

## On ECM, causation, perception and passivisation

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**Main claims:** In this paper we consider ECM causatives in (mainly) English, Brazilian Portuguese and argue in favour of the following claims: (i) the syntax of immediate causation/direct perception is such that it requires a complement smaller than a TP; (ii) there is nonetheless variation across and within languages regarding exactly how small such complements are; (iii) the accusative subjects in ECM constructions can only be passivized if they are contained in a full TP complement; (iv) for this reason, most ECM causative and perception verbs cannot undergo passivisation; (v) where causatives/perception verbs *do* allow passivisation, they do not actually encode immediate causation/direct perception; (vi) the passivisation facts stem from the phasal architecture: movement to spec TP means the embedded subject is not spelled out as part of the lower v-related phase and so is still available when matrix T is merged. In active contexts, assuming PIC2, accusative Case can be assigned to subjects contained in either TP or smaller projections.

**Size differences:** We begin by showing, based on the distribution of auxiliary verbs and temporal modification, that the size of bare infinitival ECM complements varies across Brazilian Portuguese and English along the following lines (adopting the labels from Aelbrecht and Harwood 2015 and in the spirit of Wurmbrand 1998, 2001):

- |  |   |
|--|---|
| 1) see/hear                                    | [voiceP voice [VP VP]]                                  |
| 2) let/have/make                               | [ProgP prog [voiceP voice [VP VP]]]                     |
| 3) <i>fazer</i> 'make'                         | [PerfP Perf [ProgP prog [voiceP voice [VP VP]]]]        |
| 4) <i>mandar</i> 'order' / <i>deixar</i> 'let' | [TP T [PerfP Perf [ProgP prog [voiceP voice [VP VP]]]]] |

The evidence for these different structures comes from the following contrasts. While English *see/hear* permit only passive auxiliaries in their complements, *let/have* and *make* permit also progressive auxiliaries but no English causative/perception verbs permit perfective auxiliaries in bare ECM complements (see also Bjorkman and Cowper 2013, Felser 1998, 1999, 2000, Ritter and Rosen 1993, 1996). Note that we use plural embedded subjects to avoid the potential confound from the availability of inflected infinitival complements in BP:

- 5) I made/saw/heard/let/had Mary be fired.
- 6) I let/had/made/\*saw/\*heard Mary be reading when it was time to leave.
- 7) \*I made/saw/heard/let/had Mary have read that book before we met.
- 8) Eu fiz/ deixei/ mandei as crianças estar estudando às dez horas.  
I made let had the kids be studying at ten hours  
'I made/let/had Maria be studying at ten o'clock.'
- 9) O professor fez/deixou/mandou/\*viu os meninos ter lido o livro antes da prova  
the teacher made/let/ had/ saw the kids have read the book before of the test  
Lit. 'The teacher made/let/had Rui have read the book before the test.'

The possibility of independent temporal modification suggests that T is, however, only present with *mandar/deixar* in BP and not *fazer* (or *ver*):

- 10) Ontem o Pedro deixou/mandou/\*fez/ \*viu as crianças viajar amanhã.  
Yesterday the Pedro let had made saw the children travel tomorrow  
'Yesterday Pedro let/had the children travel tomorrow.'

This cannot be due to semantic incompatibility because, where *fazer* takes a finite clause, independent temporal modification is fully acceptable:

- 11) Ontem a Maria fez com que o marido viajasse amanhã.  
Yesterday the Maria made with that the husband travel tomorrow  
'Yesterday Maria made it so that her husband would travel tomorrow.'

Thus, English ECM complements of causative/perception verbs are generally smaller than their BP counterparts, but does this have any semantic/syntactic repercussions? We argue that it does.

**Temporal reference and causation/perception:** Only ECM complements smaller than TP can have the semantics of immediate causation or direct perception, because only these complements permit temporal overlap of the two denoted events (see also Higginbotham 1983, Ramchand 2010). The verbs *mandar/deixar* in BP, though they take ECM complements, are not actually causative in the true sense as they do not entail the completion of the embedded event. In (8) for example a continuation of "mas elas não fizeram isso" 'but they didn't do it' is possible with *deixar/mandar* but not *fazer*. The same effect is in evidence in English with verbs of perception which, when they take TPs, involve

indirect rather than direct perception (Felser 1999), meaning that the embedded event may not have happened:

- 12) a. I heard him #(to be) knocking at the door, but he wasn't.  
 b. I saw him to be a great leader, but he wasn't.

**Passivisation:** *Mandar/deixar* pattern differently from the other causative/perception verbs discussed and like examples like (11) in another way: they permit passivisation of the embedded accusative subject:

- 13) O Pedro foi deixado/mandado/\*feito/\*visto ler o livro na sala.  
 The Pedro was let/had/made/seen read the book in.the room

In English too, ECM perception/causative verbs can be passivised only where they take a full TP complement (Felser 1999):

- 14) a. Martha was seen/heard \*(to) (have) read the book.  
 b. \*Kim was had/let/made/seen/heard read the book.

Felser gives convincing evidence that the ECM complement in (13a) is a full TP from the fact that all auxiliaries, including perfectives are possible. Interestingly, this kind of passivisation is also possible with *make*, even though *make* does not allow TP complements in the active, possibly as a repair mechanism (Hornstein, Nunes and Martins 2009):

- 15) John was made \*(to) (have) read the book.

Why is this repair strategy not possible with *have/let* or *watch/listen to* in English? This is presumably because only non-agentive verbs can participate in ECM with a TP complement in English (Pesetsky 1991). As Pesetsky shows, the only ECM verbs which allow passivisation in English are those which take a non-agentive subject, making ECM incompatible with imperatives, and meaning that verbs like *want* are not actually ECM verbs:

- 16) a. I remember him to be a kind fellow.  
 b. Remember him to be a kind fellow!

The difference between *make/see/hear* vs. *have/let/watch/listen* is that the former take a non-volitional subject, whereas the latter do not:

- 17) The bad weather made/\*had/??let me wear my new wellies.

This (language-specific) sensitivity to volitionality, we argue, can explain the (non)availability of a TP repair.

**Phases and ECM:** The accusative subjects of ECM complements can be passivized in both BP and English only if they are contained in TP and nothing smaller. We argue that phase theory provides an explanation for this pattern. In active contexts, accusative Case is available to be assigned to the Caseless subject of any kind of complement:

- 18) a. [<sub>voiceP</sub> **voice**<sub>[PHI]</sub> [<sub>VP</sub> see/hear [<sub>voiceP</sub> **DP**<sub>[ACC]</sub> voice [<sub>VP</sub> VP]]]]  
 b. [<sub>voiceP</sub> **voice**<sub>[PHI]</sub> [<sub>VP</sub> deixar [<sub>TP</sub> **DP**<sub>[ACC]</sub> T [<sub>PerfP</sub> Perf [<sub>ProgP</sub> prog [<sub>voiceP</sub> voice [<sub>VP</sub> VP]]]]]]

In a passive context, however, where the matrix voice head fails to assign ACC, the subject of the embedded clause needs to get Case from the matrix T.

- 19) a. [<sub>TP</sub> T [<sub>voiceP</sub> voice [<sub>VP</sub> see/hear [<sub>voiceP</sub> **DP**<sub>[uCase]</sub> voice ...]]]]  
 b. [<sub>TP</sub> T [<sub>voiceP</sub> voice [<sub>VP</sub> see/deixar [<sub>TP</sub> **DP**<sub>[NOM]</sub> T [<sub>PerfP</sub> Perf [<sub>ProgP</sub> prog [<sub>voiceP</sub> voice ...]]]]]]

Adapting the definition of phases in Boskovic (2015), and PIC2, we propose that all of the structure below TP will be spelled out when the higher voice head is merged. This means that only embedded subjects in spec TP will be available as a goal to the matrix T probe (19b).

### Selected References:

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