As originally stated by Kuno and Robinson (1972, 474), Superiority constrains *wh*-preposing in the following way:

(1) A *wh*-word cannot be preposed, crossing over another *wh*.

This generalization embodies the following three claims:

(2) a. Superiority applies to *wh*-words.
   
   b. Superiority is a property of movement.
   
   c. Superiority involves crossing.

The statement in (1) captures the ill-formedness of (3b), where the *wh*-object is preposed and crosses over the *wh*-subject.

(3) a. I wonder who bought what.
   
   b. *I wonder what who bought.

Since superiority effects were observed and formulated as in (1), additional data have been discovered and various proposals have been made to accurately locate Superiority within the general theory of grammar. Throughout the development of this line of research, the essence of superiority has generally been analyzed as a condition on the movement of *wh*-phrases,\(^1\) and *wh*-phrases not displaying superiority effects have generally been analyzed as not undergoing movement. For instance, it has been pointed out that not all *wh*-words exhibit the effect of superiority: specifically, *which*-phrases do not exhibit this effect. The link between superiority and movement has naturally led to proposals to distinguish the two types of *wh*-phrases in terms of movement: according to this approach, D(iscourse)-linked *which* phrases, which do not exhibit superiority effects, do not undergo movement, whereas non-*which* phrases do exhibit superiority effects and therefore must move (see, e.g., Pesetsky...
In this chapter, we will demonstrate not only that the claim in (2a) is empirically inadequate, but also, contra (2b), that superiority effects are exhibited in structures that are not derived by movement and, contra (2c), that they do not involve crossing.

1.1 Superiority as a Condition on Movement

Working within the principles-and-parameters framework (Chomsky 1981), many researchers have adopted the assumption that wh-phrases must undergo movement and have suggested some version of the Empty Category Principle (ECP) or other well-formedness conditions on empty categories to derive Superiority as stated in (1) and illustrated in (3). Representative formulations are Kayne’s (1983) Connectedness; May’s (1985) and Pesetsky’s (1982) Path Containment Conditions; Huang’s (1982), Lasnik and Saito’s (1984), and Rizzi’s (1990) head and antecedent government; and Aoun’s (1985, 1986) Generalized Binding in place of the antecedent government clause of the ECP. Indeed, under an ECP approach, the superiority effect exhibited in (3b) was used in turn to argue for the existence of LF movement. The overt movement of what in (3b) makes the empty category left by the LF movement of the subject, who, ill formed, whereas the trace left by the covert movement of the direct object, what, in (3a) is well formed. The contrast between (3a) and (3b) is reduced to the well-formedness of the traces generated by movement of the in-situ wh-phrases at LF.

In fact, ECP-based accounts have proven to be not quite adequate empirically. First, it was observed that Superiority is not a condition on D-linked wh-expressions. (The examples in (4) are from Hornstein 1995, 130–132; those in (5)–(6) are from Pesetsky 2000, 16.)

(4) a. Which man reviewed which book?
   b. Which book did which man review?

(5) a. Which person ____ bought which book?
   b. Which book did which person buy ____?

(6) a. Which person did John talk to ____ about which topic?
   b. Which topic did John talk to which person about ____?

Second, an ECP approach essentially reduces the subject/object asymmetry to a left branch effect or argument/adjunct asymmetry. This is, however, not completely accurate. As Hornstein notes (1995, 124):
There are well-known empirical puzzles. For example, Hendrick and Rochemont (1982) note that sentences like [(7b)] display superiority effects without either of the wh-words being in subject position. The Superiority Condition can capture these cases straightforwardly as who is superior to what. However, an ECP-style analysis has to postulate that who in such cases is actually a kind of subject or adjunct and this is what prevents its LF movement. Though it is possible to elaborate such an ECP-style theory, it lacks naturalness.[4]

(7) a.  Who did you persuade to buy what?  
b.  *What did you persuade who to buy?  

Moreover, as Kayne (1983) notes, in sentences like (8a–b) with three or more wh-phrases, Superiority is no longer relevant, a fact that is difficult to capture under an ECP-based approach. (The following examples are from Pesetsky 2000, 17.)

(8) a.  *What did who give ___ to Mary?  (detectable superiority effect)  
b.  What did who give ___ to whom?  (no detectable superiority effect)  

ECP-based approaches thus have been replaced by approaches such as those based on Connectedness or the Path Containment Condition. Despite these adjustments, it remains the case that superiority effects are considered a property of movement structures.

This line of pursuit—relating superiority effects to movement—has been incorporated into the latest theoretical development, the Minimalist Program. Within this framework, superiority effects have been subsumed primarily under the notion of Attract Closest (Chomsky 1995, 296).

(9) α can raise to target K only if there is no legitimate operation Move β targeting K, where β is closer to K.  

In a structure such as (10), C₀ has a strong wh-feature that requires checking by a wh-element.

(10) [C₀ [IP who saw what]]  

Either who or what can satisfy this requirement. Movement of who is preferred since the distance it must travel is shorter than the distance what would need to travel in order to check the same feature. This captures the contrast found in the following pair of sentences:

(11) a.  Who saw what?  
b.  *What did who see?
We will return to the details of this type of analysis in section 1.3. For present purposes, it suffices to point out that a very prominent line of research historically has been to subsume superiority effects under general conditions on movement structures.\footnote{7}

### 1.2 Superiority in Nonmovement Structures

Though superiority effects have often been related to movement our investigation of Lebanese Arabic (LA) demonstrates that such effects occur in nonmovement as well as movement structures.

In LA, a \textit{wh}-element can remain in situ, be moved to the Spec of Comp, or be directly generated in the Spec of Comp. When it is directly generated in the Spec of Comp, the \textit{wh}-interrogative is related to a resumptive pronoun in argument position. Questions containing two \textit{wh}-phrases, which have the potential to display superiority effects, may be generated in any of the following ways:

\begin{enumerate}
\item One \textit{wh}-phrase undergoes \textit{wh}-movement, leaving a gap in the position from which it is raised; the other stays in situ.
\item One \textit{wh}-phrase occurs at the beginning of a sentence and is related to a resumptive pronoun in the sentence; the other stays in situ.
\item Both \textit{wh}-phrases stay in situ.
\end{enumerate}

There is evidence, to be discussed shortly, indicating that the (12b)-type construction cannot be derived by movement when the resumptive pronoun is within an island. Significantly, not only the (12a)-type but also the (12b)-type of \textit{wh}-construction displays superiority effects. This fact shows that superiority effects do not arise from movement alone. We elaborate on this point by first discussing in detail the types of \textit{wh}-interrogatives in LA and then demonstrating the relevance of Superiority to nonmovement structures.

#### 1.2.1 \textit{Wh}-Interrogatives in Lebanese Arabic

In LA, three different strategies, illustrated in (13)–(15), can be used to generate \textit{wh}-interrogative constructions.

- \textit{Gap strategy}: The \textit{wh}-phrase occurs at the beginning of a clause and is related to a gap.
Resumptive strategy: The *wh*-phrase occurs at the beginning of a clause and is related to a resumptive pronoun.

\[(13) \ \text{?ayya mmasil šəft} \ \text{bə-l-maṭʕam} \]
\[\text{which actor saw.2ms in-the-restaurant} \]
\[\text{‘Which actor did you see in the restaurant?’} \]

\cdot **Resumptive strategy:** The *wh*-phrase occurs at the beginning of a clause and is related to a resumptive pronoun.

\[(14) \ \text{?ayya mmasil šəft-uu} \ \text{bə-l-maṭʕam} \]
\[\text{which actor saw.2ms-him in-the-restaurant} \]
\[\text{‘Which actor did you see (him) in the restaurant?’} \]

\cdot **In-situ strategy:** The *wh*-phrase remains in situ.

\[(15) \ \text{šəft} \ \text{?ayya mmasil bə-l-maṭʕam} \]
\[\text{saw.2ms which actor in-the-restaurant} \]
\[\text{‘Which actor did you see in the restaurant?’} \]

As established in Aoun and Benmamoun 1998, Aoun and Choueiri 1997, 1999, and Aoun, Choueiri, and Hornstein 2001, the gap strategy is generated by movement. The resumptive strategy is also generated by movement when the *wh*-element and the resumptive pronoun are not separated by an island; otherwise, it is base-generated. Finally, movement does not play a role at all for the in-situ strategy. Evidence for the above distinctions comes from the relevance of island conditions to the various strategies and the possibility of reconstruction. Below, we briefly sketch some of the syntactic differences among the three strategies. (For details and examples, see the works mentioned above.)

*Wh*-elements related to gaps are sensitive to islands: a gap cannot be separated by an island from the *wh*-phrase it is related to. Moreover, a *wh*-phrase related to a gap displays reconstruction effects: the *wh*-phrase behaves as if it were in the gap position with respect to binding, for instance. In sentence (16), which illustrates a reconstruction effect, the pronoun contained in the fronted *wh*-element can be bound by a quantifier that c-commands the gap position, but the fronted *wh*-element itself cannot.

\[(16) \ \text{?ayya taalib min tulaab-a fakkarto ?ənno kall} \]
\[\text{which student among students-her thought.2p that every} \]
\[\text{mʕallme ʔatnaʔe} \]
\[\text{teacher.rs will.3fs.choose} \]
\[\text{‘Which of her; students did you think that every teacher; would choose?’} \]
Such diagnostics lead to the conclusion that the gap strategy is generated by movement: a $wh$-phrase is moved from the gap position to the beginning of a sentence—the Spec of Comp.

The resumptive strategy is not a unified strategy; reconstruction facts indicate that two different types of constructions with resumptive pronouns need to be distinguished. Reconstruction is possible when the $wh$-phrase and the resumptive pronoun are not separated by an island; it is not possible when the $wh$-phrase and the resumptive pronoun are separated by an island. In sentence (17) (no islands involved), but not sentence (18) (an island involved), the pronoun contained within the $wh$-element can be bound by the quantifier.

(17) ?ayya τaalib min ṭułaab-a ḳakkarto ṭənno kəll which student among students-her thought.2p that every mʕallme ḫatnaʔ-ii teacher.ṛs will.3ṛs.choose-him

‘Which of her; students did you think that every teacher; would choose?’

(18) ?ayya τaalib min ṭułaab-a ťənbaṣṭʔo laʔinno kəll which student among students-her pleased.2p because every mʕallme ḫatnaʔ-ii teacher.ṛs will.3ṛs.choose-him

‘*Which of her; students were you pleased because every teacher; would choose him?’

Assuming with Chomsky (1995, 71–74) that reconstruction is a diagnostic for movement, Aoun and Benmamoun (1998), Aoun and Choueiri (1997, 1999), and Aoun, Choueiri, and Hornstein (2001) argue that resumption can and in fact must be generated by movement when the $wh$-element and the resumptive pronoun are not separated by an island. Resumption is base-generated otherwise: when separated by an island, the $wh$-phrase and the resumptive pronoun are generated in the Spec of Comp and the argument position, respectively. In other words, a distinction can be made between “true” resumption in cases not allowing reconstruction and “apparent” resumption in cases allowing reconstruction.

In brief, the following generalizations regarding $wh$-interrogatives with resumption can be advanced:

(19) a. A $wh$-phrase is generated by movement when it is not separated from its resumptive pronoun by an island (an “apparent” resumptive pronoun).
b. A *wh*-phrase is not generated by movement when it is separated from its resumptive pronoun by an island (a “true” resumptive pronoun).

The following generalization applies to in-situ *wh*-interrogatives, as will be illustrated:

(20) In-situ constructions allow a *wh*-phrase in situ to occur within an island and have interrogative scope outside the island.

Consider the following sentence:

pleased.2p because left.3rs without 3rs.introduce who to
Sami
‘lit. You were pleased because she left without introducing whom to
Sami?’
‘Who were you pleased because she left without introducing to
Sami?’

This sentence is interpreted as a direct question; the *wh*-in-situ in the adjunct clause can take matrix scope. With Aoun and Choueiri (1999), we assume that the interpretation of this *wh*-in-situ in LA is not generated by (overt or covert) movement to the Spec of Comp (see, e.g., Chomsky 1995, 68–70; Watanabe 1992; Aoun and Li 1993b).

Given the three strategies available for *wh*-interrogatives (13)–(15), a sentence containing two *wh*-phrases may be generated as follows:

(22) a. One *wh*-phrase undergoes *wh*-movement to the Spec of Comp, leaving a gap in the position from which it is raised; the other stays in situ.

b. One *wh*-phrase is directly generated in the Spec of Comp and is related to a resumptive pronoun in the sentence; the other stays in situ.

c. Both *wh*-phrases stay in situ.

What will prove significant is that superiority effects arise in both of the first two patterns and not in the third, as we discuss in the following section.

### 1.2.2 Superiority in *Wh*-Interrogatives

It is not surprising that the pattern in (22a), which involves movement of a *wh*-phrase, exhibits superiority effects: a lower *wh*-phrase cannot be moved across a higher *wh*-phrase.
(23) miin ?annaꜱ to yzuur miin
    who persuaded.2p 3ms.visit who
    ‘Who did you persuade to visit whom?’

(24) *miin ?annaꜱ to miin yzuur
    who persuaded.2p who 3ms.visit
    ‘*Who did you persuade whom to visit?’

Schematically, these configurations, involving Superiority, can be represented as follows (t is the trace left by wh-movement; irrelevant details are omitted):

(25) a. \[ CP \text{wh}_1 [\text{IP} \ldots \text{t}_1 \ldots \text{wh}_2 \ldots ] ] (\text{t}_1 \text{c-commands} \text{wh}_2)
    b. *[CP \text{wh}_2 [\text{IP} \ldots \text{wh}_1 \ldots \text{t}_2 \ldots ] ] (\text{wh}_1 \text{c-commands} \text{t}_2)

Furthermore, as is generally true with Superiority violations, replacing ‘who’ with a ‘which’ NP renders (24b) grammatical.

(26) ?ayya walad ?annaꜱ to ?ayya mꜱ allme tzuur
    which boy persuaded.2p which teacher ms 3fs.visit
    ‘Which boy did you persuade which teacher to visit?’

Next, consider the resumptive strategy discussed in (22b). Recall that two types of resumptive structures must be recognized in LA. One is derived by movement; in this case, no island intervenes between the wh-phrase and the resumptive pronoun. The other is base-generated; in this case, an island intervenes between the wh-phrase and the resumptive pronoun. Interestingly, superiority effects occur in both types of resumptive constructions: the one that is derived by movement and the one that is not. In (27a–b), the wh-element in the Spec of Comp is not separated from the resumptive pronoun by an island and Superiority must be respected, as illustrated by the ungrammaticality of (27b). In (28a–d), an island intervenes between the wh-element and the resumptive pronoun and Superiority is also respected, as indicated by the ungrammaticality of (28b,d).

(27) a. miin ?annaꜱ ṯu yzuur miin
    who persuaded.2p him 3ms.visit who
    ‘Who did you persuade (him) to visit whom?’
    b. *miin ?annaꜱ to miin yzuur-dım
    who persuaded.2p who 3ms.visit-him
    ‘Who did you persuade whom to visit (him)’
(28) a. miin ñabasaţto la?inno saami ŋarraf-o ña-miin who pleased.2p because Sami introduced.3ms him to-whom ‘Who? were you pleased because Sami introduced him to whom?’

b. *miin ñabasaţto la?inno saami ŋarraf miin ñəl-e who pleased.2p because Sami introduced.3ms who to-him ‘Who? were you pleased because Sami introduced whom to him?’

c. miin hannayt-u la?inno saami zaaar miin who congratulated.2p him because Sami visited.3ms who ‘Who? did you congratulate (him1) because Sami visited whom?’

d. *miin hannayto miin la?inno saami zaaar-o who congratulated.2p whom because Sami visited-him ‘Who? did you congratulate whom because Sami visited him?’

Sentences (27a–b) are schematically represented in (29a–b), and sentences (28a–d) are schematically represented in (30a–b) (RP stands for resumptive pronoun; irrelevant details omitted).

(29) a. \([\text{CP } wh_1 [\text{IP } . . . \text{RP} . . . wh_2 . . .]]\) (RP1 c-commands wh2)

b. *\([\text{CP } wh_2 [\text{IP } . . . wh_1 . . . \text{RP} . . .]]\) (wh1 c-commands RP2)

(30) a. \([\text{CP } wh_1 [\text{IP } . . . [\text{island } . . . \text{RP} . . . wh_2 . . .]] . . .]]\) (RP1 c-commands wh2)

b. *\([\text{CP } wh_2 [\text{IP } . . . wh_1 . . . \text{RP} . . .]] . . .]]\) (wh1 c-commands RP2)

c. \([\text{CP } wh_1 [\text{IP } . . . \text{RP} . . . [\text{island } . . . wh_2 . . .]] . . .]]\) (RP1 c-commands wh2)

d. *\([\text{CP } wh_2 [\text{IP } . . . wh_1 . . . [\text{island } . . . \text{RP} . . .]] . . .]]\) (wh1 c-commands RP2)

Again, the unacceptable sentences in (27b) and (28b,d) become acceptable when ‘who’ is replaced with a ‘which’ phrase.

(31) a. ñayya walad ñannaţto ñayya bint tzuur-o which boy persuaded.2p which girl 3rs.visit-him ‘Which boy did you persuade which girl to visit him?’

b. ñayya walad ñabasaţto la?inno saami ŋarraf ñayya which boy pleased.2p because Sami introduced.3ms which bent ñəl-e girl to-him
'Which boy i were you pleased because Sami introduced which girl to him?'

c. Ayya walad hannayto Ayya bənt laʔinno saami which boy congratulated.2p which girl because Sami zaar-o visited.3ms-him

‘Which boy i did you congratulate which girl because Sami visited him?’

In the ill-formed cases (27b) and (28b,d), the intervening wh-in-situ c-commands the RP. Now, consider sentences in which c-command does not obtain between the wh-in-situ and the resumptive pronoun. These sentences are also unacceptable.

(32) a. *miin fakkarto laʔinno l-mʔallme hikət maʃ-o who thought.2p because-the-teacher.fs spoke.3fs with-him ?onno l-mudiira ha-təʃhaʃ miin that the-principal.fs will-3fs.expel who ‘Whoi did you think because the teacher spoke with him that the principal would expel whom?’

b. *miin fakkarto laʔinno l-mʔallme hikət maʃ miin who thought.2p because-the-teacher.fs spoke.3fs with who ?onno l-mudiira ha-təʃhaʃ-o that the-principal.fs will-3fs.expel-him ‘Whoi did you think because the teacher spoke with whom that the principal would expel him?’

c. *miin fakkarto laʔinno l-mʔallme hikət maʃ-o who thought.2p because-the-teacher.fs spoke.3fs with-him ?onno l-mudiira ha-truuh minduun-ma təʃhaʃ miin that the-principal.fs will-3fs.leave without 3fs.expel who ‘Whoi did you think because the teacher spoke with him that the principal would leave without expelling whom?’

d. *miin fakkarto laʔinno l-mʔallme hikət maʃ miin who thought.2p because-the-teacher.fs spoke.3fs with who ?onno l-mudiira ha-truuh minduun-ma təʃhaʃ-o that the-principal.fs will-3fs.leave without 3fs.expel-him ‘Whoi did you think because the teacher spoke with whom that the principal would leave without expelling him?’

Once again, as is true of Superiority violations, the sentences in (32) become acceptable just in case the in-situ ‘who’ is replaced with a ‘which’ NP.
(33) a. miin fakkarto laʔinnu l-mʕallme hikat maʕ-o who thought.2p because the-teacher.rs spoke.3rs with-him ḥa-təšhat-ʔayya walad that the-principal.rs will-3fs.expel which boy ‘Who did you think because the teacher spoke with him that the principal would expel which boy?’

b. miin fakkarto laʔinnu l-mʕallme hikat maʕ ʔayya who thought.2p because the-teacher.rs spoke.3rs with which walad ḥa-təšhat-o boy that the-principal.rs will-3fs.expel-him

‘Who did you think because the teacher spoke with which boy that the principal would expel him?’

c. miin fakkarto laʔinnu l-mʕallme hikat maʕ-o who thought.2p because the-teacher.rs spoke.3rs with-him ḥa-truuh minduun-ma təšhat that the-principal.rs will-3fs.leave without 3fs.expel ʔayya walad which boy

‘Who did you think because the teacher spoke with him that the principal would leave without expelling which boy?’

d. miin fakkarto laʔinnu l-mʕallme hikat maʕ ʔayya who thought.2p because the-teacher.rs spoke.3rs with which walad ḥa-truuh minduun-ma boy that the-principal.rs will-3rs.leave without təšhat-o 3rs.expel-him

‘Who did you think because the teacher spoke with which boy that the principal would leave without expelling him?’

The sentences in (32) are schematically represented in (34).

(34) a. *[CP wh1 [IP ... [island ... RP1 ...] ... wh2 ...]]

b. *[CP wh2 [IP ... [island ... wh1 ...] ... RP2 ...] ]

c. *[CP wh1 [IP ... [island ... RP1 ...] ... [island ... wh2 ...] ...]]

d. *[CP wh2 [IP ... [island ... wh1 ...] ... [island ... RP2 ...] ...]]

The unacceptability of (34a,c) is especially significant in light of the formulation of Superiority in (1)–(2). Note that in these two patterns, RP1 does not cross another wh-phrase to be related to the wh-phrase in the Spec of Comp, with “crossing” interpreted either linearly or hierarchically.
This fact indicates that crossing is not an intrinsic property of superiority effects.

Finally, let us consider constructions in which both $wh$-phrases remain in situ.

(35) a. $\text{?anna}^{\text{to}} \text{miin yzuur miin}$ persuaded.$2p$ who $3\text{ms.visit who}$
   ‘Lit. You persuaded whom to visit whom?’
   ‘Who did you persuade to visit whom?’

b. $\text{?\text{\text{"o}}nbas\text{"\text{\text{"o}}}la\text{\text{"\text{"o}}}inno \text{saami } \text{\text{"\text{"o}}}\text{\text{"\text{"o}}}araf miin } \text{\text{"\text{"o}}}\text{\text{"\text{"o}}}ala \text{miin}$ pleased.$2p$ because Sami introduced.$3\text{ms who to who}$
   ‘Lit. You were pleased because Sami introduced whom to whom?’
   ‘Who were you pleased because Sami introduced _____ to whom?’

c. $\text{hannayto miin la\text{\text{"o}}}inno \text{saami zaar miin}$ congratulated.$2p$ who because Sami visited.$3\text{ms who}$
   ‘Lit. You congratulated whom because Sami visited whom?’
   ‘Who did you congratulate because Sami visited whom?’

d. $\text{fakkarto la\text{\text{"o}}}inno \text{l-m\text{\text{"o}}}\text{\text{"o}}llme } \text{\text{"\text{"o}}}\text{\text{"o}}}hik\text{"\text{"o}}} $ $\text{ma\text{\text{"o}}} \text{miin}$ $\text{?\text{\text{"o}}}nno$
   thought.$2p$ because the-teacher.$\text{rs spoke.3rs with who that}$
   $\text{l-mudiira } \text{ha-t\text{"\text{"o}}}\text{\text{"o}}}ha\text{"\text{"o}}} \text{miin}$
   the-principal.$\text{rs will-3rs.expel who}$
   ‘Lit. You thought because the teacher spoke with whom that the principal would expel whom?’

e. $\text{fakkarto la\text{\text{"o}}}inno \text{l-m\text{\text{"o}}}\text{\text{"o}}llme } \text{\text{"\text{"o}}}\text{\text{"o}}}hik\text{"\text{"o}}} $ $\text{ma\text{\text{"o}}} \text{miin}$ $\text{?\text{\text{"o}}}nno$
   thought.$2p$ because the-teacher.$\text{rs spoke.3rs with who that}$
   $\text{l-mudiira } \text{ha-truuh minduun-ma } \text{t\text{"\text{"o}}}\text{\text{"o}}}ha\text{"\text{"o}}} \text{miin}$
   the-principal.$\text{rs will-3rs.leave without } 3\text{rs.expel who}$
   ‘Lit. You thought because the teacher spoke with whom that the principal would leave without expelling whom?’

The sentences in (35a–e), schematically represented as (36a–e), are all acceptable; no Superiority violation occurs.

(36) a. $\ldots wh_1 \ldots wh_2 \ldots$

b. $\ldots [\text{island } \ldots wh_1 \ldots wh_2 \ldots ] \ldots$

c. $\ldots wh_1 \ldots [\text{island } \ldots wh_2 \ldots ] \ldots$

d. $\ldots [\text{island } \ldots wh_1 \ldots ] \ldots wh_2 \ldots$

e. $\ldots [\text{island } \ldots wh_1 \ldots ] \ldots [\text{island } \ldots wh_2 \ldots ] \ldots$
1.3 Superiority and Movement

The facts presented so far not only pose problems for the generalizations in (1)–(2) but also challenge any movement approach to Superiority. Such approaches are best represented by the recent work of Pesetsky (2000—also see Oka 1993; Bošković 1998, 1999), which presents quite a refined movement (Attract Closest) analysis for Superiority. We show below that even such a refined movement analysis does not account for superiority effects in LA. We first briefly describe Pesetsky’s (2000) analysis and then show what challenges the LA data pose.

1.3.1 Pesetsky’s (2000) Approach to Superiority

Pesetsky (2000) refines the movement approach to superiority effects based on Attract Closest (AC; see (9)) and offers a comprehensive account that accommodates various types of counterexamples to the standard superiority effects. He argues that superiority effects are accounted for by AC and some special requirement on how the Spec of Comp should be filled. English, for example, has a rule like (37), which requires the Spec of Comp to be filled in the overt syntax by more than one wh-phrase (C_m-spec = multispecifier complementizer).

(37) Specifier potential of C_m-spec

C_m-spec requires more than one wh-specifier.

The fact that English requires multiple wh-specifiers in C_m-spec is not obvious from superficial inspection of a string because the following language-specific pronunciation rule operates in English:

(38) Pronunciation rule (English)

a. The first instance of wh-phrase movement to C is overt, in that wh is pronounced in its new position and unpronounced in its trace positions.

b. Secondary instances of wh-phrase movement to C are covert, in that wh is pronounced in its trace position and unpronounced in its new position.

Superiority in English is, then, accounted for by AC and the multiple Spec requirement in (37), tempered by the pronunciation rule in (38).

A wh-element can undergo either phrasal movement or feature movement. In sentences with two wh-expressions, such as (39a), AC requires the higher wh (in (39a), who) to move first. What also undergoes movement to
satisfy (37), whose effect is not detectable by surface inspection because of the pronunciation rule in (38). (39a) is therefore well formed. (39b), however, violates either AC or the multiple Spec requirement (37). (39b) violates AC if what is moved first to the Spec of Comp. However, AC can still be satisfied if feature (as opposed to phrasal) movement applies first to who—that is, if only the [+wh] feature of who is moved first. What could then legitimately undergo phrasal movement to the Spec of Comp, which would be overt according to the pronunciation rule. However, this derivation violates (37), which requires the Spec of Comp to be filled by more than one wh-phrase. Feature movement of who cannot satisfy (37), and thus there is no well-formed derivation of (39b).

(39) a. Who saw what?
   b. *What did who see?

Apparent violations of Superiority involving three wh-elements, such as the grammatical example in (40), are accounted for by AC, Richards's (1997) Principle of Minimal Compliance (PMC) (41), and the specific English pronunciation rule in (38).

(40) What did who persuade whom to buy ____?

(41) Principle of Minimal Compliance (PMC; Richards 1998, 601)

For any dependency D that obeys constraint C, any elements that are relevant for determining whether D obeys C can be ignored for the rest of the derivation for purposes of determining whether any other dependency D' obeys C.

An element X is relevant to determining whether a dependency D with head A and tail B obeys constraint C iff

a. X is along the path of D (that is, X = A, X = B, or A c-commands X and X c-commands B), and
b. X is a member of the class of elements to which C makes reference.

The PMC allows AC to be met only once. Once AC is satisfied, subsequent movement does not also need to satisfy AC. The derivation of sentence (40) is as follows:

(42) a. Input to wh-movement
   C_{m-spec} [who persuaded whom to buy what]
   b. Step 1
      C attracts the [+wh] feature of who (H), pays “AC tax.”
      F_{i-C} [F_{i-who persuade whom to buy what}]

Step 2
C attracts either of the remaining wh-phrases, since the PMC no longer requires obedience to AC.
what F₁-C [F₁-who persuade whom to buy ____]

Step 3
C attracts the other wh-phrase(s).
what whom F₁-C [F₁-who persuade ____ to buy ____]

Pronounced result
What did who persuade whom to buy?

As for the fact that which-phrases escape superiority effects as in (4)–(6) and (43), Pesetsky suggests that for sentences containing which phrases, there is no requirement that at least two wh-phrases must be attracted by Cₘ-spec. That is, the multiple Spec requirement in (37) does not apply in cases involving which phrases. In (43), for instance, the wh-phrase which person can undergo feature movement first, thus satisfying AC, and the multiple Spec requirement in (37) is suspended. The step-by-step derivation is given in (44).

(43) Which book did which person buy?

(44) a. Input to wh-movement
Cₘ-spec [which person bought which book]
b. Step 1
Cₘ-spec attracts the [+wh] feature of which person.
F₁-C [F₁-which person bought which book]
c. Step 2
Cₘ-spec attracts the wh-phrase which book.
which book F₁-C [F₁-which person bought ____]
d. Pronounced result
Which book did which person buy?

Recall that feature movement of the first wh-phrase is not possible in (39b) because of the multiple Spec requirement in (37). The contrast between (39b) and (43) is the consequence of different requirements on the number of wh-phrases in the Spec of Comp: (37) does not apply to which phrases.

The existence of feature movement, Pesetsky argues, is supported by contrasts like the following (É. Kiss 1986; Hornstein 1995):12

(45) a. Which person did not read which book?
b. Which person didn’t read which book?
c. Which book did which person not read?

d. *Which book didn’t which person read?

(45d) is unacceptable. The unacceptability of this sentence is captured by the requirement of AC together with the blocking effect of negation. To satisfy AC, the subject which person needs to undergo movement first—feature movement in this case. However, feature movement is blocked by negation in C. In contrast, (45a) and (45b) are acceptable because the object which book can undergo phrasal movement, after which person undergoes phrasal movement. Negation does not block phrasal movement. (45c) is grammatical because negation is not in Comp, therefore does not intervene between the subject and the Spec of Comp, and therefore does not intercept feature movement of the subject.

1.3.2 Attract Closest in Lebanese Arabic

An immediate difficulty in extending an AC approach to the LA data is the relevance of superiority effects in nonmovement structures involving resumption, such as those involving islands, discussed earlier and repeated here:

(46) a. \[ CP \, wh_1 \, [IP \ldots [island \ldots RP_1 \ldots wh_2 \ldots] \ldots] \] (RP_1 c-commands wh_2)

b. *\[ CP \, wh_2 \, [IP \ldots [island \ldots wh_1 \ldots RP_2 \ldots] \ldots] \] (wh_1 c-commands RP_2)

c. \[ CP \, wh_1 \, [IP \ldots RP_1 \ldots [island \ldots wh_2 \ldots] \ldots] \] (RP_1 c-commands wh_2)

d. *\[ CP \, wh_2 \, [IP \ldots wh_1 \ldots [island \ldots RP_2 \ldots] \ldots] \] (wh_1 c-commands RP_2)

(47) a. *\[ CP \, wh_1 \, [IP \ldots [island \ldots RP_1 \ldots] \ldots wh_2 \ldots] \] (neither RP_1 nor wh_2 c-commands the other)

b. *\[ CP \, wh_2 \, [IP \ldots [island \ldots wh_1 \ldots] \ldots RP_2 \ldots] \] (neither wh_1 nor RP_2 c-commands the other)

c. *\[ CP \, wh_1 \, [IP \ldots RP_1 \ldots [island \ldots wh_2 \ldots] \ldots] \] (neither RP_1 nor wh_2 c-commands the other)

d. *\[ CP \, wh_2 \, [IP \ldots [island \ldots wh_1 \ldots] \ldots [island \ldots RP_2 \ldots] \ldots] \] (neither wh_1 nor RP_2 c-commands the other)

We have argued that these patterns cannot be derived by movement because of a lack of reconstruction. As a result, AC is not relevant and the contrast found in (46) and (47) cannot be captured by a movement approach.
Suppose we weaken a movement approach by proposing that, despite standard assumptions, movement is possible from within islands and that the lack of reconstruction is due to other factors. Even an approach based on such a weakening of grammatical theory would still fail for empirical reasons. Recall that resumption in LA is sensitive to Superiority but in-situ $wh$-phrases are not, as illustrated by the contrast in (46) and (47) and the cases with all $wh$-phrases in situ as in (48).

\[(48)\]
\begin{align*}
a. & \ldots wh_1 \ldots wh_2 \ldots \\
b. & \ldots [\ldots wh_1 \ldots wh_2 \ldots ] \\
c. & \ldots wh_1 \ldots [\ldots wh_2 \ldots ] \ldots \\
d. & \ldots [\ldots wh_1 \ldots ] \ldots wh_2 \ldots \\
e. & \ldots [\ldots wh_1 \ldots ] \ldots [\ldots wh_2 \ldots ] \ldots \\
\end{align*}

According to Pesetsky’s analysis, all $wh$-phrases undergo movement (feature movement or phrasal movement). They appear in different positions—peripheral or argument positions—because of a difference in pronunciation rules: $wh$-phrases appearing in peripheral positions are generated by spelling out the head of the chain; in-situ $wh$-phrases are generated by spelling out the tail of the chain. Under such an approach, it is not clear, for instance, why the corresponding pairs of patterns in (47a–d) and (48d–e) differ in acceptability.

In brief, the LA data cannot be satisfactorily accommodated by an AC approach to Superiority. Superiority in LA is at play in nonmovement structures and does not apply to constructions involving only $wh$-in-situ as in (48). The intervention effects are not responsible for Superiority violations. They are relevant for pair-list interpretations but not single-pair interpretations.

Even if illicit movement is made to apply to those cases with $wh$-phrases in situ or resumptive pronouns within islands, a movement approach to superiority effects cannot adequately capture the differences in acceptability exhibited in (46)–(48).

1.4 Summary

In this chapter, we investigated the behavior of the three types of LA $wh$-interrogative constructions listed in (22a–c), repeated here, with respect to superiority effects. We showed that, when an island separates a resumptive pronoun in a (b)-type structure from the $wh$-phrase in the Spec of Comp, the structure cannot be derived by movement. Nonetheless, (b)-type structures as well as (a)-type structures exhibit superiority effects.
(22) a. One wh-phrase undergoes wh-movement to the Spec of Comp, leaving a gap in the position from which it is raised; the other stays in situ.
b. One wh-phrase is directly generated in the Spec of Comp and is related to a resumptive pronoun in the sentence; the other stays in situ.
c. Both wh-phrases stay in situ.

In view of the prominent, decades-old line of research that subsumes Superiority under movement relations, the data we have discussed so far are significant. They present a novel and interesting picture: Superiority is relevant even in certain nonmovement structures such as those involving a resumptive pronoun separated from its wh-antecedent by an island, as in (46) and (47). These facts indicate that Superiority violations are not restricted to constructions involving movement. We further showed that cases involving which phrases do not exhibit Superiority, thus confirming that we are indeed dealing with superiority effects in LA. Moreover, we established that Superiority violations do not necessarily involve crossing. This argues that the view of Superiority as originally formulated in (1), consisting of the three subclaims in (2a–c), is not adequate empirically. A movement approach fails to capture the contrasts found in (46)–(48), even if movement is made to apply more broadly (allowing illicit movement) and the movement theory greatly weakened. Consequently, Superiority must be approached from a new perspective—an important focus of the next chapter.