

# More on Movement

	A-movement	A'-movement
Head of chain in position where Case is assigned	yes	no
Head of chain in position where theta-role is assigned	no	no
Foot of chain in position where Case is assigned	no	sometimes (if the moved element is an adjunct, there is no Case at the foot of the chain)
Foot of chain in position where theta-role is assigned	sometimes (if the moved element is an expletive, there is no theta-role at the foot of the chain)	sometimes (if the moved element is an adjunct, there is no theta-role at the foot of the chain)

The previous differences between A and A'-movement follow from their general properties, which we already know.

There are many other differences between them. Here is one of my favorites.

What does (1) mean?

1. Who thinks that Mary likes him?

and (2):

2. Who<sub>i</sub> thinks that Mary likes him<sub>i</sub>?

3. For which person x: x thinks that Mary likes x

Now look at (4):

4. Who does his mother like?

(4) is grammatical but it can only have the indexing in (5), not in (6). If the indexing in (6) were possible, (4) would have the meaning in (7,8), which it does not.

5. Who<sub>i</sub> does his<sub>k</sub> mother like?

6. \*Who<sub>i</sub> does his<sub>i</sub> mother like?

7. For which  $x$  does  $x$ 's mother love  $x$ ?

8. Who is loved by his own mother?

So the configuration in (9) leads to ungrammaticality:

9.\*  $WH_k$  ..... [ $\dots pron_k \dots$ ] .....  $t_k$



[ $\dots pron_k \dots$ ] indicates that the pronoun is contained inside a constituent and does not c-command out. That is, the pronoun does not c-command the trace  $t_k$ .

A WH-word cannot cross over a coindexed pronoun that does not c-command the trace of the WH-word.

How do we know that movement (i.e. the crossover) is necessary for the violation?

10. Who<sub>i</sub> likes his<sub>i</sub> mother?

11. Who<sub>i</sub> thinks his<sub>i</sub> mother is nice?

4. \*Who<sub>i</sub> does his<sub>i</sub> mother like?

no crossover → no violation

Weak Cross Over violation (WCO):

12. \* WH<sub>k</sub> ..... [.....pron<sub>k</sub>.....].....t<sub>k</sub>

If you are wondering why it is called Weak CO: it is in opposition to Strong Cross Over (SCO).

In SCO, unlike in WCO, the pronoun *does* c-command the trace of movement.

Can you think of SCO violating sentences?

13. Who does he like?

14. Who does he think Mary likes?

(13, 14) are fine sentences but only on the indexing in (13', 14'), not the indexing in (13'', 14''), which would have led to the unavailable readings in (15, 16).

13'. Who<sub>i</sub> does he<sub>k</sub> like?

14'. Who<sub>i</sub> does he<sub>k</sub> think Mary likes?

13''. \* Who<sub>i</sub> does he<sub>i</sub> like?

14''. \* Who<sub>i</sub> does he<sub>i</sub> think Mary likes?

15a. For which  $x$ ,  $x$  likes  $x$

b. Who likes himself?

16a. For which  $x$ ,  $x$  thinks that Mary likes  $x$ ?

b. Who<sub>i</sub> thinks that Mary likes him<sub>i</sub>?

Strong Cross Over violation:

17. Wh<sub>i</sub> ..... pron<sub>i</sub>..... t<sub>i</sub>



And again we can check that the crossing over is crucial:

18. Who<sub>i</sub> believes that Mary likes him<sub>i</sub>?

Can you see what SCO might be reducible to?

Binding Condition C!

So, what we see is that WH-movement (A'-movement) is subject to WCO and SCO.

Is A-movement subject to WCO?

What sentences should we create to find out if it is?

This will take a bit to set up, so please bear with me.

Remember the general profile of WCO:

19.  $\alpha_i$     [...pron<sub>i</sub>....]     $t_i$

Remember:

20. It seems that he is the best candidate

21. He seems to be the best candidate

What is the derivational relationship between these two sentences?

21'. He<sub>k</sub> seems [ t<sub>k</sub> to be the best candidate]

Now look at these:

22. It seems **to me** that he is the best candidate  
the “experiencer”

23. He seems to me to be the best candidate

24. He<sub>k</sub> seems **to me** [ t<sub>k</sub> to be the best candidate]

So now we have the position in which we can place the cross-overed pronoun: (in) the experiencer.

What do we need to ensure in order to decide whether we are dealing with WCO or SCO?

We need to see whether the pronoun c-commands the trace of movement (SCO) or not (WCO).

How can we check whether the pronoun would c-command the position of the trace?

Condition C!

So what is our test sentence?

25. \* It seems to him<sub>k</sub> that John<sub>k</sub> is the best candidate

26. It seems to him<sub>k</sub> that John<sub>m</sub> is the best candidate

So the pronoun in the experiencer does c-command

*K* (ignore for right now how the the experiencer can c-command out of the PP headed by *K* ).

So when the pronoun gets crossed over, what sort of configuration are we creating? SCO or WCO?

27. \* John<sub>k</sub> seems to him<sub>k</sub> [t<sub>k</sub> to be the best candidate]

Is (27) good or bad?

So A-movement, like A'-movement, is subject to SCO, which is not surprising at all if SCO is nothing other than Binding Condition C.

What about WCO?

What would be the right sentence to test whether A-movement objects to WCO configurations?

28. It seems to [his mother] that John is the best candidate.

29. It seems to [ $his_k$  mother] that  $John_m$  is the best candidate.

30. It seems to [ $his_k$  mother] that  $John_k$  is the best candidate.

So we now have the right sentence to check whether A-movement is subject to WCO! How do we proceed?

31.  $John_k$  seems to [ $his_k$  mother] [ $t_k$  to be the best candidate.

So!

A'-movement is subject to WCO violations. A-movement is not!

32.  $\alpha_i$     [...pron<sub>i</sub>....]     $t_i$

-bad if  $\alpha_i \dots t_i$  is an A'-chain

-fine if  $\alpha_i \dots t_i$  is an A-chain

Let's look at the type of sentences that we created along the way and see if there is something else we want to say about them.

33. It seems to him<sub>k</sub> that he<sub>k</sub> is the best candidate

34. \* He<sub>k</sub> seems to him<sub>k</sub> to be the best candidate

What can we conclude?

A-movement "feeds" Binding Theory!

A-movement creates new antecedents for BT.

35. \*It seems to herself<sub>k</sub> that Mary<sub>k</sub> is the best candidate
36. Mary<sub>k</sub> seems to herself<sub>k</sub> [t<sub>k</sub> to be the best candidate]

What about the following pair:

37. It seems to John<sub>k</sub>'s mother that he<sub>k</sub> is the best candidate
38. \*He<sub>k</sub> seems to John<sub>k</sub>'s mother to be the best candidate.

So A-movement creates new antecedents for Binding.

Which means that Binding Theory applies (at least also) after A-movement takes place.

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