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Clausal and phrasal architecture:
syntactic derivation and interpretation
Wh-movement, interpretation, and optionality in Persian*

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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-adjuncts cherâ 'why' and chetor(i) 'how', similar to other kinds of wh-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-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 affect 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. Phases\(^1\)) (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 issue.) 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 unique.

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.  
\[\text{pro fekr mi-kon-i } [(ke) emshab } [{_p} ki \text{ be restorân } \text{ bi-yâd}]\]  
thought dur-do-2sg that tonight who to restaurant subj- come-3sg  
'Who do you think will come to the restaurant tonight?'

b.  
\[[_\text{FocP } ki \text{ pro fekr mi-kon-i } [(ke) emshab } t \text{ barâ shâm } \text{ bi-yâd}]\]  
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)  
\[\text{to hads mi-zad-i } / \text{ dust-dâsht-i } / \text{ xâhesh kard-i } / [\text{pro ki-ro be-bin-i}]\]  
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)  
\[\text{to [ki-ro ] hads mi-zad-i } / \text{ dust-dâsht-i } / \text{ xâhesh kard-i } / [\text{pro t be-bin-i}]\]  
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.  
\[\text{pro fekr mi-kon-i } [ ke \text{ } ki-ro \text{ Kimea tu mehmuni be-bin-e}]\]  
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.  
\[* \text{pro fekr mi-kon-i } [ki-ro ke Kimea tu mehmuni be-bin-e }]\]

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

(7)  

a.  
\[\text{to fekr mi-kon-i } (ke) ki bâ ki be-raghs-e}\]  
you thought dur-do-2sg that who with who subj-dance-3sg  
'Who do you think will dance with whom?'
b. \([\text{focP} \text{ki} \ bâ \ kij \ [\text{TP} \text{to} \ [\text{cp} \text{fekr-mi-kon-i} \ [\text{cp} \text{(ke)} \ tij \ who \ with \ who \ you \ thought-dur-do-2sg \ that} \]
\text{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. ??ki\text{fekr-mi-kon-i} \ tij \ be-raghs-e] \text{subj-dance-3sg} \text{who today with who you thought-dur-do-2sg that} \]
(\text{Karimi 2003})

b. *\text{ki} \text{fekr-mi-kon-i} \ tij \ be-raghs-e] \text{subj-dance-3sg} \text{with whom you thought dur-do-2sg that} \]

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 Bulgarian\(^4\). 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 \text{hads mi-zan-i} \text{Kimea chetori in mâshin-ro dorost karde} \text{you guess hab-hit-2sg K how this car-râ right made} \text{Lit. You guess, as for Kimea, how (she) fixed this car.}

b. \text{chetori to hads mi-zan-i} \text{Kimea in mâshin-ro dorost karde} \text{How do you guess has Kimea fixed this car?’}

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\(^4\) 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. koi kogo vizda ?
\text{who whom sees} \text{‘Who sees whom?’}

b. *kogo koi vizda \text{Rudin 1988:472-473, per Richards 1997:63} \text{per} \text{Richards 1997:63} \text{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 clause. 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 Kahnamuipour (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.'


c. Ali *cherâ* bâ Maryam ezdevâj kard A why with M marry did-3sg 'Why did Ali marry Maryam?' (Kahnamuyipour 2001:47)

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

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

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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) are. 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 *(e)sh* 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-

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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).

(16) \[ \begin{align*} 
wh-argument & : & wh-adjunct \\
\text{a. } & \text{DP} & \text{b. } & \text{QP} \\
& \text{D'} & & \text{Q'} \\
& \text{D+Foc/wh} & \text{wh-word} & \text{Q}_{\text{wh}} & \text{wh-word} \\
\end{align*} \]

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). This is illustrated in (17).

(17) \[ [\text{CP/O} \ [ \ldots \quad \text{wh} \quad \ldots \]] \]

♦ The wh-feature moves up to C to be in an Agree relation with the operator. 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’
Kojå ‘where’ yejåi/yekjåi ‘somewhere’ hijjå ‘nowhere’

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8 See also Megerdoomian 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).

<table>
<thead>
<tr>
<th></th>
<th>Q</th>
<th>D</th>
<th>Informational</th>
<th>Contrastive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wh-adjunct</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>Wh-argument in situ</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>Spec/FocP</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>D-linked wh-phrase</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>+</td>
</tr>
</tbody>
</table>

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 feature.\(^{10}\)

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. kamau a- ón-1 írère o? Wh-in-situ
   Kamau SP-see-T who?
   (SP = Subject prefix, T= Tense/Aspect affix)
   'Who did Kamau see?'

   b. nóó o-t eM-írère mo-te? Moved wh-phrase
   FP-who PP-cut-T CP-tree
   (FP= Focus particle, PP =pronominal prefix)
   'Who cut a tree?' (Sabel 2000:429)

The focus particle nóó 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. $[\text{CP } A \text{ mendon } [\text{CP } \text{ se } \text{ Maria thotë } [\text{CP } \text{ se } \text{ çfare}_i \text{ ka sjelle } \text{ burri } t_i ]] ]$

Q you-think that M says that what has brought her-husband

'What do you think that Mary says her husband has brought?'

b. $[\text{CP } A \text{ mendon } [\text{CP } \text{ se } \text{ çfare}_i \text{ Maria thotë } [\text{CP } \text{ se } \text{ ka sjelle } \text{ burri } t_i ] ] ]$

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 CP\(^{12}\). The scope marker in these languages is the overt realization of the wh-operator we suggest to be present in Persian.

(30) a. $[\text{IP mit wem}]_i \text{ glaubt } [\text{IP Hans } [\text{CP } \text{ dass } [\text{IP Jakob jetzt spricht } ] ] ]$

with who believes Hans that Jakob now speaks

'With whom does Hans think that Jakob is now talking?'

b. $[\text{IP Hans } [\text{CP mit wem}_i ] [\text{IP Jakob jetzt } t_i \text{ spricht } ] ]$

what believes Hans with whom Jakob now talks

(31) a. $[\text{IP o Demiri mislinol } [\text{CP } t_i \text{ so } [\text{IP i arifa dikhla } t_i ] ] ]$

'Whom does Demir think that Arifa saw?'

b. $[\text{IP o Demiri mislinol } [\text{CP kas}_1 [\text{IP i arifa dikhla } t_i ]] ]$

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

(33) ki bá 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).

    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-phrase 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, 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-yâmâd
     thought dur-do-2sg no one why neg-came-3sg

b. pro fekr mi-kon-i cherâ hichkas na-yâmâd
   '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,

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) \[
[CP OP C [\text{FocP} \quad \text{wh}] [\text{NegP Neg} \quad \text{hichkas}]
\]

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

(43) \[
[CP OP C [\text{wh}] [\text{NegP Neg} \quad \text{QP hichkas}]
\]

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

(44) a. \(\text{ki}_{i} \text{ pro fekr mi-kon-i t}_{i} \text{ hich film-i-ro na-dide}\)
who thought dur-do-2sg no movie-ind-Acc neg-seen-3sg
‘Who do you think has not seen any movie?’

b. \(\*\text{hich film-i-ro}_{i} \text{ fekr mi-kon-i ki t}_{i} \text{ na-dide}\)

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

b. \(\text{kodum film-ro}_{i} \text{ pro fekr mi-kon-i hichkas t}_{i} \text{ na-dide}\)

‘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. \(\*\text{Amuto muos-ul sa-chi anh-ass-ni}\)
anyone what-Acc buy-CHI not do-Past-Q

b. \(\text{muos-ul Amuto sa-chi anh-ass-ni}\)
‘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?’

(Tanaka 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. daêy-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. daêy-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). 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.

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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.

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