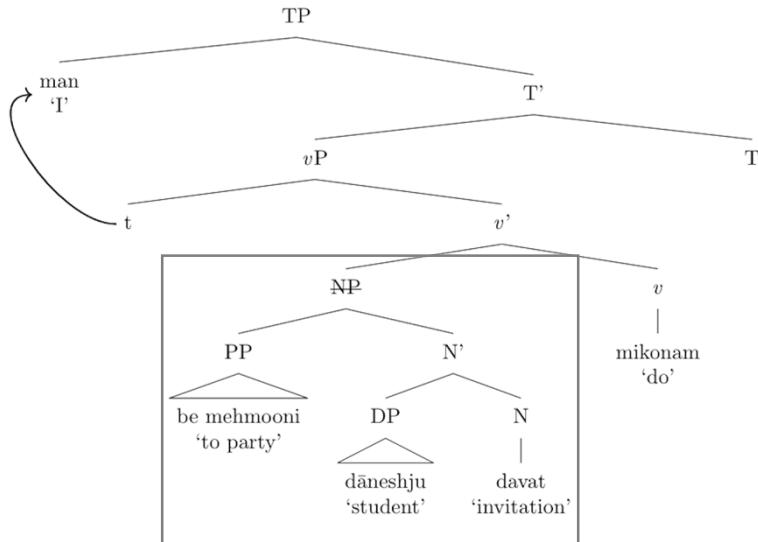
- (27) a. Nilufar be mehmooni dāneshju [CPr davat ne-mikon-e]
Nilufar to party student invitation NEG-do-3SG
'Nilufar does not invite students to the party.'
- b. vali man (~~be mehmooei~~) (~~dāneshju~~) [CPr (~~davat~~) mikon-am].
but I to party student invitation do-1SG
'But, I do (invite students to the party)' (Toosarvandani 2009: ex.33)

In (27b), the NV element *davat* 'invitation', indirect object *be mehmuni* 'to party', and direct object *dāneshju* 'student' are elided, while the LV *mikonam* 'do' is overt. According to Toosarvandani's analysis, the LV is stranded in *v* while its complement, NP, is elided, as schematically illustrated in (28).³ Since the verb is stranded in *v*, he refers to this type of structure as *v*-stranding VPE (*v*VPE).

³ It should be noted that in some CPrs, it is not possible to elide the nonverbal element as the following examples illustrate.

- (i) Ayda tavallod-esh-ro [CPr jashn gereft] vali sālgard-e
Ayda birthday-her-ACC celebration took.3SG but anniversary-EZ
ezdevāj-esh-ro [CPr *(jashn) na-gereft]
wedding-her-ACC celebration NEG-took.3SG
'Ayda celebrated her birthday but she did not celebrate her wedding anniversary.'
- (ii) Ayda Araz-ro [CPr doost dare], vali Ali-ro [CPr *(dooest) na-dāre]
Ayda Araz-ACC like have.3SG but Ali-ACC like NEG-have.3SG
'Ayda likes Araz, but she does not like Ali.'
- (iii) Ayda bā Araz [CPr bāzi kard], vali bā Ali [CPr *(bāzi) na-kard]
Ayda with Araz play did.3SG but with Ali play NEG-did.3SG
'Ayda played with Araz, but she did not play with Ali.'

(28) Structure of vVPE (Toosarvandani 2009: ex.37)



Toosarvandani adopts the CPr structure proposed by Folli, Harley, and Karimi (2005), in which the two parts of CPr (the NV element and LV) are separated and do not form a constituent. As shown in (28), the LV of the CPr acts as an overt *v* and the NV element is inside the NP. When ellipsis occurs, according to Toosarvandani's analysis, it is the complement of *v*, NP, that is deleted. This predicts that the NV element must always elide along with the internal arguments. However, it is possible for the NV element to remain overt, as shown in (29b).

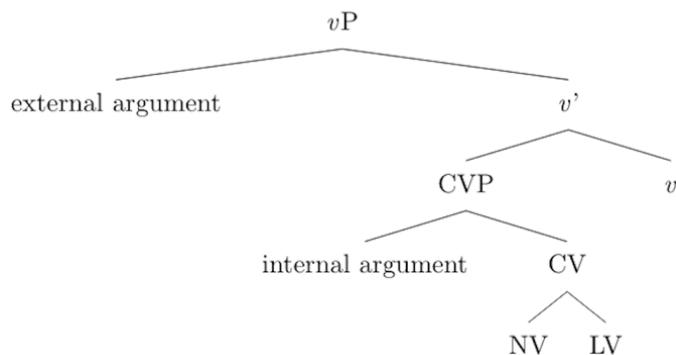
- (29) a. Nilufar be mehmooni dāneshju [CPr davat ne-mikon-e]
 Nilufar to party student invitation NEG-do-3SG
 'Nilufar does not invite students to the party.'
- b. vali man (be—mehmooni) (dāneshju) [NV davat] mikon-am.
 but I to party student invitation do-1SG
 'But, I do (invite students to the party)'

In (29b), the indirect object *be mehmooni* 'to party' and the direct object *dāneshju* 'student' are elided while the NV element *davat* 'invitation' is overt. Toosarvandani's approach cannot account for this structure.

2.4.1.2. Shafiei's (2016) analysis

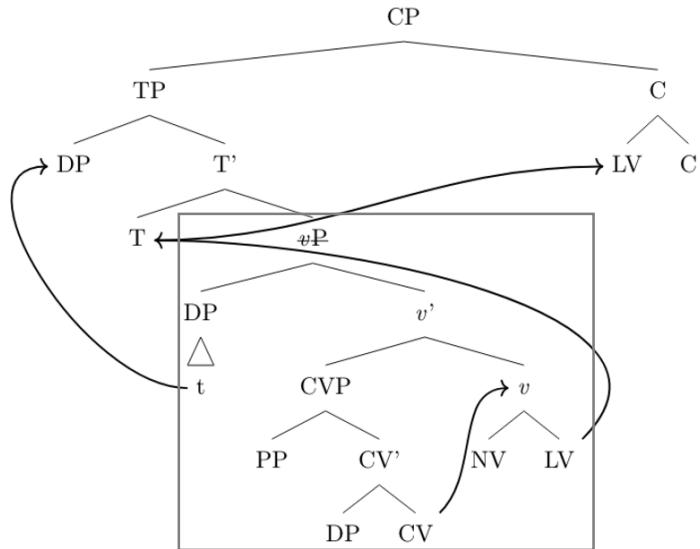
As discussed in the previous section, in Toosarvandani's CPr structure, the LV and NV element do not form a constituent. When vVPE takes place, the light verb is stranded in v , where it starts off, while its complement that includes the NV element and internal arguments is elided. Therefore, his analysis cannot account for structures in which the NV element is overt. To solve this issue, Shafiei (2015, 2016) adopts Megerdootian's (2001, 2012) structure and proposes a new CPr structure, in which the NV element and LV form a constituent, as illustrated in (30).

(30) CPr Structure (Shafiei 2016)

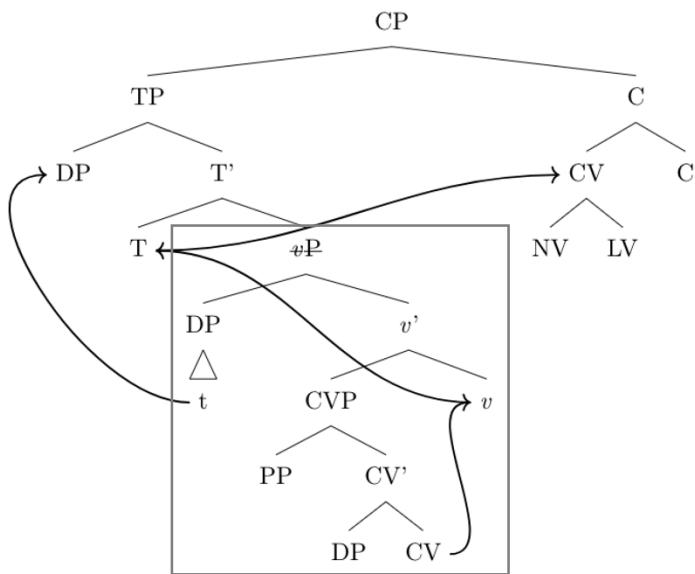


In (30), the NV element and LV form a constituent, which Shafiei calls Complex-Verb (CV). CV takes arguments similar to simple verbs and projects its own phrase CV Phrase (CVP). According to Shafiei's analysis, in elliptical structures, the verb moves from v to T, but it cannot stay there since Persian does not have V to T movement; therefore, it moves all the way up to C. Based on her approach, the NV element can either be elided or remain overt. In the former case, the LV moves to C by itself, stranding NV in v while in the latter case, the LV moves to C pied-piping the NV element, as schematically illustrated in (31).

- (31) a. NV element is stranded in *v* while LV moves to C (Shafiei 2016)



- b. Both NV element and LV survive ellipsis by moving to C (Shafiei 2016)



There are two main issues with Shafiei's approach. First, she proposes that the verb moves to C but the motivation for this verb movement is not clear. Second, her analysis predicts that the internal arguments must be elided; therefore, her approach cannot account for structures in which an internal argument survives ellipsis, as illustrated in (32b). In this structure, the direct object 'book' is elided while the indirect object 'for Sina' is overt.

- (32) a. az in-ke Ayda barā Araz ketāb kharid ta'ajob na-kard-am
 from this-that Ayda for Araz book bought.3SG surprise NEG-did-1SG
 'The fact that Ayda bought a book for Araz did not surprise me.'
- b. vali az in-ke **barā Sina** (**ketāb**) na-kharid ta'ajob kard-am
 but from this-that for Sina book NEG-gave.3SG surprise did-1SG
 'But the fact that (she) did not buy (a book) for Sina surprised me.'

Now that we are familiar with the issues of the previous approaches (AE and VVPE), in the next section, I first investigate diagnostics to distinguish AE from VVPE, then discuss which approach can best account for Verb-stranding constructions in Persian.

2.5. Does Persian have AE or VVPE?

In order to determine whether Persian has AE or VVPE, we can use our four diagnostics: V to T movement, extraction of an argument out of the ellipsis site, adverb interpretation in the ellipsis site, and verbal identity requirement. Regarding these diagnostics, the characteristics of AE and VVPE approaches are as given in (33)

(33) Characteristics of AE vs. VVPE	AE	VVPE
a. Verb has to move out of vP	No	Yes
b. Adverbs are interpreted in the ellipsis site	No	Yes
c. There is verbal identity requirement between the verbs in the ellipsis site and its antecedent clause	No	Yes
d. For an internal argument to remain overt, it has to be extracted out of the ellipsis site	No	Yes

Now that we are familiar with the characteristics of AE and VVPE approaches, using our four diagnostics in (33), we can determine which of these approaches can account for Verb-stranding constructions in Persian.

2.5.1. V to T movement

According to Goldberg's (2005) cross-linguistic study, languages with VVPE structure (such as Hebrew, Irish, Swahili) have V to T movement. Based on her analysis, Persian

cannot have VVPE since it does not have V to T movement (Karimi 2005).⁴

Persian has unmarked SOV word order, as the example in (34a) illustrates. If Persian had V to T movement, we would expect the sentence in (34b), in which the verb precedes the direct object, to be acceptable.⁵

- (34) a. [TP Ayda [VP ketāb kharid]]
 Ayda book bought.3SG
 ‘Ayda bought books.’
-

⁴ Toosarvandani also proposes that there is no V to T movement in Persian. His evidence comes from the variable interpretation of the modifier *again*. When ‘again’ modifies a transitive verb phrase, it has two interpretations (repetitive and restitutive readings). When *again* modifies the entire vP, the sentence has a repetitive reading, and when it modifies the VP, the result is a restitutive reading. He uses this ambiguity to determine the size of the ellipsis and to show that verbs do not raise to T in Persian. For further discussion, refer to Toosarvandani (2009).

⁵ Recall from chapter 1 that even though Persian is a verb-final language, TP is assumed to be head-initial (Karimi 2005). According to Karimi (2005:8), one piece of evidence for this comes from the sentential argument of the verb, which follows its head in Persian, as illustrated in (i).

- (i) Kimea goft ke Parviz khoone nist
 Kimea said.3SG that Parviz home not.be
 ‘Kimea said that Parviz was not home.’

If T were in the final position, we would expect the verb to be in the rightmost position of the sentence. However, as illustrated in (ii), the sentence would be ungrammatical if the verb follows the sentential argument.

- (ii) *man t_v [CP ke Kimea in kār-ro migir-e] goft-am
 I that Kimea this job-ACC get-3SG said-1SG
 Intended: ‘I said that Kimea will get this job.’

Karimi (2005: 10) argues that the clausal argument of the verb is base-generated in post-verbal position, as shown in (iii). This claim is supported by the ungrammaticality of the sentence in (iv).

- (iii) Kimea Parviz-ro vādār kard [CP ke nāma-sh-ro tāyp kon-e]
 Kimea Parviz-ACC force did.3SG that letter-her-ACC type do-3SG
 ‘Kimea forced Parviz to type her letter.’
- (iv) *Kimea Parviz-ro [CP ke nāma-sh-ro tāyp kon-e]
 Kimea Parviz-ACC that letter-her-ACC type do-3SG
 vādār kard
 force did.3SG
 ‘Kimea forced Parviz to type her letter.’

- b. #[_TP Ayda kharid_i [_vP ketāb _{t_i}]]
 Ayda bought.3SG book

In Persian, verb movement out of vP is triggered for topic and focus purposes (Karimi 2005). For instance, let us have a look at the example in (35), in which the verb phrase has moved to the left of the subject. According to Karimi, this is an instance of topicalization, in which the direct object has moved to the Spec of TP and the verb has moved to T.⁶ Therefore, in this sentence, we do not have vP movement but rather a topic movement, followed by verb movement.⁷

- (35) [un film-ro]_i [did-an]_j unā _{t_i} _{t_j}
 that movie-ACC saw-3PL they
 ‘They saw that movie.’ (Karimi 2005:159)

Verb movement can also be triggered by focus, as illustrated in (36). In this structure, the DP *Kimea*, which has a focus interpretation, has moved to the Spec of FocP, and the verb has adjoined to the focus head (Karimi 2005).

- (36) [KIMEA-ro]_i [did-am]_j _{t_i} to khyāboon _{t_j}
 Kimea-ACC saw-1SG in street
 ‘It was Kimea that I saw on the street.’ (Karimi 2005:160)

Based on Goldberg’s (2005) cross-linguistic study on VVPE, V to T movement is a crucial factor in licensing such elliptical structures. Therefore, the fact that Persian does not have V to T movement can be taken as a piece of evidence to argue against VVPE approach for Persian, as we see in Rasekhi’s (2014, 2016) and Sato & Karimi’s (2016) study. However,

⁶ According to Karimi (2005), the Spec of TP in Persian is a domain of topics and any specific element can be topicalized and move to the Spec of TP. The subject raises to the Spec of TP only if it is not taken by another element in the sentence.

⁷ Verb phrase can only be topicalized locally and long-distance movement of the verb is not possible as the following example illustrates.

- (v) * [un film-ro]_i [did-an]_j Kimea goft unā _{t_i} _{t_j}
 that movie-ACC saw-3PL Kimea said.3SG they
 Intended: ‘Kimea said that they have seen that film.’ (Karimi 2005:159)

in this chapter, I propose that the verb movement out of vP is the universal feature of VVPE while the landing site of the verb is not universal. In some languages such as Hebrew, Irish, and Swahili, the verb moves to T (Goldberg 2005). On the other hand, in languages that T is not an option, the verb must move to another functional projection. For instance, Gribanova (2013) has proposed that in Russian the verb is stranded in AspP, while I propose that in Persian, the verb moves to FocP, which is directly above vP, in the TP level.

2.5.2. Adverbs

Adverbs are divided into *high adverbs* and *low adverbs* (Cinque 1999). High adverbs (e.g. fortunately, usually, possibly) always precede low adverbs (e.g. carefully, wisely, completely, suddenly, always), as the Persian examples in (37) demonstrate.

- | | |
|--|---|
| (37) a. ehtemālan hamishe
‘possibly always’ | b. khoshbakhtāne āghelāne
‘fortunately wisely’ |
| *hamishe ehtemālan | *āghelāne khoshbakhtāne (Karimi 2005: 125) |

Low adverbs are assumed to adjoin to VP. Therefore, in elliptical structures, low adverbs can be used to determine the size of the ellipsis. For instance, consider the English example in (38). The manner adverb ‘carefully’, which is a low adverb, is present only in the first clause. However, it is obligatorily interpreted in the second clause, as shown in (38a). It is not possible for ‘carefully’ not to be interpreted in the second clause, as shown in (38b). The fact that this adverb is interpreted in the second clause shows that the size of ellipsis in this structure cannot be smaller than vP.

- (38) John read the book carefully but Mary did not.
- a. ‘...Mary did not read the book carefully.’
 - b. *‘...Mary did not read the book.’

However, a VP-adjunct adverb is not always interpreted in the ellipsis site. In the second clause of the example in (39), the adverb *dutifully* is present in the first clause but not in

the second one. The ellipsis site lacks the meaning of the adverb *dutifully*. This suggests that in (39), we have VP ellipsis rather than vP ellipsis.

- (39) John might indeed have dutifully read the book very carefully but Mary might have very sloppily. (Graf Thomas p.c.)

Now, let us examine the interaction of low adverbs and ellipsis in Persian. Consider the example in (40), in which the manner adverb *bā deqat* ‘carefully’ is present only in the first clause.

- (40) Ayda ketāb-ro **bā deqat** khoond, vali Araz na-khoond
 Ayda book-ACC with care read.3SG but Araz NEG-read.3SG
 ‘Ayda read the book carefully but Araz did not.’
 a. ...Araz did not read the book.
 b. ...#Araz did not read the book carefully.

My consultants reported that the second clause in (40) can only mean that *Araz did not read the book*. They rejected the obligatory interpretation of the adverb ‘carefully’ in the second clause. This suggests that the size of ellipsis in this structure has to be smaller than vP, similar to the English example in (39). However, the judgment on the sentence in (40) changes when the manner adverb precedes the direct object, as shown in (41).

- (41) Ayda **bā deqat** ketāb-ro khoond, vali Araz na-khoond
 Ayda with care book-ACC read.3SG but Araz NEG-read.3SG
 ‘Ayda carefully read the book but Araz did not.’
 a. ...Araz did not carefully read the book.
 b. ...Araz did not read the book.

For the structure in (41), the majority of my consultants allow both interpretations: *Araz did not carefully read the book* and *Araz did not read the book*. However, they reported that the first interpretation is stronger than the second one. This suggests that the size of ellipsis in this structure can be as high as vP.

The examples in (40) and (41) show that the order of the manner adverb and the direct object affects allowing the interpretation of the adverb in the ellipsis site, which helps us determine the size of ellipsis. When the manner adverb follows the direct object (40),

we have a smaller size of ellipsis. However, when the manner adverb precedes the specific direct object (41), the size of ellipsis is vP.

2.5.3. Verbal Identity

VVPE is constrained by an identity condition, which requires the verb in the ellipsis site and its antecedent clause to be identical (Goldberg 2005). For instance, in Hebrew, the main verbs must have identical roots and derivational morphology, as in (42b). Otherwise, the result yields ungrammatical sentences, as in (42c) and (42d).

- (42) a. (Ha'im) Miryam **hevi'a** et Dvora la-xanut?
Q Miryam brought.3FSG ACC Dvora to-the store
'(Did) Miryam bring Dvora to the store?'
- b. ken, hi **hevi'a**
yes, she brought.3FSG
'Yes, she brought (Dvora to the store).'
- c. *ken, hi **lakxa**
yes, she took.3FSG
Intended: 'Yes, she took (Dvora to the store).'
- d. *lo, hi **šalxa**
no, she sent.3FSG
Intended: 'No, she sent (Dvora to the store).' (Goldberg 2002a: ex.13)

Unlike Hebrew, in Persian, according to Toosarvandani's (2009) analysis, the verbs in VVPE structures must be either identical or have identical meanings. On this account, alternation of light verbs is acceptable as long as they are semantically identical, as in (43). In this sentence, the verbs *otu kardan* and *otu zadan* have different forms but they both mean 'to iron'.

- (43) a. piran-o [otu **kard-i**]?
shirt-ACC iron did-2SG
'Did you iron the shirt?'

- b. āre, dirooz (piran-e) [(etu) zad-am]
 yes yesterday shirt-ACC iron hit-1SG
 'Yes, I did yesterday.' (Toosarvandani 2009: ex.86)

If we follow Toosarvandani's analysis, we do not expect the sentence in (44b) to be acceptable since the verbs have neither identical forms nor identical meanings.

- (44) a. bā deqat livān-hā-ro be Ali **dād-am**
 with care glass-PL-ACC to Ali gave-1SG
 'I carefully gave the glasses to Ali.'
- b. az in-ke bā deqat (livān-hā-ro) **na-gereft** ta'ajob kard-am
 from this-that with care glass-PL-ACC NEG-took.3SG surprise did-1SG
 'The fact that he did not carefully take (the glasses) surprised me.'

(Rasekhi 2016: ex. 33)

The grammaticality of this sentence shows that the verbs do not need to be identical to yield grammatical sentences. In this example, the verbs 'give' and 'take' are 'lexically contrastive', i.e. they have opposite meanings. Based on this example, we expect Verb-stranding constructions to be grammatical if the verbs are lexically contrastive. This prediction is borne out, as shown in (45). In this structure, the verbs are 'buy' and 'sell'.

- (45) a. az in-ke Ali pārsāl yeho un khuna-ro **kharid**
 from this-that Ali last year suddenly that house-ACC bought.3SG
 ta'ajob na-kard-am
 surprise NEG-did-1SG
 'The fact that Ali bought that house suddenly last year did not surprise me.'
- b. vali az in-ke emsāl yeho (un khuna-re) **furukht**
 but from this-that this year suddenly that house-ACC sold.3SG
 ta'ajob kard-am
 surprise did-1SG
 'But the fact that he sold that house suddenly this year surprised me.'

(Rasekhi 2016: ex. 34)

Toosarvandani's analysis cannot account for the examples in (44) and (45) since the verbs are neither identical nor have identical meanings. The grammaticality of these structures show that in Persian, the verbs do not have to be identical for the ellipsis to be acceptable but rather they can be lexically contrastive. Otherwise, the result would be an unacceptable sentence, as shown in (46b), in which the verbs 'baked' and 'bought' are neither identical nor lexically contrastive.

- (46) a. az in-ke Araz barā-ye bache-hā keyk **pokht**
 from this-that Araz for-EZ kid-PL cake baked.3SG
 nārāhat na-shod-am
 upset NEG-became-1SG
 'The fact that Araz baked a cake for the kids did not upset me.'
- b. *vali az in-ke (~~barā-ye bache-hā~~) (~~keyk~~) **na-kharid**
 but from this-that for-EZ kid-PL cake NEG-bought.3SG
 nārāhat shod-am
 upset became-1SG
 Intended: 'But the fact that he did not buy (a cake for the kids) upset me.'

Recall from chapter 1 that contrastive focus can have three interpretations: contrastive, additive, and corrective. We have already seen that VVPE is acceptable when the verbs have a contrastive interpretation, as illustrated in (44) and (45). It is also compatible with additive (47) and corrective (48) interpretations.

- (47) a. az in-ke Ayda āpārtemān **kharid** ta'ajob na-kard-am
 from this-that Ayda apartment bought.3SG surprise NEG-did-1SG
 'The fact that Ayda bought an apartment did not surprise me.'
- b. vali az in-ke Araz **ham** (~~āpārtemān~~) **kharid**
 but from this-that Arz also apartment bought.3SG
 ta'ajob kard-am
 surprise did-1SG
 'But the fact that Araz also bought (an apartment) surprised me.'

The structure in (47b) has an additive interpretation. In this structure, we have the focus

particle *ham*⁸ ‘also’, which follows the subject *Araz*, and the verb is identical to the one in the preceding clause. On the other hand, in structures which have a corrective interpretation (48), the verbs can be either contrastive (48B) or identical (48B').

- (48) A: az in-ke Ayda benz-a-ro **kharid** Maryam ta'ajob kard
 from this-that Ayda Benz-DEF-ACC bought.3SG Maryam surprise did.3SG
 ‘The fact that Ayda bought the Mercedes surprised Maryam.’
- B: na, az in-ke (**benz-a-ro**) **furukht** Maryam ta'ajob kard
 no from this-that Benz-DEF-ACC sold.3SG Maryam surprise did.3SG
 No, the fact that (Ayda) sold (the Mercedes) surprised Maryam.’
- B': na, az in-ke Araz (**benz-a-ro**) **kharid** Maryam ta'ajob kard
 no from this-that Araz Benz-DEF-ACC bought.3SG Maryam surprise did.3SG
 No, the fact that Araz bought (the Mercedes) surprised Maryam.’

Note that when the verbs are identical, as in (48B'), there must be another element that contrasts with its correlate in the preceding clause. In this structure, it is the subject *Araz* (48B') that contrasts with its corresponding element *Ayda* (48A).

AE approach cannot account for the verbal identity requirement presented in this section. Since in AE, the verb is not in the ellipsis site, the identity of the verbs should not be relevant at all. In section 2.6., I propose that the verb carries a contrastive focus feature and that it survives ellipsis by moving to the FocP, above vP, in the TP level.

⁸ The focus particle *ham* ‘also’ is always in the second position:

- (i) A: Ayda ketāb kharid
 Ayda book bought-3SG
 ‘Ayda bought books.’
- B: majalle **ham** kharid
 magazine also bought.3SG
 ‘(She) bought magazines too.’

2.5.4. Extraction

It is known that VPE, a type of surface anaphora, allows extraction of an argument out of the ellipsis site before deletion takes place (Schuyler 2002), as illustrated in (49). In this example, the direct object ‘squid’ has moved out of the ellipsis site before the verb phrase is elided.

- (49) Jason will eat shrimp, but squid, I know he won’t [eat <squid>].

If VVPE in Persian is a surface anaphora like English VPE, we expect to be able to extract an argument from the ellipsis site. Toosarvandani (2009) shows that in Persian VVPE, it is possible to extract an argument out of the ellipsis site before deletion takes place, as in (50).

- (50) Rostam PIRAN-O otu na-zade vali SHALVAR-o midun-am
Rostam shirt-ACC iron NEG-hit.3SG but pants-ACC know-1SG
ke <shalvar-o> etu zad-e
that pants-ACC iron hit.3SG
‘Rostam did not iron the shirt, but the pants, I know he did.’ (Toosarvandani 2009: ex.21)

In this structure, the direct object *shalvar-o* ‘pants’ is extracted from the ellipsis site and moved to the focus position in the matrix clause. Therefore, the extracted argument *shalvar-o* ‘pants’ receives a contrastive focus interpretation since it contrasts with its corresponding element *piran-o* ‘shirt’ in the antecedent clause. AE approach cannot account for the contrastive interpretation of *shalvar-o* ‘pants’ in (50) since based on this approach, the element that survives ellipsis is in its base position.

Sato and Karimi (2016) argue against the possibility of extraction based on the examples in (51).

- (51) a. Kimea_i [DP ketāb-esh_{i/*j}-ro] [PP bā Arezu_j] khund
Kimea book-her-ACC with Arezu read.3SG
‘Kimea read Kimea’s book with Arezu.’
- b. Kimea_i [PP bā Arezu_j]_k [DP ketāb-esh_{i/j}-ro] _{t_k} khund
Kimea with Arezu book-her-ACC read.3SG
‘Kimea read Kimea/Arezu’s book with Arezu.’ (Sato & Karimi 2016: 9)

In (51a), the direct object *ketāb-esh* ‘her book’, which has the anaphoric pronoun *-esh*, can refer to the subject *Kimea* but not to *Arezu*. However, when the indirect object *bā Arezu* appears to the left of the direct object (51b), the pronoun can refer to both *Kimea* and *Arezu*. Based on Karimi’s proposal that movement is triggered by topic or focus purposes, we can assume that *bā Aerzu* in (51b) has moved to the Spec of FocP, in the left periphery. With this information in mind, let us have a look at the example in (52).

- (52) a. Kimea_i [DP ketāb-esh_{i/*j}-ro] [PP bā Arezu_j] khund
 Kimea book-her-ACC with Arezu read.3SG
 ‘Kimea read Kimea’s book with Arezu.’
- b. ammā Parviz_i [DP ketāb-esh_{i/*j}-ro] [PP bā Azita_j] na-khund
 but Parviz book-her-ACC with Azita NEG-read.3SG
 Lit: ‘But Parviz didn’t read with Azita.’
 Means: ‘But Parvia did not read Parviz’s book with Azita.’

(Sato & Karimi 2016: 10)

In (52b), the pronoun *-esh* refers to the subject *Parviz* but it does not refer to *Azita*. Based on this example, Sato & Karimi argue against VVPE analysis and in support of AE. They base their claim on the contrast between the sentences in (51a) and (51b). Since the interpretation of the structure in (52b) is compatible with the one in (51a), they claim that the indirect object in (52b) has not undergone focus movement.

However, one thing that needs to be kept in mind is that the reason the *-esh* in (52b) refers to the subject of the clause rather than the object is because the *-esh* in (52a) also refers to the subject. The sentence in (52a) means *Kimea read her own book (but not Arezu’s book)*. Similarly, the sentence in (52b) means *Parviz read his own book (but not Azita’s book)*. This suggests that there is a parallel structure between the ellipsis site and the antecedent clause, which means that the ellipsis site must mirror the structure of the antecedent clause. If this is on the right track, we expect to have an ambiguity when *-esh* in the antecedent clause refers to both the subject and the object. Now, let us consider the examples in (53).

- (53) a. Kimea_i [PP bā Arezu_j] [DP ketāb-esh_{i/j}-ro] khund
 Kimea with Arezu book-her-ACC read.3SG
 ‘Kimea read her book with Arezu.’
- b. ammā Parviz_i [PP bā Azita_j] [DP ketāb-esh_{i/j}-ro] na-khund
 but Parviz with Azita book-her-ACC NEG-read.3SG
 Lit: ‘But Parviz didn’t read with Azita.’

In (53a), the pronoun *-esh* can refer to both *Kimea* and *Arezu*. We expect to have the same interpretation in (53b). However, the majority of my consultants reported that the sentence in (53b) can only mean that *Parviz read Parviz’s book with Azita*. They had a hard time interpreting *-esh* as referring to Azita’s book, which I think is related to the fact that the indirect object ‘with Azita’ in this structure is an adjunct. On the other hand, when they were presented with a sentence that involves a ditransitive verb, as in (54b), they were able to interpret *-esh* as ambiguous.

- (54) a. Kimea_i [PP be Arezu_j] [DP aks-esh_{i/j}-ro] dād
 Kimea to Arezu picture-her-ACC gave.3SG
 ‘Kimea gave her picture to Arezu.’
- b. ammā Parviz_i [PP be Azita_j] [DP aks-esh_{i/j}-ro] na-dād
 but Parviz to Azita picture-her-ACC NEG-gave.3SG
 Means: ‘But Parviz didn’t give Parviz’s picture to Azita.’ or
 ‘But Parviz didn’t give Azita’s picture to Azita.’

In (54a), the pronoun *-esh* follows the indirect object and it can refer to both *Kimea* and *Arezu*.⁹ In (54b), in which the direct object ‘her picture’ is elided, the sentence is ambiguous and ‘her picture’ can refer to both ‘Parviz’s picture’ and ‘Azita’s picture’.

⁹ As illustrated in (i), when *-esh* precedes the indirect object, it can only refer to the subject.

- (i) Kimea_i [DP aks-esh_{i/j}-ro] [PP be Arezu_j] dād
 Kimea picture-her-ACC to Arezu gave.3SG
 ‘Kimea gave her picture to Arezu.’
- ammā Parviz_i [DP aks-esh_{i/j}-ro] [PP be Azita_j] na-dād
 but Parviz picture-her-ACC to Azita NEG-gave.3SG
 Means: ‘But Parviz didn’t give Parviz’s picture to Azita.’

2.5.5. Interim Conclusion

In this section, four diagnostics (V to T movement, adverb interpretation, verbal identity, and extraction) for distinguishing AE from VVPE in Persian were discussed. A summary of the discussion is presented in (55).

(55)	Characteristics of AE versus VVPE	AE	VVPE	Persian
a.	V to T movement	No	No	No
b.	Adverb interpretation in the ellipsis site	No	Yes	Yes
c.	Identical verbs in the ellipsis site and its antecedent clause	No	Yes	No
d.	Extraction of an argument out of the ellipsis site	No	Yes	Yes

As shown in (55), languages that allow VVPE structures have the following properties: i) V to T movement, ii) adverbs are obligatorily interpreted in the ellipsis site, iii) verbs in the ellipsis site and the antecedent clause must be identical, and iv) extraction of an argument out of the ellipsis site is possible.

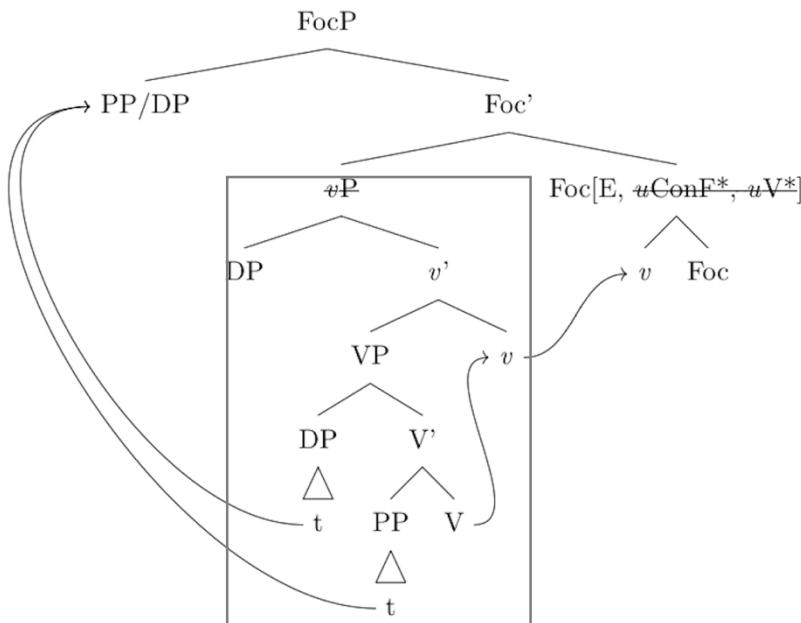
One might logically infer that the lack of these characteristics can be associated with the presence of AE. Therefore, we can say that languages with AE have the following features: i) lack of V to T movement or any type of verb movement out of vP, ii) adverb interpretation in the ellipsis site is not obligatory, iii) verbs do not need to be identical, and iv) since the internal arguments are elided independently, extraction is not applicable.

Having applied these four diagnostics to Persian, I showed that Persian does not have V to T movement, and verb movement out of vP occurs due to topic or focus purposes (Karimi 2005). It was also shown that manner adverbs are interpreted in the ellipsis site when they precede the direct object. In addition, I showed that verbs can be either identical or lexically contrastive. Lastly, it was discussed that it is possible to extract an argument out of the ellipsis site when it is contrastively focused.

2.6. Proposal

In this section, I propose a unified account for Verb-stranding structures, in which the verb is overt while its internal argument(s) is elided. Following Kahnemuyipour (2001), I propose that there is FocP, above vP, in the TP level. The focus head carries an [E] feature bundled with [*uConF**] and [*uV**] features, i.e. [E, *uConF**, *uV**]. The [*uConF**] triggers the movement of an argument with a contrastive focus feature to the Spec of FocP. The [*uV**] attracts the verb to the focus head and the [E] feature licenses the deletion of its complement, vP, at the PF level. Based on my approach, the structure of Verb-stranding would be as schematically illustrated in (56).

(56) vP deletion in VVPE



Before providing an analysis, in the next two sub-sections, I discuss the evidence that focus plays an integral role in deriving VVPE, and the evidence that there is FocP in the TP level.

2.6.1. The Evidence that We Deal with Focus in VVPE

The first piece of evidence that shows focus is involved in VVPE comes from the verbal identity requirement. Recall that in VVPE in Persian, the verbs in the ellipsis site and the antecedent clause can be either identical (57) or lexically contrastive, as in (44) repeated in (58).

- (57) a. az in-ke Ali mādar-esh-ro **boosid** ta'ajob na-kard-am
 from this-that Ali mother-his-ACC kissed.3SG surprise NEG-did-1SG
 ‘The fact that Ali kissed his mother did not surprise me.’
- b. vali az in-ke Maryam (mādar esh-ro) **na-boosid**
 but from this-that Maryam mother-her-ACC NEG-kissed.3SG
 ta'ajob kard-am
 surprise did-1SG
 ‘But the fact that Maryam did not kiss (her mother) surprised me.’

(Rasekhi 2016: ex.32)

- (58) a. bā deqat livān-hā-ro be Ali **dād-am**
 with care glass-PL-ACC to Ali gave-1SG
 ‘I carefully gave the glasses to Ali.’
- b. az in-ke bā deqat (livān-hā-ro) **na-gereft** ta'ajob kard-am
 from this-that with care glass-PL-ACC NEG-took.3SG surprise did-1SG
 ‘The fact that he did not carefully take (the glasses) surprised me.’

(Rasekhi 2016: ex. 33)

The fact that non-identical verbs that are lexically contrastive yield grammatical sentences shows that contrastive focus plays a crucial role in licensing VVPE.

The second piece of evidence for having focus in Verb-stranding constructions comes from extraction. Recall that the element that carries a contrastive focus feature can survive ellipsis by being extracted out of the ellipsis site, as shown in (50), repeated in (59). In this

example, the direct object ‘pants’ has moved from its base position to the matrix clause, where it receives a contrastive focus interpretation.¹⁰

- (59) Rostam PIRAN-O otu na-zade vali SHALVAR-o
 Rostam shirt-ACC iron NEG-hit.3SG but pants-ACC
 midun-am ke <shalvār-o> ət̪ə zad-e
 know-1SG that pants-ACC iron hit-3SG
 ‘Rostam did not iron the shirt, but the pants, I know he did.’ (Toosarvandani 2009: ex.21)

2.6.2. The Evidence for the Existence of FocP in the TP Level

The evidence for the existence of FocP in the TP level comes from the focus movement of *wh*-phrase. Consider the example in (60a) which is a declarative sentence with unmarked SOV word order. The sentences in (60b) and (60c) show that Persian does not have obligatory *wh*-movement. In these structures, the *wh*-phrase is in the same position as its counterpart in (60a).

- (60) a. Ali Hasan-ro zad
 Ali Hasan-ACC hit.3SG
 ‘Ali hit Hasan.’
- b. ki Hasan-ro zad?
 who Hasan-ACC hit.3SG
 ‘Who hit Hasan?’

¹⁰ This indicates that the arguments that are already mentioned in the discourse are redundant; therefore, they should be elided. This can account for the ungrammaticality of the sentence in (i). The direct object *piran-o* ‘shirts’ cannot be extracted out of the ellipsis site because it is already mentioned in the preceding clause; therefore, it is redundant and must be elided.

- (i) *Rostam PIRAN-O otu na-zad-e vali PIRAN-o midun-am ke
 Rostam shirt-ACC iron NEG-hit-3SG but shirt-ACC know-1SG that
 Maryam <pirān-o> ət̪ə zad-e
 Maryam shirt-ACC iron hit-3SG

- c. Ali **ki-ro** zad?
 Ali who-ACC hit.3SG
 ‘Who did Ali hit?’
- (Kahnemuyipour 2001: ex. 6)

Even though Persian is a *wh*-in-situ language, *wh*-phrases can undergo focus movement (Karimi 1999a, 2005, Kahnemuyipour 2001, Toosarvandani 2008), as illustrated in (61).

- (61) a. Ali bā ajale bā māmān-esh madrase raft
 Ali with speed with mother-his school went.3SG
 ‘Ali went to school with his mother quickly.’
- b. Ali bā ajale bā māmān-esh **kojā** raft?
 Ali with speed with mother-his where went.3SG
 ‘Where did Ali go with his mother quickly?’
- c. Ali **kojā** bā ajale bā māmān-esh raft?
- d. **kojā** Ali bā ajale bā māmān-esh raft?

(Adapted from Kahnemuyipour 2001)

In (61b), the *wh*-phrase ‘where’ is in the same position as its counterpart in (61a), which shows that *wh*-phrase has not moved. However, in (61c), the *wh*-phrase ‘where’ has undergone syntactic movement to the focus position above vP (Kahnemuyipour 2001). On the other hand, in (61d) the *wh*-phrase has moved to the focus position above TP. These examples show that the *wh*-phrase can either stay in the TP-internal focus position or move to the higher focus position in the left periphery.

One might wonder how we know that the verb in VVPE moves to the TP-internal focus position and not to the focus position in the left periphery. The answer to this question comes from the position of the verb with respect to the high adverbs. In Persian, high adverbs (e.g. usually, fortunately, apparently, possible) are assumed to be higher than vP (Karimi 2005: 124-125). If the verb has to follow high adverbs, we can say that it has not moved to the left periphery. However, if the verb can precede the high adverbs, it means that it has moved to a higher functional projection in the CP level. To illustrate this point, let us have a look at the examples in (62).

- (62) a. az in-ke Ayda mamulan otāgh-esh-ro tamiz
 from this-that Ayda usually room-her-ACC clean
 mikon-e ta'ajob ne-mikon-am
 do-3SG surprise NEG-do-1SG
 ‘The fact that Ayda usually cleans her room does not surprise me.’
- b. vali az in-ke Araz **mamulan** (~~otāgh-esh-ro~~) tamiz
 but from this-that Araz usually room-his-ACC clean
 ne-mikon-e ta'ajob mikon-am
 NEG-do-3SG surprise do-1SG
 ‘But the fact that Araz usually does not clean (his room) surprises me.’
- c. *vali az in-ke Araz **tamiz** **ne-mikon-e** **mamulan**
 but from this-that Araz clean NEG-do-3SG usually
 (~~otāgh-esh-ro~~) ta'ajob mikon-am
 room-his-ACC surprise do-1SG

In (62b), we have a high adverb *mamulan* ‘usually’ that precedes the verb *tamiz kardan* ‘to clean’. If the verb precedes the high adverb ‘usually’, the sentence becomes ungrammatical, as shown in (62c). The ungrammaticality of this sentence shows that the verb cannot move to the left periphery but rather it stays in the TP level.

Based on the data presented in this section, we know that there is FocP, above vP, in the TP level. Therefore, we can revise the Persian phrase structure, which was discussed in chapter one (57), to include this FocP. The result yields (63).

- (63) [CP [TopP [FocP [NegP Neg [TP FocP [vP]]]]]]

 Operator/Discourse Phase Lexical Phase

It should be noted that proposing FocP in the TP level is not unprecedented cross-linguistically. The TP internal focus phrase has been proposed for Malayalam (Jayaseelan 2001), Italian (Belletti 2004), Mandarin Chinese (Paul 2005), and Spanish (Jiménez-Fernández 2009).

2.6.3. Analysis

In this section, I propose a unified account for structures in which the verb is overt while parts of the verb phrase are elided. I also propose that these structures are constrained by information structure. As discussed in chapter one, one of the main notions of information structure is focus, in particular contrastive focus. I claim that in VVPE, the verb can be stranded only if it is identical to its antecedent or carries a contrastive focus feature. Therefore, based on the data provided in this chapter, The Verbal Identity Requirement that holds in Persian VVPE is as given in (64).

(64) **The Verbal Identity Requirement**

The verbs in the ellipsis site and the antecedent clause must be either identical or lexically contrastive.

We have already seen that an internal argument that survives ellipsis receives a contrastive focus interpretation. On the other hand, the elements that are elided are the ones that are already given. These characteristics are compatible with the Identity Condition on Remnants and the Identity Condition on the Elided Elements discussed in chapter 1.

Recall from the discussion in chapter 1 that ellipsis is licensed via feature bundles on the heads that have focus features. Regarding licensing VVPE, as mentioned in section 2.6., I propose that the focus head carries the [E, *uConF**, *uV**] feature bundles. The [*uConF**, *uV**] features must be checked and deleted by being in a local relationship with an element that has a matching feature. The [E] feature licenses the deletion of *vP*, at the PF level.

Now, let us see how the proposed analysis works in Persian Verb-stranding constructions. Consider the example in (65).

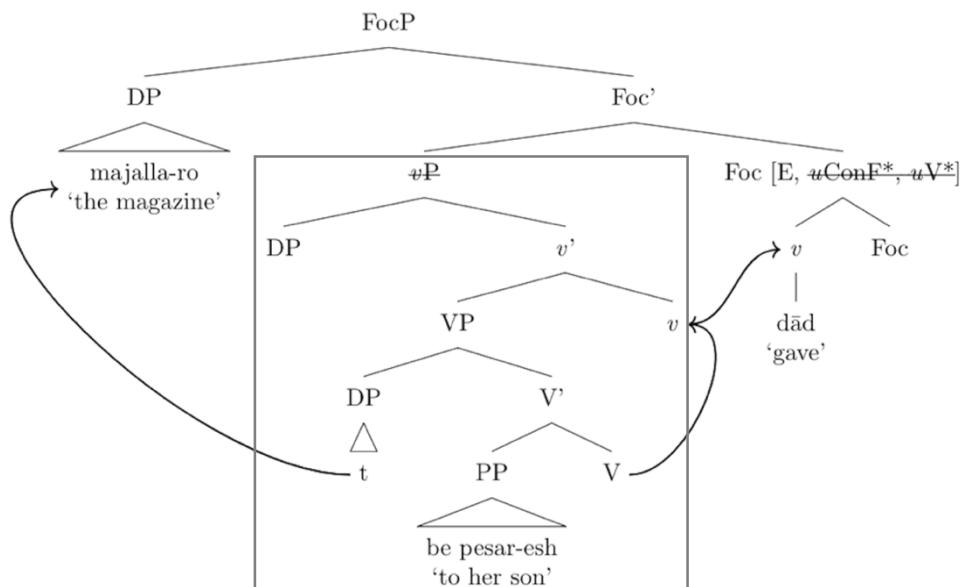
- (65) a. az in-ke Ayda **ketāb-ro** be pesar-esh na-dād
from this-that Ayda book-ACC to son-her NEG-gave.3SG

ta'ajob na-kard-am
surprise NEG-did-1SG
'The fact that Ayda did not give the book to her son did not surprise me.'

- b. vali az in-ke **majalla-ro** (be pesar-esh) dād
 but from this-that magazine-ACC to son-her gave.3SG
 ta'ajob kard-am
 surprise did-1SG
 'But the fact that (she) gave the magazine (to her son) surprised me.'

In (65b), the indirect object 'to her son' is elided under identity with its antecedent in (65a). However, the direct object 'the magazine' is overt because it contrasts with its corresponding DP 'the book' in the preceding clause. In addition, there is a contrastive relationship between the verbs in (65a) and (65b). The relevant parts of the sentence in (65b) is schematically illustrated in (66).

(66) Structure of VVPE with Simple Predicates



There are three features that interact to make this structure possible: the [*uConF**] and [*uV**] features are strong features that must be checked in a local relationship with an element that has a matching feature. Therefore, they trigger the movement of the contrastively focused direct object 'the magazine' and the verb to the Spec of FocP and to the focus head, respectively. Afterwards, the [E] feature on the focus head licenses the deletion of its complement, *vP*, at the PF level.

Regarding structures with a complex predicate (CPr), we have seen that not only an internal argument can survive ellipsis (67b) but also the NV element can survive ellipsis, too (67c).

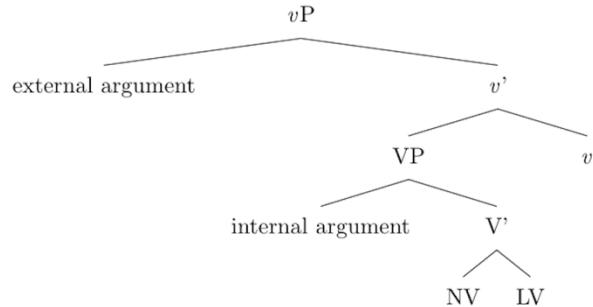
- (67) a. az in-ke Ayda be dokhtar-esh ye ketāb [CPr hedye
 from this-that Ayda to daughter-her a book gift
 na-dād] ta'ajob na-kard-am
 NEG-gave.3SG surprise NEG-did-1SG
 'The fact that Ayda did not gift a book to her daughter did not surprise me.'
- b. vali az in-ke be pesar-esh (ye ketāb) (hedye)
 but from this-that to son-her a book gift
 dād ta'ajob kard-am
 gave.3SG surprise did-1SG
 'But the fact that (she) gifted (a book) to her son surprised me.'
- b'. vali az in-ke be pesar-esh (ye ketāb) hedye
 but from this-that to son-her a book gift
 dād ta'ajob kard-am
 gave.3SG surprise did-1SG
 'But the fact that (she) gifted (a book) to her son surprised me.'

In (67b), the direct object 'a book' and the NV element 'gift' are elided while the indirect object 'to her son' and the LV 'gave' are overt. On the other hand, in (67b'), the direct object is elided while the NV element is overt.

Recall that neither Toosarvandani's nor Shafiei's analysis can account for these data. In Toosarvandani's approach, the NV element is always elided while in Shafiei's analysis, the internal arguments are always elided.

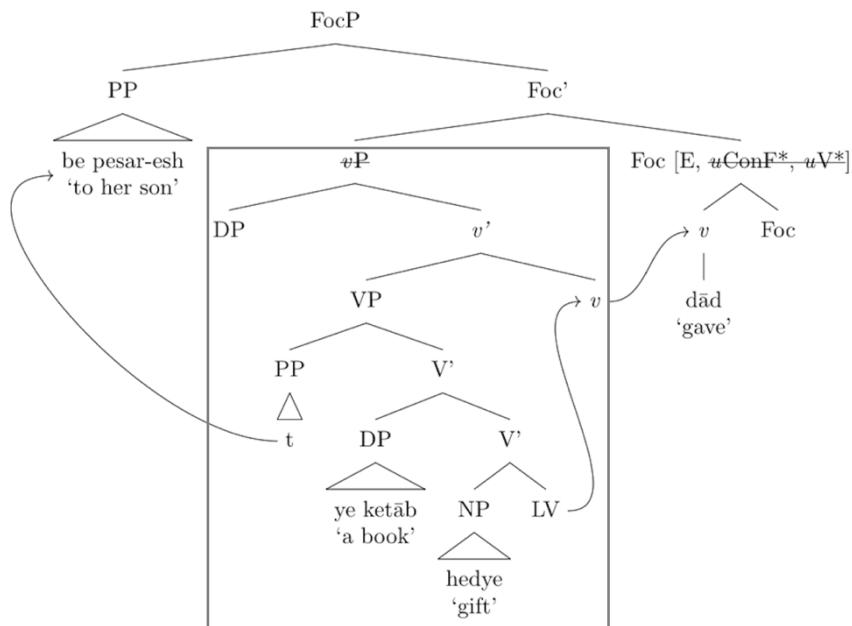
To account for structures with complex predicates, I adapt Megerdoomian's CPr (2012) structure in which the NV element and LV form a constituent, and propose the structure in (68).

(68) Proposed CPr Structure

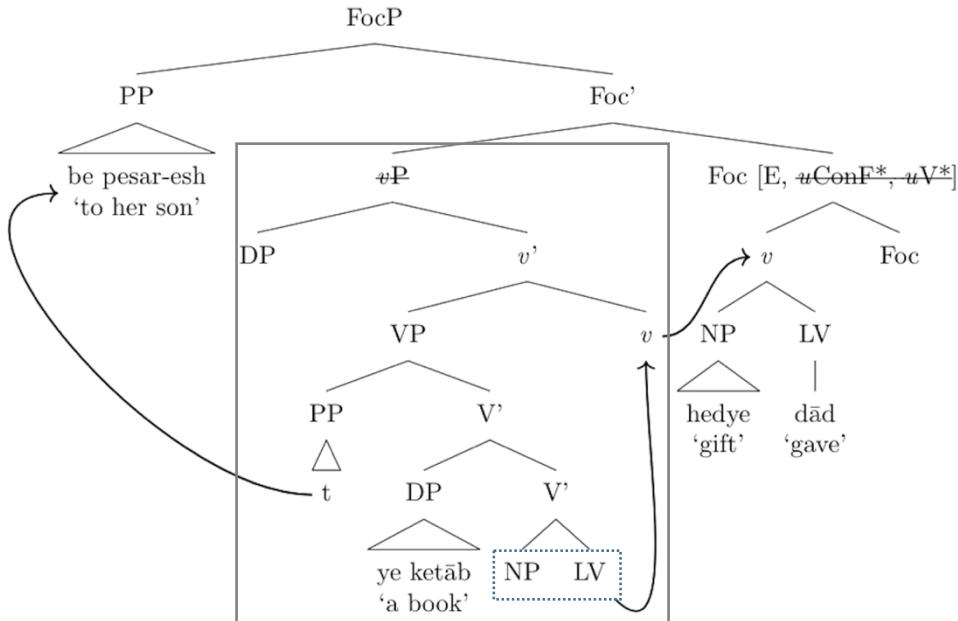


When VVPE takes place, following Shafiei (2016), I propose that the LV can either pied-pipe the NV element and move to FocP or it can strand the NV element. In the first case, both the LV and NV element survive ellipsis; whereas, in the second case, the NV element is elided. This is schematically illustrated in (69a) and (69b), which represent the structures in (67b) and (67c), respectively.

(69) a. The NV element is stranded while the LV survives ellipsis by moving to Foc



b. Both NV element and LV survive ellipsis by moving to Foc



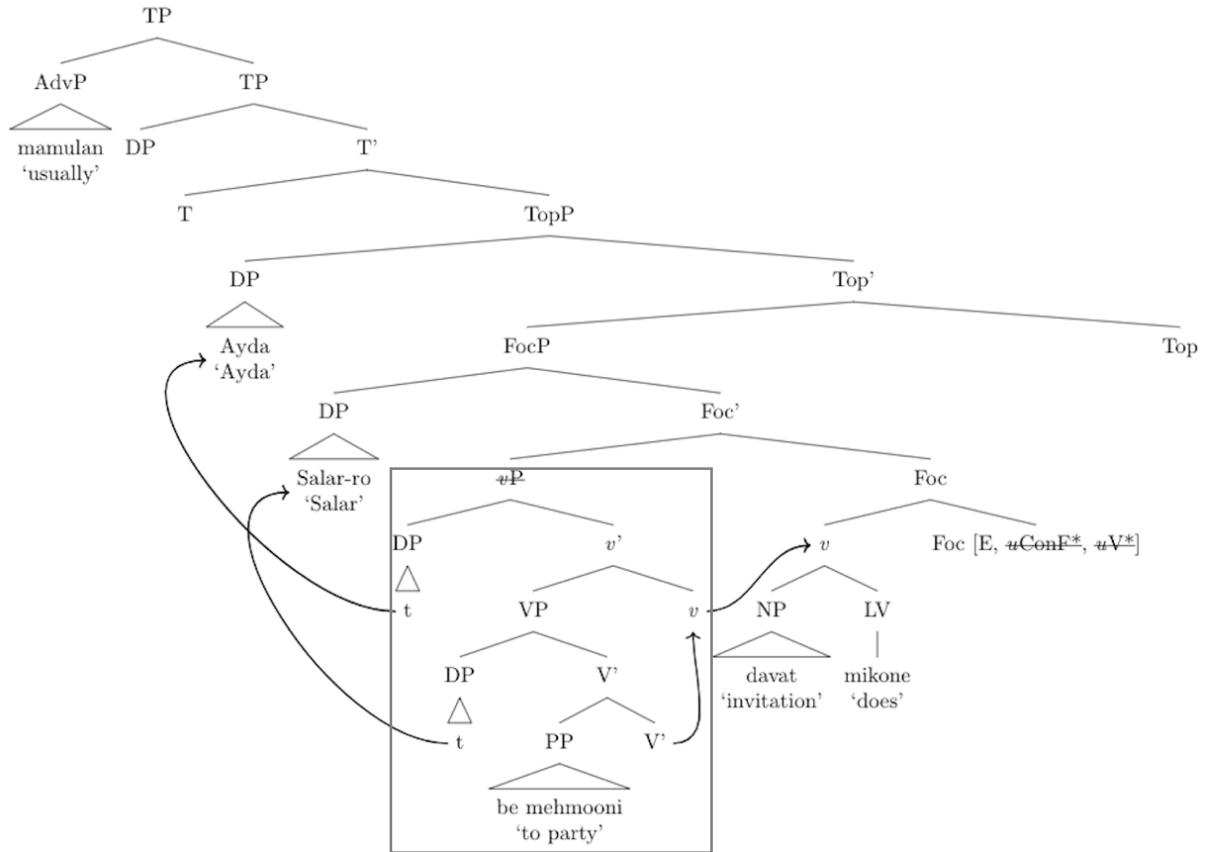
The reader might have already noticed that in all the examples provided in this chapter so far, there was not an overt subject in the second clause. This was done on purpose to keep the reader's attention on the internal arguments and the verb. In VVPE, in addition to the verb and an internal argument, it is also possible to have an overt subject, as shown in (70b).

- (70) a. az in-ke mamulan **Araz** **Sina-ro** be mehmoonni davat
 from this-that usually Araz Sina-ACC to party invitation
 ne-mi-kon-e nārāhat ne-mish-am
 NEG-DUR-do-3SG upset NEG-became-1SG
 'The fact that Araz usually does not invite Sina to the party does not upset me.'
- b. vali az in-ke mamulan **Ayda** **Salar-ro** (be-mehmoonni)
 but from this-that usually Ayda Salar-ACC to party
 davat ne-mi-kon-e nārāhat mish-am
 invitation NEG-DUR-do-3SG upset became-1SG
 'But the fact that Ayda usually does not invite Salar (to the party) upsets me.'

There is a contrastive relationship between the direct objects and the subjects in (70a) and (70b). We already know that the direct object moves to the Spec of FocP. Now, the question is where does the subject move to?

The subject *Ayda* in (70b) functions as a contrastive topic; therefore, it should move to the Spec of TopP.¹¹ I propose that there is TopP, above FocP, in the TP level, which hosts the contrastive topic in Verb-stranding constructions. The relevant parts of the sentence in (70b) are schematically illustrated in (71).

(71) Subject moves to TopP in the TP level



¹¹ Recall from chapter 1 that the Spec of TP hosts background topic.

The evidence that the subject moves to TopP in the TP level comes from the interaction of the subject with sentential adverbs. In this structure, the subject *Ayda* follows the sentential adverb *mamulan* ‘usually’. This shows that the subject has not moved to the left periphery.¹² Now that we know there is TopP in the TP level, we can revise the Persian phrase structure in (63). The result yields (72).

- (72) [CP [TopP [FocP [NegP Neg [TP [TopP [FocP [vP]]]]]]]]

 Operator/Discourse Phase Lexical Phase

Recall that TP internal focus phrase has been proposed for Malayalam (Jayaseelan 2001), Italian (Belletti 2004), Mandarin Chinese (Paul 2005), and Spanish (Jiménez-Fernández 2009). It has also been proposed that these languages have a TP internal topic position. Therefore, Persian data contributes to the existing literature with regard to the existence of low left periphery, and that it includes topic and focus positions.

2.7. Conclusion

In this chapter, I discussed Persian structures in which the verb is overt while its internal argument(s) and the non-verbal element are elided. I showed that there are three possible strategies to account for these structures: Null Argument, Argument Ellipsis (AE), and Verb-stranding Verb Phrase Ellipsis (VVPE).

I presented three diagnostics (providing a linguistic antecedent, embedding the ellipsis clause inside an island, and sloppy/strict readings) to determine whether a structure

¹² Note that the subject can also move to TopP in the CP level, as shown in (i).

- (i) vali az in-ke **Ayda** mamulan Salar-ro (**be mehmooni**)
 but from this-that Ayda usually Salar-ACC to party
 davat ne-mi-kon-e nārāhat mish-am
 invitation NEG-DUR-do-3SG upset became-1SG

involves null argument or ellipsis. I presented evidence that in order to make sure we are dealing with an elliptical structure, we can provide the structure with a linguistic antecedent and embed it inside a syntactic island.

I briefly discussed null argument constructions but then focused on structures that involve ellipsis. I reviewed VVPE (Toosarvandani 2009, Shafiei 2015, 2016) and AE (Rasekhi 2014, 2016, Sato & Karimi 2016) approaches that have been proposed for Persian, followed by a discussion of the issues of each study. I showed that none of the proposed analyses can account for all Persian data.

I discussed four diagnostics (V to T movement, adverb interpretation, extraction, and verbal identity) for distinguishing VVPE from AE in order to determine whether Persian has VVPE or AE. I showed that VVPE can account for all the data in which one or more than one argument is elided. I proposed a unified VVPE analysis that is different from Toosarvandani's and Shafiei's analyses in terms of structure of complex predicates, the landing site of verb, and the ellipsis licensing features.

I argued that Persian has FocP above vP, in the TP level, which is the landing site of the verb in VVPE structures. The focus head carries an [E] feature bundled with the [*uConF**] and [*uV**] features. The [*uConF**] feature triggers the movement of the element that carries a contrastive focus feature to the Spec of FocP, prior to ellipsis. On the other hand, the [*uV**] feature attracts the verb, which moves to the focus head. Afterwards, the [E] feature licenses the deletion of vP, which includes all the materials that have antecedents in the preceding clause.

2.8. Future Research

In this chapter, I have proposed that there is FocP in the TP level, and that in Verb-stranding constructions, the verb survives ellipsis by moving to the focus head. In addition, an internal argument that carries a contrastive focus feature moves out of the ellipsis to the Spec of FocP, before ellipsis takes place. This proposal raises the following questions: what prevents the verb and the contrastively focused argument from moving all the way to the

FocP in the CP level? How many projections of contrastive focus can we have in a sentence?

Recall from chapter 1 that the contrastively focused element can either stay in-situ or move to FocP. With this information in mind, let us consider the examples in (73).

- (73) a. [TP Ayda dirooz [vP ketāb-ro **be ki** dād]]?
- Ayda yesterday book-ACC to who gave.3SG
- ‘Who did Ayda give the book to yesterday?’
- b. [TP Ayda dirooz [FocP **be ki** [vP ketāb-ro dād]]]]?
- c. [TopP Ayda [FocP **be ki** [TP dirooz [vP ketāb-ro dād]]]]?
- d. [FocP **be ki** [TP Ayda dirooz [vP ketāb-ro dād]]]]?

The contrastively focused element *be ki* ‘to who’ in (73a) is in-situ while in (73b), it has moved to FocP in the TP level, and in (73c) and (73d), it has moved to FocP in the CP level.

If we have specific positions that can host contrastive focus i.e. FocP in the TP and CP levels, one might wonder if we can fill both positions at the same time. The answer is simply no. Recall from chapter 1 that we can only have one contrastive focus per sentence (74).

- (74) a. KIMEA se-tā film did
Kimea three-part film saw.3SG
‘It is Kimea who has seen three movies.’
- b. *KIMEA se-tā FILM did
Kimea three-part film saw.3SG (Karimi 2005: 134)

Persian allows two elements bearing a contrastive focus feature in the same sentence only if one of them has an inherent focus feature, as illustrated in (75).

- (75) KIMEA māh-e gozashte faqat se-tā film did-e
Kimea month-EZ previous only three-part film saw-3SG
‘It was Kimea who saw only three movies last month.’ (Everyone else has seen more movies) (Karimi 2005: 133)

An alternative approach to proposing focus positions in the TP and CP levels is ‘focus field’, which has been proposed for Turkish (Göksel and Özsoy 1995). Based on Göksel and Özsoy’s proposal, the focused element can appear at any preverbal position. This eliminates the need for having specific focus positions in the TP and CP levels where the focused element moves to.

Persian and Turkish exhibit some similarities including i) SOV word order, ii) scrambling, and iii) having complex predicates. However, there are some differences between the two languages which are as follows: i) the non-verbal element in Persian but not in Turkish can be separated from the light verb, ii) in Persian, it is possible for the contrastively focused non-specific object to move to FocP, while in Turkish it must stay in-situ, and iii) in Turkish but not in Persian, the immediately preverbal position is the focus position.

Focus constructions in Persian should be further investigated to determine whether Persian has focus field. It should also be kept in mind that Göksel and Özsoy claim that stress is the sole indicator of the focused element. However, there are some restrictions on what elements can be focused. For instance, if we have two elements competing for focus, the leftmost one should win (76a); otherwise, the result yields an ungrammatical sentence (76b).

- (76) a. OKUL-A ne zaman gid-ecek-sin?
school-DAT when go-FUT-2SG
'When will you go TO SCHOOL?'

b. *ne zaman OKUL-A gid-ecek-sin?
when school-DAT go-FUT-2SG (Göksel and Özsoy 1995: 2)

The examples in (76) show that the focalized element cannot be preceded by a wh-phrase. Even though the focused phrase in (76b) is in preverbal position, which is assumed to be the focus position, the sentence is ungrammatical. The fact that word order plays a role in assigning focus indicates that stress cannot be the sole indicator of focus but rather syntax also affects which word can be focused.

Further studies need to be conducted to establish whether Persian has focus field as in Turkish or there are specific focus phrase positions in the TP and CP levels as has been proposed in this chapter. In addition, the role of syntax in focus field needs to be studied since as the examples in (76) illustrate, it cannot be just stress that determines which words can be focused. Therefore, without syntax we cannot fully account for the data. It would be fruitful to propose that an element that carries a contrastive focus feature moves to a focus position in the focus field, and receives a high pitch accent at the PF level.

Chapter 3: Stripping Constructions with Negation in Persian

3.1. Introduction

Stripping refers to an operation in which the entire clause except for one constituent is elided under identity with corresponding parts of the preceding clause (Hankamer and Sag 1976). The constituent that survives ellipsis is called *remnant*, which contrasts with its corresponding element in the preceding clause. In Stripping constructions with negation, in addition to the remnant, the stripped clause includes a negative marker. Persian has two types of Stripping that occur with negation, as shown in (1). I refer to the structure in (1a) as Polarity Stripping (PolS), and to the structure in (1b) as Negative Stripping (NegS).

- (1) a. Araz ketāb kharid, **vali** Ayda **na** (PolS)
Araz book bought.3SG but Ayda NEG
'Araz bought books, but Ayda did not (buy books).'.
- b. ARAZ ketāb kharid, **AYDA** **na** (NegS)
Araz book bought.3SG Ayda NEG
'ARAZ bought books, AYDA did not (buy books).'.

In both (1a) and (1b), the remnant *Ayda*, which carries a high pitch accent, contrasts with its correlate *Araz* in the preceding clause. In addition, the remnant precedes the negative marker *na*. The only difference between these structures, on the surface, is the presence of the coordinator *but* in (1a). Persian also allows structures such as (2), which I refer to as Pseudo-Stripping (PseS).

- (2) ARAZ ketāb kharid, **NA** **Ayda** (PseS)
Araz book bought.3SG NEG Ayda
'Araz bought books, not Ayda.'

In this structure, the negative marker precedes *Ayda*, which contrasts with its corresponding element *Araz* in the preceding clause. In addition, in Pseudo-stripping, unlike Polarity Stripping and Negative Stripping, the negative marker carries a high pitch accent.

In this chapter, I study Polarity Stripping (1a), Negative Stripping (1b), and Pseudo-

stripping (2) structures in Persian, which have not been previously studied. My first goal is to contribute to the Persian linguistics field by studying these constructions. My second goal is to contribute to the general syntactic knowledge base, in particular Stripping constructions with negation.

In this chapter, I show that even though Polarity Stripping, Negative Stripping, and Pseudo-stripping look similar on the surface, they cannot be used in the same contexts since they are different regarding their context of occurrence and interpretation, underlying structure, and boundedness.

I show that Polarity Stripping can occur in an out of the blue context since it adds new information to the discourse. On the other hand, Negative Stripping and Pseudo-stripping cannot occur in an out of the blue context but rather they can only occur in contexts in which a proposition has been made. I show that this is due to the fact that they have a corrective interpretation. In Negative Stripping, which involves two alternatives, correction involves showing which alternative is true and which one is false. On the other hand, in Pseudo-stripping, correction involves substitution; one alternative substitutes the other.

With regard to their underlying structure, I argue that structures with XP¹ NEG word order, i.e. Polarity Stripping and Negative Stripping, are bi-clausal while structures with NEG XP word order, i.e. Pseudo-stripping, are mono-clausal. Therefore, I argue that Polarity Stripping and Negative Stripping are true instances of Stripping, in which the entire clause except for one element is elided; whereas, Pseudo-stripping does not involve ellipsis despite what has been claimed for English (Kolokonte 2008).²

In addition, I show that in Polarity Stripping and Negative Stripping, the XP NEG can be embedded and there is no locality constraint; therefore, they are unbounded. On the

¹ XP refers to any phrase (e.g. DP, PP, AdvP, AdjP) that can precede or follow the negative marker in PolS/NegS and PseS, respectively.

² Even though I argue that PseS is not an instance of Stripping and does not involve ellipsis, I include it in this chapter and compare and contrast it with PolS and NegS. This is because it has been claimed for English (Kolokonte 2008) that PseS is an instance of Stripping and involves ellipsis.

other hand, the NEG XP in Pseudo-stripping is bounded and it must directly follow the clause that includes its correlate.

A summary of the characteristics of our three constructions discussed in this chapter is presented in (3).

(3) Distinguishing Features	PolS	NegS	PseS
a. Acceptable in an out of the blue context	Yes	No	No
b. Has a corrective interpretation	No	Yes	Yes
c. Has correction by showing which alternative is true and which one is false	NA	Yes	No
d. Has correction by substituting one alternative by another	NA	No	Yes
e. Has XP NEG word order	Yes	Yes	No
f. Has NEG XP word order	No	No	Yes
g. Is bi-clausal	Yes	Yes	No
h. Is mono-clausal	No	No	Yes
i. Is bounded	No	No	Yes

Adopting Kolokonte (2008), I propose that the negative marker in Polarity Stripping and Negative Stripping functions as a focusing adverb. However, against her analysis, I propose that the negative marker in Pseudo-stripping is constituent negation.

I also propose that the XP in Polarity Stripping and Negative Stripping carries contrastive topic and contrastive focus features, respectively. This is in line with the Identity Condition on the Remnant proposed in chapter 1. Based on this condition, only the elements that have contrastive topic or focus features can survive ellipsis. Adopting Rizzi's (1997) cartographic approach, I propose that the XP in these structures moves to the Spec of TopP and FocP, respectively, prior to ellipsis.

In addition, I propose that Polarity Stripping and Negative Stripping are licensed by the Pol head, which carries an [E] feature bundled with the [$u\text{Pol}_{[+}\text{Neg}]$] feature. The uninterpretable Pol feature is satisfied by being in a local relationship with the negative marker *na*. The [E] feature licenses the ellipsis of its complement, TP, at the PF level.

Recall from chapter 1 that in Persian declarative sentences, elements with a contrastive topic feature always move to the Spec of TopP, independent of ellipsis.

Therefore, we can derive Polarity Stripping, in which the XP has a contrastive topic feature, employing the $[E, uPol_{[+Neg]}]$ feature bundles.

On the other hand, elements with a contrastive focus feature can either move to the Spec of FocP or stay in-situ. In order to ensure that the XP in Negative Stripping, which carries a contrastive focus feature, moves to the Spec of FocP, I propose that we must have a strong uninterpretable contrastive focus feature, $[uConF^*]$. This feature needs to be checked and deleted by being in a local relationship with an element that has a matching feature. Therefore, to derive Negative Stripping, we need the $[E, uPol_{[+Neg]}, uConF^*]$ feature bundles.

A summary of the proposal for deriving Polarity Stripping and Negative Stripping is presented in (4).

(4)	PoS	NegS
a. Remnant	Contrastive topic, NEG	Contrastive focus, NEG
b. Elided phrase	TP	TP
c. Licensing feature bundles	$[E, uPol_{[+Neg]}]$	$[E, uPol_{[+Neg]}, uConF^*]$.

Regarding Pseudo-stripping, I propose that it does not involve ellipsis despite what has been claimed for English (Kolokonte 2008) but rather is derived via movement. I propose that in the underlying structure, the NEG XP constituent adjoins to the XP's corresponding element. However, since it carries a contrastive focus feature, it has to move to a focus position. I propose that it undergoes right-ward movement and adjoins to FocP, above vP, in the TP level.

The structure of this chapter is as follows. In section 2, I discuss characteristics of Polarity Stripping, Negative Stripping, and Pseudo-stripping. In section 3, I discuss the proposal for the three constructions under discussion. I also discuss how these constructions are constrained by information structure and the nature of the negative marker in these constructions. In section 4, I provide an analysis for the Persian data and compare and contrast them with other languages. Sections 5 and 6 provide a conclusion and suggestions for future research, respectively.

3.2. Characteristics of Stripping Constructions with Negation

In Stripping constructions, the first clause is a complete clause that can occur in isolation. However, in the second clause some elements are missing; therefore, the second clause depends on the first one to receive its interpretation. The main characteristic of Stripping is that it is restricted to coordinate constructions and cannot occur in subordinate clauses, as the ungrammaticality of the following examples show.

- (5) a. *Ayda ketāb mi-khar-e vali [age Araz na] (PolS)
Ayda book DUR-bought-3SG but if Araz NEG
Intended: ‘Ayda will buy books but if Araz does not (buy books).’
- b. *Ayda ketāb mi-khar-e [age Araz na] (NegS)
Ayda book DUR-bought-3SG if Araz NEG
- c. *Ayda ketāb mi-khar-e [age na Araz] (PseS)
Ayda book DUR-bought-3SG if NEG Araz

Even though Polarity Stripping, Negative Stripping, and Pseudo-stripping constructions look similar on the surface, they cannot be used interchangeably. In this section, I provide evidence and argue that these constructions differ in their: i) context of occurrence and interpretation, ii) underlying structure, and iii) (un)boundedness.

3.2.1. Context of Occurrence and Interpretation

Polarity Stripping

Suppose that speaker A and B are talking about their visit to the bookstore with their friends *Araz* and *Ayda*. In this context, speaker A can utter the sentence in (6a), which is an instance of Polarity Stripping.

- (6) Context: [Araz bought books but Ayda did not]

- A: Araz dirooz ketāb kharid, vali Ayda na (PolS)
Araz yesterday book bought.3SG but Ayda NEG
‘Araz bought books yesterday, but Ayda did not (buy books).’

The grammaticality of this sentence shows that Polarity Stripping can occur in an out of the blue context, without requiring a linguistic antecedent. Therefore, we can say that in this structure, the speaker is introducing new information to the discourse by saying that *Araz bought books but Ayda did not buy books*.³

Negative Stripping

Negative Stripping, unlike Polarity Stripping, is not acceptable in contexts in which there is not a linguistic antecedent, as shown in (7).

- (7) Context: [Araz bought books but Ayda did not]

A:	#ARAZ	dirooz	ketāb	kharid,	AYDA	na	(NegS)
	Araz	yesterday	book	bought.3SG	Ayda	NEG	

In this example, *Araz* and *Ayda* are contrastively focused elements, which is represented by capitalization. The ungrammaticality of this sentence shows that Negative Stripping cannot occur in an out of the blue context, i.e. with a contextual antecedent. However, this sentence becomes acceptable when a linguistic antecedent is provided (8).

- (8) A: Araz va Ayda dirooz ketāb kharid-an
Araz and Ayda yesterday book bought-3PL
'Araz and Ayda bought books yesterday.'

B:	ARAZ	dirooz	ketāb	kharid,	AYDA	na	(NegS)
	Araz	yesterday	book	bought.3SG	Ayda	NEG	
'(No, you are wrong), ARAZ bought books yesterday, AYDA did not (buy books).'							

³ The stripped clause can also have the implicature that *Ayda did not buy books but she bought something else.*

The speaker in (8A) makes an assertion that *Araz and Ayda bought books yesterday*. Since this statement is not correct, speaker B corrects speaker A by saying (*no, you are wrong*) *Araz bought books yesterday, Ayda did not buy books.*⁴ The fact that Negative Stripping is acceptable with a linguistic antecedent, as shown in (8B), but not with a contextual antecedent, as in (7A), shows that it can only occur in contexts in which a proposition has been made.

In (8B), the emphasis is on the predicate and whether Ayda and Araz bought books. We know that we have two alternatives in this regard; Ayda and Araz have either bought books or they have not bought books. Therefore, we can say that in Negative Stripping, as in (8B), speaker B corrects speaker A's presupposition by showing which alternative is true and which one is false. In this context, *Araz bought books* is true while *Ayda bought books* is false.

Pseudo-stripping

Pseudo-stripping, similar to Negative Stripping, is not acceptable in contexts in which there is not a linguistic antecedent.

(9) Context: [Araz bought books but Ayda did not]

A:	#ARAZ	dirooz	ketāb	kharid,	NA	Ayda	(PseS)
	Araz	yesterday	book	bought.3SG	NEG	Ayda	

However, it becomes acceptable if a linguistic antecedent is provided, as the grammaticality of the example in (10B) shows.

(10) A: Ayda dirooz ketāb kharid
Ayda yesterday book bought.3SG
'Ayda bought books yesterday.'

⁴ The stripped clause can also have the implicature that *Ayda did not buy books, she bought something else.*

- B: ARAZ dirooz ketāb kharid, NA Ayda (PseS)
Araz yesterday book bought.3SG NEG Ayda
‘(No, you are wrong), ARAZ bought books yesterday, NOT Ayda.’

Pseudo-stripping, similar to Negative Stripping, has a corrective interpretation. In (10A), speaker A makes an assertion that *Ayda bought books*. Since this is not true, speaker B corrects speaker A by saying (*no, you are wrong*), *it was Araz who bought books, not Ayda*. In (10B), the emphasis is on the person who bought books; whether it was Araz or Ayda who bought books. We can say that in this context, we have two alternatives with regard to who bought books, i.e. either *Araz bought books* or *Ayda bought books*. We see that speaker B corrects speaker A by replacing *Ayda* in (10A) with *Araz*. Thus, we can say that in Pseudo-stripping, we have correction by substitution.

In this section, we have seen that Polarity Stripping does not have a corrective interpretation while Negative Stripping and Pseudo-stripping do. To further support this difference, let us consider the examples in (11).

- (11) Q: ki ketāb kharid?
who book bought.3SG
‘Who bought books?’
- A1: Araz ketāb kharid, vali Ayda na (PolS)
Araz book bought.3SG but Ayda NEG
‘Araz bought books, but Ayda did not.’
- A2: #ARAZ ketāb kharid, AYDA na (NegS)
Araz book bought.3SG Ayda NEG
- A3: #ARAZ ketāb kharid, NA Ayda (PseS)
Araz book bought.3SG NEG Ayda

We see that in response to the *wh*-question in (11Q), only Polarity Stripping is acceptable (11A1), while Negative Stripping (11A2) and Pseudo-stripping (11A3) are not. This is because the speaker in (11Q) does not make an assertion but rather asks a question. Therefore, Negative Stripping and Pseudo-stripping, which have a corrective interpretation, cannot occur in response to *wh*-questions.

Summary

A summary of the characteristics of Polarity Stripping, Negative Stripping, and Pseudo-stripping constructions discussed in this section is presented in (12).

(12) Context of Occurrence and Interpretation	PolS	NegS	PseS
a. Acceptable in an out of the blue context	Yes	No	No
b. Has a corrective interpretation	No	Yes	Yes
c. Has correction by showing which alternative is true and which one is false	NA	Yes	No
d. Has correction by substituting one alternative by another	NA	No	Yes

3.2.2. Underlying Structure

Polarity stripping

In Polarity Stripping, the first clause must be affirmative while the second clause must be negative, as shown in (13A1). It is not possible for both clauses to be negative, as the ungrammaticality of the sentence in (13A2) shows.⁵

⁵ In chapter 4, I study *Cherā*-stripping, which is the opposite of Polarity Stripping. In *Cherā*-stripping, the first clause must be negative while the second clause must be affirmative.

- (i) Araz ketāb **na-kharid**, vali Ayda **cherā** (~~ketāb kharid~~)
 Araz book NEG-bought.3SG but Ayda why book bought.3SG
 ‘Araz did not buy books but Ayda did (buy books).’

- (13) Q: ki ketāb kharid?
 who book bought.3SG
 ‘Who bought books?’

- A1: Araz ketāb **kharid**, vali Ayda **na** (ketāb na-kharid) (PolS)
 Araz book bought.3SG but Ayda NEG book NEG-bought.3SG
 ‘Araz bought books, but Ayda did not (buy books).’
- A2: *Araz ketāb **na-kharid**, vali Ayda **na**
 Araz book NEG-bought.3SG but Ayda NEG

In Polarity Stripping, it is possible to continue the sentence after the negation as shown in (13A1). This shows that there are two clauses in the underlying structure. Note that in the second clause, the verb ‘bought’ must have the negative marker *na*.⁶

Negative Stripping

Recall that, as shown in (8B), Negative Stripping has a corrective interpretation; therefore, it can only occur in contexts in which a proposition has been made. Keeping this information in mind, let us consider the examples in (14).

- (14) Context: [Ayda passed her exam but Araz did not]

- A: ARAZ emtehān-esh-ro pās kard
 Araz exam-his-ACC pass did.3SG
 ‘Araz passed his exam.’
- B: AYDA emtehān-esh-ro **pās kard**, ARAZ **na** (NegS)
 Ayda exam-her-ACC pass did.3SG Araz NEG
 (emtehān-esh-ro pās na-kard)
 exam-his-ACC pass NEG-did.3SG
 Lit: ‘AYDA passed her exam, ARAZ not.’
 Means: ‘(No, you are wrong) AYDA passed her exam, ARAZ did not (pass his exam).’

⁶ I discuss the nature of the negative marker in section 3.3.4.

In (14A), speaker A makes an assertion that *Araz passed his exam*. However, since this statement is not correct, speaker B corrects speaker A by saying (*no, you are wrong*), *Ayda passed her exam, Araz did not*.

In Negative Stripping (14B), similar to Polarity Stripping (13A1), it is possible to continue the sentence after the negative marker, which shows that there are two clauses in the underlying structure. In addition, we have two negative markers in the second clause; one is prefixed to the verb and the other follows the remnant *Araz*.

In (14B), the first clause is affirmative while the second clause is negative. However, it is possible for both clauses to be negative, as shown in (15B).

(15) Context: [Ayda passed her exam but Araz did not]

A: AYDA emtehān-esh-ro pās na-kard
 Ayda examher-her-ACC pass NEG-did.3SG
 ‘Ayda did not pass her exam.’

B: ARAZ emtehān-esh-ro **pās** **na-kard**, AYDA **na** (NegS)
 Araz exam-his-ACC pass NEG-did.3SG Ayda NEG
 (emtehān-esh-ro pās kard)
 exam-her-ACC pass did.3SG
 Lit: ‘ARAZ did not pass his exam, AYDA not.’
 Means: ‘(No, you are wrong) ARAZ did not pass his exam, AYDA did (pass her exam).’

Speaker A makes an assertion that is not correct. Therefore, speaker B corrects speaker A by saying (*no, you are wrong*), *Araz did not pass his test, Ayda did*. Note that even though we have the negative marker *na* in the second clause, the sentence has an affirmative interpretation. The negative marker negates the polarity of the antecedent clause.

Pseudo-stripping

Recall that Pseudo-stripping, as shown in (10B), similar to Negative Stripping (8B), has a corrective interpretation and can only occur in contexts in which a proposition has been made. With this information in mind, let us have a look at the examples in (16).

- (16) Context: [Ayda passed her exam but Araz did not]

- A: ARAZ emtehān-esh-ro pās kard
Araz exam-his-ACC pass did.3SG
'Araz passed his exam.'
- B: AYDA emtehān-esh-ro pās **kard**, NA Araz (PseS)
Ayda exam-her-ACC pass did.3SG NEG Araz
(*emtehān-esh-ro pās na-kard)
exam-his-ACC pass NEG-did.3SG
'(No, you are wrong), AYDA passed her exam, NOT Araz.'

In (16A), speaker A makes an assertion that *Araz passed his exam*. Since this is not true, speaker B corrects speaker A by saying *no, you are wrong, it was Ayda who passed her exam, not Araz*. Note that in this structure, it is not possible to continue the sentence after *Araz*, which suggests that Pseudo-stripping is mono-clausal.

In (16B), the first clause is affirmative while the second clause is negative. However, in Pseudo-stripping, similar to Negative Stripping (15B), it is possible for both clauses to be negative, as shown in (17B).

- (17) Context: [Ayda passed her exam but Araz did not]

- a: Ayda emtehān-esh-ro pās na-kard
Ayda exam-her-ACC pass NEG-did.3SG
'Ayda did not pass her exam.'
- b: ARAZ emtehān-esh-ro pās **na-kard**, NA Ayda (PseS)
Araz exam-his-ACC pass NEG-did.3SG NEG Ayda

(*emtehān-esh-ro pās kard)
exam-her-ACC pass did.3SG
Lit: 'ARAZ did not pass his exam, NOT Ayda.'
Means: (No, you are wrong) ARAZ did not pass his exam, Ayda did (pass her exam).'

Mono-clausal vs. Bi-clausal

One of the differences we have already seen among Polarity Stripping (13A1), Negative Stripping (14B), and Pseudo-stripping (16B) is that the first two constructions are bi-clausal while the latter one is mono-clausal. There are two more pieces of evidence that support this difference. The first evidence comes from coordination, as illustrated in ((18)-(20)).

- (18) Araz ketāb kharid, vali Ayda na, Maryam ham na (PolS)
Araz book bought.3SG but Ayda NEG Maryam also NEG
'Araz bought books, but Ayda did not, Maryam did not either.'
- (19) ARAZ ketāb kharid, AYDA na, MARYAM ham na (NegS)
Araz book bought.3SG Ayda NEG Maryam also NEG
'ARAZ bought books, AYDA did not, MARYAM did not either.'
- (20) *ARAZ ketāb kharid, NA Ayda, NA ham Maryam (PseS)
Araz book bought.3SG NEG Ayda NEG also Maryam

We see that it is possible to coordinate the stripped clause with another clause in Polarity Stripping (18) and Negative Stripping (19). However, as the ungrammaticality of the sentence in (20) shows, coordination is not possible in Pseudo-stripping, which indicates that *na Ayda* in this clause does not have a full clause in the underlying structure.

The second evidence comes from the (im)possibility of reversing the order of clauses while their interpretation remains the same, as shown in ((21)-(23)).

- (21) Araz na, (ketāb na-kharid), vali Ayda ketāb kharid (PolS)
Araz NEG book NEG-bought.3SG but Ayda book bought.3SG
Lit: 'Araz did not (buy books) but Ayda bought books.'

- (22) **ARAZ na**, (ketāb na-kharid), AYDA ketāb kharid (NegS)
 Araz NEG book NEG-bought.3SG Ayda book bought.3SG
 Lit: ‘ARAZ did not (buy books), AYDA bought books.’
- (23) ***NA Araz**, AYDA ketāb kharid (PseS)
 NEG Araz Ayda book bought.3SG

The fact that in Polarity Stripping (21) and Negative Stripping (22), it is possible to reverse the order of clauses suggests that we have two independent clauses in these constructions.⁷ On the other hand, in Pseudo-stripping (23), it is not possible to move *na Araz* to the sentence initial position, which suggests that we do not have a full clause in the underlying structure.

3.2.3. (Un)boundedness

Since it is possible to coordinate the stripped clause in Polarity Stripping (18) and Negative Stripping (19) with another clause, we expect these structures to be unbounded. This expectation is borne out as illustrated in (24)⁸ and (25).

- (24) māmān goft Araz ketāb kharid, vali [fekr (PolS)
 mom said.3SG Araz book bought.3SG but thought
 kon-am Ayda na]
 do-1SG Ayda NEG
 ‘Mom said Araz bought books but I think Ayda did not (buy books).’

⁷ This also suggests that these structures allow backward ellipsis, i.e. the ellipsis site precedes the antecedent clause. In English, Stripping does not allow backward ellipsis (i) while VPE does (ii).

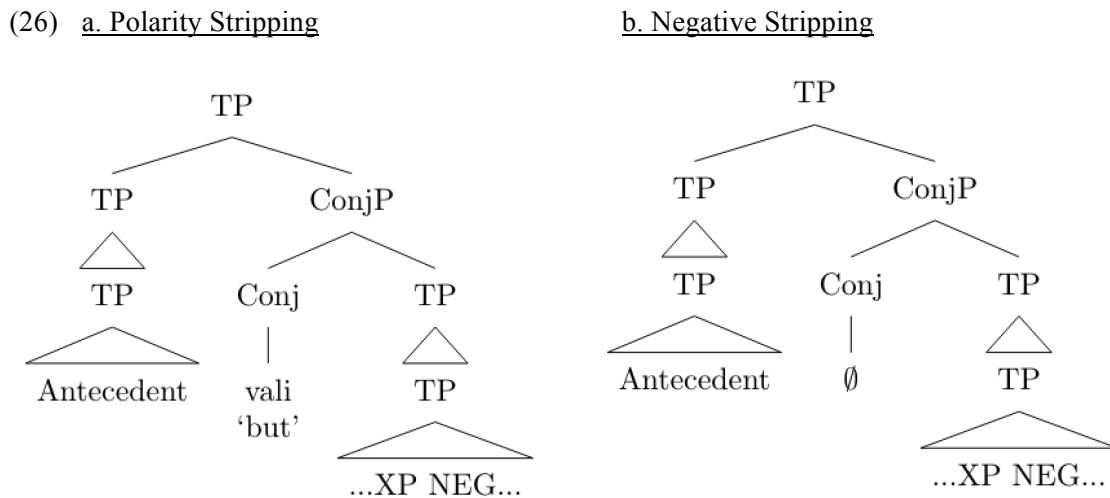
- (i) *Not John (~~bought books~~), but Mary bought books. (Stripping)
 (ii) John did not (~~buy books~~), but Mary bought books. (VPE)

⁸ The following word order is also possible, in which the coordinator ‘but’ is inside the embedded clause:

- (iii) māmān goft Araz ketāb kharid, [fekr kon-am vali Ayda na]
 mom said.3SG Araz book bought.3SG thought do-1SG but Ayda NEG

- (25) māmān goft ARAZ ketāb kharid, [fekr (NegS)
 mom said.3SG Araz book bought.3SG thought
 kon-am AYDA na]
 do-1SG Ayda NEG
 ‘Mom said Araz bought books, I think AYDA did not (buy books).’

In these structures, the DP *Ayda* and the negative marker *na* in the second clause, and their antecedent in the first clause are embedded. The fact that they are acceptable shows that they are unbounded, which means that they do not have a locality requirement and the negative marker and XP can be embedded, as schematically illustrated in (26).



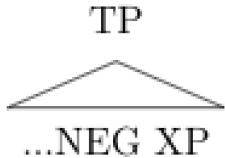
On the other hand, since Pseudo-stripping is not possible with coordination (23), we expect it to be bounded. This is borne out, as shown in (27).

- (27) *māmān goft ARAZ ketāb kharid, [fekr (PseS)
 mom said.3SG Araz book bought.3SG thought
 kon-am NA Ayda]
 do-1SG NEG Ayda

Pseudo-stripping is not acceptable when it is embedded, which means that this structure is bounded and has a locality requirement; the negative marker and XP must directly follow

the clause that includes the XP's corresponding element. In addition, since we know that Pseudo-stripping is mono-clausal, we can say that its structure is as illustrated in (28).⁹

(28) Pseudo-stripping



Summary

The data presented in this section show that Polarity Stripping, Negative Stripping, and Pseudo-stripping structures have the following structures.

(29) Structure of Polarity Stripping

- a. [_{TP} [_{vP} (affirmative predicate)]], [_{TP} XP *na* [_{vP} (negative predicate)]]]
- b. [_{TP} [_{vP} (negative predicate)]], [_{TP} XP *cherā* [_{vP} (affirmative predicate)]]]¹⁰

(30) Structure of Negative Stripping

- a. [_{TP} [_{vP} (affirmative predicate)]], [_{TP} XP *na* [_{vP} (negative predicate)]]]
- b. [_{TP} [_{vP} (negative predicate)]], [_{TP} XP *na* [_{vP} (affirmative) predicate]]]

(31) Structure of Pseudo-stripping¹¹

- a. [_{TP} [_{vP} (affirmative predicate), *na* XP]]
- b. [_{TP} [_{vP} (negative predicate), *na* XP]]

The structures presented in ((29)-(31)) suggest that in constructions with XP NEG word order, we have two clauses while in structures with NEG XP word order, we have only one clause. In addition, since Negative Stripping and Pseudo-stripping have a corrective

⁹ See section 3.3.2. for the proposal regarding the position of NEG XP inside the TP.

¹⁰ Note that in this chapter, I have only mentioned *Cherā*-stripping in footnote 6. See chapter 4 for the discussion on this structure.

¹¹ In section 3.3.2., I propose that in Pseudo-stripping, in the underlying structure, the NEG XP constituent adjoins to the XP's corresponding element, and that the surface word order is derived via right-ward movement.

interpretation, we can make a generalization that in structures with a corrective interpretation, it is possible to have either two clauses or one.

3.3. Proposal

3.3.1. Polarity Stripping and Negative Stripping

We have already seen that in Polarity Stripping (32) and Negative Stripping (33), the entire clause except for one constituent is elided.

- (32) Araz ketāb kharid, vali Ayda na (~~ketāb na kharid~~) (Pols)

Araz book bought.3SG but Ayda NEG book NEG-bought.3SG

‘Araz bought books but Ayda did not (buy books).’

- (33) ARAZ ketāb kharid, AYDA na (~~ketāb na kharid~~) (NegS)

Araz book bought.3SG Ayda NEG book NEG-bought.3SG

‘(No, you are wrong), ARAZ bought books, AYDA did not (buy books).’

In both constructions in (32) and (33), the remnant *Ayda* is in a contrastive relationship with its antecedent *Araz* in the preceding clause. However, in Negative Stripping (33), *Ayda* and *Araz* are focalized elements, which is represented by capitalization.

Recall from chapter 1 that based on the Identity Condition on the Remnant, repeated in (34), only the elements that are in a contrastive relationship with their correlate can survive ellipsis.

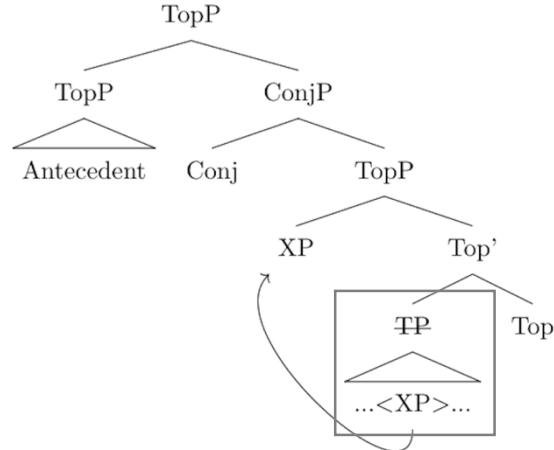
- (34) **Identity Condition on the Remnant**

- (i) There must be a contrastive relationship between the remnant and its correlate, and
- (ii) They must have the same information structure, i.e. both of them must be topicalized or focalized elements.

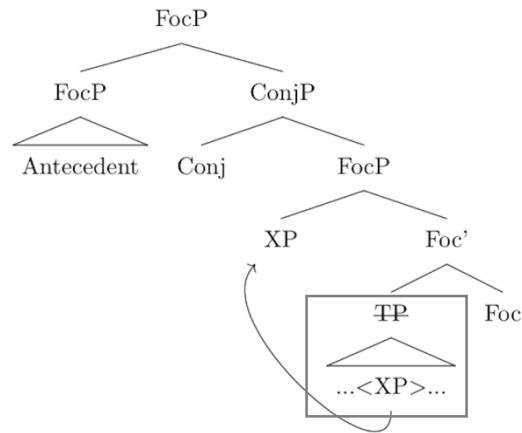
The sentences in (32) and (33) show that Polarity Stripping and Negative Stripping satisfy the condition in (34i), as the remnant *Ayda* contrasts with its corresponding element *Araz*.

Regarding the condition in (34ii), I propose that the remnant in Polarity Stripping functions as a topic while the remnant in Negative Stripping functions as a focalized element.¹² Therefore, the remnant in these structures moves to the Spec of TopP and FocP, respectively, before TP is elided, as schematically illustrated in (35).

(35) a. Structure of Polarity Stripping



b. Structure of Negative Stripping



Recall that in Polarity Stripping and Negative Stripping, when we continue the sentence after the remnant, the verb must have a negative marker, as shown in (36) and (37). In these constructions, we have two negative markers: one follows the remnant *Ayda* and the other is affixed to the verb.

- (36) Araz ketāb kharid, vali Ayda **na** (ketāb **na**-kharid) (PolS)
 Araz book bought.3SG but Ayda NEG book NEG-bought.3SG
 ‘Araz bought books, but Ayda did not (buy books).’

- (37) ARAZ ketāb kharid, AYDA **na** (ketāb **na**-kharid) (NegS)
 Araz book bought.3SG Ayda NEG book NEG-bought.3SG
 ‘ARAZ bought books, AYDA did not (buy books).’

¹² See section 3.3.3. for the evidence.

The question that needs to be answered is: what is the nature of the negative marker after the remnant and where is it in the structure? In Persian, the position of sentential negation is assumed to be in the CP level. As the phrase structure in (38) illustrates, NegP, which hosts sentential negation, is above TP.

- (38) [CP [TopP [FocP [**NegP** [TP [vP PredP]]]]]]] (Karimi 2005: 147)

The phrase structure in (38) shows that sentential negation, NegP, selects TP as its complement. However, negation is morphologically realized on the verb through Agree relation between NegP, which bears an interpretable negation feature, and *v*, which bears an uninterpretable negation feature (Taleghani 2008).

Since the negative marker in Polarity Stripping and Negative Stripping precedes the sentential negation, which is prefixed on the verb, it has to be in a position higher than NegP. In addition, since the remnant in these structures moves to the Spec of TopP and FocP, respectively, we know that the negative marker *na* should be higher than NegP but lower than FocP. Let us call this position PolP. Adopting Kolokonte (2008), I propose that the negative marker *na* in Polarity and Negative Stripping structures, which functions as a focusing adverb, originates in the Spec of PolP. If our analysis is on the right track, the phrase structure in (38) should be revised to include PolP. The result yields (39).

- (39) [CP [TopP [FocP [**PolP** [NegP [TP [vP PredP]]]]]]]

In the literature, some people refer to PolP as ΣP (Laka 1990, Depiante 2000, Lopez 1999, 2000). These labels have been generally used in works on negation and polarity. Therefore, this position is used to refer to a position that hosts negation or polarity markers. In addition, it is assumed that there is a parametric variation among languages with regard to the position of PolP. In some languages, PolP is in the CP level while in others, it is in the TP level (Laka 1990, Depiante 2000, Lopez 1999, 2000).

Recall from the discussion in chapter 1 that in Persian, only the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head, and Int(errogative) head, can license ellipsis. I propose that in Polarity Stripping and Negative Stripping, the Pol head carries an

[E] feature bundled with [*uPol*] which has a [+Neg] value, i.e. [E, *uPol*_[+Neg]].¹³ The [*uPol*] feature requires having an overt polarity marker, which is the negative marker *na*.

Also recall from chapter 1 that the elements with a contrastive topic feature always move to the Spec of TopP, independent of ellipsis. Therefore, we do not need to have [*uConT**] feature but rather we can derive Polarity Stripping with the [E, *uPol*_[+Neg]] feature bundles.

However, the elements with a contrastive focus feature do not have to move to the Spec of FocP. Thus, to derive Negative Stripping, we need to have the [*uConF**] feature, i.e. [E, *uPol*_[+Neg], *uConF**]. The [*uConF**] feature is satisfied and deleted when it is in a local relationship with a constituent that has a matching feature. This will make sure that the element with a contrastive focus feature moves out of the ellipsis site before deletion takes place.

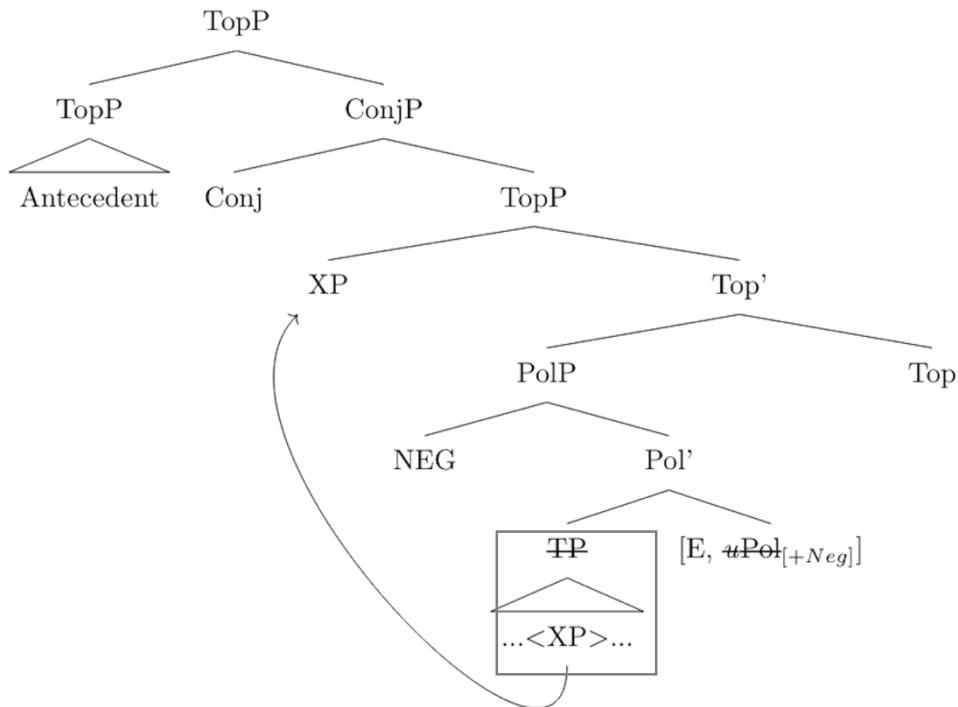
A summary of the proposal for deriving Polarity Stripping and Negative Stripping is given in (40).

(40)	PoS	NegS
a. Remnant	Contrastive topic, NEG	Contrastive focus, NEG
b. Elided phrase	TP	TP
c. Licensing feature bundles	[E, <i>uPol</i> _[+Neg]]	[E, <i>uPol</i> _[+Neg] , <i>uConF*</i>]

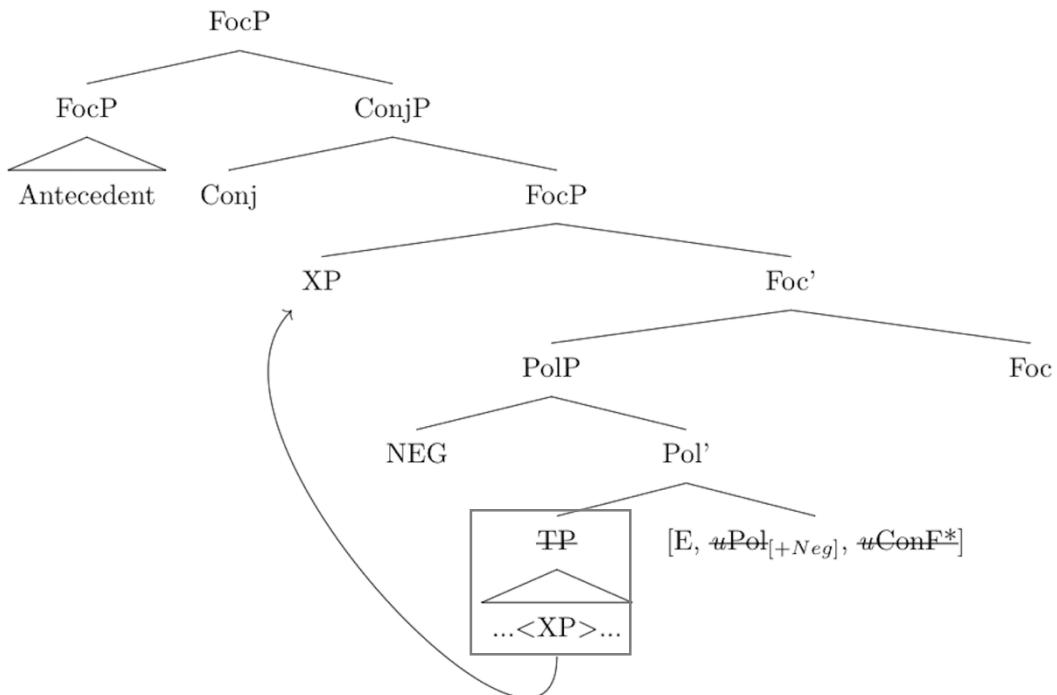
Based on (40), schematic illustrations of Polarity Stripping and Negative Stripping would be as in (41a) and (41b), respectively.

¹³ In chapter 4, I study *Cherā*-stripping, which is the opposite of Polarity Stripping in terms of the polarity of the clauses. I propose that the [*uPol*] feature can have two values: [+Neg] and [+Pos], and that the former construction is licensed by the [E, *uPol*_[+Pos]] feature bundles while the latter one is licensed by the [E, *uPol*_[+Neg]] feature bundles.

(41) a. Structure of Polarity Stripping



b. Structure of Negative Stripping



3.3.2. Pseudo-stripping

Based on the evidence presented in section 3.2.2., we know that Pseudo-stripping, as in (42), is mono-clausal.

- (42) AYDA ketāb kharid, NA Araz (*ketāb kharid)
 Ayda book bought.3SG NEG Araz book bought.3SG
 ‘AYDA bought books, NOT Araz.’

I propose that Pseudo-stripping does not involve ellipsis but rather is derived via movement. I provide evidence that the negative marker in this structure is constituent negation¹⁴, and propose that the NEG XP constituent originates adjacent to the XP’s corresponding element, as shown in (43). In this example, *na Araz* originates adjacent to *Araz*’s correlate *Ayda*.

- (43) ?AYDA, NA Araz, ketāb kharid
 Ayda NEG Araz book bought.3SG
 Lit: ‘AYDA, NOT Araz, bought books.’

I propose that the constituent *na Araz* undergoes obligatory right-ward movement (44)¹⁵ and that this movement is triggered by the contrastive focus feature that the XP carries.

- (44) AYDA t_i ketāb kharid, [NA Araz]_i
 Ayda book bought.3SG NEG Araz

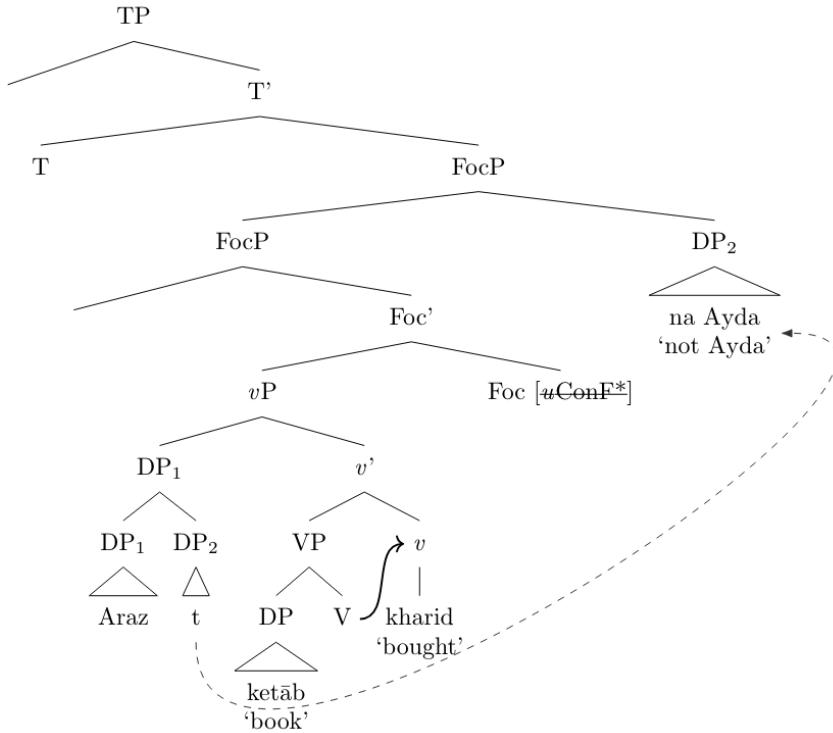
¹⁴ See section 3.3.4. for the evidence.

¹⁵ Note that the NEG XP cannot originate in its surface position. The main evidence for this comes from case marking, as the following example illustrates. The adjective *sabz-a-ro* ‘the green’ has the same case marking as its correlate *germez-a-ro* ‘the red’. Base-generation approach cannot account for case marking in this construction.

- (i) GERMEZ-A-RO doost dār-am, NA sabz-a-ro
 red-DEF-ACC like have-1SG NEG green-DEF-ACC
 Lit: ‘THE RED ONE I like, NOT the green one.’

The structure in (44) raises the question of where does the NEG XP move to? I propose that the constituent negation, which carries a contrastive focus feature, moves to the right and adjoins to FocP, above vP, as illustrated in (45).¹⁶

(45) Structure of Pseudo-stripping



3.3.3. Information Structure

In this section, I discuss how Polarity Stripping, Negative Stripping, and Pseudo-stripping constructions are constrained by information structure. I argue that the XP in Polarity

¹⁶ The left-ward movement is not the right approach for Pseudo-stripping because as illustrated below, one has to propose that the subject *Araz*, the direct object ‘book’ and the verb ‘bought’ move out of the vP.

- (i) [FocP ARAZ_i [TP ketab_j kharid_k [vP t_i NA Ayda t_j t_k]]]
 Araz book bought.3SG NEG Ayda

Stripping has the characteristics of a topicalized element while the XP in Negative Stripping and Pseudo-stripping constructions has the characteristics of a focalized element. I provide three pieces of evidence for this claim.

One of the differences between topic and focus is that we can have more than one topic in a sentence while we can only have one focus per sentence. Let us consider the Persian example in (46). In this example, the embedded direct object and indirect object have been topicalized in the main clause and the sentence is grammatical.

- (46) ketāb-ā-ro_i be Kimea_j man fekr mi-kon-am *pro t_i t_j* dād
 book-PL-ACC to Kimea I thought DUR-do-1SG gave.3SG
 Lit: ‘As for the books, to Kimea, I think she gave (them).’ (Karimi 2005: 128)

On the other hand, it is not possible to have two elements bearing a contrastive focus feature, as the ungrammaticality of the sentence in (47a) shows. Only one element can receive a contrastive focus interpretation (47b).¹⁷

- (47) a. *KIMEA se-tā FILM did
 Kimea three-part film saw.3SG (Karimi 2005: 134)
- b. KIMEA se-tā film did
 Kimea three-part film saw.3SG
 ‘It is Kimea who has seen three movies.’

Now that we know we can have more than one topic but only one focalized element in a sentence, we can apply this test to our structures under discussion, as illustrated in ((48)-(50)).

- (48) Ayda ketāb-a-ro kharid, vali Araz majall-a-ro na (PolS)
 Ayda book-DEF-ACC bought.3SG but Araz magazine-DEF-ACC NEG
 ‘Ayda bought the book but Araz didn’t (buy) the magazine.’

¹⁷ Persian allows two elements bearing a contrastive focus feature in the same sentence only if one of them has an inherent focus feature (Karimi 2005: 133).

- (i) KIMEA māh-e gozashte faqat se-tā film did-e
 Kimea month-EZ previous only three-part film saw-3SG
 ‘It was Kimea who saw only three movies last month.’ (Everyone else has seen more movies)

- (49) *AYDA ketāb-a-ro kharid, **ARAZ MAJALL-a-ro** na (NegS)
 Ayda book-DEF-ACC bought.3SG Araz magazine-DEF-ACC NEG
- (50) *AYDA ketāb-a-ro kharid, **NA Araz majall-a-ro** (PseS)
 Ayda book-DEF-ACC bought.3SG NEG Araz magazine-DEF-ACC

In Polarity Stripping (48), it is possible to have two elements before the negative marker; we have the subject *Araz* and the direct object ‘magazine’ preceding *na*, and the sentence is grammatical. However, as the ungrammaticality of the sentences in (49) and (50) shows, in Negative Stripping and Pseudo-stripping, it is not possible to have two elements. These examples show that Polarity Stripping is compatible with topicalized elements while Negative Stripping and Pseudo-stripping are compatible with focalized elements.

The second piece of evidence that shows Negative Stripping and Pseudo-stripping are compatible with focalized elements comes from their compatibility with focus adverbs such as *only*. Let us consider the examples in (51). Suppose that speaker A and speaker B are talking about their friends who bought books. In this context, speaker A can ask the *wh*-question *who bought books?* We see that responding to this question using Polarity Stripping, in which the focus adverb *faqat* ‘only’ precedes the remnant *Ayda*, yields a degraded sentence (51B). This shows that the DP *Ayda* in Polarity Stripping is not compatible with the focus adverb *faqat* ‘only’.

- (51) [Context: speaker A and speaker B are talking about their friends who bought books]

- Q. ki-yā ketāb kharid-an?
 who-PL book bought-3PL
 ‘Who bought books?’
- B. ??hame ketāb kharid-an, vali FAQAT Ayda na (PolS)
 everyone book bought.3PL but only Ayda NEG
 Intended: ‘Everyone bought books, but only Ayda did not.’

(Adapted from López and Winkler 2000)

In the same context, the conversation can continue as in (52). In (52A), the speaker makes an assertion that *only Araz bought books*. We see that Negative Stripping (52B) and

Pseudo-stripping (52B') are acceptable in this context. This shows that the DP *Araz* in these structures is compatible with the focus adverb ‘only’.

- (52) A. pas faqat Araz ketāb kharid
so only Araz book bought.3SG
'So, only Araz bought books.'
- B. HAME ketāb kharid-an, FAQAT ARAZ na (NegS)
everyone book bought.3PL only Araz NEG
'(No, you are wrong) everyone bought books and not just Araz.'
- B'. HAME ketāb kharid-an, NA FAQAT Araz (PseS)
everyone book bought.3PL NEG only Araz
'(No, you are wrong), everyone bought books, not just Araz.'

(Adapted from López and Winkler 2000)

The third piece of evidence that shows we have a topicalized element in Polarity Stripping but not in Negative Stripping and Pseudo-stripping constructions comes from examples such as (53).

- (53) Q: emshab hame miy-ān?
tonight everyone come-3PL
'Will everyone come tonight?'
- A1: pesar-ā miy-ān, vali dokhtar-ā na (PolS)
boy-PL come-3PL but girl-PL NEG
'As for the boys, they will come, but as for the girls, they won't come.'
- A2: #PESAR-A miy-ān, DOKHTAR-A na (NegS)
boy-PL come-3PL girl-PL NEG
- A3: #PESAR-A miy-ān, NA dokhtar-ā (PseS)
boy-PL come-3PL NEG girl-PL
(Adopted from Solé and Solé 1977)

In (53Q), the speaker asks whether everyone will come tonight, which is basically a yes/no

question. Polarity Stripping (53A1) is an acceptable answer in this context, while Negative Stripping (53A2) and Pseudo-stripping (53A3) are not felicitous responses. The translation of the sentence in (53A1) shows that the remnant in Polarity Stripping is taken as a topic and translated with the ‘as for...’ phrase.

The Negative Stripping (53A2) and Pseudo-stripping (53A3) are not felicitous in this context because they have a corrective interpretation and can only occur in contexts in which a proposition has been made. In (53Q), we have a yes/no question and the speaker does not make any assumptions with regard to whether the girls or boys will come to the party.

Now that we have established we have a topicalized element in Polarity Stripping and a focalized element in Negative Stripping and Pseudo-stripping, in the next section, I discuss the nature of the negative marker in these constructions.

3.3.4. The Nature of the Negative Marker

Consider the examples in (54), which are instances of Polarity Stripping (54a), Negative Stripping (54b), and Pseudo-stripping (54c).

- (54) a. Ayda ketāb kharid, vali Araz **na** (ketāb **na**-kharid)
Ayda book bought.3SG but Araz NEG book NEG-bought.3SG
'Ayda bought books, but Araz did not (buy books).'
- b. AYDA ketāb kharid, ARAZ **na** (ketāb **na**-kharid)
Ayda book bought.3SG Araz NEG book NEG-bought.3SG
'AYDA bought books, ARAZ did not (buy books).'
- c. AYDA ketāb kharid, **NA** Araz (*ketāb na-kharid)
Ayda book bought.3SG NEG Araz book NEG-bought.3SG
'AYDA bought books, NOT Araz.'

In Polarity Stripping (54a) and Negative Stripping (54b), we have two negative markers in the second clause: one after the remnant *Araz* and the other affixed to the verb. The negative marker prefixed on the verb is obligatory in these structures, which suggests that the

negation *na* after the remnant *Araz* is not the regular sentential negative marker. On the other hand, in Pseudo-stripping (54c), we have only one negative marker that precedes the DP *Araz*.

The data in (54) raises the question of what is the nature of the negation in these structures? In Persian, sentential negation *na* and constituent negation *na* are homophonous.¹⁸ Thus, it is not clear whether the negation in the structures in (54) is sentential or constituent negation.¹⁹

¹⁸ This is different from what we have in English, in which the sentential negation ‘not’ and constituent negation ‘no’ are different. In English, only sentential negation is possible in Stripping, as shown in (i), while phrasal negation is not possible (ii).

- (i) John bought a book, not Mary
- (ii) *John bought a book, no Mary

¹⁹ The examples given in (iii) and (iv) show that the negative marker *na* can be used as sentential negation. In these sentences, the negation that is prefixed to the verb takes scope over the predicate.

- (iii) Q: Maryam-ro did-i?
Maryam-ACC saw-2SG
'Did you see Maryam?'

A: na, **na**-did-am
NEG NEG-saw-1SG
'No, I did not see her.'
- (iv) dirooz **na**-raft-am madrase
yesterday NEG-went-1SG school
'I did not go to school yesterday.' (Kwak 2010: 623)

The negative marker *na* can also be used as constituent negation, as shown in (v) and (vi). In these structures, the negative marker functions as contrastive negation.

- (v) man in mozu-ro **na** mi-pasand-am, **na** gabul dār-am
I this topic-ACC NEG DUR-like-1SG NEG accept have-1SG
'I neither like this topic nor accept it.' (Karimi Simin p.c.)

In this section, adopting Kolokonte (2008), I propose that the negative marker in Polarity Stripping and Negative Stripping functions as a focusing adverb. However, against her analysis, I propose that the negative marker in Pseudo-stripping is constituent negation. My evidence for this proposal is based on Klima's (1964) either-and neither conjoining test and adverbs.

3.3.4.1. Either-and Neither Conjoining

In this section, I use Klima's (1964) either-and neither-conjoining test to determine the nature of the negative marker in the constructions under discussion. As shown in (55a) and (56a), the structures with sentential negation are grammatical with either-and neither-conjunction. However, the structures with constituent negation are not compatible with this type of conjunction, as shown in (55b) and (56b).

- (55) a. Sentential negation: Mary isn't a happy person and John isn't either.
- b. Constituent negation: *Mary is a not happy person and John isn't either.

- (56) a. Sentential negation: Mary isn't a happy person and neither is John.
- b. Constituent negation: *Mary is a not happy person and neither is John.

Note that this test is similar to the coordination test we had in section 3.2.2. To determine whether we have constituent negation or sentential negation in Polarity Stripping, Negative Stripping, and Pseudo-stripping, let us consider the structures in ((18)-(20)), repeated in ((57)-(59)).

-
- (vi) a. **na** man chini sohbat mikon-am, **na** unā
NEG I Chinese harf do-1SG NEG they
'Neither I nor they speak Chinese.'

 - b. man ketāb mi-khoon-am, **na** majalle
I book DUR-read-1SG NEG magazine
'I am reading a book, not a magazine.'

(Kwak 2010: 624)

- (57) Araz ketāb kharid, vali Ayda na, Maryam ham na (PolS)
 Araz book bought.3SG but Ayda NEG Maryam also NEG
 ‘Araz bought books, but Ayda did not, Maryam did not either.’
- (58) ARAZ ketāb kharid, AYDA na, MARYAM ham na (NegS)
 Araz book bought.3SG Ayda NEG Maryam also NEG
 ‘ARAZ bought books, AYDA did not, MARYAM did not either.’
- (59) *ARAZ ketāb kharid, NA Ayda, NA ham Maryam (PseS)
 Araz book bought.3SG NEG Ayda NEG also Maryam

We see that only Polarity Stripping and Negative Stripping are acceptable with either-conjoining while Pseudo-stripping is not. This shows that we have sentential negation in the first two constructions and constituent negation in the latter one.

3.3.4.2. Adverbs

The second piece of evidence that shows the negative marker in Pseudo-stripping but not in Polarity Stripping and Negative Stripping is constituent negation comes from examples as in ((60)-(62)).

- (60) Ayda hamishe ketāb mi-khar-e, vali Araz hamishe na (PolS)
 Ayda always book DUR-buy-3SG but Araz always NEG
 ‘Ayda always buys books, but Araz does not always (buy books).’
- (61) AYDA hamishe ketāb mi-khar-e, ARAZ hamishe na (NegS)
 Ayda always book DUR-buy-3SG Araz always NEG
 ‘AYDA always buys books, ARAZ does not always (buy books).’
- (62) *AYDA hamishe ketāb mi-khar-e, NA hamishe Araz (PseS)
 Ayda always book DUR-buy-3SG NEG always Araz

As illustrated in these examples, in Polarity Stripping (60) and Negative Stripping (61), an adverb can occur between *Araz* and the negative marker. However, this is not possible in

Pseudo-stripping (62). This shows that the negative marker in Pseudo-stripping is constituent negation.²⁰

Now that we know the negative marker in Pseudo-stripping involves constituent negation, in the next section, I show that the negative marker in Polarity Stripping and Negative Stripping functions as a focusing adverb.

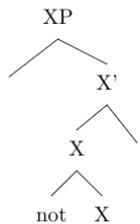
3.3.4.3. Focusing Adverb

Following Kolokonte (2008), I propose that the negative marker in Polarity Stripping and Negative Stripping belongs to a class of adverbs such as *never* called focusing adverb (Rooth 1985, 1996), based on the examples in ((63)-(65)).

- (63) Ayda hamishe ketāb mi-khar-e, vali Araz **hichvaqt** (ketāb **ne**-mi-khar-e)
 Ayda always book DUR-buy-3SG but Araz never book NEG-DUR-buy-3SG
 ‘Ayda always buys books, but Araz never (buys books).’
- (64) AYDA hamishe ketāb mi-khar-e, ARAZ **hichvaqt** (ketāb **ne**-mi-khar-e)
 Ayda always book DUR-buy-3SG Araz never book NEG-DUR-buy-3SG
 ‘AYDA always buys books, ARAZ never (buys books).’
- (65) *AYDA hamishe ketāb mi-khar-e, **HICHVAQT** Araz
 Ayda always book DUR-buy-3SG never Araz

²⁰ Following Iatridou’s (1990: 574) analysis of constituent negation, I assume that the NEG XP constituent has the following structure:

(i)



In Polarity Stripping (63) and Negative Stripping (64), it is possible to replace the negative marker with the adverb *never*, while in Pseudo-stripping (65), this is not possible. These examples show that the negative marker in (63) and (64) functions as a focusing adverb.

3.4. Analysis

In section 3.3., I proposed that Polarity Stripping, Negative Stripping, and Pseudo-stripping constructions are derived via movement. Before discussing the analysis, I provide evidence for movement based on case-matching, impossibility of preposition stranding, and islands.

3.4.1. Evidence for Movement

3.4.1.1. Case-matching

The strongest evidence for movement comes from case-matching in contexts in which the remnant in an elliptical construction behaves exactly like its non-elliptical counterpart. Case-matching was first observed by Ross (1969) and discussed in Merchant (2001) for Sluicing. Merchant shows that in languages with Sluicing (e.g. German, Greek, Russian, and Polish, among others), the *wh*-remnant in the ellipsis site has the same case marking as the fronted *wh*-phrase would have in its non-elliptical counterpart. Even though English does not have a rich inflectional morphology, this generalization holds, as illustrated in (66).

- (66) Somebody from Kankakee is going to be invited to the party by Ralph, but they don't know who/*whom (is going to be invited to the party by Ralph). (Ross 1969: 254)

The fact that the *wh*-remnant in (66), must be nominative indicates that it is the subject of the sentence. Therefore, in the subject question of (66), the nominative *who* is allowed while the accusative *whom* is not (67).

- (67) Who/*whom from Kankakee is going to be invited to the party by Ralph?

We find the same case-matching effect in Polarity Stripping (68a), Negative Stripping (68b), and Pseudo-stripping (68c).

- (68) a. Araz Ayda-**ro** did, vali Maryam-**ro** na (PolS)
 Araz Ayda-ACC saw.3SG but Maryam-ACC NEG
 ‘Araz saw Ayda but (he) did not (see) Maryam.’
- b. Araz AYDA-**ro** did, MARYAM-**ro** na (NegS)
 Araz Ayda-ACC saw.3SG Maryam-ACC NEG
 ‘Araz saw AYDA, (he) did not (see) MARYAM.’
- c. Araz AYDA-**ro** did, NA Maryam-**ro** (PseS)
 Araz Ayda-ACC saw.3SG NEG Maryam-ACC
 ‘Araz saw AYDA, NOT Maryam.’

The fact that *Maryam* in these structures receives the same accusative case marking *-ro* as its correlate *Ayda* indicates that it cannot be base-generated at its surface position but rather it has arrived at its surface position via movement.

3.4.1.2. Preposition Stranding

The second diagnostic for movement involves the (im)possibility of preposition stranding. In some languages, preposition can be stranded while in others leaving preposition behind is not possible. English belongs to the former group while Persian belongs to the latter group. Merchant (2001) shows that since English allows preposition stranding in a regular *wh*-question (69a), it also allows preposition stranding in Sluicing (69b).

- (69) a. Who_i was Peter talking with *t_i*?
 b. Peter was talking with someone but I don’t know (with) who. (Merchant 2001: 92)

On the other hand, since Persian does not allow preposition stranding, we expect preposition to be pied-piped in regular questions (70a); otherwise, the result yields an ungrammatical sentence (70b).

- (70) a. [bā ki]_i Ali *t_i* harf mizad?
 with who Ali speech hit.3SG
 'Who was Ali talking with?'
 b. *[ki]_i Ali bā *t_i* harf mizad?
 who Ali with speech hit.3SG (Toosarvandani 2008: 691)

If the XP in Polarity Stripping, Negative Stripping, and Pseudo-stripping arrives at its surface position via movement, we expect the preposition to be pied-piped with the DP. This expectation is borne out, as illustrated in (71).

- (71) a. Araz **be** Ayda pool dād vali **be** Maryam na (PoS)
 Araz to Ayda money gave.3SG but to Maryam NEG
 'Araz gave money to Ayda but (he) did not (give money) to Maryam.'
- b. Araz **BE** AYDA pool dād, **BE** MARYAM na (NegS)
 Araz to Ayda money gave.3SG to Maryam NEG
 'Araz gave money to AYDA, (he) did not (give money) to MARYAM.'
- c. Araz **BE** AYDA pool dād, NA **be** Maryam (PsS)
 Araz to Ayda money gave.3SG NEG to Maryam
 'Araz gave money to AYDA, NOT to Maryam.'

3.4.1.3. Islands

The third diagnostic for movement comes from islands. Since movement out of an island is impossible or degraded, in order to determine the underlying structure of the constructions under discussion, we need to investigate how they fare with islands. If our structures are grammatical with islands, it means that the XP does not arrive at its surface position via movement. However, if our structures are ungrammatical when they are embedded inside an island, they can be accounted for by a movement analysis.

As the following examples illustrate, Polarity Stripping, Negative Stripping, and Pseudo-stripping structures are sensitive to Complex NP Constraint ((72)-(74)) and Adjunct Island Constraint ((75)-(77)).

Complex NP Constraint

- (72) *[ketāb-i-ro ke **syntax-ro** toseef mi-kon-e] (PolS)
 book-DEF-ACC that syntax-ACC description DUR-do-3SG

be Maryam dād-am, vali **fonology-ro** na
 to Maryam gave-1SG but phonology-ACC NEG

Intended: 'I gave the book which describes syntax to Maryam, but I didn't give the book which describes phonology to Maryam.'

- (73) *[ketāb-i-ro ke **SYNTAX-ro** toseef mikone] (NegS)
 book-DEF-ACC that syntax-ACC description DUR-do-3SG

be Maryam dād-am, **FONOLOGY-ro** na
 to Maryam gave-1SG phonology-ACC NEG

Intended: 'I gave the book which describes syntax to Maryam, I didn't give the book which describes phonology to Maryam.'

- (74) *[ketāb-i-ro ke **SYNTAX-ro** toseef mikone] (PseS)
 book-DEF-ACC that syntax-ACC description DUR-do-3SG

be Maryam dād-am, NA **fonology-ro**
 to Maryam gave-1SG NEG phonology-ACC

Intended: 'I gave the book which describes syntax to Maryam, I didn't give the book which describes phonology to Maryam.'

Adjunct Island Constraint

- (75) *[barā-ye in-ke **Ali** ketāb kharid] Maryam (PolS)
 because-EZ this-that Ali books bought.3SG Maryam

asabāni shod, vali **Ayda** na
 angry became.3SG but Ayda NEG

Intended: 'Maryam got angry because Ali bought books, but she did not get angry because Ayda bought books.'

- (76) *[barā-ye in-ke **ALI** ketāb kharid] Maryam (NegS)
 because-EZ this-that Ali books bought.3SG Maryam

asabāni shod, **AYDA** na
 angry became.3SG Ayda NEG

Intended: ‘Maryam got angry because Ali bought books, she did not get angry because Ayda bought books.’

- (77) *[barā-ye in-ke **ALI** ketāb kharid] Maryam (PseS)
 because-EZ this-that Ali book bought.3SG Maryam

asabāni shod, NA **Ayda**
 angry became.3SG NEG Ayda

Intended: Maryam got angry because Ali bought books, she did not get angry because Ayda bought books.

The ungrammaticality of these structures shows that the XP in these constructions arrives at its surface position via movement.²¹

3.4.2. Analysis of Polarity Stripping

Recall that in Polarity Stripping, as in (78), clauses are coordinated with ‘but’ and we have XP NEG word order.

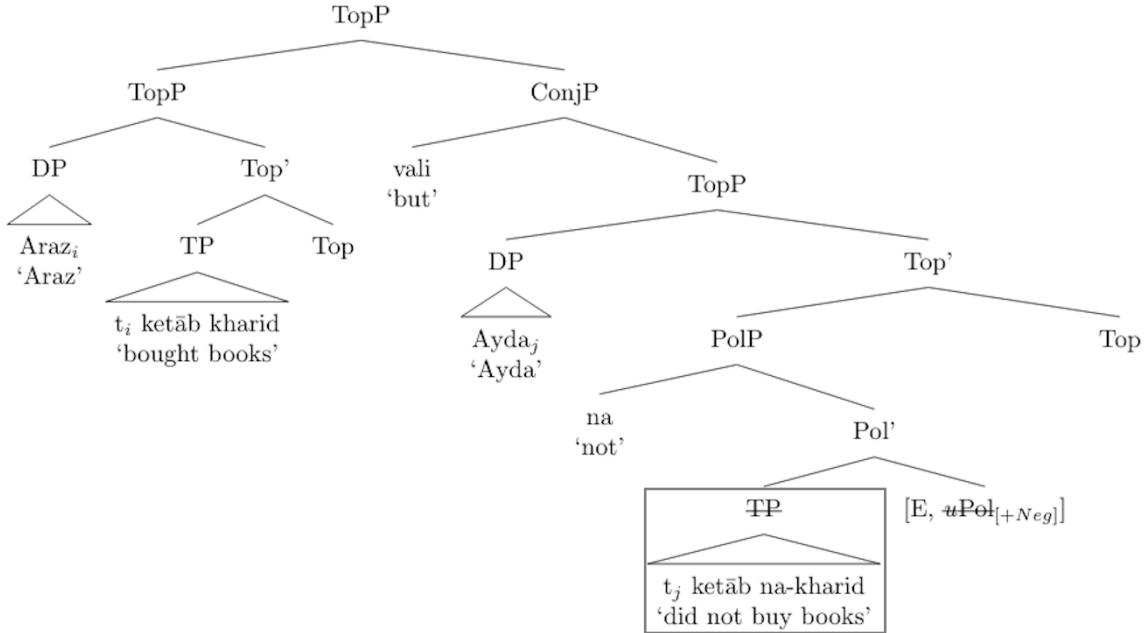
- (78) Araz ketāb kharid, vali Ayda na
 Araz book bought.3SG but Ayda NEG
 ‘Araz bought books, but Ayda did not.’

In section 3.3.1., I proposed that the negative marker in this structure originates in the Spec of PolP and that the Pol head, which carries the [E, uPol_[+Neg]] feature bundles, licenses the deletion of its complement, TP, at the PF level.

To illustrate how Polarity Stripping is derived, let us consider the schematic illustration in (79), which represents the sentence in (78).

²¹ The Polarity Stripping and Negative Stripping examples are a challenge to Merchant’s (2001) island repair proposal, which I discuss in chapter 4. Based on his proposal, crossed island nodes are marked with a PF-uninterpretable feature called *. The deletion of the phrase that includes the island violation feature is able to repair the otherwise grammatically deviant structure. However, even though in these structures, TP, which includes the island violation * feature, is elided, they are not able to repair islands.

(79) Structure of Polarity Stripping in (78)



In the second clause of this structure, the materials in TP are elided under identity with their antecedent in the first clause. On the other hand, the element that survives ellipsis, i.e. *Ayda*, contrasts with its corresponding element, i.e. *Araz*, in the preceding clause.

Regarding the licensing features, as illustrated in (79), the Pol head carries an [E] feature bundled with the [$u\text{Pol}_{[+}\text{Neg}]$] feature. The [$u\text{Pol}_{[+}\text{Neg}]$] feature is satisfied by being in a local relationship with the negative marker *na*. The [E] feature licenses the deletion of TP at the PF level, after the element that carries a contrastive topic feature moves to the Spec of TopP. Recall from chapter 1 that in Persian, the element that has a contrastive topic feature always moves to the Spec of TopP. Since this is done independent of ellipsis, it is not necessary to bundle the [E] feature with an uninterpretable strong contrastive topic feature, i.e. [$u\text{ConT}^*$].

In addition to Persian, Polarity Stripping is also found in Spanish (80) and German (81).

(80) Spanish

Susana leyó la guerra y la paz pero María no
Susana read the War and the Peace but María NEG
'Susana read War and Peace but María did not.'

(Lopez 1999: 264)

(81) German

Anna spielt Klavier aber María nicht
Anna plays piano but María not
'Anna plays piano but María does not.'

(Konietzko 2016:1)

These examples illustrate that Polarity Stripping in Spanish and German has the same characteristics we find in Persian: i) the first clause is affirmative while the second clause is negative, ii) clauses are coordinated with 'but', iii) and we have XP NEG word order.

Lopez (1999, 2000) proposes that Spanish Polarity Stripping, as in (80), involves Verb Phrase Ellipsis (VPE). He adopts Laka's (1990) functional head Σ that contains negation and emphatic affirmation and proposes that this structure is licensed by the sigma head, which licenses the deletion of VP. He assumes that the missing verb phrase is a proform (pro(v)), which carries the $[\Sigma]$ feature. This feature needs to be checked against the Σ head to license ellipsis. The $[\Sigma]$ feature is satisfied by merging the negation *no* that adjoins to Σ' , and then the negation licenses the ellipsis, as illustrated in (82).²²

(82) Susana leyó la guerra y la paz pero [_{TP} [_{Σ P} María [_{Σ'} no [_{V_P} *e*]]]]]

²² In English, it is not possible for the negative marker to follow the XP, as the ungrammaticality of the following example illustrates:

(i) *Susan read War and Peace but Mary not.

According to Lopez, the ungrammaticality of this structure is due to the parametric variation, i.e., Spanish auxiliaries do not carry the $[\Sigma]$ feature while English auxiliaries do. According to his analysis, in English, the auxiliary verb merges with Σ' , and the negation *not* is in the Spec of ΣP , as shown in (ii); therefore, since the negation is not the head of ΣP , it cannot license ellipsis.

(ii) *Susan read War and Peace but [_{TP} Mary [_{Σ P} not [_{Σ'} did [*e*]]]]]

Based on Lopez's analysis, the hierarchical order of functional projection can vary from one language to another. For instance, in English, the Σ head is below TP and it selects for VP. However, in Spanish, the Σ head is above TP and it selects for TP.

Based on Lopez's analysis, the remnant, which functions as a contrastive topic, is base-generated and adjoined to ΣP. On the other hand, Depiante (2000) and Kolokonte (2008) propose that Spanish Polarity Stripping has a full clause in the underlying structure, and that the remnant moves to the left periphery before TP ellipsis takes place.

I agree with Depiante's and Kolokonte's analysis that Polarity Stripping involves clausal coordination. A piece of evidence for this type of coordination comes from examples such as (83).

- (83) Susana leyó *la guerra y la paz* pero María no y Pedro tampoco
Susana read the War and the peace but Maria NEG and Pedro either
'Susana read War and Peace, but Maria did not and Pedro did not either.'

(Elías-Ulloa José p.c.)

The fact that it is possible to coordinate the stripped clause with another clause indicates that we have a full clause in the underlying structure.

Even though Depiante and Kolokonte agree on the structure of Polarity Stripping, they disagree regarding the position where the remnant moves to. Depiante proposes that the remnant is a focalized element; therefore, it moves to the Spec of FocP. On the other hand, Kolokonte proposes that the remnant is a topicalized element and that it moves to the Spec of TopP.²³

I agree with Kolokonte's proposal that the remnant is a topicalized element, based on two pieces of evidence. First, Polarity Stripping can occur in an out of the blue context. For instance, the sentence in (80) can be uttered in a context in which a group of friends are talking about who has read which book. In this context, one of them can say *Susana read War and Peace but María did not*. In this structure, the speaker adds information about *Susana* and *María* by saying *as for Susana, she read War and Peace but as for María she has not read War and Peace*. Also note that, in this structure, there is a contrast between *Susana* and *María*; therefore, we can say that they are contrastive topics.

²³ According to Kolokonte, this movement is an instance of Clitic Left Dislocation.

The second piece of evidence for the proposal that the remnant is a topicalized element, rather than a focalized one, comes from its incompatibility with focusing adverbs such as *only*, as shown in (84).

- (84) *Todos han venidos y sólo María no
 all-PL have.3SG come and only Maria NEG
 Intended: 'Everybody came but only Maria did not.' (Kolokonte 2008: 28)

Regarding the negation in Polarity Stripping, Kolokonte proposes that the negation originates in the Spec of PolP and the Pol head licenses ellipsis of its complement.²⁴ For instance, in the example in (85), the remnant *María* moves to the Spec of TopP in the left periphery and the Pol head licenses the ellipsis of TP.

- (85) Susana leyó la guerra y la paz
 Susana read the War and the Peace
 pero [TopP María_i [PolP no [Pol [TP *t_i* leyó la guerra y la paz]]]]
 but Maria NEG read the War and the Peace

Regarding Polarity Stripping in German, as in (86), Konietzko (2016) proposes that the remnant carries a contrastive topic feature; therefore it moves to the Spec of CP²⁵, before ellipsis takes place.

²⁴ Regarding the negation, Depiante proposes that when TP is elided, the Σ is left stranded (i), which is a violation of the stranded affix filter of Lasnik (1981). To prevent this violation, the negative marker *no* is inserted (ii). See Depiante (2000) for the discussion.

- (i) *Ana leyó El Quijote pero [FP María_i [ΣP [TP ~~t_i~~ leyó el Quijote]]]]
 (ii) Ana leyó El Quijote pero [FP María_i [ΣP **no** [TP ~~t_i~~ leyó el Quijote]]]]
 'Ana read El Quijote but Maria did not.'

²⁵ He argues that the Spec of CP is associated with contrastive and emphatic effects. His argument comes from instances of Polarity Stripping, in which the remnant is of a category that does not scramble such as participles and adjectives. See Konietzko (2016: 80-82) for the discussion.

- (86) German
- | | | | | | | |
|--|-------|----------------|------|------|------------|-------|
| Maria | liest | Zeitschriften, | aber | Anna | vermutlich | nicht |
| Maria | reads | magazines | but | Anna | presumably | not |
| 'Maria reads magazines, but Anna presumably does not.' | | | | | | |
- (Konietzko 2016:78)

There are two pieces of evidence that shows the remnant is a topic. First, similar to Spanish, Polarity Stripping in German can occur in an out of the blue context and it does not need a linguistic antecedent. For instance, the sentence in (86) can be uttered in a context in which a group of friends are talking about their musical talent and what instruments they play.

The second piece of evidence comes from the interaction of the remnant with the sentential adverbs, as illustrated in (87).

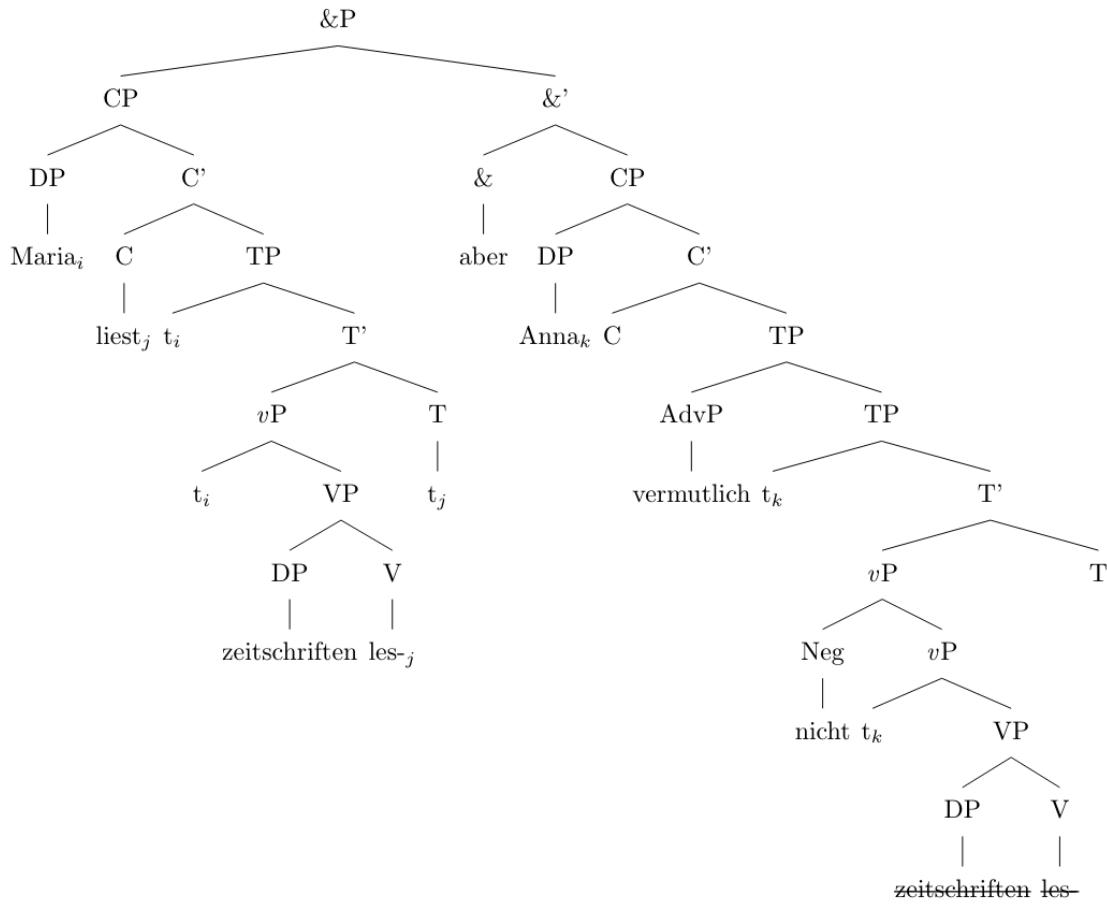
- (87) A: Will both of your siblings go to France?
 A': Will Maria go to France?
- B: Maria wird wohl fahren, aber Hans vermutlich nicht
 Maria will PART go but Hans probably not
- C: #Maria wird wohl fahren, aber vermutlich nicht Hans
 Maria will PART go but probably not Hans

(Konietzko 2016: 60)

Following Frey (2004), Konietzko assumes that the constituent that directly precedes sentential adverb is a topic, as in (87B). In this example, *Hans* precedes the sentential adverb *vermutlich* and the negation *nicht*. The unacceptability of the sentence in (87C) shows that topic cannot occur below the sentential adverb and negation.

To explain Konietzko's proposal for German Polarity Stripping as in (86), let us consider its schematic illustration in (88).

(88) Structure of German Polarity Stripping in (86) (Konietzko 2016: 81)



In this structure, we have CP coordination. In the first clause, the subject *Maria* and the verb *liest* ‘reads’ move to the Spec of CP and C, respectively. In the second clause, the subject *Anna* moves to the Spec of CP, which is above the sentential adverb. Based on Konietzko’s analysis, the negation *nicht*, which he assumes to be at the edge of vP, acts as a licenser and marks the deletion domain, which only includes the elements that are given in the preceding clause. In his approach, there is no [E] feature or deletion at the PF level but rather the negative marker, which has a focus feature independent of ellipsis, licenses the given elements not to be sent to PF.

In this section, we have seen that the analysis I have proposed for Persian is similar to Kolokonte's analysis for Spanish Polarity Stripping. In both languages, the remnant moves to the Spec of TopP, prior to ellipsis. The [E] feature on the Pol head licenses the ellipsis of TP at the PF level.

This PF deletion analysis can also be extended to Polarity Stripping in German. Assuming that negation licenses ellipsis, as Konietzko has proposed, the only issue is the size of ellipsis. If negation marks the edge of vP, as he assumes, then we have to say that Polarity Stripping in German elides vP.²⁶

One important difference between Persian, Spanish, and German is that in Persian Polarity Stripping, when we continue the sentence after the negation, the verb must also have a negative marker. This suggests that Persian has a distinct polarity marker that can co-occur with the sentential negation.²⁷ However, in Spanish and German, there is only one

²⁶ If this is the case, then we have a typological issue since Stripping is assumed to involve TP ellipsis. More investigation of German Polarity Stripping is needed to determine whether the negation is at the edge of vP or it can be in a higher position.

²⁷ In Persian, Polarity Stripping is possible with the negative polarity marker *na*, as we have seen in this chapter, and the affirmative polarity marker *cherā*, which is discussed in chapter 4. This leads to the generalization that if a language allows Polarity Stripping with negation (examples are given in this section), it should also allow Polarity Stripping with affirmative marker, as the following examples illustrate for Persian (i), Spanish (ii), and German (iii).

- (i) Ayda piāno ne-mizan-e, vali Araz cherā
Ayda piano NEG-hit-3SG but Araz why
'Ayda does not play piano but Araz does.'
- (ii) Anna no toca el piano, aber María sí
Anna not plays the piano but Maria yes
'Anna does not play piano but Maria does.'
- (iii) Anna nicht spielt Klavier, aber Maria schon
Anna not plays piano but Maria prt
'Anna does not play piano but Maria does.'

negative marker; if we continue the sentence after the negation, there is not another negative marker associated with the verb.²⁸

3.4.3. Analysis of Negative Stripping

Recall that in Persian Negative Stripping, as in (89), clauses are coordinated with a null coordinator and we have XP NEG word order.

- (89) ARAZ ketāb kharid, AYDA na
Araz book bought.3SG Ayda NEG
'(No, you are wrong) Araz bought books, Ayda did not.'

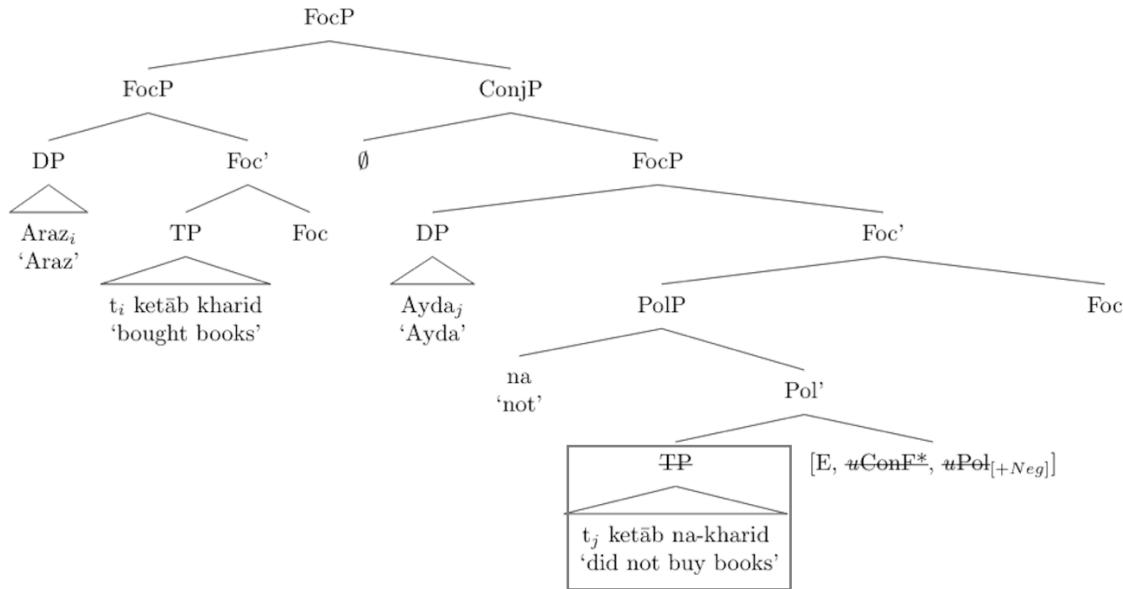
In section 3.3.1., I proposed that Negative Stripping and Polarity Stripping have similar structures. The difference between these two constructions originate from the information structure of the XP. In Negative Stripping, the XP functions as a contrastive focus while in Polarity Stripping, the XP functions as a contrastive topic. Therefore, Polarity Stripping can occur in an out of the blue context while Negative Stripping cannot. Since Negative Stripping has a corrective interpretation, it can only occur in contexts in which a proposition has been made.

One of the crucial characteristics of Negative Stripping is that it involves two alternatives that contrast with each other. For instance, the alternatives in (89) are *Araz bought books* and *Ayda bought books*. Negative Stripping has an obligatory corrective interpretation by showing which alternative is true and which one is false.

To illustrate how Negative Stripping is derived, let us consider the schematic illustration in (90), which represents the sentence in (89).

²⁸ Based on Kolokonte's analysis, the negative marker in Spanish Polarity Stripping is a focusing adverb that originates in the Spec of PolP. However, in Konietzko's analysis, the negative marker in German Polarity Stripping is the sentential negation that originates at the edge of vP.

(90) Structure of Negative Stripping



This structure shows that Negative Stripping satisfies the identity condition on the elided elements and the identity condition on the remnant discussed in chapter 1. In the second clause of this structure, the entire clause except for *Ayda* is elided under identity with the antecedent in the first clause. The subject *Ayda* survives ellipsis because it contrasts with its correlate *Araz* in the preceding clause.

The [*uConf**] feature on the Pol head triggers the movement of the contrastively focused *Ayda* to the Spec of FocP. The [*uPol*] feature is satisfied by being in a local relationship with the negative marker. After these features are checked and deleted, the [E] feature on the Pol head licenses the deletion of its complement, TP, at the PF level.

In addition to Persian, Negative Stripping is also found in Spanish (91) and German (92).

(91) Spanish

Anna	toca	piano,	María	no
Anna	play.3SG	piano	Maria	NEG
‘Anna plays piano, Maria does not.’				(Elías-Ulloa José p.c.)

- (92) German
- | | | | | |
|-------------------------------------|----------|----------|-------|-------|
| Anna | spielt | Klavier, | Maria | nicht |
| Anna | play.3SG | piano | Maria | not |
| ‘Anna plays piano, Maria does not.’ | | | | |
- (Graf Thomas p.c.)

The examples in (91) and (92) show that Spanish and German behave exactly like Persian in terms of having a null coordinator and XP NEG word order.²⁹ In addition, these structures cannot be uttered in an out of the blue context or as an answer to a *wh*-question. For instance, the Spanish sentence in (91) is not a felicitous answer to the question in (93).

- (93) Q: ¿Quién toca piano?
 who plays piano?
 ‘Who plays piano?’

The sentence in (91) can occur in contexts in which there are two alternatives, as shown in (94). In this context, our two alternatives are: i) Anna plays the piano and ii) María plays the piano.

- (94) A: Anna ye María toca piano
 ‘Anna and María play piano.’
- B: Anna toca piano, María no
 ‘Anna plays piano, María does not.’

In (94), speaker A makes an assertion that *Anna and María play the piano*. However, speaker B corrects speaker A’s assumption by saying which alternative is correct and which one is false. We find this pattern in German, as well, as illustrated in (94).

- (95) A: Anna und María spielen Klavier
 Anna and María play.3PL piano
 ‘Anna and María play piano.’

²⁹ In Spanish and German, unlike Persian, Negative Stripping does not always have a corrective interpretation.

- B: Anna spielt Klavier, Maria nicht
 Anna play.3SG piano Maria not
 ‘Anna plays piano, Maria does not.’ (Graf Thomas p.c.)

The fact that Negative Stripping can only occur in contexts in which a proposition has already been made shows that the XP cannot be a topic but rather it has to be a focalized element.

Another property of Negative Stripping that we have seen in Persian is that it is bi-clausal and can be coordinated with another clause. Negative Stripping in Spanish (96) and German (97) also has this characteristic.

- (96) Anna toca el piano, María no, ni tampoco Pedro
 Anna play.3SG the piano María not, neither Pedro
 ‘Anna plays piano, María does not, Pedro does not either.’ (Elías-Ulloa José p.c.)
- (97) Anna spielt Klavier, María nicht, (und) Peter auch nicht
 Anna play.3PL piano María not and Peter also not
 ‘Anna plays piano, María does not, (and) Peter also does not.’ (Graf Thomas p.c.)

The Spanish and German data presented in this section show that Negative Stripping in these languages has the same characteristics we find in Persian. Therefore, the structure proposed for Persian Negative Stripping in (90) can be extended to Spanish and German, as well. We can say that the remnant survives ellipsis by moving to the Spec of FocP, followed by the deletion of TP.³⁰

3.4.4. Analysis of Pseudo-stripping

Recall that in Persian Pseudo-stripping, as in (98B), the negative marker precedes the XP and the sentence has a corrective interpretation.

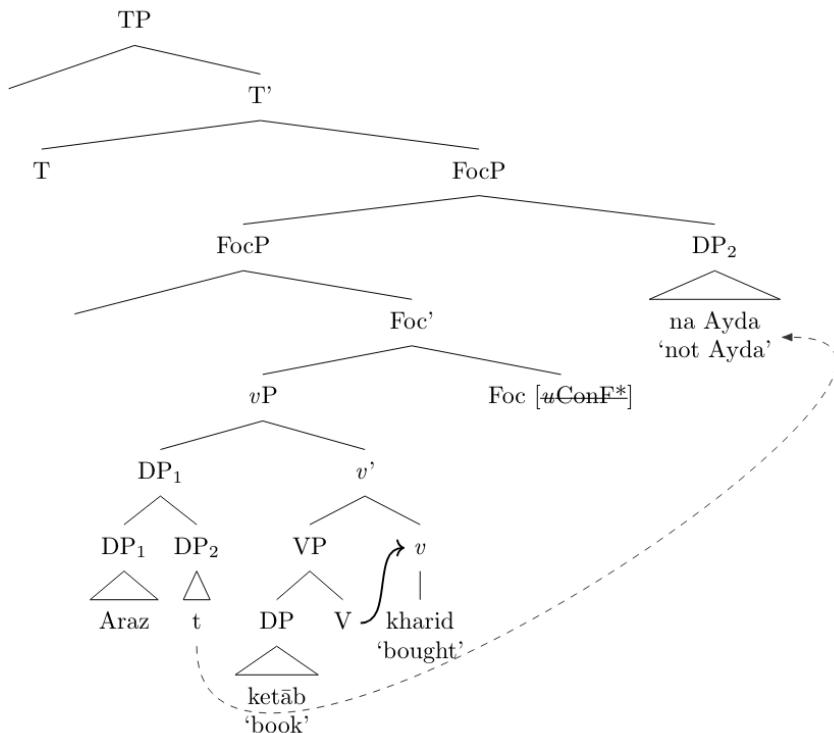
³⁰ If the negative marker in German is at the edge of vP and cannot move to a higher position, we need to say that German Negative Stripping involves vP ellipsis.

- (98) A: Ayda ketāb kharid
 Ayda book bought.3SG
 ‘Ayda bought books.’
- B: ARAZ ketāb kharid, NA Ayda
 Araz book bought.3SG NEG Ayda
 ‘(No, you are wrong) Araz bought books, not Ayda.’

In this structure, *Araz* in (98B) replaces *Ayda* in (98A). Therefore, we can say that the correction involves replacing one alternative by another.

I have proposed that Pseudo-stripping does not involve ellipsis but rather is derived via movement. In section 3.3.2., I propose that the NEG XP constituent originates adjacent to the XP’s corresponding element. However, since the XP has a contrastive focus feature, it must move to FocP. I propose that it undergoes right-ward movement and adjoins to FocP, above vP, as illustrated in (99).

(99) Structure of Pseudo-stripping



Based on the structure in (99), the underlying structure of Pseudo-stripping is as given in (100).

- (100) ?ARAZ, NA Ayda, ketāb kharid
 Araz NEG Ayda book bought.3SG
 Lit: 'ARAZ, NOT Ayda, bought books.'

This word order does not sound natural and the preferred word order is as in (98B), in which the NEG XP appear at the sentence-final position. This suggests that there is an obligatory right-ward movement in this structure, which is triggered by the contrastive focus feature that the XP carries.

In Persian, the default word order is XP NEG, as in (101). The NEG XP word order is possible in contexts in which we have two alternatives, as shown in (102). As the translation of this sentence shows, it is the same as English *neither...nor* construction.

- (101) Araz na, Ayda ketāb kharid
 Araz NEG Ayda book bought.3SG
 Lit: 'Araz not, Ayda bought books.'
- (102) Araz na goosht va na sabzijāt mi-khor-e
 Araz NEG meat and NEG vegetables DUR-eat-3SG
 'Araz neither eats meat nor vegetables.'

The sentence in (102) can be re-phrased as in (103). Both constructions have exactly the same meaning.

- (103) Araz na goosht mi-khor-e, na sabzijāt
 Araz NEG meat DUR-eat-3SG NEG vegetables

The examples in (102) and (103) show that when we have a *neither...nor* construction, the NEG XP can appear either in the middle of the sentence or in the sentence-final position. Now, let us consider the example in (104).³¹

³¹ The sentence in (104), in which the XP is the direct object, sounds much worse than the one in (100), in which the XP is the subject.

- (104) ??Araz **goosht**, **na** **sabzijāt** mi-khor-e
 Araz meat NEG vegetables DUR-eat-3SG
 '(No, you are wrong) Araz eats meat, not vegetables.'

In this structure, we have the NEG XP in the middle of the sentence, which makes the sentence degraded. However, this sentence becomes perfectly fine when the NEG XP appears at the end of the sentence (105).

- (105) Araz **goosht** mi-khor-e, **na** **sabzijāt**
 Araz meat DUR-eat-3SG NEG vegetables
 '(No, you are wrong) Araz eats meat, not vegetables.'

Based on the examples in ((102)-(105)), we can conclude that when the NEG XP has a corrective interpretation, it must appear at the end of the sentence. The NEG XP can appear in the middle of the sentence only if there is another NEG XP in the sentence, in which case the sentence does not have a corrective interpretation (102).

The fact that the NEG XP constituent in Pseudo-stripping must appear at the end of the sentence is not restricted to Persian. We find the same pattern in English (106).

- (106) English
 a. John plays piano, **not Mary**.
 b. ?John, **not Mary**, plays piano.

However, the proposal that in Pseudo-stripping, the NEG XP constituent originates adjacent to the XP's corresponding element and the surface structure is derived by the right-ward movement of the NEG XP is supported by the data in German³² and Spanish. As illustrated in (107) and (108), it is possible for NEG XP to appear at the sentence final position or in the middle of the sentence.

- (107) German
 A: Anna spielt Klavier, **nicht** **Maria**
 Anna plays piano not Maria
 'Anna plays piano but not Maria.'

³² In German, the subject is in CP. Therefore, the position of NEG XP in the underlying structure and surface structure would be different from the ones in Persian and Spanish.

B: Anna, **nicht** **Maria**, spielt Klavier
Anna not Maria plays piano
'Anna, not Maria, plays piano.' (Graf Thomas p.c.)

(108) Spanish

- A: Anna taco el piano, **no** **María**
Anna plays the piano not María
'Anna plays piano, not María.'
- B: Anna, **no** **María**, taco el piano
Anna not María plays the piano
'Anna, not María, plays piano.' (Elías-Ulloa José p.c.)

Even though Persian and English differ from German and Spanish regarding the position of the NEG XP, in all these languages Pseudo-stripping has an obligatory corrective interpretation, as illustrated in (109). The translation of these sentences is as in English (109a).

(109) a. English

- A: María plays piano
B: (No, you are wrong), Anna plays the piano, not María.

b. German

- A: María spielt Klavier.
B: Anna spielt Klavier, nicht María.

c. Spanish

- A: María toca el piano.
B: Anna toca el piano, no María.

d. Persian

- A: María piāno mizane
B: Anna piāno mizane, na María.

In (109), speaker A makes an assertion that *Maria plays piano*. However, speaker B corrects speaker A's assumption by saying that *no, you are wrong, Anna plays piano, not María*.

Recall that I have proposed that Pseudo-stripping in Persian is mono-clausal. A piece of evidence for this comes from the fact that this structure is not possible with coordination, as the ungrammaticality of the example in (110) illustrates.

- (110) *Anna piāno mizan-e, na gitār, na ham fulut
Anna piano hit-3SG NEG guitar NEG also flute
Intended: ‘Anna plays piano, not guitar, neither flute.’

We find the same pattern in English (111a) and German (111b).³³

- (111) a. English
??Anna plays piano, not guitar, neither flutes
- b. German
??Anna spielt Klavier, nicht Gitarre, noch Flöte (Graf Thomas p.c.)

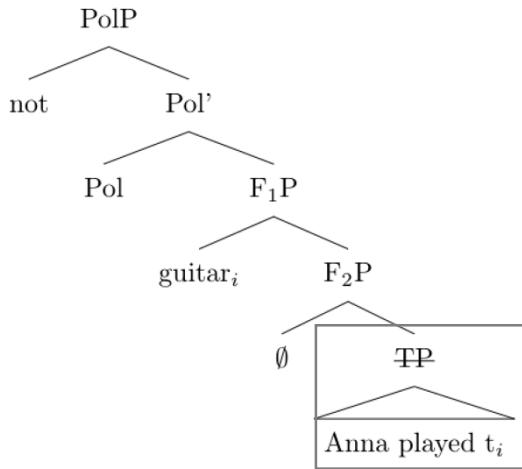
Kolokonte (2008) has proposed that Pseudo-stripping in English involves clausal coordination. Based on her approach, the XP in this structure carries a contrastive focus feature; therefore, it moves to the Spec of FocP in the left periphery, before TP deletion takes place. In addition, she proposes that the negative marker, which functions as a focusing adverb, originates in the Spec of PolP. Based on her analysis, the structure of the relevant parts of the English example in (111a) would be as illustrated in (112).

³³ Pseudo-stripping in Spanish, unlike Persian, English, and German, is acceptable with coordination.

(i) Anna toca el piano, no la guitarra, ni la flauta
‘Anna plays piano, not guitar, neither flutes’ (Elías-Ulloa José p.c.)

The Spanish data needs further investigation to determine whether Pseudo-stripping in this language is mono-clausal.

(112) Kolokonte's analysis of English Pseudo-stripping



As illustrated in (112), in Kolokonte's approach, there are two focus positions in the left periphery. The focus projection F_2P is reserved for elements that have an information focus feature while F_1P hosts elements that have a contrastive focus feature.

There are three main issues with Kolokonte's analysis. First, her proposal of two focus positions in the CP domain is not motivated. Second, we know that information focus is not subject to overt movement (Kiss 1998).³⁴ Third, Kolokonte proposes that Pseudo-

³⁴ Kolokonte acknowledges that it is not possible for information focus to be preposed, as illustrated in (i).

- (i) Q: What did you order?
 A1: I ordered pizza.
 A2: *PIZZA I ordered. (Kolokonte 2008: 127)

However, following Baltazani's (1999) analysis of focus constructions in Greek, Kolokonte proposes that first the focused element moves to the left, and then the TP remnant moves to the left. Based on this proposal, the sentence in (iA1) is derived as illustrated in (ii).

- (ii) Step 1: Focus movement Pizza_i [I ordered _{t_i}]
 Step 2: TP-remnant movement [I ordered _{t_i}]_j pizza_i _{t_j}

Step 2 renders the same word order as in (iA1). The focus movement is obscured by the subsequent movement of the remnant TP to a position higher than FocP, presumably TopP. Kolokonte bases her proposal on Greek data but she does not provide any English data. It is not clear whether focus fronting in Greek can be extended to English.

stripping involves a clausal coordination; however, since it is not possible to continue the sentence after the XP, the TP undergoes an obligatory deletion. If Pseudo-stripping involves clausal coordination, we would expect to be able to coordinate it with another clause. However, as shown in (111a), coordination is not possible.

The data presented in this section indicates that Pseudo-stripping is mono-clausal rather than bi-clausal. In addition, we have seen that Pseudo-stripping in English, Spanish, and German has the same characteristics that we find in Persian. Therefore, the structure proposed for Persian in (99) can be extended to Pseudo-stripping structures in these languages, as well.

3.5. Conclusion

In this chapter, I discussed two types of Stripping constructions that occur with negation: Polarity Stripping and Negative Stripping. I also discussed another structure, which I referred to as Pseudo-stripping. Even though these structures look similar on the surface, I argued that they cannot be used in the same contexts since they have different interpretations and context of occurrence.

I argued that these structures are constrained by information structure. I provided evidence that the XP in Polarity Stripping carries a contrastive topic feature; therefore, it moves to the Spec of TopP. On the other hand, the remnant in Negative Stripping carries a contrastive focus feature; thus, it moves to the Spec of FocP.

Regarding negation in these constructions, I proposed that in Polarity Stripping and Negative Stripping, the negative marker, which functions as a focusing adverb, originates in the Spec of PolP. On the other hand, the negative marker in Pseudo-stripping is constituent negation.

In addition, I argued that Polarity Stripping and Negative Stripping are bi-clausal while Pseudo-stripping is mono-clausal. Therefore, the first two constructions are true

instances of ellipsis while the latter one does not involve ellipsis but rather is derived via movement.

I proposed that in Polarity Stripping and Negative Stripping, the Pol head that carries an [E] feature licenses the deletion of its complement, TP, at the PF level. In the former structure, the [E] feature is bundled with the [$u\text{Pol}_{[+}\text{Neg}]$] feature while in the latter one, the [E] feature is bundled with the [$u\text{Pol}_{[+}\text{Neg}]$, $u\text{ConF}^*$] features.

On the other hand, I proposed that Pseudo-stripping is derived via movement. The NEG XP constituent adjoins to the XP's corresponding element in the underlying structure. However, since it carries a contrastive focus feature, it undergoes right-ward movement and adjoins to FocP, above vP, in the TP level.

After discussing Persian data, I provided an overview of Stripping constructions with negation in Spanish, German, and English. A summary of the discussion is given in (113).

(113) Constructions	Word order	Ellipsis licensing feature bundles	Size of ellipsis	Remnant	Languages
a. Polarity Stripping	XP NEG	[E, $u\text{Pol}_{[+}\text{Neg}]$]	TP	Negation, ConT	Persian, German, Spanish
b. Negative Stripping	XP NEG	[E, $u\text{Pol}_{[+}\text{Neg}]$, $u\text{ConF}^*$]	TP	Negation, ConF	Persian, German, Spanish
c. Pseudo-stripping	NEG XP	N/A	N/A	N/A	Persian, German, Spanish, English

As illustrated in (113), we find similarities among Persian, German, and Spanish. These languages allow Polarity Stripping, Negative Stripping, and Pseudo-stripping, and as suggested in this chapter, the analysis proposed for Persian can be extended to German and Spanish, as well.

On the other hand, English only allows Pseudo-stripping but not Polarity Stripping and Negative Stripping, which means that only the structures with NEG XP are acceptable in English. This restriction is related to the manifestation of negation in English sentences.

For instance, it is possible to start a clause with negation (114a) while it is not possible for negation to follow an XP (114b).

- (114) a. **Not everyone** will agree with you.
b. ***Everyone not** will agree with you.

The correct version of the sentence in (114b) is given in (115), in which the negation follows the auxiliary verb ‘will’.

- (115) Everyone **will not** agree with you.

In English, negative sentences are formed with the addition of negation after the modal or auxiliary verb, which precedes the main verb (116a); otherwise, the result yields ungrammatical sentences (116b) and (116c).

- (116) a. He **does not** speak English.
b. *He **not** speaks English.
c. *He speaks **not** English.

The examples in ((114b)-(116)) lead to the generalization that in English, negation cannot follow an XP (e.g. DP, PP, AdjP, AdvP) but rather must follow an auxiliary verb or a modal. On the other hand, in Persian, it is possible for negation to follow an XP, as illustrated in (117).

- (117) **goosht na**, sabzijāt mi-khor-e
meat NEG vegetables DUR-eat-3SG
Lit: ‘meat not, eats vegetables.’
Means: ‘S/he does not eat meat, but s/he eats vegetables.’

We can conclude that if a language allows XP NEG word order in non-elliptical clauses, it can also allow Polarity Stripping and Negative Stripping. However, more languages need to be studied to determine whether this generalization holds.

3.6. Future Research

In this chapter, I briefly discussed English, Spanish, and German data. Stripping constructions in these languages (and other languages) need further investigation to determine whether the generalizations made in this chapter hold.

One interesting difference between Persian and the other languages discussed is that Persian allows two negative markers in Polarity Stripping and Negative Stripping. For instance, as the Polarity Stripping example in (118) illustrates, there is a negative marker after the DP *Araz* and another one affixed to the verb.

- (118) Ayda gusht mi-khor-e, vali Araz **na** (gusht-ne mi-khor-e)
Ayda meat DUR-eat-3SG but Araz NEG meat NEG-DUR-eat-3SG
'Ayda eats meat but Araz does not (eat meat).'

It seems that in other languages, unlike Persian, there is only one negative marker. For instance consider the Spanish example in (119a) and its underlying structure in (119b).

- (119) a. Ana leyó El Quijote pero María no
'Ana read El Quijote but Maria did not.'

b. Ana leyó El Quijote pero María; [_{TP} **no** [_{TP} ~~leyó el Quijote~~]] (Depiante 2000: 125)

We see that there is no negation inside the TP in (119b) but rather there is only one negative marker, which follows *María*. This raises the question of whether the nature of negative marker in Spanish (and other languages discussed in this chapter) is different from the one in Persian regarding Polarity Stripping and Negative Stripping.

Another interesting issue is the sensitivity of Stripping constructions to islands. Based on Merchant's (2001) island repair proposal, crossed island nodes are marked with a PF-uninterpretable feature called *. The deletion of the phrase that includes island violation * repairs the structures that is otherwise grammatically deviant. For instance, in Sluicing, which I discuss in chapter 4, when TP is elided, the island violation feature is also elided; therefore, Sluicing becomes acceptable when ellipsis takes place. However, even though in Polarity Stripping and Negative Stripping, TP, which includes the island

violation * feature, is elided, these constructions are not able to repair islands. Addressing this issue and investigating the differences between Stripping and Sluicing regarding islands is left to the future research.

Chapter 4: Ellipsis and Information Structure: A Unified Account

4.1. Introduction

In this chapter, I provide an overview of several elliptical structures in Persian including Stripping constructions with *wh*-phrase, Gapping, Sluicing, Fragment Answers, and Noun Phrase Ellipsis. I show how the proposal made in this dissertation on the basis of the interaction between the ellipsis licensing feature bundles and information structure can be extended to different types of ellipsis.

Recall from chapter 1 the Contrast Condition on Ellipsis, repeated in (1). Based on the first condition in (1), for ellipsis to go through, there must be at least one element in the ellipsis site that contrasts with its correlate in the antecedent clause. The second condition means that an element can survive ellipsis only if it is in a contrastive relationship with its correlate and if they have identical identical information structure. In addition, the third condition requires the elided element to be identical to their antecedent.

(1) Contrast Condition on Ellipsis

(i) Ellipsis Condition: Ellipsis can occur iff there is an element α in XP_E that contrasts with an element α' in XP_A , in which

- a) α and α' have the same syntactic category, and
- b) XP_E and XP_A have the same syntactic structure.

(ii) Identity Condition on the Remnant: An element α in XP_E can survive ellipsis iff there is an element α' in an XP_A , in which α and α' are in a contrastive relationship and have identical information structure.

(iii) Identity Condition on the Elided Materials: An element β in XP_E can be elided iff there is an element β' in an XP_A , in which β and β' are identical. (The identity relation is sensitive to both semantic and syntactic forms)

Regarding licensing heads, in chapter 1, I proposed that in Persian, ellipsis is licensed by the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head, and Int(errogative) head. This is the result of the restriction on the feature bundles that are possible in Persian.

I proposed that in general, the [E] feature can be bundled with i) a strong uninterpretable [wh] feature, i.e. [E, *uwh**], ii) a strong uninterpretable contrastive focus [ConF] feature, i.e. [E, *uConF**], and iii) an uninterpretable polarity [Pol] feature, i.e. [E, *uPol*]. In this chapter, I provide an overview of several elliptical structures in Persian and show that my proposal can account for different types of ellipsis.

4.2. Stripping Constructions with Wh-phrase

Recall from chapter 3 that Stripping refers to an operation that deletes everything in a clause under identity with corresponding parts of the preceding clause, except for one constituent (Hankamer and Sag 1976: 409). In chapter 3, we discussed Polarity Stripping (2a) and Negative Stripping (2b) constructions that occur with negative marker *na*.

- (2) a. Araz ketāb kharid, vali Ayda na (PolS)
 Araz book bought.3SG but Ayda NEG

‘Araz bought books, but Ayda did not (buy books).’

- b. ARAZ ketāb kharid, AYDA na (NegS)
 Araz book bought.3SG Ayda NEG
 ‘ARAZ bought books, AYDA did not (buy books).’

In the second clause of the structures in (2), we have the remnant *Ayda*, which contrasts with its corresponding element *Araz* in the preceding clause. In addition, we have the negative marker *na*, which follows the remnant.

In this section, I introduce novel Stripping data that occur with the *wh*-phrase *cherā* ‘why’ and *chi* ‘what’. In these structures, there is a non-*wh*-phrase remnant and a *wh*-phrase while the rest of the clause is elided. I discuss two types of constructions with *cherā*, which I refer to as Why-stripping and *Cherā*-stripping. In the former construction, *cherā* has an interrogative interpretation while in the latter one, it functions as an affirmative polarity marker. I refer to the construction with *chi* ‘what’ as What-stripping.

In Why-stripping, as in (3B), the only *wh*-phrase that can occur is *cherā* ‘why’, and other *wh*-phrases are not possible (3B').

- (3) A: Araz dirooz barā-ye Nahid ketāb dāstān kharid
 Araz yesterday for-EZ Nahid book story bought.3SG
 ‘Araz bought a story book for Nahid yesterday.’
- B: ketāb dāstān **cherā?** (~~Araz dirooz barā-ye Nahid kharid~~)
 book story why Araz yesterday for-EZ Nahid bought.3SG
 Lit: ‘A story book why?’
 Means: ‘How come a story book, (but not something else)?’
- B': *ketāb dāstān **barāye ki?/kei?/chi?**
 book story for who? when? what?

In (3B), the non-*wh*-phrase remnant *ketāb dāstān* ‘story book’ is identical to its antecedent. However, the speaker is contrasting this element with a set of other elements in that set. This means that in this structure, *ketāb dāstān* has been selected from a set of alternatives, i.e. {story book, science magazine, art book, graphic novel}, that are known to the speaker and hearer.

In *Cherā*-stripping, as in (4), we have *cherā*, which literally means ‘why’; however, it does not have an interrogative interpretation but rather functions as an affirmative polarity marker.

- (4) Araz ketāb dāstān na-kharid, vali Ayda
 Araz book story NEG-bought.3SG but Ayda
- cherā** (~~ketāb dāstān kharid~~)
 why book story bought.3SG
 ‘Araz did not buy a story book yesterday but Ayda did (buy a story book).’

In *cherā*-stripping, the first clause must be negative while the second clause must be affirmative.¹ In addition, the non-*wh*-remnant contrasts with its corresponding element in the preceding clause.

In What-stripping, as in (5B), only the *wh*-phrase *chi* ‘what’ can occur while other *wh*-phrases are not possible (5B'). In this structure, similar to *Cherā*-stripping, the non-*wh*-remnant contrasts with its corresponding element in the preceding clause.

- (5) A: Araz dirooz barā-ye Nahid ketāb dāstān kharid
 Araz yesterday for-EZ Nahid book story bought.3SG
 ‘Araz bought a story book for Nahid yesterday.’
- B: Ayda **chi?** (dirooz barā-ye Nahid kharid)
 Ayda what yesterday for-EZ Nahid bought.3SG
 Lit: ‘Ayda what?’
 Means: ‘What about Ayda? (What did Ayda buy for Nahid yesterday?)’
- B': *Ayda **kei?/ cherā?/ barāye ki?**
 Ayda when? why? for who?

4.2.1. Characteristics of Stripping Constructions with Wh-phrase

4.2.1.1. Evidence for Ellipsis

In this section, I show that Why-stripping, What-stripping, and *Cherā*-stripping have a full clause in the underlying structure and that the remnant moves out of the ellipsis site before deletion takes place. The evidence for this comes from case-matching effect and preposition stranding (Merchant 2001).

Based on case-matching effect, as discussed in chapter 3, if an element in a declarative sentence has a case marking, then the remnant in its corresponding elliptical structure must also have the same case marking. For instance, as the German Why-stripping

¹ This is the opposite of PolS, in which the first clause is affirmative while the second one is negative.

example in (6B) shows, the non-*wh*-remnant ‘secretary’ in (6B) must carry the same case marking as its corresponding element in (6A).

- (6) A: Peter will **der** Sekretaerin gefallen
 Peter wants DAT secretary please
 ‘Peter wants to be liked by the secretary.’
- B: warum **der/*die** Sekretaerin
 why DAT/ACC secretary
 ‘Why the secretary?’
- (Ortega-Santos, et al. 2014: 61)

Unlike German, Persian does not have a rich case morphology and the only case marking that we can find is the accusative marker *rā*,² which is pronounced as *-ro* or *-o* in colloquial Persian. As shown in (7) and (8), the non-*wh*-remnant must have the same *-ro* marker as its corresponding element. In addition, the sentence can be continued in all three structures, which shows that we have a full clause in the underlying structure.

- (7) A: Araz ketāb dāstān-**ro** be Ayda dād
 Araz book story-ACC to Ayda gave.3SG
 ‘Araz gave the story book to Ayda.’
- B: ketāb dāstān-*(**ro**) cherā (be Ayda dād)?
 book story-ACC why to Ayda gave.3SG
 ‘How come the story book?’
- B: Araz chi-*(**ro**) (be Ayda dād)?
 Araz what-ACC to Ayda gave.3SG
 ‘What about Araz?’
- (8) Ayda ketāb dāstān-**ro** na-kharid, vali
 Ayda book story-ACC NEG-bought.3SG but
- (Cherā-stripping)

² As it was mentioned in chapter 1, the analysis of *-ra* has been a controversial topic. *-ra* can be a case marker even though it can appear more than once in the same clause. It can also be a definite/specification marker; however, it can cooccur with the indefinite marker *-i*. For discussion on *-ra*, see Dabir-Moghaddam (1992), Ghomeshi (1997), and Karimi (1999a, 1999b, 2005).

- ketāb riyāzi-***(ro)** cherā (**kharid**)
 book math-ACC why bought.3SG
 ‘Ayda did not buy the story book yesterday but (she bought) the math book.’

The second piece of evidence that shows we have a full sentence in the underlying structure of these constructions and that the non-*wh*-remnant arrives at its surface position via movement comes from preposition stranding.

As I discussed in chapter three, some languages allow preposition in a prepositional phrase to be stranded when a *wh*-phrase undergoes movement while other languages do not allow preposition stranding. English belongs to the first group (9) while Persian belongs to the second group (10).

- (9) Who was Peter talking **with <who>**? (Merchant 2001: 92)
- (10) *ki Ali **bā <ki>** harf mizad?
 who Ali with who speech hit.3SG
 Intended: ‘Who was Ali talking with?’ (Merchant 2001: 97)

As discussed in Merchant (2001), preposition stranding in elliptical structures is possible only in languages that independently allow preposition to be left behind. For instance, since in English, a preposition can be stranded in a regular question (9), we expect preposition stranding in elliptical constructions to be possible, as shown for Sluicing in (11).

- (11) Peter was talking with someone, but I don’t know **(with) who?** (Merchant 2001: 92)

On the other hand, since in Persian, preposition must be piedpiped (10), we do not expect to have preposition stranding in elliptical structures. This is borne out, as illustrated in (12). Stranding the preposition yields an ungrammatical sentence.

- (12) 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: 97)

The examples in (11) and (12) show that the remnant in these structures behaves exactly like its non-elliptical counterpart. Therefore, we can use preposition stranding as a diagnostic to determine whether a remnant in an elliptical structure has moved to its surface position.

Let us apply preposition stranding test to our Stripping constructions with *wh*-phrase. As illustrated in (13) and (14), it is not possible to strand preposition in Why-stripping (13B), What-stripping (13B'), and *Cherā*-stripping (14). These examples show that the non-*wh*-remnant has arrived at its surface position via movement.

- (13) A. Ayda dishab **bā** Araz harf na-zad
 Ayda last night with Araz speech NEG-hit.3SG
 ‘Ayda did not talk with Araz last night.’
- B. *(**bā**) Araz cherā?
 with Araz why
 ‘How come with Araz?’ (Why-stripping)
- B'. *(**bā**) Maryam chi?
 with Maryam when
 ‘What about Maryam?’ (What-stripping)
- (14) Ayda **bā** Araz harf na-zad, vali
 Ayda with Araz speech NEG-hit.3SG but
 *(**bā**) Maryam cherā
 with Maryam why
 ‘Ayda did not talk with Araz, but she did (talk) with Maryam.’ (*Cherā*-stripping)

4.2.1.2. Locality

In order to determine the underlying structure of Stripping constructions with *wh*-phrase, we can examine their (un)boundedness. If the ellipsis clause and its antecedent can be embedded, then we know that our structure is unbounded and there is no locality requirement. On the other hand, if embedding is not possible, it suggests that the structure is bounded; therefore, the remnant cannot have a long-distance interpretation but rather it can only find an antecedent in the immediate preceding clause.

Let us consider the following examples, which are instances of Why-stripping (15B) and What-stripping (15B'). Suppose that Maryam had made pasta and salad, and taken them to Ayda's house. In this context the conversation between A and B can be as in (15).

- (15) A: Ayda enkār kard ke Maryam pāstā-ro dorost kard-e bood
Ayda deny did.3SG that Maryam pasta-ACC correct did-3SG was.3SG
'Ayda denied that Maryam had made the pasta.'
- B: **pāstā-ro cherā?** (Why-stripping)
pasta-ACC why
'How come the pasta?'
Long-distance interpretation: 'Why did Ayda deny that Maryam had made the pasta?'
- B': **sālād-ro chi?** (What-stripping)
salad-ACC what
'What about the salad?'
Long-distance interpretation: 'Did Ayda also deny that Maryam had made the salad?'

(Adapted from Ortega-Santos et al. 2014: 62)

In (15B) and (15B'), the long distance interpretation is possible when the correlate of the non-*wh*-remnant is embedded. This shows that both the matrix and embedded clauses are included in the underlying question. We find the same pattern of unboundedness in *Cherā* stripping (16).

(16) *Cherā* stripping

Ayda enkār na-kard ke Maryam pāstā-ro dorost kard-e
Ayda deny NEG-did.3SG that Maryam pasta-ACC correct did-3SG

bood vali **sālād-ro cherā**
was.3SG but salad-ACC Why

Long-distance interpretation: ‘Ayda did not deny that Maryam had made the pasta but she did deny that Maryam had made the salad.’

Based on the examples in (15) and (16), we can say that these structures are unbounded and that they are not constrained by locality requirement.

4.2.1.3. Islands

Since movement out of islands is impossible or degraded, embedding elliptical structures inside an island helps us determine whether the remnant arrives at its surface position via movement. This means that if an elliptical structure is sensitive to islands, we know that the remnant has moved out of an island. However, if an elliptical structure is insensitive to islands, we can say that the remnant does not arrive at its surface position via movement.

The examples in (17) and (18) illustrate how the Stripping structures under discussion behave regarding islands.

(17) A: Araz gasam mi-khor-e ke [bā ye dokhtar-i ke farānsavi
Araz swear DUR-eat.3SG that with a girl-INDE that French

harf mi-zan-e] ezdevāj ne-mi-kon-e
speech DUR-hit-3SG marriage NEG-DUR-do-3SG
‘Araz swears that he will not marry a girl who speaks French.’

B: farānsavi cherā (vali ālmāni na)? (Why-stripping)
French why (but German not)
‘How come French (but not German)?’
Means: Why does Araz swear that he will not marry a girl who speaks French (but not German)?’

- B': ālmāni chi? (What-stripping)
 German what
 ‘What about German?’
 Means: ‘Does Araz swear that he will not marry a girl who speaks German?’

(Adapted from Ortega-Santos, et al. 2014: 64)

- (18) A: Araz gasam mi-khor-e ke [bā ye dokhtar-i (Cherā-stripping)
 Araz swear DUR-eat.3SG that with a girl-INDE
 ke farānsavi harf mi-zan-e] ezdevāj ne-mi-kon-e,
 that French speech DUR-hit-3SG marriage NEG-DUR-do-3SG
 vali ālmāni cherā
 but German why
 Lit: ‘Araz swears that he will not marry a girl who speaks French but German
 why.’
 Means: ‘Araz wears that he will not marry a girl who speaks French but he will
 marry a girl who speaks German.’

The data shows that Why-stripping (17B), What-stripping (17B'), and *Cherā* stripping (18) are not sensitive to islands. In these examples, the correlate of the non-*wh*-remnant is embedded inside a relative clause.

The insensitivity of these structures to islands is not surprising. There are other elliptical structures such as Sluicing that is known to be able to repair island violations.³ I assume that the same process of repair can be extended to the structures in (17) and (18).

4.2.1.4. Summary

The table in (19) presents a summary of the characteristics of Stripping constructions with *wh*-phrase.

³ I discuss island repair in Sluicing in section 4.4.

(19)	Characteristics of Stripping Constructions	Why-stripping	What-stripping	<i>Cherā</i>-stripping
a.	Has identical case marking	Yes	Yes	Yes
b.	Preposition must be piedpiped	Yes	Yes	Yes
c.	Locality (clause boundedness)	No	No	No
d.	Sensitive to Islands	No	No	No

The characteristics in (19a) and (19b) provide evidence for the existence of ellipsis in these structures and for the movement of the non-*wh*-remnant out of the ellipsis site. On the other hand, the characteristics in (19c) and (19d) shed light on the direction of movement. The fact that these structures are unbounded and insensitive to islands shows that the non-*wh*-remnant undergoes left-ward movement.

4.2.2. Analysis

4.2.2.1. Analysis of Why-stripping and What-stripping

Even though the *wh*-phrase *cherā* ‘why’ and *chi* ‘what’ in Why-stripping and What-stripping are questions words, they do not have the regular *wh*-phrase interpretation. They are interpreted as ‘how come’ and ‘what about’, respectively. To elaborate on this, let us consider the examples in (20) and (21).

- (20) A: seshanbe barā shām mehmoon dār-im
 Tuesday for dinner guest have-1PL
 ‘On Tuesday, we have guests for dinner.’
- B: seshanbe cherā? (Why-stripping)
 Tuesday why
 Lit: ‘Why on Tuesday?’
 Means: ‘How come on Tuesday (but not on another day)?’

Speaker B in (20B) is not really asking for the reason why they will have guests on Tuesday but rather the question indicates speaker B's disbelief and surprise. The speaker's question

implies that s/he is surprised or maybe unhappy that they will have guests on Tuesday night rather than another day (e.g. weekend).

To further support the claim that ‘why’ can mean ‘how come’, let us have a look at the example in (21).

- (21) A: Araz be Nahid goft ke Ayda estefā dād-e
 Araz to Nahid said.3SG that Ayda resignation gave-3SG
 ‘Araz told Nahid that Ayda has resigned.’
- B: Araz cherā?
 Araz why
 Lit: ‘Why Araz?’
 Means: ‘How come Araz (but not someone else)?’
- (Why-stripping)

Similar to (20B), speaker B in (21) is not asking about why Araz told Nahid that Ayda has resigned. However, the speaker is asking why it was Araz but not someone else who told Nahid about Ayda’s resignation. The question in (21B) indicates that speaker B did not expect at all that Araz would tell Nahid about Ayda’s resignation or s/he was expecting someone else to tell Nahid about Ayda’s resignation.

The examples in (20) and (21) demonstrate that the *wh*-phrase *cherā* ‘why’ in these structures does not have a regular interrogative interpretation but rather is interpreted as ‘how come’. Now, let us consider the What-stripping examples in (22) and (23).

- (22) A: man chon sar-e kār mir-am, dar tool-e hafte
 I because head-EZ work go-1SG in during-EZ week

 vaqt ne-mi-kon-am dars bekhoon-am
 time NEG-DUR-do-1SG lesson read-1SG
 ‘Because I work, I do not have time to study during the week.’
- B: ākhar-e hafte-hā chi?
 end-EZ week-PL what
 ‘What about the weekends?’
- (What-stripping)

The example in (22B) clearly shows that the *wh*-phrase *chi* does not really mean ‘what’ but rather it means ‘what about’. The interpretation of this sentence is *do you have time on weekends to study?* Similarly, the intended meaning of Speaker B in (23) is: *Will you also take Araz to the park?* The examples in (22) and (23) show that the *wh*-phrase *chi* ‘what’ in these structures means ‘what about’.

- (23) A: man emrooz bad az in-ke kār-am tamoom
 I today after from this-that lesson-my finish
 besh-e Ayda-ro pārk mi-bar-am
 become-3SG Ayda-ACC park DUR-take-1SG
 ‘Today, after I am done with work, I will take Ayda to the park.’
- B: Araz-ro chi? (What-stripping)
 Araz-ACC what
 ‘What about Araz?’

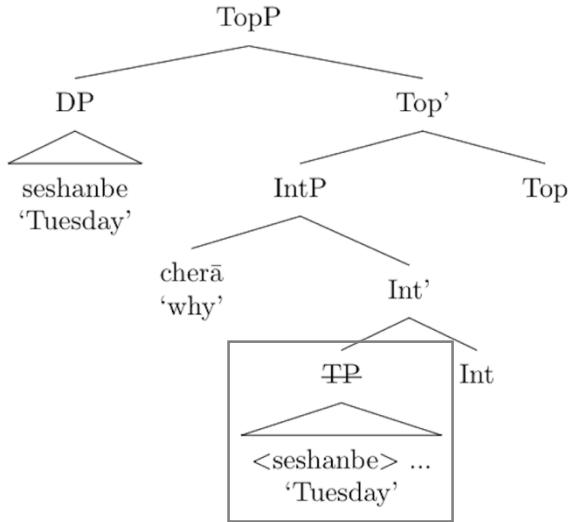
We have so far seen that Why-stripping and What-stripping have a similar structure. In both constructions, the *wh*-phrase follows the remnant. In addition, as summarized in (19), they have similar characteristics. In order to provide an analysis for these structures, we need to determine where the remnant moves to, and where the *wh*-phrase is.

Adopting Rizzi’s (1999) extended left periphery (24), I propose that *cherā* ‘why’ in Why-stripping originates in Int(errogative)P, and the non-*wh*-remnant moves to the Spec of TopP, above IntP, before TP is elided.

- (24) [ForceP [TopP [IntP [TopP [FocP [TopP [FinP [IP]]]]]]]]] (Rizzi 1999: 3)

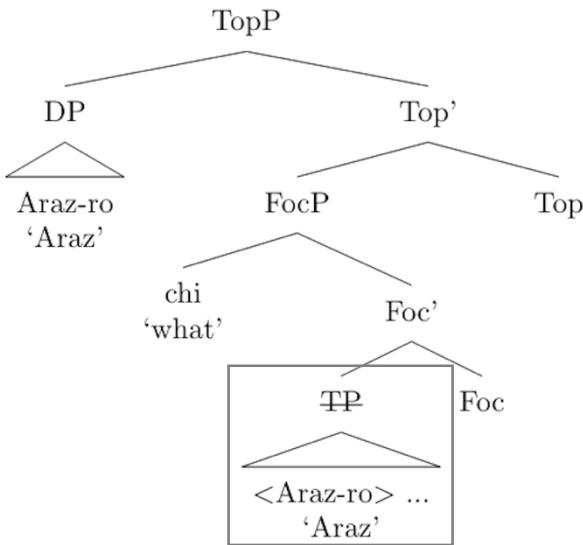
Based on my proposal, the structure of the Why-stripping in (20B) would be as illustrated in (25).

(25) Structure of Why-stripping



On the other hand, I propose that *chi* ‘what’ in What-stripping originates on the Spec of FocP, in the left-periphery and the non-*wh*-remnant moves to the Spec of TopP, prior to ellipsis, as illustrated in (26), which represents the sentence in (23B).

(26) Structure of What-stripping

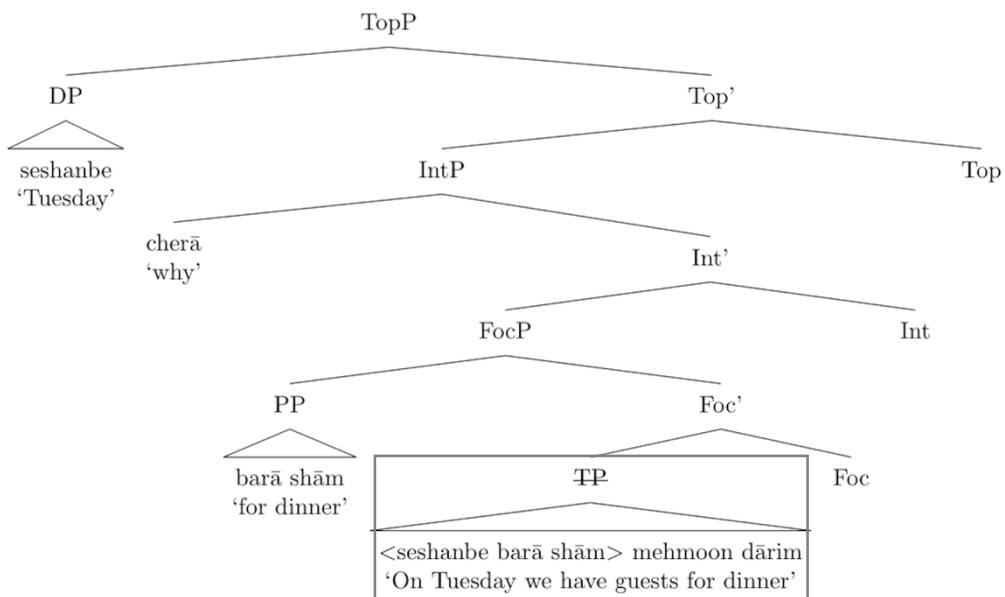


To explain why the *wh*-phrases *why* and *what* in these constructions occupy a different position, let us consider the examples in (27).

- (27) A: seshanbe barā shām mehmoon dār-im
 Tuesday for dinner guest have-1PL
 'On Tuesday, we have guests for dinner.'
- B: seshanbe cherā?
 Tuesday why
 'Why on Tuesday (but not on other days)?'
- B': seshanbe cherā BARA SHAM?
 Tuesday why for dinner
 'Why on Tuesday FOR DINNER (but not for lunch)?'

In (27B'), *wh*-phrase *cherā* 'why' is followed by a focalized element. This structure indicates that *cherā* occupies a position distinct from and higher than FocP. In this structure, *barā shām* 'for dinner' is in the Spec of FocP and *cherā* is in Int(errogative)P, as illustrated in (28).

(28) Structure of Why-stripping with a focalized element



On the other hand, it is not possible for a focalized element to follow the *wh*-phrase *chi* ‘what’, as the ungrammaticality of the sentence in (29B') illustrates.

- (29) A: doshanbe barā shām māhi dār-im
 Monday for dinner fish have-1PL
 ‘On Tuesday, we have fish for dinner.’
- B: seshanbe chi?
 Tuesday what
 ‘What about Tuesday?’
- B': *seshanbe chi BARA SHAM?
 Tuesday what for dinner

In (29B'), *chi* ‘what’ in (29B') cannot co-occur with a focalized element since the *wh*-phrase occupies the Spec of FocP, thus competing with focused elements.

The contrast between Why-stripping in (27B') and What-stripping in (29B') shows that in (27B'), the *wh*-phrase is in a position higher than FocP. Since the FocP is available, a contrastive focus bearing element can move to the Spec of FocP. On the other hand, the *wh*-phrase in (29B') occupies the Spec of FocP; therefore, a focalized element cannot move to this position.

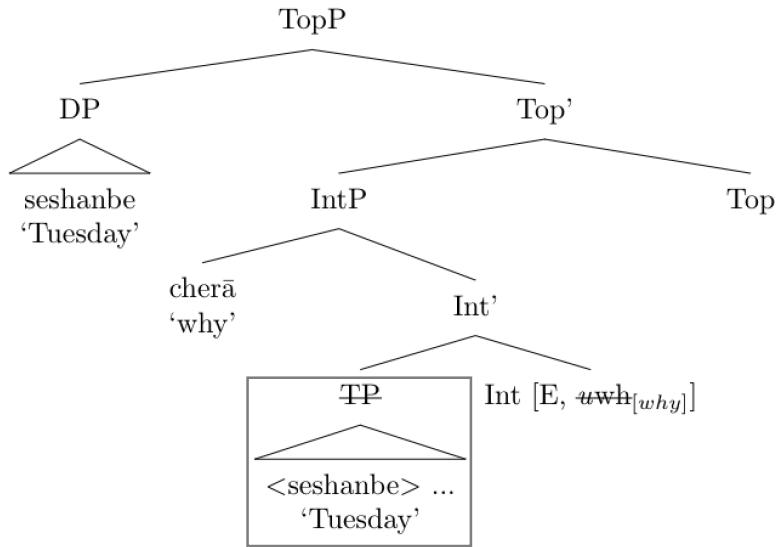
Based on the examples in ((20)-(29)), we can say that the *wh*-phrase *cherā* ‘why’ and *chi* ‘what’ have two functions: i) they can act as a regular *wh*-question, in which case they move from their base position to the Spec of FocP or ii) they can be interpreted as ‘how come’ and ‘what about’, in which case they originate on the Spec of IntP and FocP, respectively.

Following Rizzi (1999: 8), I assume that operator-like elements such as *wh*-phrase can be base-generated in the Spec of IntP. In addition, assuming that the Int head inherently has a *wh*-feature, it cannot be a landing site of movement; however, it is compatible with the base-generation of the *wh*-phrase.

So far we have not discussed how TP is elided in Why-stripping and What-stripping constructions. I propose that in Why-stripping, the Int(errogative) head carries an [E]

feature bundled with [uwh], which is specified as [uwh_[why]] to make sure that this structure is licensed only in the presence of the specified *wh*-phrase, i.e. *cherā* ‘why’. The [E] feature on the Int head licenses the deletion of its complement, TP, at the PF level.⁴ The structure in (30) is the updated version of the one in (25).

(30) Updated structure of Why-stripping

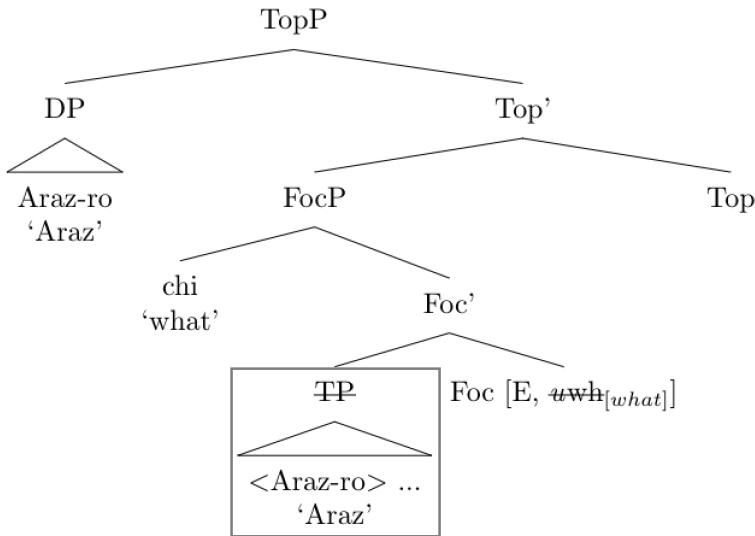


Proposing that the Int head is the ellipsis licensor in this structure is compatible with my typology of licensing heads in this dissertation; the ellipsis in Persian is licensed by heads that have a focus feature. Int head does have a focus feature since *wh*-phrases, which are assumed to be inherently focused, can originate in this position.

Regarding What-stripping, I propose that the focus head carries an [E] feature bundled with the [uwh] feature, which is specified as [uwh_[what]]. The [uwh_[what]] is satisfied by having the *wh*-phrase *chi* ‘what’ on the Spec of FocP. As illustrated in (31), which is the revised version of the structure in (26), the [E] feature licenses the deletion of TP, at the PF level.

⁴ Note that, as illustrated in (24), IntP does not select TP as its complement. However, in this structure, the functional projections between IntP and TP are not filled; therefore, they do not project.

(31) Updated structure of What-stripping



A summary of deriving Why-stripping and What-stripping is presented in (32).

(32)	Why-stripping	What-stripping
a. Non- <i>wh</i> -remnant	Contrastive topic	Contrastive topic
b. Position of the <i>wh</i> -phrase	'why' originates in the IntP	'what' originates in FocP
c. Licensing feature bundles	[E, uwh[why]]	[E, uwh[what]]
d. Elided phrase	TP	TP

Recall from chapter 1 that the elements with a contrastive topic feature always move to the Spec of TopP. Therefore, it is not necessary for the [E] feature to be bundled with the [uConT*] feature in these structures.

4.2.2.2. Analysis of *Cherā* stripping

Recall that *Cherā* stripping, as in (4), repeated in (33), is similar to Polarity Stripping (34).

- (33) Araz ketāb dāstān **na-kharid**, vali Ayda (*Cherā* stripping)
 Araz book story NEG-bought.3SG but Ayda

cherā (~~ketāb dāstān kharid~~)

why book story bought.3SG

‘Araz did not buy a story book yesterday but Ayda did (buy a story book).’

- (34) Araz ketāb dāstān **kharid**, vali Ayda (Polarity Stripping)
Araz book story bought.3SG but Ayda

na (~~ketāb dāstān na kharid~~)

NEG book story NEG-bought.3SG

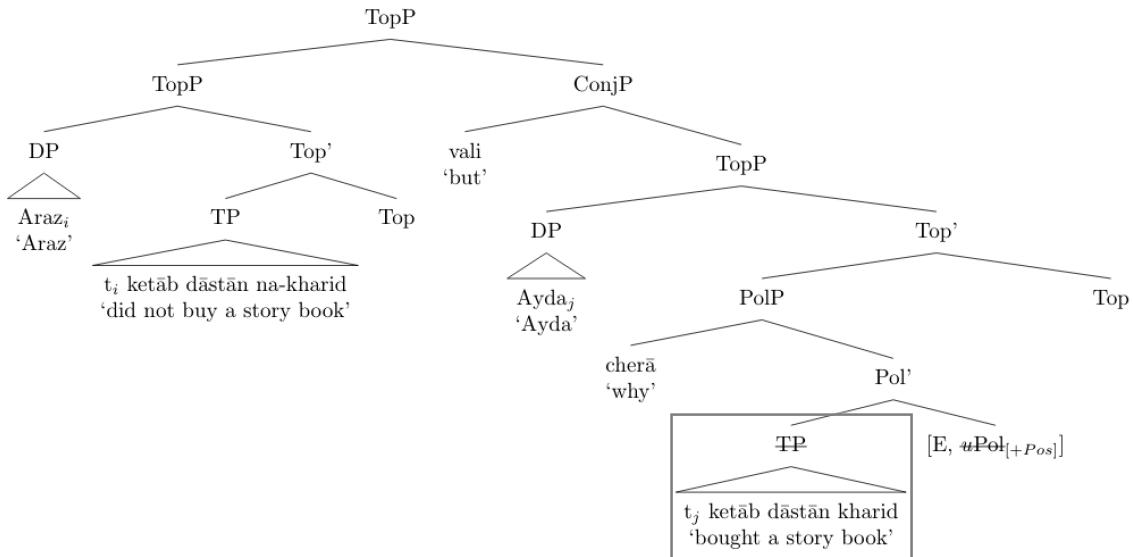
‘Araz bought a story book yesterday but Ayda did not (buy a story book).’

In both structures, we have a non-*wh*-remnant *Ayda* that contrasts with its corresponding element *Araz* in the preceding clause. As noted in footnote 1 in this chapter, the main difference between these structures is in their polarity. In *Cherā*-stripping (33), the first clause must be negative while the second clause must be affirmative. On the other hand, in Polarity Stripping (34), the antecedent clause must be affirmative while the ellipsis clause must be negative.

The choice of polarity marker, i.e. *cherā* ‘why’ vs. *na* ‘not’, depends on the polarity of the antecedent clause. If the antecedent clause is negative, the polarity marker must be affirmative but if the antecedent clause is affirmative, the polarity marker must be negative.

Since *Cherā*-stripping and Polarity Stripping have similar characteristics (except for their polarity), the structure proposed for Polarity Stripping in chapter three, can be extended to *Cherā*-stripping. Therefore, the structure of *Cherā*-stripping in (33) would be as illustrated in (35).

(35)



As illustrated in (35), the Pol head carries an [E] feature bundled with the $[u\text{Pol}_{[+Pos]}]$ feature, which is specified to have an affirmative polarity marker. The polarity marker *cherā* originates in the Pol head and the [E] feature on this head licenses the deletion of its complement, TP, at the PF level.

4.3. Gapping

Gapping occurs in coordinate constructions, in which the verb in the second clause is elided, leaving behind two elements, as illustrated in (36).

- (36) Anahita māhi-(ro) khord va Rad gusht-(ro) (**khord**)
 Anahita fish-ACC ate.3SG and Rad meat-ACC ate.3SG
 ‘Anahita ate fish and Rod (ate) meat.’ (Farudi 2013:57)

In this structure, the verb ‘ate’ is elided since it is already mentioned in the preceding clause. However, the subject *Rad* and the direct object ‘meat’ remain overt since they contrast with their corresponding elements in the preceding clause.

The main characteristic of Gapping is that it is restricted to coordinate constructions, as shown in (36). It cannot occur in subordinate clauses, as the ungrammaticality of the sentences in (37) show.

- (37) a. *Anahita māhi khord bad az in-ke Giti gusht
 Anahita fish ate.3SG after from this-that Giti meat
 Intended: ‘Anahita ate fish after Giti (ate) meat.’
- b. *Daryush be Giti pul mi-d-e agar Rata be Anahita
 Daryush to Giti money DUR-give-3SG if Rata to Anahita
 Intended: ‘Daryush will give money to Giti if Rata (will give money) to Anahita.’

(Farudi 2013: 64)

There are three pieces of evidence that show the remnant in Gapping arrives at its surface position via movement. First, the remnant has the same case marking as its antecedent. As shown in (36), the remnant *gusht-ro* carries the same case marking , i.e *-ro*, as its corresponding element in the preceding clause.⁵

The second piece of evidence for movement of the remnant comes from examples as in (38), which show that it is not possible to strand the preposition. The fact that the preposition *be* in this structure cannot be stranded shows that the remnant cannot be extracted out of PP but rather it must be piedpiped with the DP *Farmehr*.

- (38) Rata bastani-ro be Pari dād va Mehran (*bastani-ro*)
 Rata ice cream-ACC to Pari gave.3SG and Mehran ice cream-ACC

 *(be) Farmehr (*dād*)
 to Farmehr gave.3SG
 ‘Rata gave the ice cream to Pari and Mehran (gave the ice cream) to Farmehr.’

(Farudi 2013:57)

⁵ Note that the remnant *Rad* and its correlate *Anahita* have a null nominative case marker. Persian only has an accusative case marker *-ro*.

The third piece of evidence for the existence of movement comes from islands. As the ungrammaticality of the examples in (39) show, Gapping is sensitive to islands.

(39) a. Complex NP Constraint

*Giti [mard-ā-yi-ro ke **footbāl** bāzi mi-kon-an] doost
Giti man-PL-INDE-ACC that football play DUR-do-3PL like

dār-e va Sara **tennis**

have-3SG and Sara Tennis

Intended: 'Giti likes men who play soccer, and Sara (likes men who play) tennis.'

b. Sentential Subject Constraint

*[in-ke Jamshid **bā** **Bahman** doost shod] Sara-ro
this-that Jamshid with Bahman like became.3SG Sara-ACC

aziyat mi-kon-e va in-ke **bā** **Mahsa** Shiva-ro

bother DUR-do-3SG and this-that with Mahsa Shiva-ACC

Intended: 'That Jamshid became friends with Bahman bother Sara and that (Jamshid became friends) with Mahsa (bothers) Shiva.'

(Farudi 2013: 74)

Similar to Persian, Gapping in English is also sensitive to islands (40).

(40) a. Complex NP Constraint

*Alfonse ate the rice, and I was stunned by the fact that Harry the beans.

b. Sentential Subject Constraint

*Alfonse ate the rice, and that Harry the beans is fantastic.

(Neijt 1979: 23)

The Persian (39) and English (40) examples show that island violations in Gapping cannot be repaired. The island sensitivity of Gapping is plausible in English but not in Persian. It has been proposed that English Gapping does not involve TP ellipsis but rather it is derived via Across The Board (ATB) movement (Johnson 2009).

Johnson proposes a low coordination structure (*vP* coordination) for Gapping in English based on the examples in (41). The ungrammaticality of these structures show that

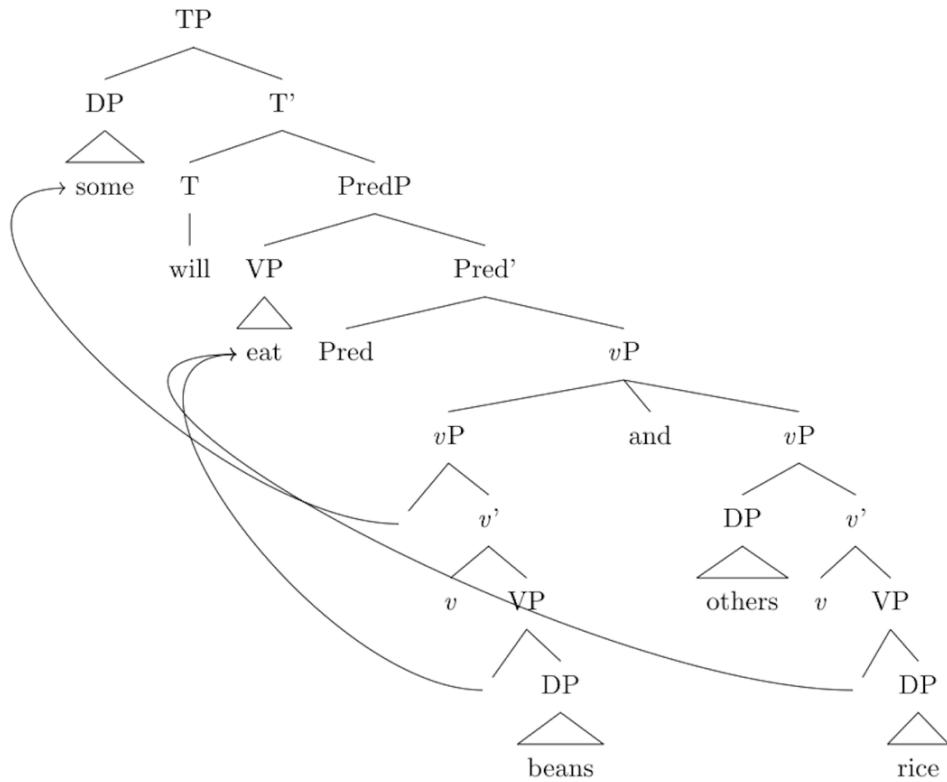
it is not possible for Gapping to occur with embedded gaps (41a) or with an embedded antecedent (41b).

- (41) a. *Some had eaten mussels and she claims that others shrimp.
 b. *She's said Peter has eaten his peas, and Sally her green beans, so now we can have dessert.

(Johnson 2009: 293)

Based on Johnson's approach, Gapping has one T head that is shared by more than one vP coordinate, as illustrated in (42b).

- (42) a. Some will eat beans and others rice. (Johnson 2009: 307)
 b.

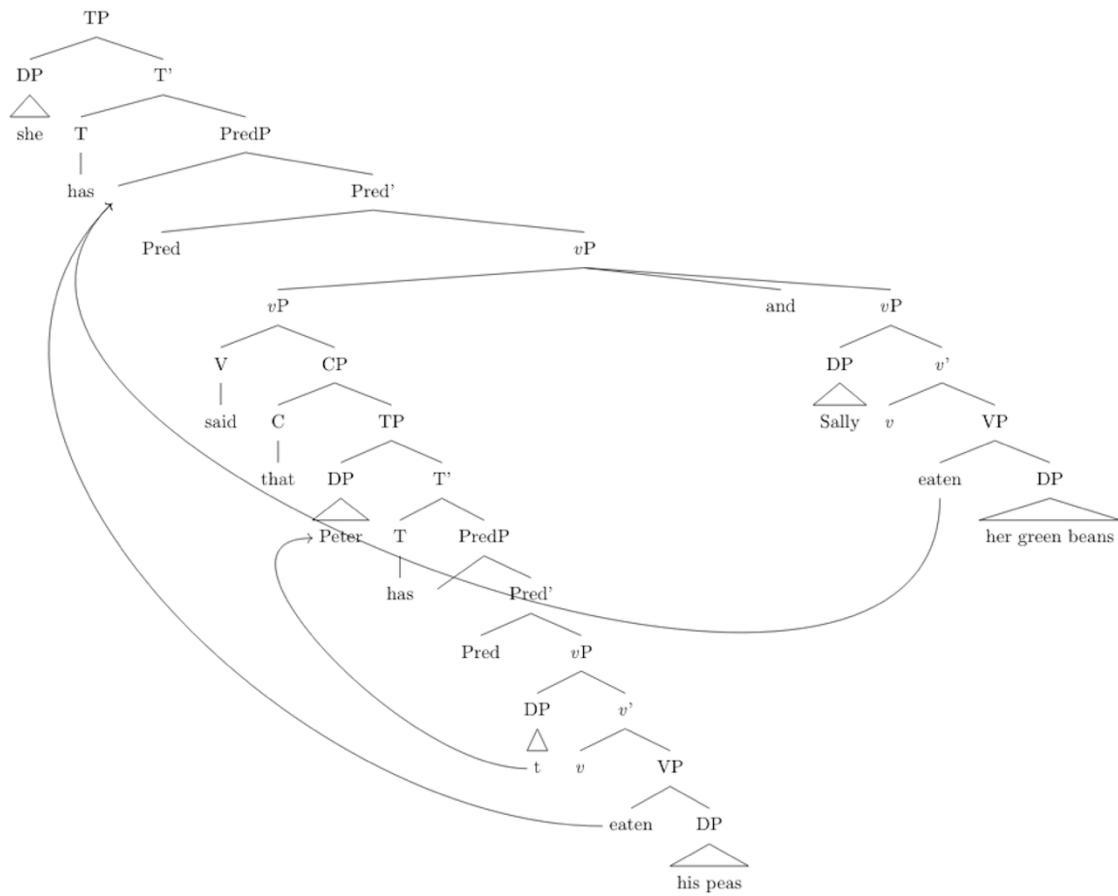


As illustrated in (42b), there is no T in the second clause and a single T is shared by both vP coordinates. The verbs are moved from both conjuncts via ATB movement to the Spec of PredP, outside the coordination structure. Johnson refers to this type of movement as

predicate shift and assumes that the VP can move into the Spec of functional projection located above vP, which he calls PredP following Zwart (1997).

As the examples in (41) show, Gapping cannot occur in embedded clauses. Based on the structure in (42b), which has low coordination, we know that embedding is not possible because T in the first coordinate cannot be shared with the second vP coordinate. Based on Johnson's approach, the structure of the (relevant parts of the) sentence in (41b) would be as schematically illustrated in (43).

(43) *



In theory, the ATB movement of the verbs in (43) should be possible since we have identical verbs in both conjuncts. However, ATB movement of the verbs to the PredP above vP is ruled out since predicate shift can only be local and long-distance dependencies

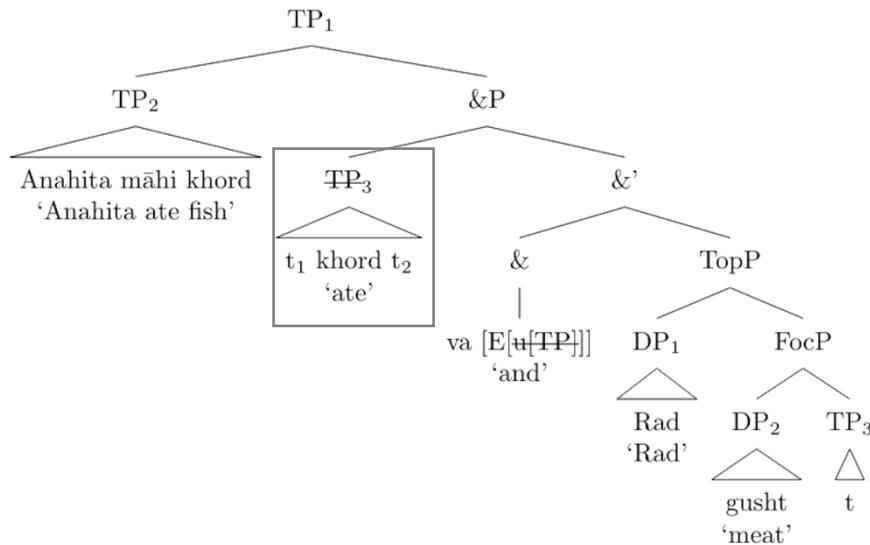
are not allowed. In addition, allowing the verbs move to the PredP, outside the coordination, derives wrong word order.

Unlike English, Gapping in Persian can occur in embedded clauses. It can occur with embedded gaps (44a), and with an embedded antecedent (44b).

- (44) a. māmān chāi khord va fekr mi-kon-am bābā gahve
mom tea drank.3SG and thought DUR-do-1SG dad coffee
‘Mom had tea and I think dad (had) coffee.’ (Farudi 2013: 76)
- b. fekr mi-kon-am māmān chāi khord va bābā gahve
thought DUR-do-1SG mom tea drank.3SG and dad coffee
‘I think that Mom had tea and dad coffee.’

Since Gapping in Persian is acceptable in embedded clauses, a low coordination approach and ATB movement cannot account for the data. However, as proposed by Farudi (2013), it has to have a clausal coordination. Farudi (2013) proposes the structure in (45) for the sentence in (36).

(45)



Based on Farudi’s approach, as illustrated in (45), the subject remnant *Rad* moves to the Spec of TopP and the object remnant *gusht* ‘meat’ moves to the Spec of FocP. In her

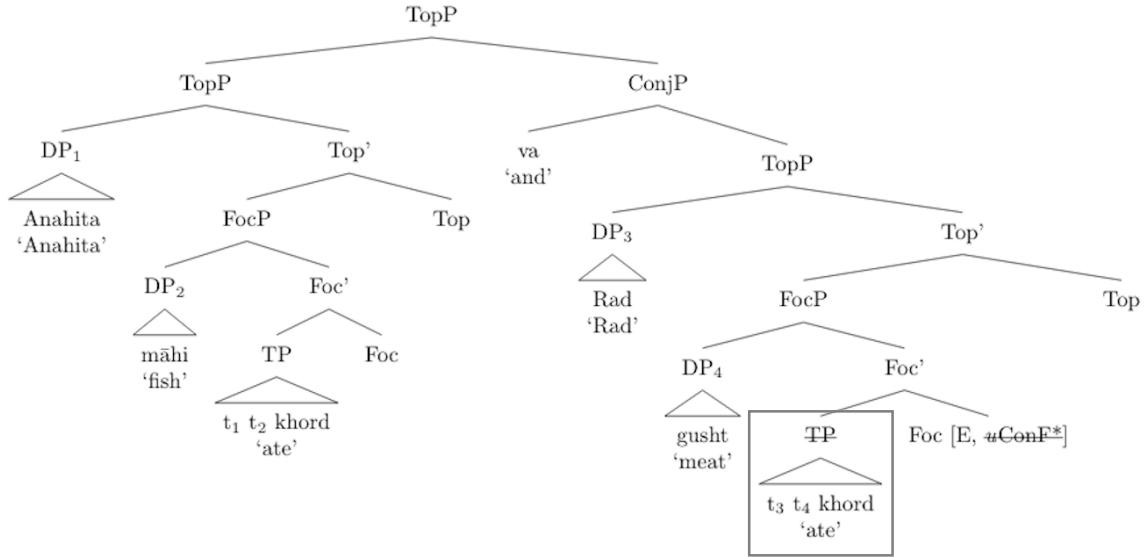
analysis, the coordinate head acts as a licensor. Since the licensing head licenses ellipsis of its complement (Merchant 2001), it should be TopP that is elided. However, TopP contains elements that are not elided. Since the elided elements are inside the TP, Farudi proposes that ellipsis is licensed through the Agree relation between the coordinate head and TP. However, based on her approach, this agreeing mechanism is not done at a distance but rather the [E] feature must agree with the TP locally.⁶ This means that the complement of ellipsis must be in a local relationship with the licensing head to license ellipsis. Therefore, TP moves to the coordinate head to satisfy this requirement.

The main problem with Farudi's analysis is that the movement of TP to the Spec of coordinate phrase is not motivated. Farudi (2013: 224) proposes that it is TP that carries an [E] feature, which has "a featural requirement for &; accordingly, when a coordinate head is merged above an E-bearing TP, Gapping results." Based on her analysis, TP has [E, u&] feature, which triggers its movement to the coordinate phrase. However, it is not clear how the [E] feature can be assigned to TP rather than let's say the coordinate head.

In my approach, only the heads that can license ellipsis have an [E] feature. The [E] feature bearing head licenses ellipsis of its complement at the PF level. The structure that I propose for Gaping is given in (46).

⁶ The Agree relation is assumed to be satisfied at a distance and movement to the Spec of the licensor is not required (Aelbrecht 2010).

(46)



I propose that Gapping, as illustrated in (46), is licensed by the focus head that carries an [E] feature bundled with the [*uConF**] feature, i.e. [E, *uConF**]. This feature has two functions: it requires the movement of the element that has a contrastive focus feature from the ellipsis site to the Spec of FocP. Then it licenses the ellipsis of its complement, TP, at the PF level.⁷

4.4. Sluicing

Sluicing refers to an operation in which the entire clause except for a *wh*-phrase is elided, as shown in (47). In the second clause of the sentence in (47), the *wh*-phrase *chi* ‘what’ is overt while the subject *Ramin* and the verb ‘bought’ are elided.

⁷ Note that in my approach, the remnants and their antecedents have identical information structure, i.e. they are either topicalized or focalized elements.

- (47) Ramin ye chiz-i kharid. hads bezan (**Ramin**) chi (**kharid**)
 Ramin one thing-IND bought.3SG guess hit.3SG Ramin what bought.3SG
 'Ramin bought something. Guess what.' (Toosarvandani 2008:679)

The example in (47) raises the question of where the *wh*-phrase *chi* 'what' moves to since Persian is a *wh*-in-situ language. In Persian, a declarative sentence has unmarked SOV word order (48a). In *wh*-questions, as shown in (48b) and (48c), the *wh*-phrase occupies the same position as its non-*wh*-counterpart.

- (48) a. Sohrab moz-o khord
 Sohrab banana-ACC ate.3SG
 'Sohrab ate the banana.'
- b. **ki** moz-o khord (Subject question)
 who banana-ACC ate.3SG
 'Who ate the banana?'
- c. Sohrab **chi-o** khord (Object question)
 Sohrab what-ACC ate.3SG
 'What did Sohrab eat?' (Toosarvandani 2008: 692)

Even though Persian does not have obligatory *wh*-movement, as illustrated in (48), the *wh*-phrase can undergo focus movement (Karimi 1999a, 2005, Kahnemuyipour 2001, Toosarvandani 2008). For instance, the *wh*-phrase *chi* 'what' in (48c) can undergo focus movement and move to the sentence initial position, as shown in (49).

- (49) **chi-o** Sohrab khord?
 what-ACC Sohrab ate.3SG
 'What did Sohrab eat?'

Since focus fronting of the *wh*-phrase is possible; therefore, we can say that the underlying structure of the sentence in (47) is as in (50).

- (50) Ramin ye chiz-i kharid. hads bezan [Foc chi_i [TP (Ramin _{t_i}-kharid)]]
 Ramin one thing-IND bought.3SG guess hit.3SG what Ramin bought.3SG
 ‘Ramin bought something. Guess what (he bought).’ (Toosarvandani 2008: 700)

There are three types of evidence which shows that the *wh*-phrase in (50) has undergone movement. The first piece of evidence comes from case matching effect, as illustrated in (51). We see that in a regular *wh*-question (51a), and its corresponding Sluice (51b), the *wh*-phrase carries the same accusative case marker *-ro*.

- (51) a. **ki-ro_i** Mahin *t_i* daavat karde?
 who-ACC Mahin invitation did.3SG
 ‘Who did Mahin invite?’

b. Mahin ye nafar-i-ro daavat karde vali be Sohrab
 Mahin a Person-INDE-ACC invitation did.3SG but to Sohrab

 ne-mig-e **ki-ro**
 NEG-say-3SG who-ACC
 ‘Mahin invited someone, but she won’t tell Sohrab who.’

(Toosarvandani 2008:690)

The second piece of evidence for movement of the *wh*-phrase in Sluicing comes from the impossibility of preposition stranding, as illustrated in (52b) and (53). It is not possible to strand preposition in a regular *wh*-question (52b). Similarly, stranding the preposition in Sluicing is not possible (49).

- (53) Ali bā yeki 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)

The third piece of evidence for movement comes from islands. First, let us consider the example in (54), which shows that it is not possible to extract from a CP that is inside a noun phrase.

- (54) *unā mi-khā-n [ye nafar-i-ro ke yeki az zabān-ā-ye
 they DUR-want-3PL a one-INDE-ACC that one from language-PL-EZ
 urupāyi-ro balad bāsh-e] estekhdām kon-an vali
 European-ACC knowledge be-3SG hiring do-3PL but
 yād-am nist **kodum** zabān unā mi-khān
 Memory-my NEG.is which language they DUR-want-3PL
 [ye nafar-i-ro ke <kodum zabān-ro> balad bāshe]
 a one-INDE-ACC that which language-ACC knowledge be-3SG
 Intended: ‘They want to hire someone who knows one of the European language, but I do not know which language.’

(Toosarvandani 2008: 715)

In (54a), the *wh*-phrase *kodum zabān* ‘which language’ has been focus fronted out of a relative clause and the sentence is not grammatical. This sentence is ungrammatical because the movement of the *wh*-phrase out of the relative clause incurs an island violation. However, if the clause that contains the relative clause island is sluiced, then the sentence becomes grammatical (55).

- (55) unā mi-khā-n [ye nafar-i-ro ke yeki az zabān-ā-ye
 they DUR-want-3PL a one-INDE-ACC that one from language-PL-EZ
 urupāyi-ro balad bāsh-e] estekhdām kon-an vali
 European-ACC knowledge be-3SG hiring do-3PL but

yād-am nist kodum zabān-ro
 memory-my NEG.is which language-ACC
 ‘They want to hire someone who knows one of the European languages, but I don’t know
 which language.’
 (Toosarvandani 2008: 715)

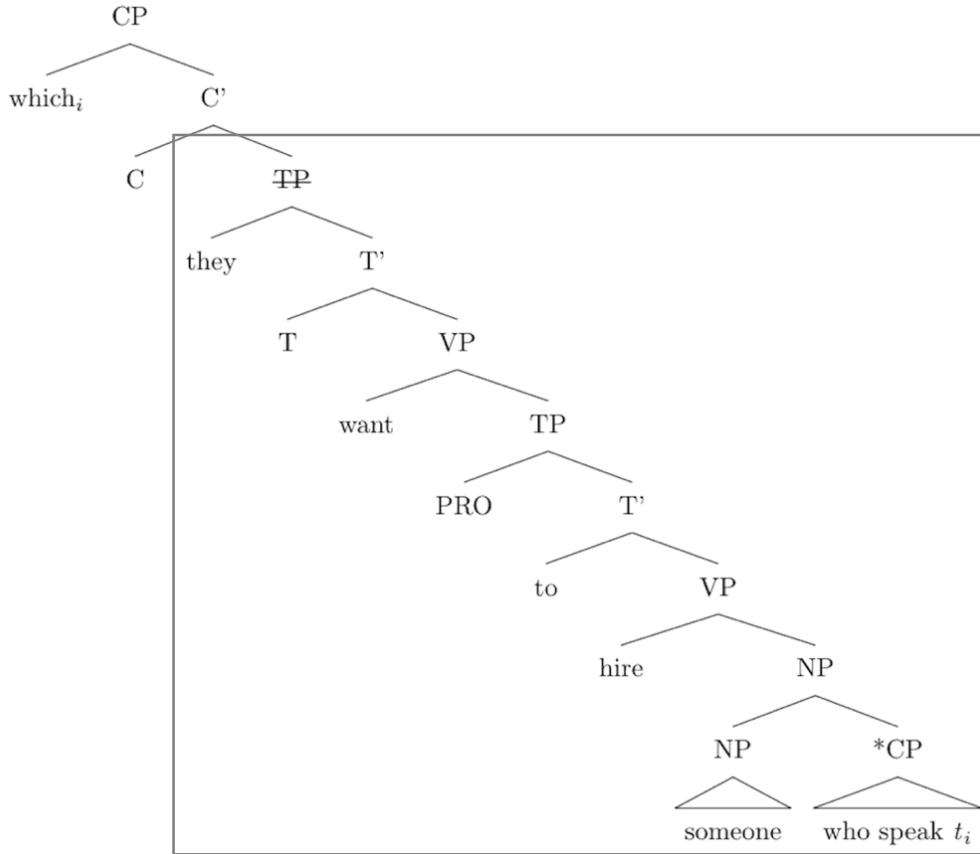
Similar to Persian, Sluicing in English is insensitive to islands, as well (56a).

- (56) a. They want to hire someone who speaks a Balkan language, but I don’t remember which.
- b. *I don’t remember which (Balkan language)_i; they want to hire someone [who speak *t_i*]

In (56a), the *wh*-phrase *which* has moved out of the relative clause and the sentence is grammatical. This sentence has the same interpretation as its unelided but ungrammatical counterpart in (56b). The sentence in (56b) is ungrammatical because it violates relative clause island. However, we see that Sluicing repairs islands and yields a well-formed sentence.

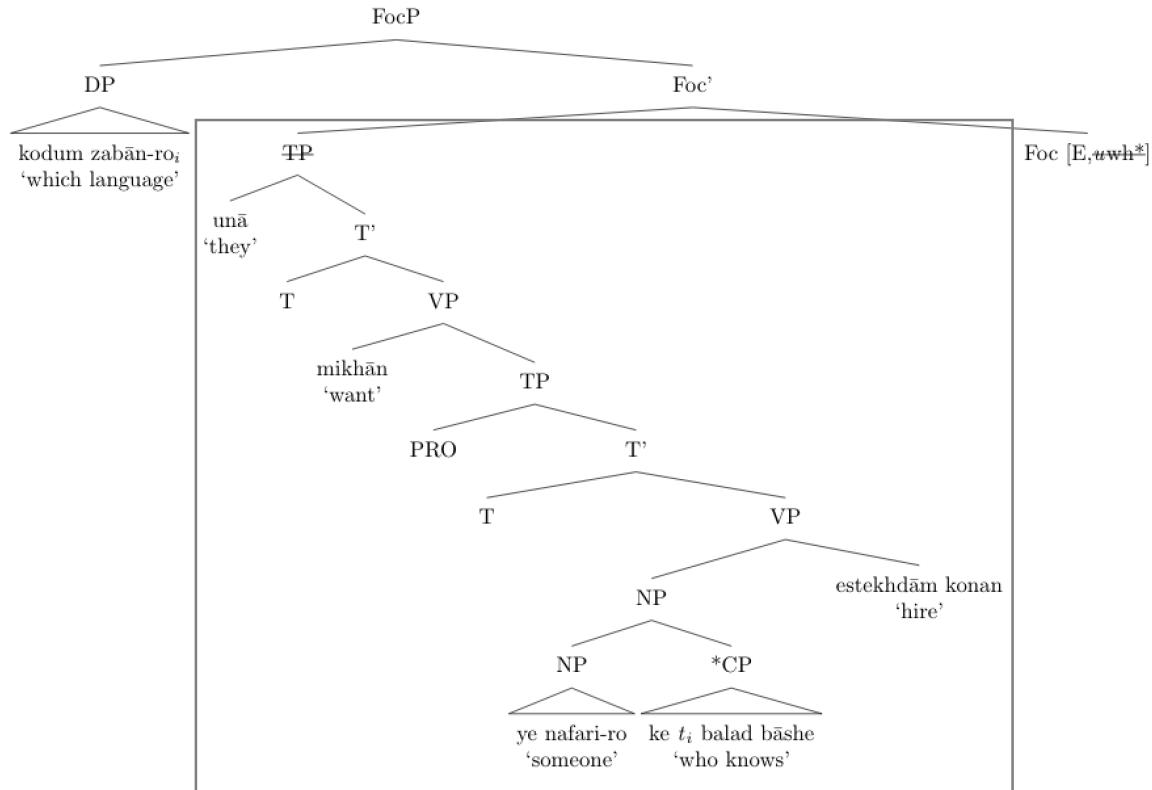
Merchant’s (2001) account of island repair is as follows. He assumes that the crossed island nodes are marked with PF-uninterpretable features called *. In (56a), the *wh*-phrase *which* moves to the Spec of CP. Since it crosses the relative clause island, the CP is marked with *. However, since Sluicing involves the deletion of TP, the *CP is elided, as well, as illustrated in (57). Therefore, the structure is saved and we have a grammatical structure. On the other hand, in (56b), when *CP reaches PF, it causes the structure to crash since * is a PF-uninterpretable feature.

(57)



The English Sluicing structure in (57) can be extended to Persian Sluicing. As shown in (58), when TP is elided, the island violation on CP is elided, as well. Note that the difference between English and Persian Sluicing is that the wh-phrase in Persian moves to the Spec of FocP rather than Spec of CP.

(58)



As illustrated in (58), the focus head has an [E] feature bundled with a strong uninterpretable *wh* feature [E, *uwh**]. This means that in Sluicing, the [E] feature is licensed only when it is in a local relationship with a *wh*-phrase. The [*uwh**] feature triggers the movement of the *wh*-phrase from the ellipsis site to the Spec of FocP. Then, the [E] feature licenses the deletion of its complement, TP, which also includes the *CP.

It should be noted that the fronted *wh*-phrase is in a contrastive relationship with another phrase in the preceding clause. To illustrate this, let us consider the examples in (59).

- (59) a. mi-doон-am ke Sohrab **ye ketāb** kharid vali
 DUR-know-1SG that Sohrab a book bought.3SG but

ne-mi-doon-am [CHE **ketāb-i-ro**]_i Sohrab *t_i* kharid
 NEG-DUR-know-1SG what book-IND-ACC Sohrab bought.3SG
 'I know that Sohrab bought a book, but I don't know what book he bought.'

- b. mi-doon-am Sohrab Vis-o **kojā** mi-khād shām
 NEG-DUR-know-1SG Sohrab Vis-ACC where DUR-want.3SG dinner
 bebar-e vali yād-am nist **KEI_i** mi-khād Vis-o
 take.3SG but memory-my is.NEG when DUR-want.3SG Vis-ACC
t_i beresun-e khoone
 make.arrive.3SG Home

'I know where Sohrab want to take Vis to dinner, but I do not remember when Sohrab wants to bring Vis home.'

(Toosarvandani 2008: 697)

In (59a), there is a contrastive relationship between the determiner of *che ketābi-ro* 'what book' and the determiner of *ye ketāb* 'a book'. Similarly, in (59b), the interrogative phrase *kojā* 'where' contrasts with *kei* 'when'.

As noted by Toosarvandani (2008), focus fronting of a *wh*-phrase is not felicitous when there is no element for the interrogative phrase to contrast with, as illustrated in (60).

- (60) #CHI Sohrab *t_i* āvord?
 what Sohrab brought.3SG
 'What did Sohrab bring?'

(Toosarvandani 2008: 697)

However, as noted by Karimi (p.c.), this sentence becomes acceptable if we add *-ro*, as shown in (61).

- (61) CHI-**ro** Sohrab *t_i* āvord?
 what-ACC Sohrab brought.3SG
 'What did Sohrab bring?'

In this structure, the speaker is signaling out an element out of a set of other elements in that set, contrasting this element with the rest. This indicates that the focus fronted *wh*-phrase receives an obligatory contrastive focus interpretation.

4.5. Fragment Answers

Fragment Answers are answers consisting of a non-sentential XP with the same propositional content as a fully sentential answer (Merchant 2004). As shown in (62), it is possible to answer the question in (62Q) with just the direct object *māshin* ‘car’. Even though we do not have a full sentence in (62A), it does have the same interpretation as in (62B).

- (62) Q: dirooz chi-ro kharid-i?
yesterday what-ACC bought-2SG
'What did you buy yesterday?'

A: māshin-ro
car-ACC
'the car.'

B: dirooz māshin-ro kharid-am
yesterday car-ACC bought-1SG
'Yesterday, I bought the car.'

(Shabani 2013b: 84)

Fragment Answers have the same characteristics of Sluicing in terms of case matching effect, impossibility of preposition stranding, and insensitivity to islands. For instance, the direct object *māshin* ‘car’ in (62A) and its corresponding DP in the full sentential answer (62B) have the accusative case marker *-ro*.

Regarding the impossibility of preposition stranding, as illustrated in (63A), the preposition *barāye* ‘for’ cannot be stranded but rather it must be piedpiped with the DP *bache* ‘child’. This also holds in full answers as stranding the preposition yields an ungrammatical sentence (63B).

- (63) Q: mādar barā-ye ki she'r khoond
mom for-EZ who poem read.3SG
'Who did mom read the poem for?'

- A: *(barā-ye) bache
 for-EZ child
 ‘For the child’
- B: *bache_i mādar barā-ye *t_i* she’r khoond
 child mom for-EZ poem read.3SG
 Intended: ‘Mom read the poem for the child.’ (Shabani 2013b: 87)

The case matching (62) and preposition piedpiping (63) examples show that the remnant has undergone movement. The third piece of evidence for movement in Fragment Answers comes from their interaction with islands. Let us consider the examples in (64) and (65).

(64) Complex NP Constraint

- Q: Ali bā ādami ke **chi** tadrīs mi-kon-e ezdevāj kard?
 Ali with person-INDE that what teach DUR-do-3SG marriage did.3SG
 What does the person who Ali married to teach?
- A: **fizik**
 physics
 ‘Physics.’ (Shabani 2013b: 97)

(65) Adjunct Constraint

- Q: har ādam-i kheili aziyat mish-e vaqt-i **kojā-sh**
 every person-IND very annoyed become-3SG time-IND where-3SG
 dard migir-e?
 pain get-3SG
 ‘Where does every person become annoyed when it hurts?’

- A: **qalb-esh**
 heart-3SG
 ‘Their heart.’ (Shabani 2013b: 96)

The examples in (64) and (65) show that Fragment Answers are not sensitive to islands. This pattern of island insensitivity can be accounted for by the island repair mechanism

that we have already seen for Sluicing. The island violation * feature is elided at the PF level; therefore, it cannot cause the derivation to crash.

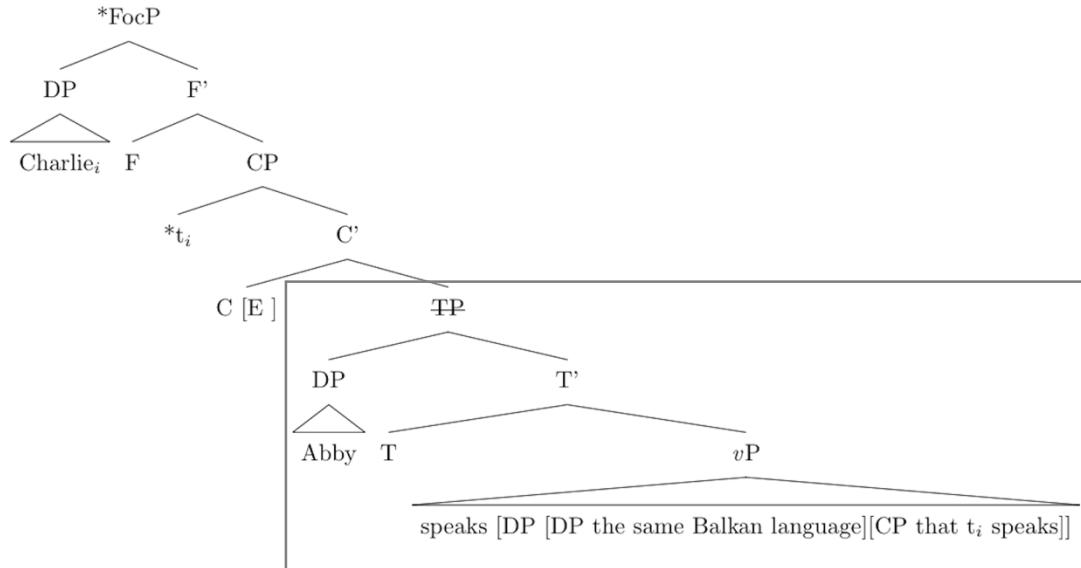
Merchant's island repair mechanism is also supported by Fragment Answers in English. Let us consider the examples in (66), which are instances of Fragment Answers in English. We see that these structures are sensitive to islands.

- (66) a. Q: Does Abby speak the same Balkan language that *Ben* speaks?
A: *No, Charlie.
B: No, she speaks the same Balkan language that *Charlie* speaks.
- b. Q: Did Ben leave the party because *Abby* wouldn't dance with him?
A: *No, Beth.
B: No, he left the party because *Beth* wouldn't dance with him.

(Merchant 2004: 688)

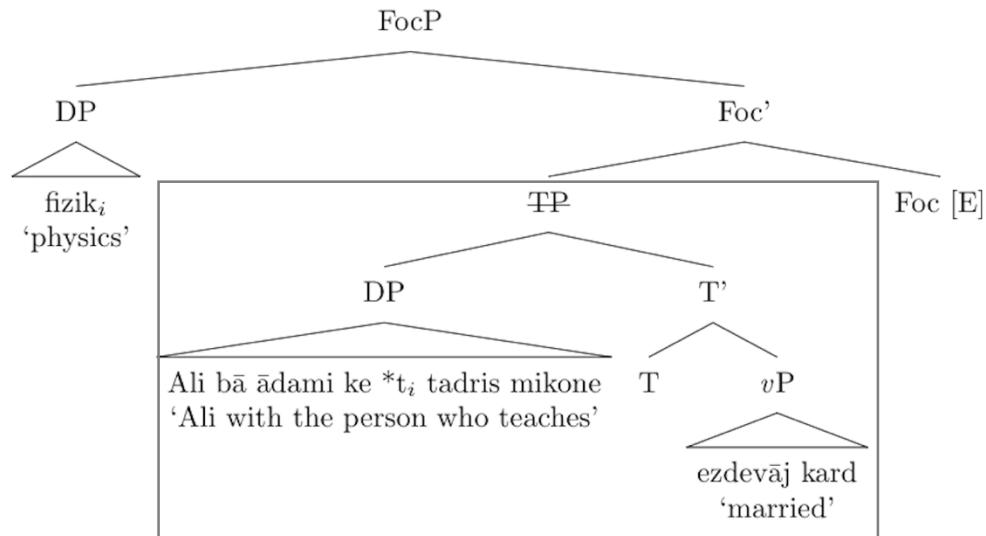
Since Fragment Answers in English, similar to Sluicing, involve TP ellipsis, we expect them not to be sensitive to islands. However, they are island sensitive. The reason for this sensitivity comes from the fact that the island violation * feature reaches the PF, which causes the derivation to crash. As illustrated in (67), the remnant in Fragment Answers moves to the Spec of FocP that is above CP. Since the remnant undergoes cyclic movement, it first moves to C and then to FocP; therefore, it leaves a trace in the Spec of CP. Since the trace is not inside the deletion site, TP, it is not deleted at the PF level; the derivation crashes (Merchant 2004).

(67)



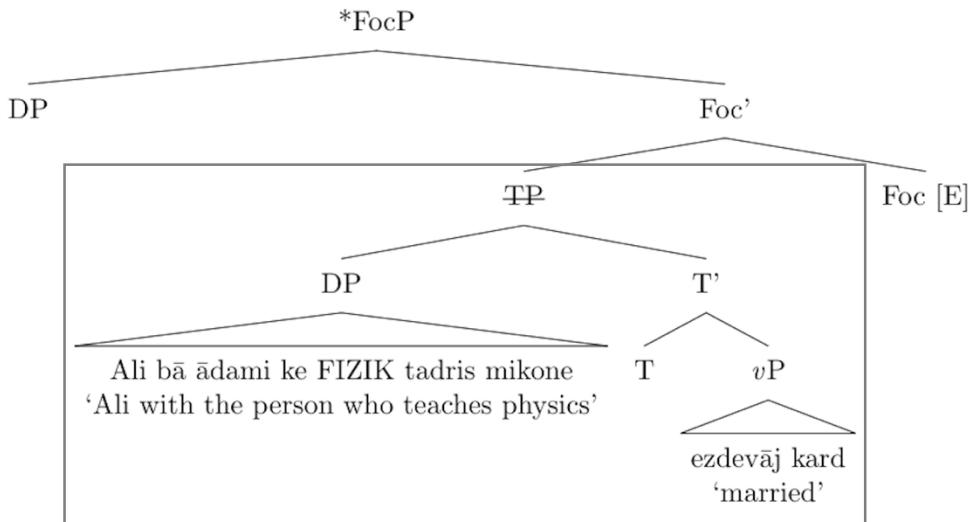
In Persian, unlike English, FocP is between TP and CP. Therefore, when TP is elided, all traces of the remnant are elided as well. Shabani (2013b) proposes the structure in (68) for Fragment Answers in Persian.

(68)



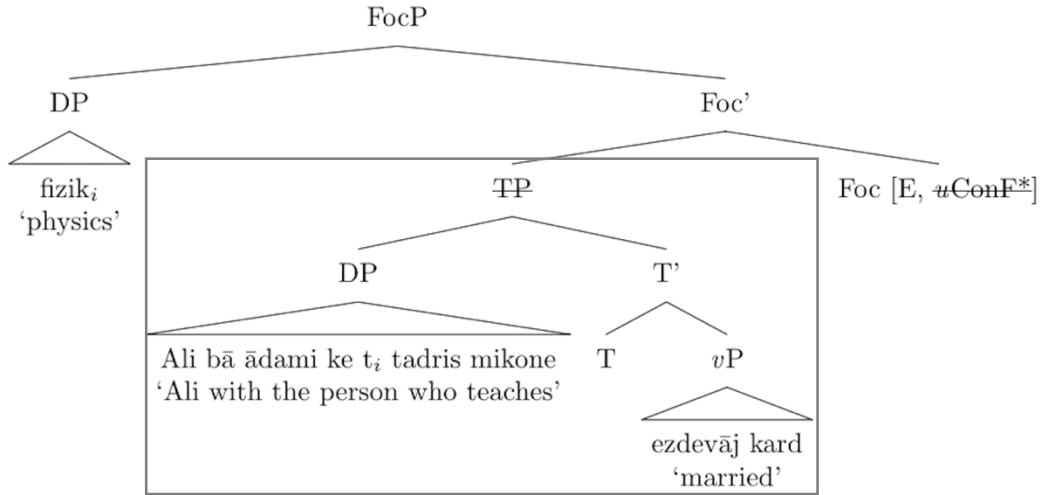
In Shabani's approach, as illustrated in (68), the focus head carries an [E] feature which licenses the deletion of TP. However, there is not a mechanism to trigger the movement of the remnant to the Spec of FocP. Recall that in Persian, elements with a contrastive focus feature do not have to undergo overt movement. Therefore, without having an appropriate mechanism in place, the structure in (68) cannot account for the sentence in (64A). As illustrated in (69), the element with a contrastive focus, which is inside TP, is elided.

(69)



To make sure that the contrastively focused element survives ellipsis, I propose that the [E] feature is bundled with the [*uConF**] feature. Based on my approach, as illustrated in (70), the [*uConF**] feature attracts the remnant *fizik* 'physics', which carries a contrastive focus feature. Therefore, it moves to the Spec of FocP to satisfy the [*uConF**] feature. Afterwards, the [E] feature on the focus head licenses the deletion of TP, which includes the trace of the remnant.

(70)



4.6. Noun Phrase Ellipsis

Noun Phrase (NP) ellipsis refers to an operation in which the head noun inside a DP is elided, as shown in (71).

- (71) Sajjad pirhan-e **ABI** pooshid Sina (~~pirhan-e~~) **GERMEZ** pooshid
 Sajjad shirt-EZ blue wore.3SG Sina shirt-EZ red wore.3SG
 'Sajjad wore a blue shirt, Sina a red one.' (Ghaniabadi 2010: 61)

In (71), the head noun *pirhan-e* 'shirt' is elided while the adjective *germez* 'red' is overt. The adjective *germez* carries a contrastive focus interpretation since it contrasts with its corresponding element, i.e. *ābi* 'blue', in the preceding clause.

The deletion of head noun can be licensed by adjectives (71), demonstratives (72) and interrogatives (73).⁸

⁸ Phrasal modifiers such as adjective phrase (i), prepositional phrase (ii), and possessors (iii) do not license NP ellipsis.

- (i) baz-i az keshvar-ā negarān-e afzāyesh-e qeymat-e naft-and.
 some-IND from country-PL worried-EZ increase-EZ price-EZ oil-are.3PL

- (72) **IN** ketāb-o be-de be man, **UN** (ketāb)-o be-de be Sima
 this book-ACC IMP-give.2SG to me that book-ACC IMP-give.2SG to Sima
 ‘Give this book to me, that (one) to Sima’ (Ghaniabadi 2010: 63)
- (73) **KODUM** ketāb barā man-e, **KODUM** (ketāb) barā shomā?
 which book for me-is which book for you
 ‘Which book is for me, which (one) for you?’ (Ghaniabadi 2010: 63)

Similar to other elliptical structures discussed in this chapter, I propose that the remnant in NP ellipsis moves out of the ellipsis site before deletion takes place. To make sure this is

[_{DP} *(keshvar-ā-ye) negarān-e afzāyesh-e qeymat-e naft] ettelāiye-i
 country-PL-EZ worried-EZ increase-EZ price-EZ oil statement-IND

sāder kard-and
 issue did-3PL

Intended: ‘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.’

(Toosarvandani 2015: 25)

- (ii) Q: kodum kafsh-ā-ro doost dār-i?
 which Shoe-PL-ACC like have-2SG
 ‘Which shoes do you like?’

A: [_{DP} *(kafsh-ā-ye) tu-ye vitrin-ro] doost dār-am
 shoe-PL-ACC in-EZ window-ACC like have-2SG
 Intended: ‘I like the ones in the window.’

- (iii) Q: kif-e ki peydā shod-e?
 bag-EZ who found become-is.3SG
 ‘Whose bag has been found?’

A: [_{DP} *(kif-e) un khānom] peydā shod-e
 bag-EZ that woman found become-is.3SG
 Intended: ‘That woman’s bag has been found.’

(Toosarvandani 2015: 25)

the case, we can use our two diagnostics: case matching and islands.⁹ As the example in (74) shows, the remnant adjective *ābi* ‘blue’ in the second clause has the same case marking as its antecedent *meshki* ‘black’.

- (74) Ayda kif MESHKI-ya-ro kharid, Araz (kif) ABI-ya-ro kharid
 Ayda bag black-DEF-ACC bought.3SG Araz bag blue-DEF-ACC bought.3SG
 ‘Ayda bought the black bag and Araz bought the blue one.’

Regarding islands, the example in (75) illustrates that NP ellipsis is sensitive to islands. This structure, which is a violation of Complex NP Constraint, shows that the remnant cannot originate inside an island.

- (75) *Ayda [mard-hā-yi-ro ke **futbāl** bāzi mi-kon-an] doost dār-e
 Ayda man-PL-IND-ACC that football play DUR-do-3PL like have-3SG
 va Maryam Δ **tenis** Δ doost dār-e
 and Maryam tennis like have-3SG
 Intended: ‘Ayda likes men who play football and Maryam likes men who play tennis.’

To account for NP ellipsis, I propose that DP has a parallel structure to CP (Rizzi 1997) in terms of focus projection (76). This is in line with the literature that argues that there is a parallelism between the nominal and clausal domain (Aboh 2004, Ntelitheos 2004, Corver and van Koppen 2006, among others).

- (76) [DP [FocP [NP]]]

A piece of evidence for this claim comes from the interpretational differences that arise from reordering of adjectives. Consider the Northern Standard Dutch examples in (77).

⁹ Note that we cannot use preposition stranding diagnostic with NP ellipsis since prepositional phrase cannot be a remnant, as illustrated in footnote (8ii).

According to Corver and van Koppen (2006), the sentence in (77a), in which the adjective *pink* precedes *American*, has a neutral intonation and meaning. However, the order of these adjectives can change when one of them is focused, as in (77b). In this example, the adjective *American* has a focus interpretation. Therefore, it has moved to the focus position in the left periphery. We find a similar pattern of adjective reordering in Persian. Consider the sentence in (78), which has an unmarked word order regarding the adjectives and the noun.

- (78) un māshin-e esport-e āmrikāee
 that car-EZ sport-EZ American
 ‘that American sport car’

Now, let us have a look at the examples in (79). We see that in (79b), the adjective *American* has moved to the left of the noun *māshin* ‘car’, where it receives a contrastive focus interpretation. This suggests that the adjective *American* has moved to FocP in the DP level.

- (79) A: kodum yeki az un māshin-ā-ro mikhāy?
 which one of that car-PL-ACC want.2SG
 ‘Which one of those cars do you want?’

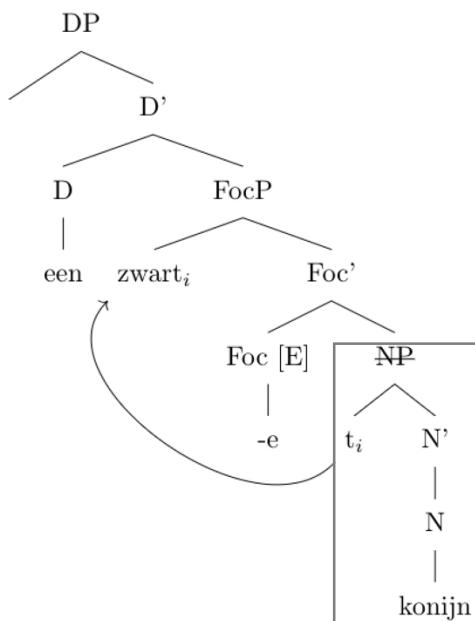
B: un **AMREEKAEE-ya-ro_i**, māshin esport-a-ro _{t_i} mikh-ām
 that American-DEF-ACC car sport-DEF-ACC want-1SG
 Lit: ‘that American one, that sport car I want.’

Persian does not have a morphological focus marker. However, there is such a marker in North-Eastern Dutch (80a) and Frisian (80b). In these languages, the *e*- or (*e*)*n*- focus marker has to be used, respectively, when the noun is elided (Corver and van Koppen 2006).

- (80) a. over konijnen gesproken... (Talking about rabbits...)
 ik heb gisteren een zwart-**e** Δ zien lopen
 I have yesterday a black-**e** see walk
 'I have seen a black one yesterday.'
- b. over jongens gesproken, dat is ook ... (Talking about boys, that is...)
 in saai-**en**
 a boring-**en**
 'a boring one' (Corver and van Koppen 2006: 8)

Corver and van Koppen (2006) propose that in (80a), the adjective *zwart* 'black', which has a [Foc] feature moves to the Spec of FocP. The *e*-suffix is a focus marker and spells out Foc. The focus head that carries an [E] feature licenses the deletion of its complement, NP, as illustrated in (81).

(81)

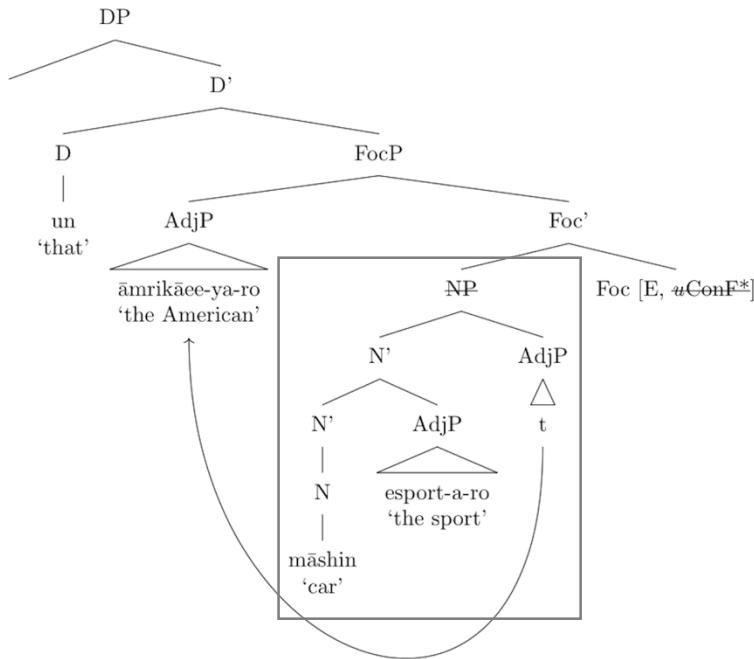


Now, let us consider the Persian NP ellipsis example in (82B). In this example, the adjective *American* has moved out of the NP before it is elided. Adopting Corver and van Koppen (2006), I propose the structure in (83) for the sentence in (82B).

- (82) A: kodum yeki az un māshin-ā-ro mikhāy?
 which one of that car-PL-ACC want.2SG
 ‘Which one of those cars do you want?’

- B: un AMREEKAEE-ya-ro_i (māshin esport-a-ro—_{t_i}) mikh-ām
 that American-DEF-ACC car sport-DEF-ACC want-1SG
 Lit: ‘That American, (the sport car) I want.’

- (83)



As illustrated in (83), the focus head carries an [E] feature, which licenses the deletion of NP. The [E] feature is bundled with the [*uConF**] feature; therefore, the remnant that carries a contrastive focus feature moves to the Spec of FocP before deletion takes place.

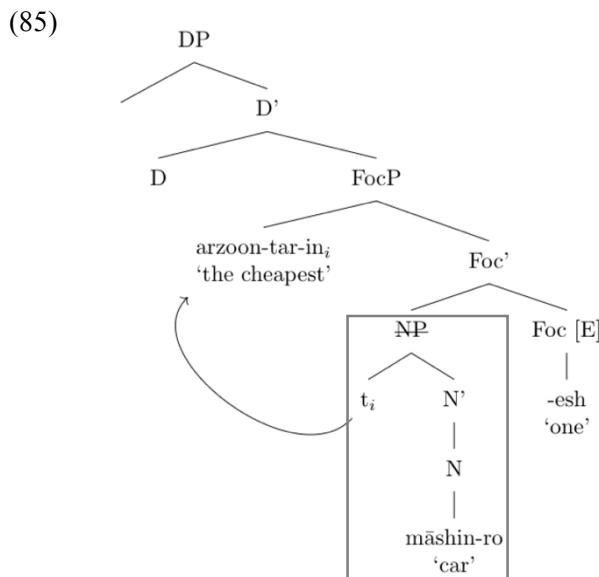
Recall that NP ellipsis can be licensed by an adjective (71), a demonstrative (72), and an interrogative (73). To be specific, we can revise the [E, *uConF**] feature to include the

type of elements that can act as a licensor. Therefore, NP ellipsis is licensed when we have the following feature bundles: [E, *uConF**_[Adj]], [E, *uConF**_[Dem]], and [E, *uConF**_[Int]].

Persian, similar to North-Eastern Dutch (80a) and Frisian (80b), also allows NP ellipsis with *one* insertion, as shown in (84).

- (84) Ayda geroon-tar-in māshin-ro kharid va
 Ayda expensive-COMP-SUPER car-ACC bought.3SG and
 Araz arzoon-tar-in-esh-ro
 Araz expensive-COMP-SUPER-one-ACC
 ‘Ayda bought the most expensive car and Araz the cheapest one.’

Following Corver and van Koppen (2006), I propose that in (84) the adjective *arzoon* ‘cheap’ has a contrastive focus feature; therefore, it moves to the Spec of FocP. The *-esh* suffix, which is a focus marker, spells out Foc. The schematic illustration of the relevant parts of the sentence is given in (85).¹⁰



¹⁰ I leave it to the future research to determine how *-ro* gets suffixed on *-esh* in (84). Recall that the analysis of *-ro* has been controversial. *-ro* can be a case marker even though it can appear more than once in the same clause. It can also be a definite/specifity marker; however, it can coocur with the indefinite marker *-i*. For discussion on *-ro*, see Dabir-Moghaddam (1992), Ghomeshi (1997), and Karimi (1999a, 1999b, 2005).

4.7. Conclusion

In this chapter, I provided a unified account for various elliptical constructions in Persian based on the mechanism of feature checking, movement, and deletion. A summary of the main characteristics of elliptical constructions discussed in this chapter is given in (86).

(86) Constructions	Elided Phrase	Licensing Feature Bundles	Remnants	Island Repair
a. Why-stripping	TP	[E, <i>uwh</i> [Why]]	<i>Why</i> , ConT	✓
b. What-stripping	TP	[E, <i>uwh</i> [What]]	<i>What</i> , ConT	✓
c. <i>Cherā</i> Stripping	TP	[E, <i>uPol</i> [+Pos]]	<i>Cherā</i> , ConT	✓
d. Gapping	TP	[E, <i>uConF*</i>]	ConF, ConT	X
e. Sluicing	TP	[E, <i>uwh*</i>]	<i>Wh</i> -phrase	✓
f. Fragment Answers	TP	[E, <i>uConF*</i>]	ConF	✓
g. NP Ellipsis	NP	[E, <i>uConF*</i>]	ConF	X

*=strong feature, Pol=Polarity, ConF=Contrastive Focus, ConT=Contrastive Topic

In the second column, ‘elided phrase’ refers to the phrase that is elided in each structure. In the third column, ‘licensing feature bundles’ refers to the features that are bundled with the [E] feature. The heads that carry these features license the deletion of their complement at the PF level.

In the fourth column, ‘remnant’ refers to the elements that survive ellipsis. We see that if there is only one remnant, it has to have a focus feature, i.e. either a focalized element or a *wh*-phrase. An element with a contrastive topic feature cannot be the sole survivor of ellipsis. Fifth column shows that all of the elliptical constructions except for Gapping and NP Ellipsis are insensitive to islands.

4.8. Future Research

In this chapter, I provided an overview of various elliptical constructions in Persian. They need to be studied in detail to establish all their characteristics and determine whether the proposed analysis can account for all of them. In addition, there should be a cross-linguistic

study to find out how the analysis proposed for Persian in this chapter can also be extended to other languages.

Why-stripping, as in (28B), repeated in (87B), is one of the most interesting topics. The reason I proposed the wh-phrase *cherā* ‘why’ in this construction originates in the Spec of Int(errogative)P, instead of FocP, is that it is possible to have a focalized element in this structure, as shown in (87B').

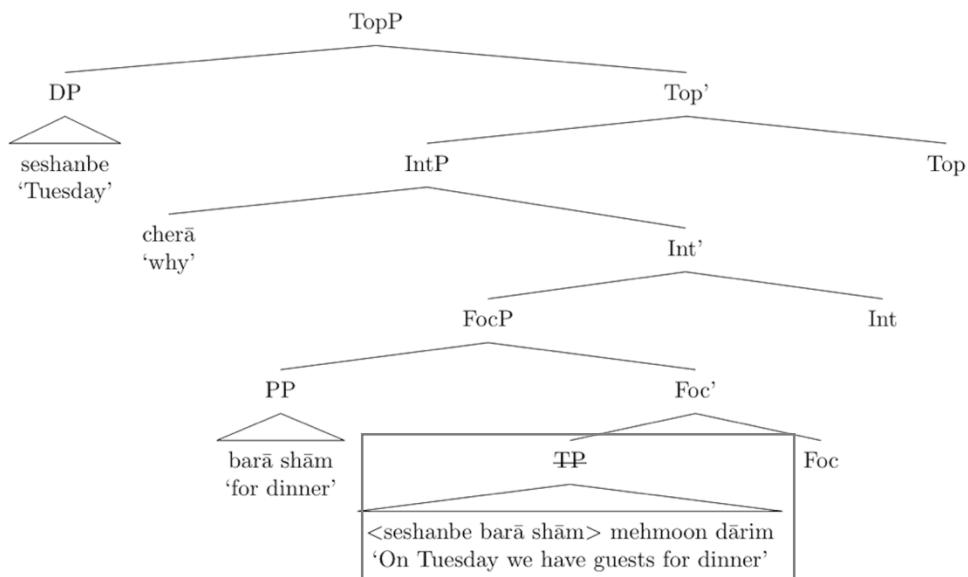
- (87) A: seshanbe barā shām mehmoon dār-im
Tuesday for dinner guest have-1PL
'On Tuesday, we have guests for dinner.'

- B: seshanbe cherā?
Tuesday why
'Why on Tuesday (but not on other days)?'

- B': seshanbe cherā BARA SHAM?
Tuesday why for dinner
'Why on Tuesday FOR DINNER (but not for lunch)?'

Based on my analysis, as discussed in this chapter, the schematic illustration of the sentence in (87B') would be as in (88). The DP *seshanbe* ‘Tuesday’, which functions as a contrastive topic, is in the Spec of TopP. The wh-phrase *cherā* ‘why’ is in the Spec of IntP, and the DP *barā shām* ‘for dinner’ is in the Spec of FocP.

(88) Structure of Why-stripping with a focalized element



It seems that we cannot always have a focalized element. For instance, in structures with a ditransitive verb, as in (89), we can only have one remnant ((89B)-(89B')).

- (89) A: Ayda ketāb-ro be Araz dād
Ayda book-ACC to Araz gave.3SG
'Ayda gave the book to Araz.'

- B: be Araz cherā?
to Araz why
'Why to Araz?'

- B': ketāb-ro cherā?
book-ACC why
'Why the book?'

It is not possible for the direct object (90B) or the indirect object (90B') to remain overt as a focalized element.

- (90) A: Ayda ketāb-ro be Araz dād
 Ayda book-ACC to Araz gave.3SG
 ‘Ayda gave the book to Araz.’
- B: *be Araz cherā ketāb-ro?
 to Araz why book-ACC
- B': * ketāb-ro cherā be Araz?
 book-ACC why to Araz

More data need to be collected and studied to determine the restrictions on the focalized element in Why-stripping.

It should be noted that Persian also allows the wh-phrase ‘why’ to occur in sentence-initial position, as illustrated in ((91B)-(91B')).

- (91) A: seshanbe barā shām mehmoon dār-im
 Tuesday for dinner guest have-1PL
 ‘On Tuesday, we have guests for dinner.’
- B: cherā seshanbe?
 why Tuesday
 ‘Why on Tuesday (but not on other days)?’
- B': cherā seshanbe BARA SHAM?
 why Tuesday for dinner
 ‘Why on Tuesday FOR DINNER (but not for lunch)?’

This type of data is also found in English (92B) and Spanish (93B), in which ‘why’ precedes the non-wh-remnant.

- (92) A: John ate natto.
 B: Why natto (but not something else)? (Nakao, et al. 2012: 270)
- (93) A: Juan besó a María
 Juan kissed to Maria
 ‘Juan kissed Maria.’

B: por qué a María (y no a Susana)?
why to Maria (and not to Susanan)
'Why Maria, and not Susana?' (Ortega-Santos, et al. 2014: 56)

For both English and Spanish, it has been proposed that the wh-phrase ‘why’ originates in the Spec of ForceP and the non-wh-remnant moves to the Spec of FocP, before TP ellipsis takes place. Possible avenue for future research is comparing the characteristics of Why-stripping in Persian, English and Spanish and determining whether we can have a unifying account that can be extended to other languages, as well.

Chapter 5: Conclusion

In this dissertation, adopting Rizzi's (1997) cartographic approach, I provided a uniform syntactic account of elliptical constructions in Persian on the basis of the interaction between ellipsis licensing feature bundles and information structure. I argued that ellipsis is constrained by information structure, in particular contrastive topic and focus. I claim that only the elements that carry contrastive topic or contrastive focus features can survive ellipsis while the other elements can be elided under identity with their corresponding elements in the antecedent clause. To account for elliptical constructions in Persian, I proposed the Contrast Condition on Ellipsis, stated in (1).

(1) **Contrast Condition on Ellipsis**

(i) Ellipsis Condition: Ellipsis can occur iff there is an element α in XP_E that contrasts with an element α' in XP_A , in which

- a) α and α' have the same syntactic category, and
- b) XP_E and XP_A have the same syntactic structure.

(ii) Identity Condition on the Remnant: An element α in XP_E can survive ellipsis iff there is an element α' in an XP_A , in which α and α' are in a contrastive relationship and have identical information structure.

(iii) Identity Condition on the Elided Materials: An element β in XP_E can be elided iff there is an element β' in an XP_A , in which β and β' are identical. (The identity relation is sensitive to both semantic and syntactic forms)

Based on the first condition in (1), ellipsis is possible only in contexts in which an element in a sentence involving ellipsis contrasts with its corresponding element in the antecedent clause. The second condition means that the element that survives ellipsis must be in a contrastive relationship with its correlate and they must have identical information structure. Based on the third condition, an element can be elided only if it is identical to its corresponding element in the antecedent clause.

I provided evidence that in Persian declarative sentences, an element with a contrastive topic feature always moves to the Spec of TopP. However, an element with a contrastive focus can either move to the Spec of FocP or stay in-situ. Therefore, to make

sure that an element with a contrastive focus feature moves out of the ellipsis site, before deletion takes place, I proposed that the focus head has a strong uninterpretable contrastive focus feature [*uConF**].

Regarding licensing ellipsis, I proposed that, in Persian, only the heads that have a focus feature, i.e. Foc(us) head, Pol(arity) head and Int(errogative) head, can license the deletion of their complement at the PF level. The proposed licensing heads are the result of the restrictions on the feature bundles that are possible in Persian. The [E] feature can in general bundle with i) a strong uninterpretable [wh] feature, [E, *uwh**], ii) a strong uninterpretable contrastive focus [ConF] feature, [E, *uConF**], or iii) an uninterpretable [Pol] feature, [E, *uPol*].

For ellipsis to go through, the [*uwh**] and [*uConF**] features must be checked and deleted by being in a local relationship with an element that has a matching feature. Therefore, the elements with an interpretable [wh] and [ConF] features must move out of the phrase that is specified for deletion.

Regarding the [*uPol*] feature, I proposed that it is satisfied by having a polarity marker in the Spec of PolP. The polarity marker can be affirmative or negative, depending on the polarity of the preceding clause.

A summary of elliptical constructions studied in this dissertation along with their characteristics is given in (2).

(2)	Constructions	Elided Phrase	Licensing Heads & Feature Bundles	Remnants	Island Repair
a.	Verb-stranding	vP	Foc, [E, <i>uConF*</i> , <i>uV*</i>]	Verb, ConF	✓
b.	Polarity Stripping	TP	Pol, [E, <i>uPol_[+Neg]</i>]	NEG, ConT	X
c.	Negative Stripping	TP	Pol, [E, <i>uPol_[+Neg]</i> , <i>uConF*</i>]	NEG, ConF	X
d.	Why-stripping	TP	Int, [E, <i>uwh_[Why]</i>]	<i>Why</i> , ConT	✓
e.	What-stripping	TP	Foc, [E, <i>uwh_[What]</i>]	<i>What</i> , ConT	✓
f.	<i>Cherā</i> Stripping	TP	Pol, [E, <i>uPol_[+Pos]</i>]	<i>Cherā</i> , ConT	✓
g.	Gapping	TP	Foc, [E, <i>uConF*</i>]	ConF, ConT	X
h.	Sluicing	TP	Foc, [E, <i>uwh*</i>]	<i>Wh</i> -phrase	✓
i.	Fragment Answers	TP	Foc, [E, <i>uConF*</i>]	ConF	✓
j.	NP Ellipsis	NP	Foc, [E, <i>uConF*</i>]	ConF	X

*=strong feature, ConF=Contrastive Focus, Pol=Polarity, ConT=Contrastive Topic, Int=Interrogative

The first column is a list of elliptical constructions studied in this work.¹ In the second column, ‘elided phrase’ refers to the phrase that is elided in each structure. In the third column, ‘licensing heads and feature bundles’ refers to the heads that license ellipsis and the feature bundles that they carry. For instance, in Verb-stranding, the [E] feature is bundled with the [*uConF**] and [*uV**] features. These features trigger the movement of an element with a contrastive focus feature and the verb out of the ellipsis site. Afterwards, the [E] feature licenses the deletion of its complement, *vP*, at the PF level.

In the fourth column, ‘remnant’ refers to the elements that remain overt. We see that if there is only one remnant, it has to have a focus feature, i.e. either a focalized element or a *wh*-phrase. An element with a contrastive topic feature cannot be the sole survivor of ellipsis.

Fifth column shows that all of the elliptical constructions except for Polarity Stripping, Negative Stripping, Gapping and NP ellipsis are insensitive to islands. A common characteristic of Gapping and Stripping constructions is that they are restricted to coordinate constructions. Even though in these structures, TP, which includes the island violation * feature, is elided, they are not able to repair islands. This raises the question of why do some elliptical structures show island amelioration effects while the others do not? More investigations of islands across languages need to be conducted before reaching a conclusion regarding island repair. On the other hand, the island sensitivity of NP ellipsis can be accounted for by Merchant’s approach. That is, the island violation feature reaches PF; therefore, the derivation crashes.

The main claim of this dissertation regarding remnants is that only the elements that carry contrastive topic or contrastive focus features can survive ellipsis. Since these elements have distinct phonetic features, an experimental study need to be conducted to provide empirical support for the proposal made in this work. Through this study, we can determine how important prosody is in judging elliptical sentences acceptable. This syntax-

¹ In this work, I also studied Pseudo-stripping. However, it is not in this list since, as discussed in chapter 3, it does not involve ellipsis but rather is derived via movement.

phonology interface will shed new lights on the study of ellipsis and information structure, which is to the best of my knowledge a novel approach.

References

- Aboh, E. (2004). Topic and focus within D. In *Linguistics in the Netherlands*, 1-12.
- Aelbrecht, L. (2010). *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins.
- Belletti, A. (2004). Aspects of low IP area. In L. Rizzi (ed.) *The structure of CP and IP: The cartography of syntactic structures*, Oxford: Oxford University Press, 16-51.
- Büring, D. (1999). Topic. In P. Bosch and R. van der Sandt (eds.) *Focus-linguistic, cognitive, and computational perspectives*, Cambridge: Cambridge University Press, 142-165.
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Chomsky, N. (1971). Deep structure, surface structure and semantic interpretation. In D. Steinberg and L. A. Jacobovits (eds.) *Semantics: An interdisciplinary reader in philosophy, linguistics, and psychology*, Cambridge: Cambridge University Press, 183-216.
- Chomsky, N. (1976). Conditions on rules of grammar. *Linguistic Analysis* 2: 303-351.
- Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In K. Hale and S. Keyser (eds.), *The view from Buildin*, 20, Cambridge, MA: MIT Press, 1-52.
- Chomsky, N. (1994). *Bare phrase structure*. MIT occasional papers in linguistics. Department of Linguistics and Philosophy, Cambridge, MA: MIT Press.
- Chomsky, N. (1995). *The minimalist program*, Cambridge, MA: MIT Press.
- Chung, S. (2006). Sluicing and the lexicon: The point of no return. In R. Cover and Y. Kim (eds.) *BLS 31, Proceedings of the Thi Annual Meeting of the Berkeley Linguistics Society*, 73-91.
- Chung, S. (2013). Syntactic identity in sluicing: How much and why. *Linguistic Inquiry* 44, 1-44.
- Culicover, P. and Jackendoff, R. (2005). *Simpler Syntax*. Oxford: Oxford University Press.
- Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. New York/Oxford: Oxford University Press.
- Cho, S. W. (2001). Missing objects and the semantic representation in Korean discourse, handout from *the Ninth Harvard International Symposium on Korean Linguistics*.
- Corver, N. and van Koppen, J. M. (2006). A focus projection in the left periphery of DP: Evidence from noun ellipsis. Handout from presentation in *Edges in Syntax*, Cyprus College.
- Dabir-Moghaddam, M. (1992). *On the (in)dependence of syntax and pragmatics: Evidence from the post-position -rā in Persian*. In D. Stein (ed.), Cooperating with written texts. Berlin: Mouton de Gruyter.
- Den Dikken, M. (2006). *Realtors and linkers: A study of Predication, Predicate Inversion, and Copulas*. Cambridge, MA: MIT Press.
- Depiante, M. (2000). The syntax of deep and surface anaphora: A study of null

- complement anaphora and stripping/bare argument ellipsis. Doctoral Dissertation, University of Connecticut.
- Farudi, A. (2013). Gapping in Farsi: A crosslinguistic investigation. Doctoral Dissertation, University of Massachusetts, Amherst.
- Fiengo, R. and May, R. (1994). *Indices and identity*. Cambridge, MA: MIT Press.
- Folli, R., Harley, H., & Karimi, S. (2005). Determinants of event type in Persian complex predicates. *Lingua*, 115(10): 1365-1401.
- Frey, W. (2004). A medial topic position for German. *Linguistische Berichte* 198: 137-161.
- Gengel, K. (2007). Focus and ellipsis: A generative analysis of pseudogapping and other elliptical structures. Doctoral Dissertation, University of Stuttgart.
- Ghaniabadi, S. (2010). The empty noun construction in Persian. Doctoral Dissertation, University of Manitoba.
- Ghomeshi, J. (1997). Topics in Persian VPs. *Lingua* 102: 133-167.
- Ginzburg, J. and Sag, I. (2000). Interrogative investigations. CSLI: Stanford.
- Göksel, A. and Özsoy, A. S. (2000). Is there a focus position in Turkish? In A. Göksel and C. Kerslake (eds.) *Studies on Turkish and Turkic Languages. Proceedings of the Ninth International Conference on Turkish Linguistics*. Wiesbaden: Harrasowitz, 219-228.
- Goldberg, L. (2002a). An elucidation of null direct object structures in Modern Hebrew. In L. Mikkelsen and C. Potts (eds.), *Proceedings of WCCFL 21*, Somerville, MA: Cascadilla Press, 99-112.
- Goldberg, L. M. (2005). *Verb-stranding VP ellipsis: A cross-linguistic study*. Doctoral Dissertation, McGill University, Montreal.
- Gribanova, V. (2013). Verb-stranding verb phrase ellipsis and the structure of the Russian verbal complex. *Natural Language & Linguistic Theory*, 31(1): 91-136.
- Gribanova, V. (2013). A new argument for verb-stranding verb phrase ellipsis. *Linguistic Inquiry*, 44(1): 145-157.
- Gundel, J. K. (1974). The role of topic and comment in linguistic theory. Doctoral Dissertation, University of Texas, Austin.
- Hankamer, J. and Sag, I. (1976). Deep and surface anaphora. *Linguistic Inquiry* 7(3): 391-426.
- Hardt, D. (1993). Verb phrase ellipsis: Form, meaning, and processing. Doctoral Dissertation, University of Pennsylvania.
- Huang, J. (1982). *Logical relations in Chinese and the theory of grammar*. Doctoral Dissertation, MIT.
- Huang, C. T. J. (1987). Remarks on empty categories in Chinese. *Linguistic inquiry*, 321-337.
- Iatridou, S. (1990). About Agr(P). *Linguistic Inquiry* 21: 551-577.
- Jayaseelan, K. (2001). IP-internal topic and focus phrases. *Studia Linguistica*, 55: 39-75.
- Jackendoff, R. (1972). Semantic interpretation in generative grammar. Cambridge, MA: MIT Press.
- Jacobson, P. (2008). Direct Compositionality and Variable-Free Semantics: The Case of

- Antecedent Contained Deletion. In K. Johnson (ed.), *Topics in Ellipsis*, Cambridge University Press, 30-68.
- Jiménez-Fernández, Á. (2009). The low periphery of double object constructions in English and Spanish. *Philologia Hispalensis*, 23: 179-200.
- Johnson, K. (2009). Gapping is not (VP)-Ellipsis. *Linguistic Inquiry* 40: 289-328.
- Kahnemuyipour, A. (2000). Persian Ezafe construction revisited: Evidence for modifier phrase. In J. T. Jensen and Gerard, van Herk (eds.) *Cahiers Lingistique d'Ottawa, proceedings of the 2000 annual conference of the Canadian Linguistics Association*, 173-185.
- Kahnemuyipour, A. (2001). On wh-questions in Persian. *Canadian Journal of Linguistics* 46: 41-61.
- Kahnemuyipour, A. (2014). Revisiting the Persian Ezafe construction: A roll-up movement analysis, *Lingua* 150: 1-24.
- 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* (Studies in generative grammar 76). Berlin: Mouton de Gruyter.
- Kim, J. S. (1997). *Syntactic focus movement and ellipsis: A minimalist approach*. Doctoral Dissertation. University of Connecticut.
- Kiss, K. E. (1998). Identificational versus Information focus. *Language*, 74: 245-273.
- Klima, E. (1964). Negation in English. In J. Fodor and J. Katz (eds.). *The structure of language: Readings in the Philosophy of Language*. Englewood Cliffs, New Jersey: Prentice-Hall, 246-323.
- Kolokonte, M. (2008). *Bare argument ellipsis & information structure*. Doctoral Dissertation, Newcastle University, United Kingdom.
- Konietzko, A. (2016). *Bare argument ellipsis and focus*. Linguistik Aktuell/Linguistics Today 233. Amsterdam/Philadelphia: John Benjamins.
- Krifka, M. (2006). Basic notions of information structure. In C. Fery and M. Krifka (eds.). *Interdisciplinary studies on information structure*, 6: 1-46.
- Kwak, S. (2010). Negation in Persian. *Iranian Studies* 43: 621-636.
- Larson, R. and Yamakido, H. (2008). Ezafe and the deep position of nominal modifiers. In L. McNally and C. Kennedy (eds.), *Adjectives and adverbs: Syntax, semantics and discourse*. Oxford: Oxford University Press, 43-70.
- Larson, R. and Samiian, V. (2018). Ezafe, PP, and the nature of nominalization. Paper presented at the 54th Meetings of the Chicago Linguistic Society (CLS). University of Chicago, April 28.
- Laka, I. (1990). Negation in syntax: On the nature of functional categories and projections, Doctoral Dissertation, MIT.
- Lasnik, H. (1981). Restricting the theory of transformations: A case study. In N. Hornstein and D. Lightfoot (eds.). *Explanations in linguistics: The logical problem of*

- language acquisition*, Longmans, London, 152-173.
- Lobeck, A. (1995). *Ellipsis: Functional heads, licensing, and identification*. Oxford: Oxford University Press.
- Lopez, L. (1999). VP-ellipsis in Spanish and English and the features of auxiliaries. *Probus* 11: 263-297.
- Lopez, L. (2000). Ellipsis and discourse linking. *Lingua*, 110: 183-213.
- Lopez, L., and Winkler, S. (2000). Focus and Topic in VP-Anaphora Constructions. *Linguistics*, 38: 623-664.
- McCloskey, J. (1991). Clause structure, ellipsis and proper government in Irish. *Lingua*, 85: 259-302.
- Megerdoomian, K. (2001). Event structure and complex predicates in Persian. *Canadian Journal of Linguistics/Revue canadienne de linguistique*, 46: 97-125.
- Megerdoomian, K. (2012). The status of the nominal in Persian complex predicates. *Natural Language & Linguistic Theory*, 30(1): 179-216.
- 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.
- Merchant, J. (2005). Revisiting syntactic identity conditions. Handout from *the Workshop on Ellipsis*, University of California, Berkeley.
- Merchant, J. (2007). Voice and ellipsis. Ms., University of Chicago.
- Merchant, J. (2013). Voice and ellipsis. *Linguistic Inquiry*, 44: 78-108.
- Molnár, V. (2001). Contrast from a contrastive perspective. ESSLI 2001, Workshop on Information Structure, Discourse Structure and Discourse Semantics. Available at: <https://www.hf.uio.no/ilos/forskning/prosjekter/sprik/pdf/molnar.pdf>
- Nakao, Ch., Yoshida, M., and Ortega-Santos, I. (2012). On the syntax of Why-stripping. In A. Arnett and R. Bennett (eds.) *Proceedings of the 30th West Coast Conference on Formal Linguistics*, 270-280.
- Neijt, A. (1979). *Gapping: A contribution to sentence grammar*. Dordrecht: Foris.
- Ntelitheos, D. (2004). The syntax of elliptical and discontinuous nominals. MA Thesis, UCLA.
- Ortega-Santos, I., Yoshida, M., and Nakao, Ch. (2014). On ellipsis structures involving a wh-remnant and a non-wh-remnant simultaneously. *Lingua*, 138: 55-85.
- Otani, K., & Whitman, J. (1991). V-raising and VP-ellipsis. *Linguistic Inquiry*, 345-358.
- Paul, W. (2005). Low IP area and left periphery in Mandarin Chinese. *Recherches linguistiques de Vincennes*, 33: 111-134.
- Rasekhi, V. (2014). Missing objects in Persian. Ms., Stony Brook University.
- Rasekhi, V. (2016). Missing objects in Persian. In J. Ghomeshi, C. Jahani, and A. Lenepveu-Hotz (eds.) *Further topics in Iranian Linguistics*. Peeters Publishers, Cahiers de Studia Iranica series, 58: 157-174.
- Reinhart, T. (1982) Pragmatics and linguistics: An analysis of sentence topics. *Philosophica*, 27: 53-94.
- Rizzi, L. (1997). On the fine structure of the left periphery. In L. Haegeman (ed.). *Elements*

- of grammar. Handbook of Generative Syntax.* Kluwer, Dordrecht, 281-337.
- Rizzi, L. (1982). *Issues in Italian syntax.* Dordrecht, Foris.
- Rizzi, L. (1986). Null objects in Italian and the theory of pro. *Linguistic inquiry*, 17: 501-557.
- Rizzi, L. (1999). On the position of “Int(errogative)” in the left periphery of the clause. *Current studies in Italian syntax: Essays offered to Lorenzo Renzi*, 287-296.
- Rooth, M. (1985). Association with Focus. Doctoral Dissertation. University of Massachusetts, Amherst.
- Rooth, M. (1992a). A Theory of focus interpretation. *Natural Language Semantics*, 1: 75-116.
- Rooth, M. (1992b). Ellipsis redundancy and reduction redundancy. In S. Berman and A. Hestvik (eds.) *Proceedings of the Stuttgart Ellipsis Workshop*. IBM, Heidelberg.
- Rooth, M. (1996). Focus. In Sh. Lappin (ed.) *The handbook of contemporary semantic theory*. Oxford: Blackwell Publishing, 271-297.
- Ross, J. R. (1969). Guess who? In R. Binnick, A. Davison, G. Green, and J. Morgan (eds.) *Papers from the 5th regional meeting of the Chicago Linguistic Society*, 252-286.
- Samiian, V. (1983). Origins of phrasal categories in Persian, an X-bar analysis. Doctoral Dissertation. UCLA.
- Samiian, V. (1994). The Ezafe construction: Some implications for the theory of X-bar syntax. In M. Marashi (ed.), *Persian Studies in North America*, Bethesda, MD: Iranbooks, 17-41.
- Sato, Y. and Karimi, S. (2016). Subject-object asymmetries in Persian argument ellipsis and the anti-agreement theory. *Glossa: a journal of general linguistics* 1: 1-31.
- Schuyler, T. (2001). Wh-movement out of the site of VP Ellipsis. *Syntax and semantics at Santa Cruz*, 3:1-20.
- Shabani, M. (2013b). Pāreye jomlehā dar zabāne fārsi [Fragments in the Persian language]. *Pazhoheshhāye Zabāni*, 4: 81-100.
- Shafiei, N. (2015). Ellipsis in Persian complex predicates: VVPE or something else. *Annual Conference of the Canadian Linguistic Association*.
- Shafiei, N. (2016). *Persian complex predicates: Evidence for verb movement from ellipsis and negation*. MA thesis, University of Calgary.
- Solé, Y. R., and Solé, C. A. (1977). Modern Spanish syntax: a study in contrast. Lexington, MA: D.C. Heath and Co.
- Strawson, P. F. (1964). Identifying reference and truth-values. *Theoria*, 30(2): 96-118.
- Taleghani, A. (2008). The modality, aspect, and negation in Persian. Philadelphia: John Benjamins Publishing Company.
- Tomioka, S. (1998). The laziest pronouns. *Japanese/Korean Linguistics*, 7: 515-531.
- Toosarvandani, M. (2008). Wh-movement and the syntax of sluicing. *Journal of Linguistics*, 44: 677-722.
- Toosarvandani, M. (2009). Ellipsis in Farsi complex predicates. *Syntax*, 12(1): 60-92.
- Toosarvandani, M. (2015). Persian. In The J. van Craenenbroeck and T. Temmerman (eds.) *Oxford handbook of ellipsis*, Oxford University Press.

- Tsimpli, I. M. (1995). Focusing in Modern Greek. In K. Kiss (ed.) *Discourse configurational languages*. Oxford: Oxford University Press, 176-206.
- Vahedi-Langrudi, M. M. (1996). *The syntax, semantics and argument structure of complex predicates in modern Farsi*. Doctoral Dissertation, University of Ottawa.
- Vallduví, E. and Engdahl, E. (1996). The linguistic realization of information packaging. *Linguistics*, 34(3): 459-520.
- van Craenenbroeck, J. (2009). When even repair fails: The case of sluicing. *DGfS, Workshop on Repairs*, University of Osnabrück, Germany.
- Wasow, T. (1972). Anaphoric relations in English. Doctoral Dissertation, MIT.
- Williams, E. (1977). Discourse and logical form. *Linguistic Inquiry*, 8: 101-139.
- Winkler, S., and Schwabe, K. (2003). Exploring the interfaces from the perspective of omitted structures. In K. Schwabe and S. Winkler (eds.) *The interfaces: deriving and interpreting omitted structures*. Amsterdam: John Benjamins, 1-26.
- Winkler, S. (2005). *Ellipsis and focus in generative grammar*. Berlin: Mouton de Gruyter.
- Zubizarreta, M. L. (1998). *Focus, prosody, and word order*, Cambridge, MA: MIT Press.
- Zwart, C. Jan-Wouter. (1997). *Morphosyntax of verb movement: A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer Academic Publishers.