

Intervention effects in Persian: A pragmatic approach*

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Yun, Suyeon. 2018. Intervention effects in Persian: A pragmatic approach. *Linguistic Research* 35(2), 337-356. This paper aims at a description of intervention effects in Persian, which have been underdocumented thus far. It is shown that Persian involves intervention effects when the NPIs and some quantificational phrases precede wh-phrases except for *cherâ* 'why', and the intervention effects are canceled when the wh-phrase scrambles over the intervener as in many other languages with intervention effects. Also, as in the case of Korean and Japanese, *cherâ* 'why' is exempt from intervention effects. This paper argues that the asymmetry between *cherâ* 'why' and the other wh-phrases with regard to intervention effects cannot be accounted for by a purely syntactic analysis. It will also be argued that the current Persian data can be explained by a pragmatic account of intervention effects proposed by Tomioka (2007, 2009) and may further support the pragmatic account. (Ewha Womans University)

Keywords intervention effects, Persian, Korean, wh-phrase, why, information structure

1. Introduction

Great attention has been shown to so-called intervention effects in syntactic and semantic literature. Intervention effects refer to the ungrammaticality of wh-interrogative sentences in which wh-phrases are c-commanded by scope-bearing elements (SBE) on the surface structure, as schematized in (1) and exemplified in (2a).¹ In the Korean sentence in (2a), the NPI *amuto* 'anyone' c-commands the wh-word *muôs* 'what', and the sentence is ungrammatical. On the other hand, if the wh-word *muôs* scrambles over the NPI *amuto* as in (2b), the sentence becomes acceptable.

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1 The following abbreviations will be used in this paper: ACC – accusative, DEC – declarative, INDEF – indefinite, LOC – locative, NEG – negation, NOM – nominative, Q – question particle.

Persian is a *wh*-in-situ language like many languages listed above, and its basic word order is SOV, while scrambling frequently occurs and the OSV order can appear as in Korean, Japanese, Hindi, Mandarin, Malayalam and Turkish. This means that the *wh*-phrase in object position may scramble over the subject, showing the optional surface *wh*-movement. Therefore, if a Persian sentence shows intervention effects as in the Korean example in (2a) and becomes grammatical after the scrambling of the object *wh*-phrase as in (2b), it could be said that intervention effects exist in Persian. Later in this paper, it will be shown that intervention effects are present in Persian for *wh*-phrases other than ‘*why*’.

The main purpose of this study is to provide an empirical contribution to the study of intervention effects by documenting new data related to the phenomena in Persian. Possible linguistic analyses of the Persian intervention effects will also be discussed. The rest of the paper is organized as follows. Section 2 presents Persian data related to intervention effects, which I obtained from native speakers. Section 3 shows that previous syntactic analyses proposed for intervention effects cannot explain the present Persian data, particularly the asymmetry between ‘*why*’ and the other *wh*-phrases. Section 4 outlines a pragmatic account of Persian intervention effects based on Tomioka (2007, 2009), and Section 5 concludes.

2. Data

In this section, I present data concerning intervention effects in Persian. The primary source for this paper is the data elicited from three Persian native speakers, who were graduate students at MIT in their 20s or 30s at the point of the data collection in 2012 and moved from Iran to the United States for their degree programs. The examples given in this section are from my field notes, unless otherwise noted. The Persian data described here is used in formal Persian. Colloquial dialects, such as the Tehrani dialect, involve phonological differences, but syntactically, it seems that they are quite similar to formal Persian, particularly with regard to intervention effects.

2.1 Intervention effects in Persian

This subsection presents data showing that intervention effects are present in Persian. In Persian, most wh-phrases cannot be preceded by an NPI, a well-known intervener in other languages. First of all, *ki* ‘who’ cannot follow the NPI *hichkas* ‘nobody’, either in subject position as in (4) or in object position as in (5).² In (4a), if the object *hichkas* ‘nobody’ scrambles over the subject *ki* ‘who’, the sentence becomes ungrammatical, while the canonical order in which the wh-phrase precedes the NPI in (4b) is good. On the other hand, the sentence in (5a) shows the normal word order, i.e., SOV, but is ungrammatical since the NPI *hichkas* precedes *ki*. The sentence becomes grammatical when the object wh-phrase scrambles over the subject NPI, as in (5b).

- (4) a. **hichkas-o ki na-did?*
 nobody-RA who NEG-met
 b. *ki hichkas-o na-did?*
 who nobody-RA NEG-met
 ‘Who didn’t meet anyone?’

- (5) a. **hichkas ki-o na-did?*
 nobody who-RA NEG-met
 b. *ki-o hichkas na-did?*
 who-RA nobody NEG-met
 ‘Who did no one meet?’

We also observe intervention effects for *chi* ‘what’. As demonstrated in (6), Karimi (2005) reports that the NPI *hichkas* ‘nobody’ cannot precede the wh-word *chi* ‘what’ as shown in (6a), but the opposite order with *chi* preceded by *hichkas* is good, as shown in (6b), which is also confirmed by my informants.³

2 For the Persian data reported in this paper, I follow the Persian linguistic tradition and use /ch/, /gh/, /j/, /sh/, /ʔ/ and /â/ to refer to [ʃ], [ʒ], [tʃ], [ʃ], [ʔ] and [a], respectively.

3 Karimi (2005) adopts a syntactic analysis of these constructions that wh-phrases cannot be located within the domain of SBEs, although intervention effects are not her main focus and no detailed analysis is provided.

- (6) a. *hichkas chi-ro na-xarid?
 nobody what-RA NEG-bought
 b. chi-ro hichkas na-xarid?
 what-RA nobody NEG-bought
 ‘What was it that no one bought?’ (Karimi 2005: 146)

It is the linear order between the *wh*-phrase and the intervening NPI that triggers intervention effects, and the *wh*-phrase does not have to move to the sentence-initial position as in the previous examples. In (7), both the *wh*-phrase and the NPI are in object position, and the subject *kimia* ‘Kimea’ precedes them. Intervention effects arise when the indirect object NPI scrambles over the direct object *wh*-phrase, as shown in (7b), whereas the original word order in which the *wh*-phrase precedes the NPI is judged grammatical in (7a).

- (7) a. kimia chi-o be hichkas-i neshun na-dâd?
 Kimea what-RA to nobody-INDEF showing NEG-gave
 b. *kimia be hichkas-i chi neshun na-dâd?
 Kimea to nobody-INDEF what showing NEG-gave
 ‘What did Kimia show to nobody?’

Not only the *wh*-words, such as *ki* and *chi*, but also *wh*-phrases are subject to intervention effects in Persian. Examples in (8) include the *wh*-phrase, *che kas* ‘which person’. Like the other sentences with the *wh*-word seen earlier, the *wh*-phrase cannot follow the NPI as in (8a) but can only precede the NPI as in (8b).

- (8) a. *hichkas-i-ro che-kas-i da’vat na-kard?
 nobody-INDEF-RA which-person-INDEF invitation NEG-did
 b. che-kas-i hichkas-i-ro da’vat na-kard?
 which-person-INDEF nobody-INDEF-RA invitation NEG-did
 ‘Who didn’t invite anyone?’

In addition, not only *wh*-arguments but also *wh*-adjuncts show intervention effects. For example, the sentences in (9) involve *key* ‘when’. Like *wh*-arguments,

key cannot be preceded by *hichkas* as in (9a) but has to precede it to make the sentence acceptable as in (9b).

- (9) a. **hichkas-i* *key* *ketâb-râ* *na-xand?*
 nobody-INDEF when book-RA NEG-bought
 b. *key* *hichkas-i* *ketâb-râ* *na-xand?*
 when nobody-INDEF book-RA NEG-bought
 ‘When didn’t anybody buy the book?’

The same goes for *kojâ* ‘where’. As shown below, intervention effects arise when the NPI *hichkas* precedes *kojâ* as in (10a), and *kojâ* has to be followed by *hichkas* as in (10b) in order for the sentence to be grammatical.

- (10) a. **kimia* *hichkas-o* *kojâ* *na-did?*
 Kimea nobody-RA where NEG-saw
 b. *kimia* *kojâ* *hichkas-o* *na-did?*
 Kimea where nobody-RA NEG-saw
 ‘Where did Kimea see no one?’

Also, non-NPI quantifiers may trigger intervention effects in Persian. For example, *faghat* ‘only’⁴ and *hattâ* ‘even’ behave as the intervener. As exemplified in (11) for *faghat* ‘only’ and in (12) for *hattâ* ‘even’, these quantifiers also do not allow wh-words to follow them as in (11a) and (12a), and the wh-words have to scramble over them as in (11b) and (12b), to make the sentences acceptable.

- (11) a. **faghat* *kimia* *chi-râ* *xând?*
 only Kimea what-RA read
 b. *chi-râ* *faghat* *kimia* *xând?*
 what-RA only Kimea read
 ‘What did only Kimea read?’

4 One of my informants preferred to use *tânha* for ‘only’ to *faghat*. Note, however, that his judgments on the sentences in (11) were consistent with the other two informants when using *tânha*.

- (12) a. *hattâ kimia chi-ro xarid?
 even Kimea what-RA bought
 b. chi-ro hattâ kimia xarid?
 what-RA even Kimea bought
 ‘What did even Kimea buy?’

It should be noted that not all quantifiers are interveners. For example, *har* ‘each, every’ does not trigger intervention effects in Persian. That is, the quantifier *har* can precede a wh-word as in (13a) and also can follow it as in (13b).⁵

- (13) a. har dânesiju-i chi(*-ro) xarid?
 every university.student-INDEF what-(RA) bought
 b. chi(-ro) har dânesiju-i xarid?
 what-(RA) every university.student-INDEF bought
 ‘What did every university student buy?’

So far we have seen that in Persian, interveners consisting of NPIs and some quantifiers, such as *faghat* ‘only’ and *hattâ* ‘even’, do not allow wh-phrases to follow them, and the sentence is acceptable only when the wh-phrases precede them through scrambling. This asymmetry in linear word order is not observed with other nominals. If we replace the interveners with *kimia* ‘Kimea (proper name)’, the sentence is grammatical regardless of whether *kimia* precedes or follows a wh-phrase, as shown with *ki* ‘who’ in (14), *chi* ‘what’ in (15), and *kojâ* ‘where’ in (16).

- (14) a. kimia ki-o na-did?
 Kimea who-RA NEG-met
 b. ki-o kimia na-did?
 who-RA Kimea NEG-met
 ‘Who did Kimea meet?’

5 My informants said that sentence (13a) was okay only when the object marker RA was absent. This seems relevant for the characteristics of RA and not relevant for the current discussion.

- (15) a. *kimia chi na-xarid?*
 Kimea what NEG-read
 b. *chi kimia na-xarid?*
 what Kimea NEG-read
 ‘What did Kimea read?’

- (16) a. *kimia kojâ na-raft?*
 Kimea where NEG-went
 b. *kojâ kimia na-raft?*
 where Kimea NEG-went
 ‘Where didn’t Kimea go?’

2.2. No intervention effects with *cherâ* ‘why’

In the previous subsection, it is shown that wh-adjuncts such as *key* ‘when’ and *kojâ* ‘where’, as well as wh-arguments, show intervention effects. Of particular interest I want to present here is that *cherâ* ‘why’, unlike the other wh-adjuncts, seems exempt from intervention effects in Persian. Let us consider sentences in (17). The sentence in (17a) has the wh-word *cherâ* ‘why’ preceded by the NPI *hichkas*, where intervention effects are expected to appear, but the sentence is judged as grammatical unlike the sentences with other wh-adjuncts seen earlier in (9a) and (10a). The sentence in (17b), in which *cherâ* precedes *hichkas* as a result of scrambling, is also grammatical, as expected. As shown in (17c), the sentence is also good when *cherâ* stays in its base position, not undergoing scrambling, and does not directly follow *hichkas*.

- (17) a. *hichkas cherâ ân ketâb-râ na-xând?*
 nobody why that book-RA NEG-read
 b. *cherâ hichkas ân ketâb-râ na-xând?*
 why nobody that book-RA NEG-read
 c. *hichkas ân ketâb-râ cherâ na-xând?*
 nobody that book-RA why NEG-read
 ‘Why did no one read that book?’

No intervention effects with *cherâ* ‘why’ are also observed with other quantifier interveners, as exemplified with *faghat* ‘only’ in (18). In (18a) and (18b), we see that the sentence is good, even though *faghat* precedes *cherâ*. As expected, the sentence is also grammatical when *cherâ* precedes *faghat*, as in (18c).

- (18) a. *faghat cherâ kimia ân ketâb-râ xând?*
 only why Kimea that book-RA read
 b. *faghat kimia cherâ ân ketâb-râ xând?*
 only Kimea why that book-RA read
 c. *cherâ faghat kimia ân ketâb-râ xând?*
 why only Kimea that book-RA read
 ‘Why did only Kimea read that book?’

Persian is not the only language in which all wh-phrases but ‘why’ show intervention effects. The same phenomena are observed in Korean and Japanese (e.g., Ko 2005; Tomioka 2009, among others). I briefly introduce intervention effects in Korean here to show their similarity to those in Persian.

Korean is one of the languages that show intervention effects, as exemplified at the beginning of this paper in (2). I repeat (2) below for the sake of convenience. Here we can see that the wh-word *muôs* ‘what’ cannot be preceded by the NPI *amuto* ‘anyone’ as in (19a), and the scrambling of *muôs* over *amuto* is obligatory for the sentence to be grammatical as in (19b). This shows the same pattern shown in Persian, as in (6).

- (19) a. **amuto muôs-ûl sa-chi anh-ass-ni?*
 anyone what-ACC buy-CHI not.do-PAST-Q
 b. *muôs-ûl amuto sa-chi anh-ass-ni?*
 what-ACC anyone buy-CHI not.do-PAST-Q
 ‘What did no one buy?’ (Beck and Kim 1997: 339)

Also, as in Persian, not only wh-arguments but also wh-adjuncts show intervention effects. In (20), *ôti-esô* ‘where-LOC’ cannot follow the NPI *amuto* ‘anyone’ in (20a), but if it scrambles over *amuto*, the sentence becomes grammatical, regardless of whether it is located after the subject as in (20b) or

sentence-initially as in (20c).

- (20) a. *Suna-ka amuto ôti-esô manna-chi anh-ass-ni?
 Suna-NOM anyone where-LOC meet-CHI not.do-PAST-Q
 b. Suna-ka ôti-esô amuto manna-chi anh-ass-ni?
 Suna-NOM where-LOC anyone meet-CHI not.do-PAST-Q
 c. ôti-esô Suna-ka amuto manna-chi anh-ass-ni?
 where-LOC Suna-NOM anyone meet-CHI not.do-PAST-Q
 ‘Where did Suna meet no one?’ (Beck and Kim 1997: 342)

On the other hand, *way* ‘why’ is immune to intervention effects unlike the other wh-phrases in Korean, as in Persian. In (21), we see that the sentence is grammatical, even though the NPI *amwuto*⁶ ‘anyone’ precedes *way* ‘why’ in (21a), as well as in (21b) in which *way* precedes *amwuto*. The same judgments go for the cases where we replace the NPI *amwuto* with a phrase with the quantifier *pakkey* ‘only’, as shown in (22). Both orders, i.e., *pakkey-way* in (22a) and *way-pakkey* in (22b), are grammatical.

- (21) a. amwuto way ku chayk-ul ilk-ci-anh-ass-ni?
 anyone why that book-ACC read-CI-not-PAST-Q
 b. way amwuto ku chayk-ul ilk-ci-anh-ass-ni?
 why anyone that book-ACC read-CI-not-PAST-Q
 ‘Why did no one read that book?’ (Ko 2005: 877)
- (22) a. ?John-pakkey way ku chayk-ul ilk-ci-anh-ass-ni?
 John-only why that book-ACC read-CI-not-PAST-Q
 b. way John-pakkey ku chayk-ul ilk-ci-anh-ass-ni?
 why John-only that book-ACC read-CI-not-PAST-Q
 ‘Why did only John read that book?’ (Ko 2005: 872)

In this subsection, we have seen that in Persian *cherâ* ‘why’ is not subject to

6 *Amwuto* ‘anyone’ here is the same word as *amuto* in the previous examples from Beck and Kim (1997). Beck and Kim (1997) and Ko (2005) employ different romanization conventions and I just cite the example sentences as they are in the original papers.

intervention effects, and a similar case is also found in Korean (and Japanese). The next two sections seek to find a way to analyze the Persian intervention effects.

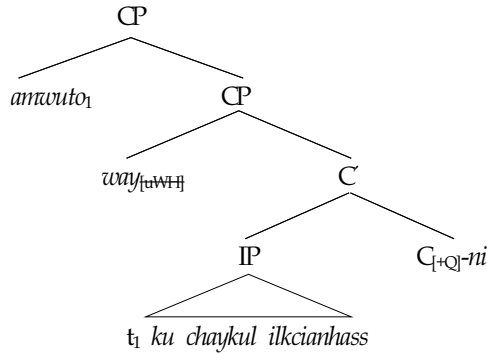
3. Problems of the syntactic analysis

Before embarking upon an analysis of the Persian intervention effects, we briefly examine previous analyses of intervention effects. The purposes of this section are to gauge the previous syntactic analysis and to see whether it can be applied to the current data of Persian intervention effects. Most analyses of intervention effects that have been provided so far are syntactic (Beck 1996; Beck and Kim 1997, among others). Beck (1996) and Beck and Kim (1997) argue that the intervention effect is a constraint on *wh*-movement at LF, as represented in (23). That is, a *wh*-phrase has to move to the Spec of the CP at LF, but an SBE blocks the binding relationship between the LF trace of the *wh*-phrase and its binder.

(23) * $[\dots Q \text{ SBE } wh \dots]_{LF}$

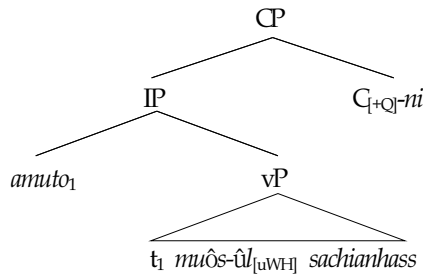
Ko (2005) interprets this within the framework of the minimalist program (Chomsky, 1995); *wh*-phrases have an uninterpretable *wh*-feature [uWH], which has to be checked off by [+Q] feature, hosted by a question morpheme Q in a head C. In her term, it is said that a *wh*-phrase cannot be attracted to its checking position across an SBE at LF. Ko's (2005) syntactic account of no intervention effects with 'why' in Korean and Japanese is that 'why' is merged into a higher position than other *wh*-phrases and licensed in the overt syntax, and thus does not undergo raising at LF. To be specific, she assumes that Korean *way* and Japanese *naze* 'why' are externally merged into the Spec of the CP, as illustrated in (24) for the sentence in (21a). Here the Q morpheme *-ni* carries the licensing feature [+Q], and [uWH] of *way* is checked off by [+Q] in the overt syntax, and thus does not have to be licensed through movement at LF. The NPI-'why' order is derived by scrambling of the NPI *anwuto*.

- (24) *amwuto way ku chayk-ul ilk-ci-anh-ass-ni?* 'Why did no one read that book?'
(Ko 2005: 879)



In contrast, other wh-phrases including *mwues-ul* 'what'-ACC in (25) below for sentence (19a), are assumed to be base-generated at a position lower than C. Here I assume that *amuto* 'anyone' is raised by the EPP and is sitting on the Spec of the IP. The feature [uWH] of *muôs* 'what' under the vP cannot be licensed in the overt syntax since the Spec-Head agreement is not satisfied. Thus, the wh-movement of *muôs* has to occur at LF, but the NPI *amuto* in the higher position interferes the licensing, which results in the ungrammaticality of the sentence.

- (25) *amuto muôs-ûl sa-chi-anh-ass-ni?* 'What did no one buy?'



This syntactic analysis, however, cannot be applied to the present Persian intervention effects data, particularly the asymmetry between 'why' and the other wh-phrases. This is because unlike Korean and Japanese, it appears that *cherâ* 'why' cannot be assumed to be externally merged into the Spec of the CP but

appears to be base-generated under the vP in Persian. Kahnemuyipour (2001) argues that wh-adjuncts in Persian undergo obligatory movement to the pre-verbal position, although Persian is a wh-in-situ language and wh-arguments only optionally scramble in focused contexts. As exemplified in (26), *chi* 'what' in (26b) stays in the object position where *ye ketâb* 'a book' in (26a) is located.

- (26) a. ali ye ketâb xarid.
 Ali a book buy-PAST.3SG
 'Ali bought a book.'
 b. ali chi xarid?
 Ali what buy-PAST.3SG
 'What did Ali buy?' (Kahnemuyipour 2001: 46)

Cherâ 'why', however, cannot remain in situ where its counterpart is located in declarative sentences. As demonstrated in (27a), a causal clause follows the verb in Persian. The interrogative counterpart of (27a) is the sentence in (27b), in which *cherâ* moves to the pre-verbal position. Of interest is that the sentence in (27c) in which *cherâ* occupies the same position as the causal clause is ungrammatical. This indicates that *cherâ* is subject to obligatory movement from its base position.

- (27) a. ali bâ Maryam ezdevâj kard [chon dust-esh dâsht]
 Ali with Maryam marry did-3SG because friend-her had-3SG
 'Ali married Maryam because he loved her.'
 b. ali cherâ bâ Maryam ezdevâj kard
 Ali why with Maryam marry did-3SG
 c. *ali bâ Maryam ezdevâj kard [cherâ]
 Ali with Maryam marriage did-3SG why
 'Why did Ali marry Maryam?' (Kahnemuyipour 2001: 47)

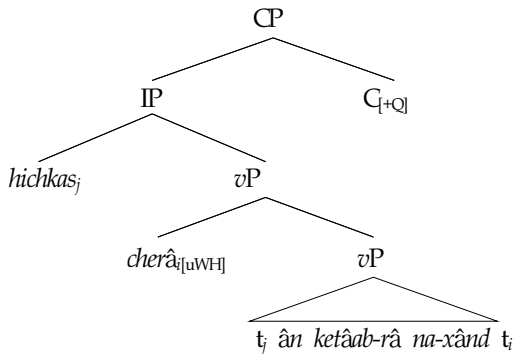
Other wh-adjuncts, as well as *cherâ*, show obligatory movement to the pre-verbal position, as shown below. In the declarative sentence in (28a), *xune* 'home' is located in the post-verbal position, but its question counterpart in (28b) has *kojâ* 'where' in the pre-verbal position.

- (28) a. ali ye sâ'at pish raft xune.
 Ali an hour ago go.PAST.3SG home
 'Ali went home an hour ago.'
- b. ali ye sâ'at pish kojâ raft?
 Ali an hour ago where go.PAST.3SG
 'Where did Ali go an hour ago?' (Kahnemuyipour 2001: 46)

Kahnemuyipour (2001) argues that elements in the pre-verbal position receive contrastive focus, and proposes that all wh-phrases in Persian undergo focus movement to the Spec of the vP.

Returning to Ko's (2005) analysis of intervention effects, the lack of intervention effects with regard to *cherâ* cannot be explained within this syntactic analysis. As discussed so far, *cherâ* is assumed to be sitting on the Spec of the vP, as illustrated in (29) for the sentence in (17a). [uWH] of *cherâ* cannot be checked off in the overt syntax, and thus *cherâ* must be raised to the Spec of the CP at LF, which is blocked by the intervening NPI *hichkas*. All other wh-phrases in Persian, either wh-arguments or wh-adjuncts, are assumed to have a similar structure to that of *cherâ*. Therefore, this syntactic account of intervention effects can explain the presence of intervention effects in Persian but fails to capture the absence of intervention effects when involving *cherâ*.

- (29) *hichkas cherâ ân ketâb-râ na-xând?* 'Why did no one read that book?'



In summary, Persian shows intervention effects, with the exception of *cherâ* 'why', and it seems difficult to account for this pattern within a purely syntactic

analysis.

4. Pragmatic analysis

This section proposes an alternative, pragmatic analysis of the Persian intervention effects. Specifically, I argue that the current data may support an information-structural account of intervention effects proposed by Tomioka (2007, 2009). Tomioka (2007, 2009) offer a pragmatic account of intervention effects in Japanese and Korean, both of which also show the cancellation (or weakening, from Tomioka's perspectives) of intervention effects only in 'why'-questions. In his view, intervention effects originate from 'ill-formed information structure'. The structure of his account is as follows. In *wh*-questions, in which the *wh*-phrase is focused, it is assumed that all other materials in the sentence belong to the background (Krifka 2001). *Wh*-questions may include a topic, which is generally considered being in the background, as it is discourse-old and provides given information. In Japanese and Korean, in particular, *wh*-questions normally take topic-marked subjects, and nominative-marked subjects make the sentences unnatural, as exemplified in (30).

- (30) a. John-wa/?-ga nani-o yon-da-no? (Japanese)
 John-TOP/-NOM what-ACC read-past-Q
 'What did John read?'
 b. John-un/?-i mues-ul ilk-ess-ni? (Korean)
 John-TOP/-NOM what-ACC read-past-Q
 'What did John read?' (Tomioka 2007: 1574)

Therefore, if a *wh*-question contains an intervener, the intervener has to be part of the background. The problem is that interveners are not presupposed in the context and are hard to be a topic. In Japanese and Korean, it is morphologically indicated by the fact that the interveners in those languages cannot be used with a topic marker, *wa* in Japanese and *-(n)un* in Korean.⁷ The

⁷ An anonymous reviewer pointed out that non-NPI quantifiers in Korean, such as *-man* and *-pakkey*, can be used with the topic marker *-(n)un*, i.e., *-man-un* and *-pakkey-nun*. Although Tomioka (2007,

sentence is unacceptable when there is a non-topic intervener preceding a wh-phrase. Tomioka argues, however, that the interveners can take the background status when located after the wh-phrase by the scrambling of the wh-phrase, as they undergo post-focus prosodic reduction. This is represented in (31), in which the curly brackets indicate major phonological phrase boundaries and the underlines indicate post-focus prosodic reduction.

- (31) Phonological phrasing of intervention effect sentences
- a. before wh-scrambling: ... intervener { Wh _____ }
 - b. after wh-scrambling: ... { Wh intervener _____ }

Both Japanese and Korean involve post-focal dephrasing or deaccentuation (cf. Ishihara 2003; Jun 1993). To be specific, wh-phrases are inherently focused and realized with a higher and longer F0 peak. The focused element, i.e., wh-phrase here, initiates a new Accentual Phrase, a prosodic constituent larger than a word but smaller than the Intonational Phrase, and all other materials in the sentence following the wh-phrase are prosodically incorporated into the Accentual Phrase, as shown in (31a) and (31b). Since the post-focal material is prosodically reduced in these languages, the intervener is also prosodically reduced as a part of the post-focal material when the wh-phrase scrambles over the intervener, as illustrated in (31b), becoming background.

What makes 'why' different from other wh-phrases is its pragmatic characteristics. Unlike the other wh-phrases, it is presupposed for 'why' that the non-wh-portion of a 'why'-question is true. For example, the sentence 'Why does Sue love linguistics?' implies that it is true that Sue loves linguistics. Thus, it can be said that the entire non-why-portion of the 'why'-question, including the intervener, is presupposed, which means that it is in the background. This makes 'why'-questions free from intervention effects, regardless of its prosodic realizations. Tomioka (2009) also points out that scrambling of 'why' over the

2009) do not deal with these quantifiers, Tomioka (2007) notes that the NPI *mwukwunka* 'someone' and disjunctive NPs, such as *John-ina Bill* 'John or Bill', may be topic-marked when interpreted as contrastive topics. I believe that the topic-marked phrases involving *-man* and *-pakkey* represent contrastive topics too, which have pragmatic features different from non-contrastive, thematic topics. This is not subject to the current pragmatic analysis and will not be discussed in this paper.

intervener still makes the why-question better because post-focus reduction as in (31b) ensures that the intervener belongs to the background.

This pragmatic account can be applied to Persian intervention effects, if (i) the interveners cannot be part of the background and (ii) the materials that follow the *wh*-phrase are prosodically reduced in Persian. First, it could be said that the interveners that precede a *wh*-phrase do not belong to the background in Persian. Although it may not be so clear as in Japanese and Korean which show the topicality with a morphological marker, Tomioka (2007) states that the interveners may be in general anti-topical, citing Kim (2005) and Beck (2006). That is, the potential interveners, i.e., NPIs and quantificational elements, are focused or focus-sensitive expressions in any language. Therefore, it is natural to assume that *wh*-questions including an intervener are ill-formed in terms of information structure in Persian. Second, post-focal deaccentuation is also a prosodic property of *wh*-questions in Persian. According to Sadat-Tehrani (2007), in *wh*-questions, the nuclear pitch accent of the Accentual Phrase always falls on the *wh*-phrase, and all materials following the *wh*-phrase are deaccented and belong to the same Accentual Phrase as the *wh*-phrase, as in (31). This holds for the cases where the *wh*-phrase is scrambled to the sentence-initial position as in (31b), as well as the cases where the *wh*-phrase stays in situ as in (31a). Let us apply the intonation pattern of Persian *wh*-questions described by Sadat-Tehrani (2007) to the example sentences in (4) presented earlier, which are repeated in (32) with prosodic marking. As in (31), the curly brackets indicate the phonological phrase boundaries and the underlines indicate post-focal deaccentuation.

- (32) a. *hichkas-o {ki na-did}?
 nobody-RA who NEG-met
 b. {ki hichkas-o na-did}?
 who nobody-RA NEG-met
 ‘Who didn’t meet anyone?’

In (32a), only *na-did* ‘NEG-met’ follows the *wh*-word *ki* ‘who’ and is deaccentuated. The sentence in (32a) is bad because the intervener *hichkas-o* ‘nobody-RA’ is not part of the background, according to Tomioka’s analysis. If

the intervener is scrambled to the sentence-initial position as in (32b), all materials following the *wh*-word are included in the same Accentual Phrase and the whole *wh*-question belongs to a single Accentual Phrase. By being prosodically reduced as part of the post-focal materials, the intervener obtains the background status and the sentence becomes acceptable.

To conclude, intervention effects in Persian can be explained by the pragmatic account suggested by Tomioka (2007, 2009) and may further be a supporting case for the account. Like Japanese and Korean, in which post-focal elements following the *wh*-phrase undergo deaccentuation, Persian allows intervention-effect sentences to become natural by scrambling the *wh*-phrase and having the intervener included in the prosodically-reduced background. *cherâ* 'why' is exempt from intervention effects regardless of the intervener's prosodic status because 'why'-questions, unlike other *wh*-questions, presuppose that the non-*wh*-portion of the *wh*-question is the background.

5. Conclusion

This paper has attempted to describe intervention effects in Persian. We have seen that Persian shows intervention effects when the NPIs and some quantificational phrases, including *fahat* 'only' and *hattâ* 'even', precede *wh*-phrases except for *cherâ* 'why', and the intervention effects become canceled when the *wh*-phrase scrambles over the intervener. It is shown that the previous syntactic account of intervention effects cannot be applied to the current Persian data, particularly to the absence of intervention effects with respect to *cherâ* 'why'. It is argued that the pragmatic account proposed by Tomioka (2007, 2009) can successfully explain the current data and is further supported by the current data, in which the intervention-effect sentence becomes acceptable when the intervener is prosodically reduced after the scrambling of the *wh*-phrase, and 'why' is exempt from the intervention effects regardless of the word orders or prosodic patterns.

References

- Beck, Sigrid. 1996. Quantified structures as barriers for LF movement. *Natural Language Semantics* 4: 1-56.
- Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14: 1-56.
- Beck, Sigrid and Shin-Sook Kim. 1997. On wh- and operator scope in Korean. *Journal of East Asian Linguistics* 6(4): 339-384.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Ishihara, Shinichiro. 2003. *Intonation and interface conditions*. PhD Dissertation. Massachusetts Institute of Technology.
- Jun, Sun-Ah. 1993. *The phonetics and phonology of Korean prosody*. PhD Dissertation. Ohio State University.
- Kahnemuyipour, Arsalan. 2001. On wh-questions in Persian. *Canadian Journal of Linguistics* 46(1-2): 41-61.
- Karimi, Simin. 2005. *A minimalist approach to scrambling: Evidence from Persian*. Berlin: Mouton de Gruyter.
- Kim, Shin-Sook. 2005. Focus intervention effects in questions. Presented at Theoretical East Asian Languages 3, Harvard University, Cambridge, MA.
- Ko, Heejeong. 2005. Syntax of why-in-situ: Merge into [Spec,CP] in the overt syntax. *Natural Language and Linguistic Theory* 23(4): 867-916.
- Krifka, Manfred. 2001. For a structured meaning account of questions and answers. In Caroline Féry and Wolfgang Sternefeld (eds.), *Audiatur vox sapientiae: A festschrift for Arnim von Stechow*, 287-319. Berlin: Akademie Verlag.
- Sadat-Tehrani, Nima. 2007. *The intonational grammar of Persian*. PhD Dissertation. University of Manitoba.
- Sadat-Tehrani, Nima. 2008. Persian prosodic structure. In *Proceedings of the 2008 Annual Conference of the Canadian Linguistic Association*. Available online at [http://homes.chass.utoronto.ca/~cla-acl/actes2008/CLA2008_Sadat-Tehrani.pdf].
- Tomioka, Satoshi. 2007. Pragmatics of LF intervention effects: Japanese and Korean wh-interrogatives. *Journal of Pragmatics* 39(9): 1570-1590.
- Tomioka, Satoshi. 2009. Why questions, presuppositions, and intervention effects. *Journal of East Asian Linguistics* 18(4): 253-271.

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