

Islands and movement

1 Islands

As the examples in the textbook on pages 161-162 show, movement cannot freely happen between any two positions. Wh-expressions, for example, cannot move to the beginning of the sentence (Spec,CP) from any position. Compare the following pair of sentences (where coindexing identifies the moved element and the position it was moved from):

- (1) a. What_i does Hortense believe that Herb saw t_i?
- b. *What_i does Hortense believe that who saw t_i?

While *what* can move out from the embedded clause [_{CP} *that Herb saw what*], it is trapped inside [_{CP} *that who saw what*]. Domains that trap an element are called *islands* (from which there is no escape)¹.

There are various types of islands, illustrated below.

1.1 Adjunct islands

Wh-expressions cannot move out of an adjunct (the island is indicated by square brackets):

- (2) a. Herb started to play [only after he drank his usual Ghoul Aid]
- b. *What_i did Herb start to play [only after he drank t_i] ?
- (3) a. Hortense is sure that Herb lost [because he drank too much Ghoul Aid]
- b. *What_i is Hortense sure that Herb lost [because he drank t_i] ?

1.2 Wh-islands

A wh-expression cannot be moved from within a constituent that contains another c-commanding wh-expressions:

- (4) a. What did Hortense tell Herb to drink?
- b. *What did Hortense tell [who to drink]?
- (5) a. Herb thought that Hortense had the ace of spades
- b. What_i did Herb think that Hortense had t_i?
- c. *What_i did Herb think that [who had t_i] ?

1.3 Complex NP islands

The wh-expression cannot be moved from within an NP or DP, either:

- (6) a. Hortense believed [the claim that Herb cheated]
- b. *Who_i did Hortense believe [the claim that t_i cheated]?

¹The islands discussed here are *strong* islands. There are also *weak* islands, where movement can happen from out of the clause, but yield a marginal sentence.

1.4 Coordinate structure constraint

A moved wh-expression cannot be a part of a conjoined structure:

- (7) a. Herb liked [fruit punch and Ghoul Aid]
b. *What did Herb like [fruit punch and t_i] ?
- (8) a. Hortense tasted the Ghoul Aid [slowly and carefully]
b. *How _{i} did Hortense taste the Ghould Aid [slowly and t_i] ?

2 Subjacency

Wh-expressions cannot escape from islands. Is there some generalization behind the islandhood, or is it just an accidental fact? In fact, several cases of islandhood can be accounted for by assuming that the movement of wh-expressions must be local. Consider the following sentences (where square brackets indicate CP boundaries, not islands):

- (9) a. Hortense believes [Herb to suspect [that Harv poisoned the Ghoul Aid]]
b. What _{i} does Hortense believe [Herb to suspect [that Harv poisoned t_i]]?

How does *what* move from its base position to Spec,CP of the matrix clause? If it moves in one fell swoop, then why is movement in the following example bad?

- (10) a. Hortense wonders [who suspects [that Harv poisoned the Ghoul Aid]]
b. *What _{i} does Hortense wonder [who suspects [that Harv poisoned t_i]]?

Let us assume that *what* does not move to its surface position in (9b) in one step, but in three (always moving to Spec,CP):

- (11) (= (9b))
What _{i} does Hortense believe [t_i Herb to suspect [t_i that Harv poisoned t_i]] ?

The intermediate step is also shown by the following example, where *what* stays in that position:

- (12) Hortense wonders [what _{i} Herb suspects [t_i that Harv poisoned t_i]]

(10b) is ungrammatical because *what* cannot move to its surface position. The ultimate landing site of *what* is empty, so this cannot be a problem. Notice, however, that the intermediate position of *what* would be the same as the surface position of *who*; at the left edge (Spec,CP) of the intermediate clause. (10b) is ungrammatical then because the second step of *what* (to the intermediate clause) is impossible; that position is occupied by *who*.

- (13) (= (10b))
What _{i} does Hortense wonder [who/ t_i knows [t_i that Harv poisoned t_i]]?

2.1 The Subjacency Condition

The distance that a wh-expression can cover in a single step is regulated by the Subjacency Condition:

- (14) Subjacency Condition
(Wh)-movement cannot cross more than one bounding node, where bounding nodes are TP and DP

The Subjacency Condition requires *what* to make a stop in the intermediate clause. If it does not, then *what* crosses three TP boundaries:

- (15) a. What _{i} does [_{TP} Hortense believe t_i [_{TP} Herb to suspect t_i that [_{TP} Harv poisoned t_i]]]?
b. *What _{i} does [_{TP} Hortense believe [_{TP} Herb to suspect that [_{TP} Harv poisoned t_i]]]?

The ungrammatical sentence involves movement across two TP nodes in the following sentence:

- (16) a. What_i does [_{TP} Hortense wonder t_i if [_{TP} Herb noticed t_i]]?
 b. *What_i does [_{TP} Hortense wonder who [_{TP} noticed t_i]]?

The same condition also rules out complex NP violations, where the wh-expression also crosses more than one bounding node, a DP and a TP node:

- (17) *Who_i did [_{TP} Hortense believe [_{DP} the claim t_i that [_{TP} t_i cheated]]?

How does the subjacency condition account for the following examples?

- (18) a. Hortense was wondering how to fix a Ghoul Aid
 b. *What was Hortense wondering how to fix t?
 (19) a. Herb drank Harv's Ghoul Aid
 b. *Whose did Herb drink Ghoul Aid?

2.2 Relative clauses

With wh-expressions as relative pronouns, the Subjacency Condition also comes into play. A complex NP violation is illustrated below.

- (20) a. this is the man whom_i [_{TP} Herb claims t_i that [_{TP} he will beat t_i]]
 b. *this is the man whom_i [_{TP} Herb made [_{DP} the claim t_i that [_{TP} he will beat t_i]]]

How does the Subjacency Condition account for the ungrammaticality of the following sentence?

- (21) *the man who_i [they think that when [Herb beats t]] then everyone will be happy

2.3 Crosslinguistic variation

Compare the Italian and English relative clauses below:

- (22) a. tuo fratello, a cui mi domando che storie abbiano raccontato
 your brother, to whom myself ask-I which stories have-they told
 'your brother, to whom I wonder which stories they told'
 b. *your brother, to whom_i [_{TP} I wonder which stories [_{TP} they told t_i]]
 (Haegeman 1994)
 (23) a. la nuova idea di Giorgio, di cui immagino che cosa pensi
 the new idea of G, of which imagine-I what think-you
 'Giorgio's new idea, of which I imagine what you think'
 b. *George's new idea, of which_i [_{TP} I can imagine what [_{TP} you think t_i]]
 (Haegeman 1994)

Do the data above indicate that Subjacency is not operative in Italian? The following example makes it clear that movement possibilities are also restricted there:

- (24) *tuo fratello, [_{CP} a cui_i [_{TP} temo [_{DP} la possibilità [_{CP} t_i che [_{TP} abbiano raccontato
 your brother . to whom . fear-I . the possibility . . that . have-they told
 tutto t_i]]]]]
 everything
 'Your brother, to whom I fear the possibility that they have told everything'

Italian differs from English in the nature of the bounding nodes:

- (25) Subjacency Condition (Italian)
 (Wh)-movement cannot cross more than one bounding node, where bounding nodes are CP and DP

In (25) below, movement of *a cui* crosses only one CP node (even though it crosses two TP nodes) – thus it does not violate Subjacency. In (26), however, it crosses both a DP and a CP node in the same step, violating the Subjacency Condition.

(26) (= (21a))

tuo fratello, a cui_i mi domando [_{CP} che storie abbiano raccontato t_i]
your brother, to whom myself ask-I . . . which stories have-they told

‘your brother, to whom I wonder which stories they told’

(27) (= (23))

*tuo fratello, a cui_i temo [_{DP} la possibilità [_{CP} t_i che abbiano raccontato tutto t_i]]]]
your brother to whom fear-I . . . the possibility . . . that have-they told everything

‘Your brother, to whom I fear the possibility that they have told everything’

The Subjacency Condition is not constant across languages; it is subject to parametric variation. We have seen that DP is a bounding node for both Italian and English. TP is a bounding node only for English; and CP is a bounding node only for Italian.