

Karimi, Simin & Azita Taleghani

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*Wh-movement, interpretation, and optionality in Persian**

Simin Karimi and Azita Taleghani
University of Arizona

1. Introduction

Persian, an SOV language with fairly free word order, neither exhibits obligatory single wh-movement comparable to English, nor obligatory multiple wh-movement observed in Bulgarian. Nevertheless, wh-arguments may undergo seemingly optional movement individually or multiply in this language. Moreover, the sentential wh-ad adjuncts *cherâ* 'why' and *chetor(i)* 'how', similar to other kinds of wh-ad adjuncts such as *kojâ* 'where' and *key* 'when', may appear in different positions in the Persian clause.

In this chapter, we examine the syntax and semantics of Persian wh-arguments and wh-ad adjuncts, and show that (a) the two types of wh-phrases have distinct internal structures that are responsible for their distinct landing sites and syntactic behavior, (b) the movement of both types of wh-phrases has an effect on the semantic output of the derivation, (c) the feature responsible for wh-movement is not a wh or focus feature, but rather a purely syntactic feature in the sense of Chomsky (2000), and (d) the wh-feature of both wh-types must be in a local Agree relation with a wh-operator in Spec/CP to allow scope marking and sentence typing. This last claim predicts that an intervening polarity item would block the Agree relation, a prediction that is borne out empirically. Finally, the analysis in this chapter provides some implications for movement and scrambling in natural language. We show that scrambling is not semantically vacuous, and that its application has an impact on the semantic output of the clause, and thus is not optional in the sense previously assumed (Saito 1985 and work thereafter, Saito and Fukui 1998, among others).

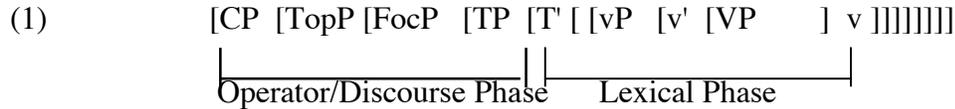
The chapter is structured as follows. We start with an overview of Persian phrase structure and some properties of Persian syntax in section 2. The relevant wh-data are introduced in section 3. Previous literature is briefly reviewed in section 4, followed by our own analysis in section 5. Supporting evidence for the proposals advanced in this chapter appears in section 6. The summary of the chapter and the concluding remarks are presented in section 7.

2. Overview of Persian Syntax

Persian is a Null-subject, SOV language, with seemingly free word order. It has been suggested that the phrase structure of this language consists of two major domains (cf. Phases¹) (Karimi 2005): the lexical domain and the operator/discourse domain. The lexical domain consists of vP, with T as an extension of this domain. The operator/discourse domain consists of CP, which could optionally include two topic positions, and a focus projection. Each one of these positions appears in a fixed order relative to others. This is presented in (1).

* The first author has directly benefited from Joe Emonds' teaching and guidance, while the second author has profited from his ideas and writings. We are both grateful to him.

¹. We are employing the term phase in the sense of Chomsky (2001b) and work thereafter.



Persian is a topic prominent language in the sense of Kiss (1994, 1997, 2003). That is, the element that moves out of the vP ranges over a number of different phrases, including the subject phrase. However, no element is extracted when the entire sentence is in focus. Furthermore, the language lacks structural passive, raising to subject, overt or covert expletives. Thus the Spec of TP is not a typical subject position, but is projected when there is a background topic present in the clause. The Spec of TopP is reserved for another type of topic, most possibly a shifted topic in the sense of Karimi (2005). (See also Svenenious (2002) on this issue².) FocP is the projection that is sandwiched inside the operator/discourse domain when an element, including the wh-argument, is focused (Karimi, 2005). The configuration in (1) is partially compatible with Rizzi (1997), who suggests that a clause may have more than one topic, while the focus is unique³.

3. Data

The wh-argument can remain *in situ*, as in (2a), and is optionally moved, as in (2b) and (2c).

- (2) a. Kimea diruz [_{vP} ketâb-ro *be ki* dâd]?
 K yesterday book-Acc to who gave
 'Who did Kimea give the book to yesterday?'
 b. [_{TopP} Kimea [_{FocP} *be ki* [_{TP} diruz [_{vP} ketâb-ro t dâd]]]]
 c. [_{FocP} *be ki* [_{TP} Kimea [diruz [_{vP} ketâb-ro t dâd]]]]
 'Who was it that Kimea gave the book to yesterday?'

². There are some distinctions between a shifted topic and a background topic. Consider the following question.

- (i) ketâb-â chi shod?
 book-pl what became-3sg
 'What happened to the books.'

A natural answer to this question would be the following:

- (ii) Kimea unâ-ro diruz *be man* dâd
 K they-Acc yesterday to me gave-3sg
 'Kimea gave them to me yesterday.'

In this sentence, *Kimea* indicates a *change* of attention in discourse. The term *Shifted Topic* is employed for this type of topicalization, and places the moved element in Spec-TopP. The pronominal *unâ-ro* 'them' in this example refers to *ketâb-â* which has already been in the discourse (cf. example (i)). We employ the term *Background Topic* for this type of topicalization.

³. Rizzi (1997) has replaced CP by ForceP.

As observed by Karimi (1999), the *wh*-phrase in (2a) receives an information focus interpretation. The answer to the question in (2a) is something like *ketâb-ro be Parviz dâd* 'she gave the book to Parviz.' The *wh*-phrase in (2b) and (2c) has moved into the Spec of FocP, and receives a contrastive interpretation (Karimi 1999, 2003). The type of question represented by (2b) and (2c) occurs when the speaker has a set of people in mind, and wonders which one was the receiver of the book. The topic phrase *Kimea* precedes the FocP in (2b), while it follows it in (2c). Given the phrase structure in (1), the subject DP is in Spec-TopP in (2b) and in Spec-TP in (2c).

The distinction we observed in (2) is more apparent in the following contrast.

- (3) a. pro fekr mi-kon-i [(ke) emshab [_{VP} ki be restorân bi-yâd]
 thought dur-do-2sg that tonight who to restaurant subj- come-3sg
 'Who do you think will come to the restaurant tonight?'
 b. [_{FocP} ki pro fekr mi-kon-i [(ke) emshab t barâ shâm bi-yâd]
 who thought dur-do-2sg that tonight for dinner subj-come-3sg
 'Who is it you think will come for dinner tonight?'

According to our informants, the first sentence is an appropriate utterance when the speaker and hearer are going to a restaurant, and they wonder who they might see there without having a specific set of restaurant-goers in mind. The one in (3b) is appropriate when the speaker and the hearer have invited a set of guests, and they wonder which people out of that set will show up. The same contrast is observed with respect to other verbs as evident in the following contrast.

- (4) to hads mi-zad-i / dust-dâst-i / xâhesh kard-i / [pro ki-ro be-bin-i]
 you guess hab-hit-2sg / friend had-2sg / ask did-2sg [who-râ subj-see-2sg]
 'Who did you guess/like/ask to see?'
 (5) to [ki-ro] hads mi-zad-i / dust-dâst-i / xâhesh kard-i / [pro t be-bin-i]
 you who-râ guess hab-hit-2sg / friend had-2sg / ask did-2sg [subj-see-2sg]
 'Who is it that you guessed/liked/asked to see?'

Relevant to our discussion is the fact that the *wh*-phrase follows the complementizer *ke* 'that', as in (6), indicating that the *wh*-phrase is not in the Spec of CP (see also the data in (3)). (6b) is ill-formed since the *wh*-phrase precedes the complementizer.

- (6) a. pro fekr mi-kon-i [ke ki-ro Kimea tu mehmuni be-bin-e]
 thought dur-do-2sg that who-Acc K in party subj-see-3sg
 Lit: you think who is it that Kimea will see at the party?
 b. * pro fekr mi-kon-i [ki-ro ke Kimea tu mehmuni be-bin-e]

Furthermore, more than one argument *wh*-phrase can be fronted, as in (7b).

- (7) a. to fekr mi-kon-i (ke) ki bâ ki be-raghs-e
 you thought dur-do-2sg that who with who subj-dance-3sg
 'Who do you think will dance with whom?'

- b. [_{FocP} *kij bâ kij* [_{TP} *to* [_{VP} *fekr-mi-kon-i* [_{CP} *(ke) t_j*
 who with who you thought-dur-do-2sg that
t_j be-raghs-e
 subj-dance-3sg
 Lit: Who with whom is it that you think will dance.'

Again, the fronted wh-phrases receive a contrastive interpretation. This occurs in a context when the speaker has a specific set of people in mind. The answer to this question is something like: *it will be the case that Kimea will dance with Rahjue, and Parviz with Arezu*, as opposed to other possible combinations of the members of the set.

The two fronted wh-phrases cannot be separated by another element, as in (8a), nor can superiority be violated, as in (8b).

- (8) a. ??*kij emruz bâ kij pro fekr-mi-kon-i* [_{CP} *t_j t_j be-raghs-e*
 who today with who thought-dur-do-2sg subj-dance-3sg
 (Karimi 2003)
- b. **bâ kij fekr mi-kon-i ki t_j be-raghs-e*
 with whom thought dur-do-2sg who subj-dance-3sg

The sentence in (8a) is awkward at best. The fact that the two fronted wh-phrases cannot be separated supports Richards' (1997, 2001) claim that there are multiple Spec positions in multiple wh-fronting languages, such as Bulgarian⁴. The sentence in (8b) is ill-formed on a reading where both wh-phrases need to be answered. This issue suggests that superiority (subsumed under the Minimal Link Condition (MLC), see section 6) holds in these cases, as observed by Karimi (1999). (8b) is grammatical on a reading where the wh-phrase *in situ* is interpreted as an indefinite quantifier such as *someone*.

Turning to wh-adjuncts, these elements appear in different positions as well.

- (9) a. *to hads mi-zan-i Kimea chetori in mâshin-ro dorost karde*
 you guess hab-hit-2sg K how this car-râ right made
 Lit. You guess, as for Kimea, how (she) fixed this car.
- b. *chetori to hads mi-zan-i Kimea in mâshin-ro dorost karde*
 'How do you guess has Kimea fixed this car?'

⁴. Analyzing multiple wh-constructions in Bulgarian and some other languages, Richards (1997, 2001) suggests that in addition to MLC, *Shortest Move* (ShM) is required to adequately account for the data in those languages. Consider the following data:

- (i) a. *koj kogo vizda ?*
 who whom sees
 'Who sees whom?'
- b. **kogo koj vizda* (Rudin 1988:472-473, per Richards 1997:63)

Furthermore, the examples in (8) also support Grewendoff's (2001) analysis where he suggests that multiple wh-fronting is a case of wh-cluster fronting where all wh-phrases are attached to each other, and move as a single cluster.

The wh-adjunct *chetori* 'how' can be placed in different positions. In each case, it takes scope over the clause it appears in. In (9a), it has scope over the embedded clause. The sentence in (9b) is ambiguous since the wh-adjunct can receive scope in either clause⁵.

The following sentences show that *cherâ* 'why' may also appear in different positions.

- (10) a. to fekr mi-kon-i (ke) *cherâ* Kimea in xuna-ro dar Tucson sâxte
 you thought dur-do-2sg that why K this house-Acc in Tucson built-3sg
- b. *cherâ* to fekr mi-kon-i (ke) Kimea in xuna-ro dar Tucson sâxte
 'Why do you think Kimea built this house in Tucson?'

Similar to (9a), the adjunct *cherâ* 'why' appears in the embedded clause in (10a), and has scope only in that clause. The sentence (10b) is ambiguous, indicating that the wh-adjunct must have originated in the embedded clause, and has moved into the matrix clause. This wh-adjunct seems to be subject to obligatory movement from its base position, as noted by Kahnmuipour (2001).

- (11) a. Ali bâ Maryam ezdevâj kard [chon dust-esh dâsht]
 A with M marry did because friend-her had-3sg
 'Ali married Maryam because he loved her.'
- b. *Ali bâ Maryam ezdevâj kard [cherâ]
 A with M marry did3sg why
- c. Ali *cherâ* bâ Maryam ezdevâj kard
 A why with M marry did-3sg
 'Why did Ali marry Maryam?' (Kahnmuipour 2001:47)

The wh-adjunct originates in the postverbal position, and obligatorily moves into the matrix position in order to take scope over that sentence⁶.

4. Previous accounts

Raghibdust (1994) suggests that wh-phrases in Persian undergo topicalization. Cheng (1991) argues along the same lines with respect to Egyptian Arabic. However, wh-movement has been vastly considered as an instance of focus movement in the literature. This analysis can be traced back to the observation that a wh-element is inherently focused (Rochmont 1978, 1986; Horvath 1986; Bresnan and Mchombo 1987; Kiss 1998, among others). Some authors have suggested that the wh-moved element and focus appear in the same position (Culicover 1992, Simpson 2000, and Urbina 1990, among others). If wh-phrases are focal inherently, then there is some

⁵. This is compatible with Jackendoff (1972), McConnell-Ginet (1982), and Ernst (1984), who suggest that adverb placement is driven by interpretation.

⁶. The adjunct *cherâ*, seems to behave differently from other adjuncts. This is similar to its counterparts in other languages, as evidenced by the following contrast in English.

- (i) What did you buy where?
 (ii) *What did you buy why?

An analysis of this distinction is beyond the scope of this paper.

problem with an analysis that considers wh-movement as an instance of topicalization for the following reasons:

- Topic implies familiarity/old information, while focus represents new information.
- Topic lacks quantificational reading, and thus can optionally appear in a Clitic Left Dislocation (CLLD) construction; focus cannot. This is exemplified in (12)-(14) in which *(e)sh* is a clitic pronoun representing the third person singular.

(12) ketâb-ro diruz Kimea xarid-(esh)
book-Acc yesterday K bought-it
'The book, Kimea bought it yesterday.'

(13) ki-ro to diruz did-i-*sh
who-Acc you yesterday saw-2sg-her
'Who was it you saw yesterday?'

(14) KETAB-ro diruz Kimea xarid-*esh
'It was the book that Kimea bought yesterday.'

The contrast we observe in these examples is due to the fact that the topicalized element in (12) is not quantificational, while the focal elements in (13) and (14) are⁷. The following example supports the idea that quantificational elements are not compatible with CLLD constructions.

(15) har filmi-ro yekbâr pro did-am-*esh
each movie-Acc once saw-1sg-it
'I saw each movie once.'

The quantified element *har filmi* 'each movie' cannot bind the clitic pronominal *-esh* in (15). Thus the wh-phrase in (13) patterns with the focused and quantified elements in (14) and (15), but not the topicalized element in (12).

We have seen thus far that wh-phrases do not undergo movement to Spec of CP and are not topicalized. Thus the following questions emerge at this point:

- What is the nature of the two types of wh-phrases?
- How different are the wh-arguments from the wh-adjuncts?
- How does the sentence receive a question interpretation in the absence of a wh-phrase in the Spec of CP?

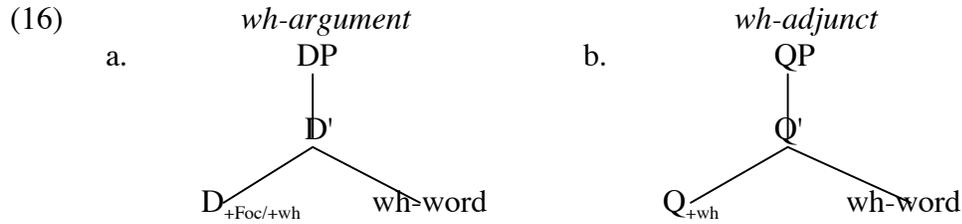
We address these questions in the next two sections.

5. Analysis

In order to answer the questions raised above, we first provide a proposal regarding the internal structures of the two types of wh-phrases. This proposal claims that wh-arguments have a D-

⁷. The same situation has been observed by Rizzi (1997) for Italian and by Kiss (2003) for Hungarian, among others.

head, while wh-adjuncts lack this nominal head, and are purely quantificational. Furthermore, the head of a wh-argument has an inherent focus feature. Wh-adjuncts lack this feature. Finally, both heads have a wh-feature. These proposals are presented in (16).



We further suggest two similarities between the two types of wh-phrases based on our observations regarding their syntactic behavior:

- ◆ There is a wh-operator in the Spec of CP in a wh-interrogative sentence (Aoun and Li 1993)⁸. This is illustrated in (17).



- ◆ The wh-feature moves up to C to be in an Agree relation with the operator⁹. This proposal suggests that the sentence becomes ungrammatical if the feature movement is blocked, a prediction that is borne out, as will be discussed in section 6.

Furthermore, we suggest the following specific properties for wh-arguments and wh-adjuncts.

Wh-arguments

- ◆ It is the structural position (cf. Spec of FocP) that provides the contrastive reading for the wh-argument.
- ◆ The empty D-head can be filled by a quantified element in which case it loses its nominal property, and becomes purely quantificational. This is shown in (18):

(18)

Ki	'who'	yeki	'someone'	hichki	'no-one'
Chi	'what'	yechizi	'something'	hichchi	'nothing'
Kojâ	'where'	yekjâi/yekjâi	'somewhere'	hijjâ	'nowhere'

⁸ See also Megerdooian and Ghanjavi (2001) and Taleghani (2003) who have made similar suggestions for Persian.

⁹ . Pesetsky (2000) explains the existence of a Superiority violation in German by suggesting a one-Spec-CP system in this language combined with the movement of the wh-feature to C. According to Pesetsky, English cannot violate the Superiority Condition, since this language has a multiple-Spec-CP system, and thus all wh-phrases must move into the Spec of CP (either overtly or covertly). The analysis in this paper seems to contradict Pesetsky's account since wh-movement is subject to a superiority condition in Persian (cf. 8b). However, the landing site of wh-arguments is the Spec of the FocP in this language, which may branch multiply. Thus superiority must be observed due to the multi-Spec-FocP system in Persian, yet allowing the wh-feature to move to C.

- ◆ The D-head is filled by a wh-operator representing contrast in the case of D-linked wh-arguments such as *kodum ketâb* 'which book', *che-kasi* 'which person, and *che chizi* 'which thing'. Thus, D-linked wh-arguments are inherently contrastive. This type of wh-argument, similar to *only*-phrases, does not have to move into the Spec of FocP. Its appearance in different positions is dependent on its scope over the rest of the clause, as shown in (19a) and (19b). Similar to other types of quantified phrases, they cannot appear in a CLLD construction, as in (19c).

- (19) a. Kimea kodum ketâb-ro emruz be to dâd?
 K which book-râ today to you gave
 'As for Kimea, Which book was it that Kimea gave you today?'
- b. kodum ketâb-ro Kimea emruz be to dâd?
 'Which book was it that Kimea gave to you today?'
- c. kodum ketâb-ro to emruz xarid-i-*sh?
 Which book-Acc you today bought-2sg-it
 'Which book did you buy today?'

Wh-adjuncts

- ◆ Wh-adjuncts have an empty quantifier head, and lack a D-head, as illustrated in (16b). The lack of a D-head is shown by the fact that these elements cannot appear in cleft constructions:

- (20) a. un ki bud ke har ruz injâ mi-âmad
 that who was that every day here dur-came-3sg
 'Who was it that used to come here every morning?'
- b. *un chetori/cherâ bud ke Kimea mashin-ro dorost kard
 that how/why was that K car-Acc right did
 '*how/why was it that he fixed the car?'

Similar distinctions are observed with respect to English wh-arguments and purely quantified wh-adjuncts.

- (21) a. Who was it that she loved so much?
 b. What was it that she bought yesterday?
- (22) a. *How was it that he fixed the car?
 b. *Why was it that he distinguished the difference.

The sentence in (22a) cannot receive a response such as *promptly*, indicating that the wh-adjunct cannot have moved out of the embedded clause. As for the sentence in (22b), it is ill-formed as a cleft construction, but fine otherwise. That is, 'why' cannot be interpreted as being extracted out of the embedded phrase. Thus the response to this question cannot be a clause such as *based on his observations*.

- ◆ Another difference between the wh-arguments and wh-adjuncts is that the latter must move into the matrix clause in order to receive a matrix interpretation. This is true of wh-phrases in some other languages as well. (See the discussion of Bangla in section 6. See also footnote 16.)

The summary of the properties of the wh-phrases are shown in (23).

Chart (23)

	Q	D	Informational	contrastive
Wh-adjunct	+	-	-	-
Wh-argument in situ	+	+	+	-
Spec/FocP	+	+	-	+
D-linked wh-phrase	+	+	-	+

The element in Spec of FocP and the D-linked wh-phrases have the same properties. All wh-phrases have a quantificational property by virtue of the movement of their wh-feature to C.

Following Karimi (2005), we further suggest that the movement of the wh-phrase is triggered by the EPP feature in the sense of Chomsky (2000).

(24) The head H of phase Ph may be assigned an EPP-feature. (Chomsky 2000:109)

An EPP feature is optionally assigned to a head (such as Foc) to attract the movement of the wh-phrase. If this movement were triggered by a focus-feature or the wh-feature, it would be difficult to account for those cases where the wh-phrase remains in situ. Thus the optionality of movement boils down to the optionality of the selection of an EPP feature¹⁰.

6. Supporting evidence

The following claims have been made thus far in this chapter:

- A. The extracted wh-argument is in Spec of FocP, bearing contrastive focus interpretation.
- B. There is a wh-operator in the Spec of CP, and

¹⁰. Chomsky (2001a:8) suggests that EPP applies freely. He states that “It is hard to think of a simpler approach than allowing internal Merge (a ‘grammatical transformation’), an operation that is freely available.”

There are alternative suggestions regarding the syntactic movement of wh-phrases. The following is one example.

(i) Phase Balance (Heck and Müller 2000:104)

Phases must be balanced: if P is a phase candidate, then for every feature F in the numeration there must be a distinct potentially available checker for F.

The statement in (i) is meant to eliminate the optional assignment of an uninterpretable EPP feature to the head of a phase (v and C). Felser (2004) states that Phase Balance entails ‘looking ahead’, an assumption that is ruled out by Chomsky (2001b). We will not pursue this issue here.

- C. The wh-feature of the wh-argument and the wh-adjunct moves to C for a local Agree relation with the wh-operator

We offer the following pieces of evidence in support of our analysis, starting with the claim in A.

A. *Evidence for Spec of FocP as the landing site for wh-arguments*

Sabel (2000) suggests that wh-movement is triggered by the need to check not only the wh-feature, but also the focus feature. The following examples, taken from Kikuyu, indicate that the wh-phrase may remain in situ, as in (25a), or move to the clause initial position, as in (25b).

Kikuyu

- | | | | |
|------|----|--|------------------------|
| (25) | a. | kamaú a- ón- ¹ íré o? | <i>Wh-in-situ</i> |
| | | Kamau SP-see-T who? | |
| | | (SP = Subject prefix, T= Tense/Aspect affix) | |
| | | 'Who did Kamau see?' | |
| | b. | nóo o-t em- íré mo-te? | <i>Moved wh-phrase</i> |
| | | FP-who PP-cut-T CP-tree | |
| | | (FP= Focus particle, PP =pronominal prefix) | |
| | | 'Who cut a tree?' | (Sabel 2000:429) |

The focus particle *nó* appears on the extracted wh-phrase, but not on the one in situ. Within the system proposed here, the focus particle must be in Spec of FocP, and is attached to the wh-argument after it moves into that position in (25b).

B. *Evidence for the existence of a wh-operator in the Spec of CP*

In Dari, a variant of Persian spoken in Afghanistan, the wh-operator may surface overtly as a scope marker. This is shown in (26) - (28)¹¹. The overt wh-phrase in the matrix clause marks the scope of the wh-phrase in the embedded clause.

- (26) *chi fekr mi-kon-i [u ki-râ did] ?*
 what thought dur-do-2sg she who-Acc saw
 'Who do you think she saw?' Lit: what do you think who she saw?
- (27) *chi feker mi-kon-i [u cherâ raft]?*
 what thought dur-do-2sg he why went
 'Why do you think he left?' Lit: what do you think why she left?
- (28) *chi feker mi-kon-i [u chetor az zendaan faraar kard]?*
 What thought dur-do-2sg he how from jail escape did-3sg
 'How do you think he escaped from prison?'

¹¹. The data are from Jan Mohammad, a native speaker of Dari (p.c.)

Lit: what do you think how he escaped from prison.

Similar cases have been observed in other languages. Turano (1995) reports that wh-phrases move into the focus position in Albanian. The following examples, exhibiting this property of Albanian, are taken from Sabel (2000). The wh-phrase has moved into the Spec of FocP in its own clause in (29a), while it has moved farther up into the Spec of FocP in the higher clause in (29b). In both cases, there is a scope marker in the Spec of CP in the matrix clause, allowing the wh-phrase to receive a wide scope.

- (29) a. $[_{CP} A \text{ mendon } [_{CP} \text{ se Maria thotë } [_{CP} \text{ se } \text{çfare}_i \text{ ka sjelle burri } t_i]]]$
 Q you-think that M says that what has brought her-husband
 'What do you think that Mary says her husband has brought?'
- b. $[_{CP} A \text{ mendon } [_{CP} \text{ se } \text{çfare}_i \text{ Maria thotë } [_{CP} \text{ se ka sjelle burri } t_i]]]$
 Q you-think that what M says that has brought her-husband
 (Sabel 2000:430)

These examples are compatible with the analysis advanced here, which states that there is a wh-operator in Spec of CP: the empty operator shows up as a lexical element in Albanian.

Further evidence for the presence of a scope marker comes from German and Romani. McDaniel (1989) argues that the wh-phrase moves in these two languages, but not necessarily all the way to Spec of CP. However, the Spec/CP must be filled by the scope marker *was* in German and *so* in Romani when there is partial wh-movement. The 'a' sentences in (30) and (31) represent full wh-movement in German and Romani, while those in 'b' exemplify partial wh-movement with a scope marker in the Spec of CP¹². The scope marker in these languages is the overt realization of the wh-operator we suggest to be present in Persian.

- (30) a. $[\text{mit wem}]_i \text{ glaubt } [_{IP} \text{ Hans } [_{CP} t_i \text{ dass } [_{IP} \text{ Jakob jetzt spricht }]]]?$
 with who believes Hans that Jakob now t_i speaks
 'With whom does Hans think that Jakob is now talking?'
- b. $\text{was}_i \text{ glaubt } [_{IP} \text{ Hans } [_{CP} [\text{mit wem}]_i [_{IP} \text{ Jakob jetzt } t_i \text{ spricht }]]]?$
 what believes Hans with whom Jakob now talks
- (31) a. $\text{kas}_i [_{IP} \text{ o Demiri mislinol } [_{CP} t_i \text{ so } [_{IP} i \text{ arifa dikh}^{\text{h}}\text{a } t_i]]]?$
 'Whom does Demir think that Arifa saw?'
- b. $\text{so}_i [_{IP} \text{ o Demiri mislinol } [_{CP} \text{ kas}_i [_{IP} i \text{ arifa dikh}^{\text{h}}\text{a } t_i]]]?$
 (McDaniel 1989:568)

¹². Some authors have observed that there are differences between *partial movement constructions* and *copy constructions*. In the case of the latter, the same wh-phrase appears in two (or more) wh-positions in a multi-embedded construction.

(i) Wie glaubst du, wie sie das gelöst hat?
 How believe you, how she that solved has
 'How do you believe that she solved that?'

See Felser (2004), and references cited there, on this issue.

Note that *so* is homophonous with the complementizer in Romani.

C. Evidence for the movement of the *wh*-feature to C

As mentioned above, we propose that the *wh*-feature must move to C to be in a local Agree relation with the operator. This proposal is supported by three pieces of evidence.

First, in a multiple *wh*-construction, we always have a pair-listing interpretation, as noted by Lotfi (2003).

(32) Ki chi-ro xarid
 who what bought-3sg
 'Who bought what?'

(33) ki bâ ki bâzi kard
 who with whom play did-3sg
 'Who played with whom?'

The answer to (32) is something like: '*Kimea bought a dress, Rahjue a hat, and I bought Chomsky's book on Hegemony or Survival*'. A single-listing interpretation is not an option, indicating that all *wh*-features must move to C.

The second piece of evidence is provided by extraction out of adjuncts. In the following example, the movement of the *wh*-feature is blocked in the embedded C, and cannot move out of the adjunct CP. The structure of (34a) is provided in (34b).

(34) a. *Parviz raghsid chon-ke ki unjâ bud.
 P dance-3sg because who there was

b. *_{[CP]Op} [C [Parviz raghsid [_{CP} [chon-ke [ki unjâ bud]]]]]

Note that (34) is grammatical if the *wh*-phrase in the embedded clause is interpreted as an echo question.

Finally, it is well-known that *wh*-phrases cannot stay in the domain of certain scope-bearing elements, including Negative Polarity Items (NPI). This restriction is reminiscent of the Intervention Effect by Pesetsky (2000).

(35) Intervention Effect:
 A semantic restriction on a quantifier (including *wh*) may not be separated from that quantifier by a scope-bearing element. (Pesetsky 2000:67)

The following contrast provides evidence for the intervention effect.

(36) a. *_{[CP]OP} [hichkas *chi-ro* na-xarid]
 nobody what-Acc neg-bought

b. [_{CP} OP [_{FocP} *chi-ro*_i hichkas t_i na-xarid]
 'What was it that no one bought?'

The NPI intervenes between the wh-operator and the wh-phrase in (36a), blocking the interrogative interpretation. Note that this sentence is fine as an echo question. The wh-argument has moved into the Spec of FocP in (36b), rescuing the ungrammatical sentence. The same blocking effect is observed when an adjunct is in the scope of negation, as in (37a). Again, the movement of the wh-adjunct to a position outside the scope of negation rescues the sentence, as in (37b).

- (37) a. *pro fekr mi-kon-i hichkas cherâ na-yâmad
 thought dur-do-2sg no one why neg-came-3sg
- b. pro fekr mi-kon-i cherâ hichkas na-yâmad
 'Why do you think no one came?'

In order to explain the ungrammaticality of (36a) and (37a), the phrase structure in (1) needs to be revised to include the Neg phrase, as in (38). (1) is repeated below for ease of reference,

- (1) [CP [TopP [FocP [TP [T' [[vP [v' [VP] v]]]]]]]]
 └──────────────────────────┘ └──────────────────────────┘
 Operator/Discourse Phase Lexical Phase

- (38) [CP [TopP [FocP [NegP **Neg** [TP [vP [VP]]]]]]]

Quantifier phrases are merged in different positions in order to have scope over the c-commanded domain. The quantifier phrases in (36a) and (37a) are in a higher position than the wh-phrase. This is illustrated in (39), with irrelevant details omitted.

- (39) [CP OP C [NegP **Neg** [hichkas [TPwh]

In order for the wh-feature to be in an Agree relation with the operator in the Spec of CP, it needs to move to C. In (39), the head of the negative quantifier phrase intervenes. The licensing of the NPI by Neg blocks the movement of the wh-feature through this head, as illustrated in (40).

- (40) [CP OP C [NegP **Neg** [hichkas Q [TP [vP wh]
- └──────────────────────────┘
 *

We suggest that the configuration in (40) violates the Minimal Link Condition (MLC), stated in (41)¹³:

- (41) Minimal Link Condition (MLC) (Chomsky 1995:311)
 K attracts α only if there is no β , β *closer* to K than α such that K attracts β .

¹³. This is in the spirit of Hagesawa (1994). But also see Beck (1997).

The wh-feature has to move to C through the head of Neg. Thus the head feature of the NPI and the wh-feature of the wh-phrase compete for the same position. The NPI head is closer, and therefore, the movement of the wh-feature is blocked.

The movement of the wh-phrase into a higher position in (36b) allows the wh-feature to move to C. In this case, the wh-argument is in the Spec of FocP.

(42) $[_{CP} OP C [_{FocP} wh [_{NegP} \mathbf{Neg} [hichkas$

The wh-adjunct in (37b) is in a higher position than the NegP as well, as shown in (43)¹⁴.

(43) $[_{CP} OP C [wh [_{NegP} \mathbf{Neg} [QP hichkas$

The restriction discussed thus far is observed with respect to long distance movement.

(44) a. ki_i pro fekr mi-kon-i t_i hich film-i-ro na-dide
 ↑
 who thought dur-do-2sg no movie-ind-Acc neg-seen-3sg
 ‘Who do you think has not seen any movie?’

b. *hich film-i-ro_i fekr mi-kon-i ki t_i na-dide
 ↑

(45) a. *pro fekr mi-kon-i hichkas kodum film-ro na-dide
 thought dur-do-2sg nobody which movie-Acc neg-seen-3sg

b. kodum film-ro_i pro fekr mi-kon-i hichkas t_i na-dide
 ▲
 ‘Which movie do you think nobody has seen?’

The contrast in (44) represents a case in which the application of scrambling to the NPI destroys the structure. The one in (45) represents the reverse situation, in which the application of scrambling to the wh-phrase rescues the ill-formed sentence.

Similar blocking effects have been observed in other languages. If the analysis advanced in this chapter is on the right track, it holds for those languages as well. The following data are taken from Korean and Japanese.

Korean.

(46) a. *Amuto muos-ul sa-chi anh-ass-ni
 anyone what-Acc buy-CHI not do-Past-Q

b. muos-ul Amuto sa-chi anh-ass-ni
 ‘What did no one buy?’ (Beck & Kim 1997:339)

¹⁴ . Contrastive non-wh elements and inherent contrastive elements reveal similar properties with respect to the head of FocP. See section 4.4.1 of Karimi (2005) for discussion.

Japanese

- (47) a. *Hanako-sika nani-o yoma-nai no?
Hanako-only what-Acc read-neg Q
- b. Nani-o Hanako-sika yoma-nai no?
(Tanaka 1997, per Pesetsky 2000)

Hindi and Turkish reveal similar properties.

Hindi

- (48) a. ??Koi nahiiN kyaa paRhaa
anyone not what read-Perf.M
- b. kyaa koi nahiiN paRhaa
what anyone not read-Perf.M
'What did no one read?' (Beck and Kim 1997:377)

Turkish

- (49) a. *kimse kimi görmedi?
anyone who-Acc see-Neg-Past
- b. kimi kimse görmedi?
who-Acc anyone see-Neg-Past
'Whom did nobody see?' (Beck and Kim 1997:380)

German has full and partial wh-movement, as we saw before in this section. However, in the case of multiple wh-constructions, only the first one is fronted. The presence of the NPI in a higher position than the wh-in-situ renders the sentence ungrammatical. This shows, once again, that the NPI must be responsible for blocking the movement of the wh-feature. Consider the contrast in (50)¹⁵.

German

- (50) a. *Wer hat niemanden wo angetroffen?
who has no one where met
- b. Wer hat wo niemanden angetroffen?
'Who didn't meet anybody where?' (Beck and Kim 1997:340)

¹⁵ . In addition to partial and full wh-movement, German also has split wh-movement, as in (i). The ungrammaticality of (ii) shows that the same blocking effects hold for this type of movement.

- (i) Was hat Karla für Bücher gelesen?
What has K for books read
'What (kind of) books has Karla read?'
- (ii) *Was hat niemand für Bücher gelesen?
What has nobody for books read (Höhle 2000:263)

Although the wh-pronominal has moved up in (ii), the rest of the wh-phrase is still in situ, in a position lower than the quantifier phrase. This example shows that the movement of a portion of the wh-phrase does not satisfy the feature-movement. In other words, the wh-feature represents the entire wh-phrase, not a portion of it.

Bangla provides an additional piece of evidence for the movement of the wh-feature to C.

- (51) a. ka-ke kew/sudhu meri vot. dæy-ni
who-Dat anyone/only Mary vote gave-not
‘Who did no one vote for? / Who did only Mary not vote for?’
- b. *kew/sudhu meri ka-ke vot. dæy-ni
anyone/only Mary who-Dat vote gave-not
(Simpson and Bhattacharya 2003:140)

The movement of the wh-feature is blocked by the presence of the polarity item (or *only*) in (b)¹⁶.

In this section, we provided supportive evidence for the proposals suggested in Section 5. Most significantly, we claimed that the wh-feature must move to C, a movement that is blocked by an intervening element, as supported by the data.

7. Conclusion

Our analysis demonstrates that wh-arguments and wh-adjuncts do not have the same internal structure, and therefore, reveal different syntactic behavior. While the wh-argument has a D-head, the wh-adjunct lacks a nominal head, and is purely quantificational. Furthermore, the wh-argument may stay in-situ and receive a reading representing information focus. Alternatively, it may move into the Spec of FocP, where it receives a contrastive reading. Wh-adjuncts move as well, but their landing position is not the FocP. Due to their purely quantificational nature, their derived position must be the same as that of sentential adverbs. This analysis shows that wh-adjuncts lack a focus feature, and thus are neutral with respect to information/contrastive focus interpretation.

It was also shown that the two types of wh-phrases share one important property: the wh-feature must be in a local Agree relation with an operator in Spec of CP; thus, this feature must move to C. This proposal suggests that intervening elements block the movement of the wh-feature to C, a prediction that was borne out.

Furthermore, the discussion in this chapter shows that *EPP*, a purely syntactic device, is responsible for wh- movement. Thus focus movement is not driven by a focus-feature (contrary to Karimi (1999), and Sable (2000), among others). Therefore, the optionality observed in wh-movement is not of a syntactic nature, but rather boils down to the selection of the EPP feature.

¹⁶. Simpson and Bhattacharya (2003) suggest that there is a focus position in every clause in Bangla. However, wh-phrases, but not other types of focused elements, must move into the matrix clause in order to receive matrix scope in this language. This fact is further evidence suggesting that the wh-feature must move to C in Bangla. That is, the closer the wh-phrase is positioned with respect to the operator in the Spec of CP, the simpler it is for the feature to move into C. Note that the same restriction holds for Persian wh-adjuncts (cf. section 5).

Moreover, we showed that the interpretation of the wh-phrase is read off its syntactic position and its internal structure. This fact clearly indicates that wh-movement in a scrambling language like Persian is not a vacuous operation with no semantic content, contrary to previous approaches to scrambling (see, e.g. Saito and Fukui (1998) and Bošković and Takahashi (1998)). The discussion in this chapter is compatible with Miyagawa (1997, 2003) who suggests that scrambling has an effect on the semantic content of the output.

References

- Auon, Joseph and Yen-hui Audrey Li.
 1993 Wh-elements in-situ: Syntax of LF? *Linguistic Inquiry* 24: 2: 199-238.
- Beck, Sigrid, and Shin-Sook Kim
 1997 On wh and operator scope in Korean. *Journal of East Asian Studies* 6: 339-84.
- Bošković, Zeljko, and Daiko Takahashi
 1998 Scrambling and last resort. *Linguistic Inquiry* 29 (2):347-366.
- Bresnan, Joan, and S. Mchombo
 1987 Topic, pronoun, and agreement in Chichewa. *Language* 63 (4): 741-782.
- Cheng, Lisa
 1991 On the typology of wh-questions. Ph.D. diss., Department of Linguistics and Philosophy, Massachusetts Institute of Technology.
- Chomsky, Noam
 1995 *The Minimalist Program*. Cambridge/London: The MIT Press.
- Chomsky, Noam
 2000 Minimalist inquiries: the framework. In *Step by Step: Essays on minimalist syntax in honor of Howard Lasnik*, R. Martin, D. Michaels, and J. Uriagereka (eds.), 89-155, Cambridge/London: The MIT Press.
- Chomsky, Noam
 2001a Beyond explanatory adequacy. *MIT Occasional Papers in Linguistics* 20.
- Chomsky, Noam
 2001b Derivation by phase. In *Ken Hale: A life in language*, M. Kenstowicz (ed.), 1-52. Cambridge/London: The MIT Press.
- Culicover, Peter
 1992 Topicalization, inversion, and complementizers in English. In Delfitto, Dennis, Martin Everaet, Arnold Evers, and Frits Stuurman (eds) *Going Romance and Beyond*, 54-87. OTS Working Papers in Linguistics 91-002. Utrecht: Utrecht Institute of Linguistics.
- Ernst Thomas.B.
 1984). *Towards an Integrated Theory of Adverb position in English*, PhD diss. Indiana University.
- Felser, Claudia
 2004 Wh-copying, phases, and successive cyclicity. *Lingua* 114: 543-574
- Grewendorf, Günter
 2001 Multiple Wh-fronting, *Linguistic Inquiry* 32:1, pp: 87-122.
- Heck, F. and G. Müller
 2000 Successive cyclicity, long-distance superiority, and local optimization.

- Proceedings of WCCFL 19, 101-114.
- Höhle, T.
 2000 The w...w construction: appositive or scope indicating? In Lutz, U., G. Müller, and A. von Stechow. (eds.) *wh-scope marking*, 249-270. Amsterdam/Philadelphia, John Benjamins.
- Hasegawa, Nobuko
 1994 Economy of derivation and A'-movement in Japanese. In *Current Topics in English and Japanese*, M. Nakamura (ed.), 1-25. Tokyo: Hituzi Syobo.
- Horvath, Julia
 1986 *Focus in the Theory of Grammar and the Syntax of Hungarian*. Dordrecht: Foris.
- Jackendoff, Ray
 1972 *Semantic Interpretation in Generative Grammar*. Cambridge/London: The MIT Press.
- Kayhnamuyipour, Arsalan
 2001 On *Wh*-Questions in Persian. *Canadian Journal of Linguistics* 46:1-2: 41-61.
- Karimi, Simin
 1999 Is Scrambling is as strange as we think it is? *MIT working papers in Linguistics* 33: 159-189.
- Karimi, Simin
 2003 Focus Movement and the Nature of Uninterpretable Features. In Carnie, Andrew, Heidi Harley & Mary Willie (eds) *Formal Approach to Functional Focus*, John Benjamins.
- Karimi, Simin
 2005 *A Minimalist approach to scrambling: Evidence from Persian*, Berlin: Mouton de Gruyter.
- Kiss, É. Katalin
 1994 Scrambling as the base generation of random complement order. In *Studies on Scrambling: Movement and non-movement approaches to free-word-order phenomena*, N. Cover and H. van Riemsdijk (eds), 221-56. Berlin: Mouton de Gruyter.
- Kiss, É. Katalin
 1997 Discourse configurability in the languages of Europe. In *Constituent Order in the Languages of Europe*, A. Siewierska (ed.). Berlin: Mouton de Gruyter.
- Kiss, É. Katalin
 1998 Identificational Focus versus Information Focus. *Language* 74:2: 245-273.
- Kiss, É. Katalin
 2003 Argument Scrambling, Operator Movement, Topic Movement in Hungarian. In *Word Order and Scrambling*, S. Karimi (ed.) 22-44. Oxford/Berlin, Blackwell Publishers
- Lotfi, Ahmad R
 2003 Persian *wh*-riddle. In Boeckx, C. and K. Grohmann (eds) *Multiple wh-fronting*, John Benjamins.
- McConnell-Ginet, Sally
 1982 Adverbs and logical form. *Language* 58 (1): 144-184.
- McDaniel, Dana

- 1989 Partial and multiple wh-movement. *Natural Language and Linguistic Theory* 7:565-604.
- Megerdooonian, Karine and Shadi Ganjavi
2001 Against optional *wh*-movement. Ms.,
University of Southern California.
- Miyagawa, Shigeru
1997 Against optional scrambling. *Linguistic Inquiry* 28 (1):1-25.
- Miyagawa, Shigeru
2003 A-movement scrambling and options without optionality. In *Word Order and Scrambling*, S. Karimi (ed.), 177-200. Oxford/Berlin: Blackwell Publishers.
- Pesetsky, David
2000 *Phrasal movement and its kin*, Cambridge, Mass.: MIT Press.
- Raghibdust, Shahla
1994 Multiple *wh*-fronting in Persian. *Cahiers de Linguistique* 21: 27-58.
- Richards, Norvin
1997 *What Moves Where When in What Language?* Ph.D. diss., Department of Linguistics and Philosophy, Massachusetts Institute of Technology.
- Richards, Norvin
2001 *Movement in Language: Interactions and Architectures*, Oxford University Press.
- Rizzi, Luigi
1997 The Fine Structure of the Left Periphery. In *Elements of Grammar*, Haegeman, Lilian (ed.) ,281-337.
- Rochemont, Michael
1978 *A Theory of Stylistic Rules in English*. New York: Garland.
- Rochemont, Michael
1986 *Focus in Generative Grammar*. Amsterdam/Philadelphia: John Benjamins.
- Sabel, Joachim
2000 Partial *wh*-movement and the typology of *wh*-questions. In *wh-scope marking*, Lutz, U., G. Müller, and A. von Stechow. (eds.), 409-447. Amsterdam/Philadelphia, John Benjamins.
- Saito, Mamoru, and Naoki Fukui
1998 Order in phrase structure and movement. *Linguistic Inquiry* 29 (3): 439-474.
- Simpson, Andrew
2000 *Wh-Movement and the Theory of Feature-Checking*. Amsterdam and Philadelphia, John Benjamins.
- Simpson, Andrew and Tanmoy Bhattacharya
2003 Obligatory overt *wh*-movement in a *wh*-in-situ language. *Linguistic Inquiry* 34:1. PP 127-142
- Svenonius Peter
2002 Subject Positions and the Placement of Adverbials. In *Subjects, Expletives, And the EPP*, P. Svenonius, (ed.) 201-242. Amsterdam/Philadelphia: John Benjamins.
- Taleghani, Azita
2003 Persian *wh*-construction: A Case of F-Selection versus C-Selection. Ms.,
University of Arizona.
- Turano, Guiseppina
1995 On indefinite elements in Albanian. Ms., Università di Firenze.

Urbina, Jon Ortiz de.

- 1990 Operator feature percolation and clausal pied-piping. In *Papers on Wh-movement*, Lisa, L., S. Cheng, and H. Demirdache (eds), 193-208. MIT Working Papers in Linguistics 13. Cambridge, Mass.: MIT, Department of Linguistics and Philosophy