

The superiority effect in Albanian multiple wh-movement structures

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Abstract. This study examines the order of wh-phrases in Albanian multiple wh-questions. Despite SVO and OVS orders, I argue that Albanian wh-movement displays the superiority effect, through a mechanism generating a rightmost highest specifier. OVS order constructions are subject to the haplology effect and word order freezing, showing the presence of a multiple wh-fronting step in the derivation. The study highlights a general observation concerning opacity and the cross-linguistic wh-question environment. Linear order does not reveal hierarchical structure, as a typically leftmost wh-phrase is pronounced rightmost. This rightward wh-movement analysis may explain future findings of languages claimed to not display the superiority effect.

Keywords. Albanian; superiority effect' wh-movement; wh-fronting; haplology effect; word order freezing

1. Introduction. Albanian is a wh-movement language marked by wh-phrase extraction and V-T-C movement (Massey, 1992), as shown in (1). For multiple wh-questions, SVO order (2a) and OVS order (2b) are both available. Either wh-phrase can appear on the left periphery and the other one on the right end. Yet, the OVS order seems to not show the superiority effect. Despite SVO and OVS orders, I argue that the superiority effect is active in Albanian wh-movement, through a mechanism generating a rightmost highest specifier. OVS order constructions are subject to the haplology effect and word order freezing, showing the presence of a multiple wh-fronting step in the derivation. The study highlights a general observation concerning opacity and the cross-linguistic wh-question environment. Linear order does not reveal hierarchical structure, as a typically leftmost wh-phrase is pronounced rightmost. This rightward wh-movement analysis may explain future findings of languages claimed to not be subject to the superiority effect.

- (1) Single Wh-question
Çfarë mbaroi Maria?
what finish.PST Maria
‘What did Maria finish?’
- (2) Multiple Wh-question
 - a. Kush mbaroi çfarë?
who finish.PST what
‘Who finished what?’
 - b. Çfarë mbaroi kush?
what finish.PST who
‘Who finished what?’

2. Superiority effect in Albanian. Albanian wh-questions are subject to the superiority effect (3) in long-distance wh-extractions (4) and embedded questions (5).

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- (3) a. WH1 C [_{TP} ... [_{TP} t ... WH2 ...]]?
 b. *WH2 C [_{TP} ... [_{TP} WH1 ... t ...]]?

In a long-distance wh-extraction, only the higher wh-phrase (WH1) in the embedded clause is allowed on the left periphery. In (4a), the interrogative probe finds the nominative WH1 ‘who’ in the embedded clause and moves it across phase boundaries. (4b) is obtained by ignoring the higher WH1 ‘who’, but rather moving the lower WH2 ‘what’ to the left periphery of the matrix clause.

(4) Long-Distance Extractions

- a. Kush tha Maria se t bleu çfarë?
 who say.PST Maria that t buy.PST what
 b. *Çfarë tha Maria se kush bleu t?
 what say.PST Maria that who buy.PST t
 ‘Who did Maria say bought what?’

When the two wh-phrases are separated by a phase boundary, only WH1 in the higher clause is subject to wh-extraction. In (5b), the embedded wh-phrase WH2 cannot be probed when a matrix wh-phrase is present.

(5) Matrix-Embedded Questions

- a. Kush tha e Xhoni bleu çfarë?
 who say.PST that John.NOM buy.PST what
 b. *Çfarë tha kush se bleu Xhoni?
 what say.PST who that buy.PST John.NOM
 ‘Who said that John bought what?’

3. Obligatory movement of WH1. In short matrix questions, the higher wh-phrase (WH1) must move out of the TP domain marked by unmoved elements such as indirect objects and adverbs. As shown in (6), the VP-adverb ‘quickly’ is prohibited in the C domain, outside of TP. The adverb distribution equally applies to both subject extraction (6a) and object extraction (6b).

(6) VP-adverb Distribution

- a. (*shpejt) kush (*shpejt) e lexoi (shpejt) librin (shpejt)?
 (*quickly) who (*quickly) e=read.PST (quickly) book (quickly)
 ‘Who read the book (quickly)?’
 b. (*Shpejt) çfarë (*shpejt) lexoi (shpejt) Maria (shpejt)?
 (*quickly) what (*quickly) read.PST (quickly) Maria (quickly)
 ‘What did Maria read (quickly)?’

If there were no superiority effect, SVO and OVS order questions should manifest the same adverb distribution in (7).

- (7) a. WH1 C [_{TP}... WH2 ... Adv]?
 b. WH2 C [_{TP}... WH1 ... Adv]?

However, (8b) contradicts the option in (7b). The adverb ‘quickly’ cannot occur to the right of the nominative wh-phrase ‘who’. Note that in (6), ‘quickly’ is not allowed in the C domain, which suggests that the rightmost ‘who’ is no longer inside TP. The adverb must illegally merge with a moved wh-phrase readily in the Specifier of CP position in (8b). Thus, we reject the analysis proposed in (7) that the superiority effect does not obtain.

- (8) a. Kush mbaroi (shpjet) çfarë (shpjet)?
 who finish.PST (quickly) what (quickly)
 b. Çfarë mbaroi (shpjet) kush (*shpjet)?
 what finish.PST (quickly) who (*quickly)?
 ‘Who finished what (quickly)?’

4. Proposed mechanism. The fact that the nominative wh-phrase moves to the right propels an analysis that adopts a right higher specifier. It is consistent with the observation in (6) that any VP-adverb is not permitted higher than a moved wh-phrase. A rightward movement analysis has been proposed for locative inversion and heavy NP shift, in which the right specifier is a focus position (Doggett, 2004).

I propose a mechanism schematized in (9). In Step 1, an interrogative probe on C obligatorily moves the closest wh-phrase, that is the nominative wh-phrase, to the specifier of CP. Step 2 consists of two separate operations. Although Step 2 itself is optional, it must be completed once initiated. Step 2.1 cannot output to PF and therefore must be followed by Step 2.2. Through the optional wh-movement in Step 2.1, the accusative wh-phrase ‘tucks in’ a specifier below the nominative wh-phrase. A similar explanation has been proposed for Bulgarian wh-phrase ordering by Richards (1997, 2001). In Step 2.2, because Albanian does not allow pronouncing multiple sentence initial wh-phrases, the nominative wh-phrase shifts to the right edge. Further evidence needs to be collected in support of such a constraint.

(9) Proposed Multiple Wh-Movement Mechanism

Step 1 (Obligatory)	Step 2.1 (Optional)	Step 2.2 (Optional)
WH1 obligatorily moves to the Specifier of CP. If the derivation terminates here, the resulting surface form is (2a) ‘who finished what?’	WH2 goes through fronting to the Specifier of CP, readily occupied by the WH1. A dissimilation constraint acts upon the intermediate.	Although multiple fronting is present in the derivation, Albanian does not pronounce multiple wh-phrases on the left periphery. WH1 moves to a higher Specifier of CP pronounced on the <i>right</i> .
Output [_{CP} WH1 C [_{TP} ... WH2 ...]]?	No Output	Output [_{CP} C' WH2 C [_{TP} ...]] WH1)?

This mechanism makes the following two predictions. First, given that the superiority effect obtains, ungrammaticality arises whenever the accusative wh-phrase c-commands the nominative WH1: * WH2 C [...WH1...]? Examples of such are shown in (10).

(10) WH2 V WH1 Order

- | | | | | |
|----|---------|------------|---------|---------|
| a. | Kush | i dha | Benit | çfarë? |
| | who | i=give.PST | Ben.DAT | what |
| b. | Kush | i dha | çfarë | Benit? |
| | who | i=give.PST | what | Ben.DAT |
| c. | Çfarë | i dha | Benit | kush? |
| | what | i=give.PST | Ben.DAT | who |
| d. | * Çfarë | i dha | kush | Benit? |
| | what | i=give.PST | who | Ben.DAT |
- ‘Who gave Ben what?’

In double object constructions, the direct object and indirect object are interchangeable in order. An obligatory wh-movement mentioned in Step 1 results in (10a) or (10b), with the nominative ‘who’ in specifier of CP and the accusative ‘what’ in-situ. The reverse order in (10c) is produced after Step 2 tucking in ‘what’ and rightward shifting ‘who’. However, (10d) is ungrammatical because ‘what’ is probed before ‘who’, giving rise to the superiority effect. One might propose a structure for (10d) where ‘Ben’ and ‘who’ are both higher than ‘what’. The only way to obtain such a structure requires an unwarranted movement of the indirect object into a focal-topical position.

Second, Step 2.1 creates an intermediate structure that resembles the surface structure for multiple wh-fronting. Whereas the two wh-phrases are adjacent, conditions that prevent other languages (i.e. Serbo-Croatian) from undergoing multiple wh-fronting should also apply to Albanian, as discussed in the next section.

5. Wh-fronting properties of Albanian. Exceptions to the reverse ordering confirm the presence of a multiple fronting intermediate step. Albanian resembles Serbo-Croatian in that they both have multiple wh-fronting and case syncretism of wh-phrases.

5.1. HAPLOLOGY EFFECT. Instead of a dissimilation process at the phonological or morphological level, the haplology effect in this context operates as a constraint that overrules syntactic operations to avoid undesirable juxtaposition of similar or identical wh-phrases. In a multiple wh-fronting language, wh-phrases typically cannot remain in situ (11). However, ‘... a non-D-linked wh-phrase does not have to be fronted if it is phonologically similar or identical to another fronted wh-phrase’ in (11) and (12) (Bošković, 1997).

(11) Obligatory Wh-fronting in Serbo-Croatian (Bošković, 1997)

- | | | |
|-----|------|---------|
| Ko | šta | kupuje? |
| who | what | buys |
- ‘Who buys what?’

(12) WH2 Not Fronted (Bošković, 1997)

- | | | | |
|----|-------------------------|------------|-------|
| a. | Šta | uslovljava | šta? |
| | what | conditions | what |
| | ‘What conditions what?’ | | |
| b. | ? Ko | je ubio | koga? |
| | who | is killed | who |
- ‘Who killed who?’

The haplology effect is observed in Albanian in (13), assuming that nominative ‘kush’ (‘who’) and dative ‘kujt’ (to whom) are phonologically similar. The argument made here is that the haplology effect takes place even in the unpronounced derivation. (13a) and (13b) are outputs at the end of Step 1, the obligatory movement of the nominative wh-phrase. Most notably, the optional movement of the dative wh-phrase is no longer available in (13c), because wh-fronting is blocked by haplology.

(13) Phonologically Similar Wh-phrases

- a. Kush i dha kujt një libër?
 who i=give.PST whom a book
 ‘Who gave whom a book?’
- b. Kush i dha një libër kujt?
 who i=give.PST a book whom
- c.??/* Kujt i dha kush një libër?
 whom i=give.PST who a book
- d. * Kujt i dha një libër kush?
 whom i=give.PST a book who

Alternative parings in the same environment as (13c) are grammatical for wh-phrases that are phonologically dissimilar, such as ‘who’-‘what’ (10).

5.2. WORD ORDER FREEZING. In the face of ambiguity due to case syncretism, wh-movement of the second wh-phrase is blocked in examples from (14) to (17). Word order freezing is also observed in German (Chomsky, 1965), Russian (Jakobson, 1936), Japanese (Flack, 2007) in various contexts. Any syntactic movement is blocked if its existence may result in interpretational ambiguity in the surface structure; the basic or default structure becomes the only option.

Based on previous examples, one interpretation maps to two surface structures (Table 1). In other words, for any surface structure only one interpretation is available. Uninformative case assignment in case syncretism, however, results in one surface structure mapping onto two possible interpretations (Table 2). For any short-distance matrix question of the form WH V WH, where cases are opaque, two interpretations are potentially valid. The nominative case wh-phrase precedes the accusative one, or vice versa. Note that abstract cases rather than overt cases are considered here.

Agent	Patient	Surface Ordering
X	Y	X _[NOM] ... Y _[ACC]
		Y _[ACC] ... X _[NOM]
Y	X	Y _[NOM] ... X _[ACC]
		X _[NOM] ... Y _[ACC]

Table 1

Surface Ordering	Agent	Patient
X _[?] ... Y _[?]	X	Y
	*Y	X
Y _[?] ... X _[?]	Y	X
	*X	Y

Table 2

On the contrary, the data show that only the surface interpretation is applicable for such constructions in (14) and (15). The Albanian wh-phrase ‘what’ is syncretic for cases such as nominative and accusative. Therefore, the theta role assignment is unintelligible in a multiple wh-question constructed with multiple ‘what’s. OVS order is no longer available. Besides syncretism in ‘what’, gender agreement patterns uniformly. Feminine or neuter noun phrases show the same agreement as masculine noun phrases in (15).

- (14) a. Çfarë inspiroi çfarë libri?
 what inspire.PST what book
 ‘What inspired what book?’
 *‘What book inspired what?’
- b. Çfarë libri inspiroi çfarë?
 what book inspire.PST what
 ‘What book inspired what?’
 *‘What inspired what book?’
- (15) a. Çfarë libri inspiroi çfarë artikulli?
 what book.MASC inspire.PST what article.MASC
 ‘What book inspired what article?’
 *‘What article inspired what book?’
- b. Çfarë artikulli inspiroi çfarë libri?
 what article.MASC inspire.PST what book.MASC
 ‘What article inspired what book?’
 *‘What book inspired what article?’

OVS order is restored once the theta role assignment is transparent through non-syncretic wh-phrases. In (16), the overt cased ‘which’ unambiguously denotes the patient theta role. The same interpretation is produced by both orderings in (16a) and (16b), as described in the paradigm in Table 1.

- (16) a. Çfarë inspiroi cilin libër?
 what inspire.PST which.ACC book
 b. Cilin libër inspiroi çfarë?
 which.ACC book inspire.PST what
 ‘What inspired which book?’

Number agreement allows discrimination between an agent and a patient. The plural morphology on the verb in (17) reflects the plural subject unambiguously. If the other singular wh-phrase are made plural, we lose the reverse ordering option in (17b), because the theta role assignment is opaque again.

- (17) a. Çfarë librash inspiruan çfarë artikulli?
 what book.PL inspire.PST.PL what article.SG
 b. Çfarë artikulli inspiruan çfarë librash?
 what article.SG inspire.PST.PL what book.PL
 ‘What books inspired what article?’

6. Discussion. This paper reveals an important general observation concerning opacity in languages where a rule masks a previous one. Despite superficial differences, Albanian is essentially a variant of a multiple wh-fronting language. Linear order does not reveal the hierarchical structure, as

a typical leftmost wh-phrase in other multiple wh-fronting languages is pronounced on the rightmost position. This rightward movement analysis might explain future findings about languages claimed to not display the superiority effect.

The special status of short-distance matrix questions is not uncommon in wh-typology (Table 3). As noted by Bošković (1997), wh-movement is required in long-distance questions and short-distance embedded questions for French, but not in short-distance matrix questions. In the case of Serbo-Croatian and Albanian, alternative wh-phrase ordering is found in short-distance matrix questions exclusively. Nevertheless, the superiority effect is shown to operate in Albanian at least in a more general environment.

	Short-distance Matrix Questions	Long-distance and Embedded Questions
French	No Overt Wh-movement	Overt Wh-movement
Serbo-Croatian	No Superiority Effect	Superiority Effect
Albanian	Rightward movement	No Rightward movement

Table 3. Wh-Typology Summary

Elaborating on Bošković's claim on phonological similarity and identity (1997), I argue that exceptions in the case of identity arise from word order freezing due to case syncretism. However, more can be said about phonological similarity. In Serbo-Croatian, the phonological similarity is identified for nominative and accusative 'who'. In Albanian, it is documented for nominative and dative 'who' but not for other wh-phrases. No further stipulation has been proposed for the rule. One may easily argue that where and whom are similar, differing by only one phoneme. More questions can be asked whether the underlying constraint indeed lies in phonological grounds. It might be worth it to search for such effects in wh-fronting languages for an atlas of exceptions, and pinpoint the reason to phonology, case or other unknown reasons. Noticeably the effect is also stronger overall for wh-phrase identity than phonological similarity for both Albanian and Serbo-Croatian. This suggests that there might be more underlying reasons for the phonological similarity.

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