Why do some ECM verbs resist passivisation? A phase-based explanation

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The problem: Despite being ECM verbs in English, Brazilian Portuguese (BP) and many other languages, causative/permissive/perception verbs often resist passivisation:

1) a. *Sam was made/had/helped/let/seen/heard/watched/witnessed leave.
   b. Sam was expected/believed/considered/remembered/understood to be right.

The examples in (1b) show that this is not true of most other ECM predicates in English (with *want* being an exception – but   see Pesetsky 1991). Indeed, it is not even true where causative/permissive/perception verbs take a larger to-infinitive complement ((2a) shows that these verbs involve ECM rather than object control):

2) a. She allowed/ordered/permitted [there **to** be non-vegan food at the party].
   b. Mary was ordered/permitted/allowed **to** leave school early.

It is therefore unlikely that the ungrammaticality of (1a) is due to the status of the matrix verbs. This is particularly true when we consider that many of these same verbs allow passivisation elsewhere:

3) a. The incident was seen/heard/witnessed/watched by Kim.
   b. John was seen/heard/witnessed leaving the room.

This difference between gerundive and bare verbal complements also holds to some extent in BP:

4) a. O incidente foi visto/ouvido/testemunhado/observado pelo Kim.
      the incident was seen/heard/witnessed   watched   by Kim
      'The incident was seen/heard/witnessed/watched by Kim.'
   b. O Pedro foi visto/ouvido/?testemunhado/observado deixando a sala.
      the Pedro was seen/heard/witnessed/watched   leaving the room
      'Pedro was seen/heard/witnessed/watched leaving the room.'

Within the class of causative/permissive verbs, however, there are verbs which permit passivisation:

5)   O Pedro foi mandando/deixado sair da sala.
      the Pedro was had/let   leave the room
      'Pedro was ordered to leave the room.'

These verbs definitely take a single (reduced) clausal complement rather than involving object control:

6) a. O que eu   mandei/deixei foi   [os meninos   ir embora].
      the that I   had/let   was   the boys   go away
   b. *O que eu persuadi/convenci   foi os meninos ir embora.
      the that I persuaded/convinced was the boys   go away

Interestingly, the possibility of passivisation seems to correlate with a size difference between these reduced clausal complements. We illustrate here with bare complements, but gerundives also work:

7)   **Generalization (version 1)**: to permit passivisation of its subject, an ECM complement must contain a T-related projection.

Care must be taken with BP because these verbs also allow inflected infinitival complements, which can be shown to be full CPs. We control for this by using plural causees which would trigger obligatory 3PL inflection were the infinitive of the inflected type.

Size differences: The distribution of auxiliary verbs and temporal modification suggests the size of bare infinitival ECM complements varies across Brazilian Portuguese and English along the following lines (adopting the approach to auxiliaries in Adger 2003; Bjorkman 2011; Wurmbrand 2012):

8) see/hear $[_{voiceP}$ voice $[_{VP}$ VP]]
9) let/have/make $[_{ProgP}$ prog $[_{voiceP}$ voice $[_{VP}$ VP]]]
10) *fazer* 'make' $[_{PerfP}$ Perf $[_{ProgP}$ prog $[_{voiceP}$ voice $[_{VP}$ VP]]]]
11) *mandar* 'order'/*deixar* 'let' $[_{wollP}$ wollP $[_{PerfP}$ Perf $[_{ProgP}$ prog $[_{voiceP}$ voice $[_{VP}$ VP]]]]]

While English *see/hear* permit only passive auxiliaries in their complements, *let/have* and *make* also allow progressive auxiliaries but no English causative/perception verbs readily admit perfective auxiliaries in bare ECM complements (Felser 1998, 1999, 2000, Ritter and Rosen 1993, 1996, but see also Bjorkman and Cowper 2013):

12) I made/had/let/saw/heard Mary be fired.
13) I made/had/let/*saw/*heard Mary be reading when it was time to leave.
14) *I made/had/let/see/hear Mary have read that book before we met.

BP perception verbs work as in English but causative and permissive verbs appear to embed larger structures, permitting the *have* auxiliary:

15) Eu fiz/ deixei/ mandei as crianças estar estudando às dez horas.
    I made let had thekids be studying at ten hours
    'I made/let/had the kids be studying at ten o'clock.'
16) O professor fez/deixou/mandou/*viu os meninos ter lido o livro antes da prova
    theteacher made/let/ had/ saw the kids have read the book before of.the test
    Lit. 'The teacher made/let/had the kids have read the book before the test.'

The possibility of independent temporal modification suggests that wollP is, however, only present with *mandar/deixar* in BP and not *fazer,* where woll is T-related head responsible for the possibility of a future modal reading (Wurmbrand 2014):

17) 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. Thus, English ECM complements of causative/perception verbs are generally smaller than their BP counterparts.

Passivisation*: Mandar/deixar* also pattern differently from the other causative/perception verbs in that they permit passivisation of the ECM causee subject:

18) 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 wollP complement (Felser 1999):

19) a. Martha was made/seen/heard *(to) (have) read the book.
    b. *Kim was had/let/made/seen/heard/witnessed/watched read the book.

Felser (1998) gives convincing evidence that the ECM complement in (19a) 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). We attribute the unavailability of this strategy with other causative/permissive verbs to the more general ban on agentive verbs in ECM constructions (Pesetsky 1991), as *have* and to some extent *let* require animate external arguments.

A phase-based analysis: We derive the generalisation in (7) from a version of phase theory predicated on three main ideas: (i) the dynamic v-related phase is larger than vP, being progP in English (see Aelbrecht & Harwood 2015 a.o.); (ii) phases are dynamic in that in the absence of progP, vP becomes a phase (Bobaljik & Wurmbrand 2005, Boskovic 2013, 2014, 2015); (iii) the v-related phase is transferred to the interface in its entirety once the next highest head has discharged al its features. Additionally, we give evidence from ellipsis to show that PerfP is a phase in BP, since non-finite have auxiliaries like the English being auxiliary, must be elided. These facts mean that generalisation (7) can be revised as (20):

20) **Generalization (final version):** Only the subjects of non-phasal ECM complements can undergo passivisation.

In active contexts, accusative Case is available to be assigned to the Caseless subject of any kind of complement. We assume that the highest head in the complement bears an EPP feature as BP and English are both strong EPP languages. The size of the ECM complement makes no difference here:

21) a. [$_{voiceP}$ **voice$_{[PHI]}$** [$_{VP}$ see/hear [$_{voiceP}$ **DP$_{[ACC]}$** voice [$_{VP}$ VP]]]]
    b. [$_{voiceP}$ **voice$_{[PHI]}$** [$_{VP}$ deixar [$_{wollP}$ **DP$_{[ACC]}$** woll [$_{PerfP}$ Perf [$_{ProgP}$ prog [$_{voiceP}$ voice [$_{VP}$ VP]]]]]]]

In a passive context, however, the subject of the embedded clause needs to get Case from the matrix T. Here, given our assumptions about spell-out, the size of the complement makes a difference. If the complement of the ECM verb is phasal, this whole complement including the DP causee will have been transferred before T can probe. If, however, the complement is non-phasal, then the DP will remain visible to matrix T, hence able to undergo passivisation:

22) a. [$_{TP}$ T [$_{voiceP}$ voice [$_{VP}$ see/hear ~~[$_{voiceP}$ DP$_{[uCase]}$ voice …]~~]]]
    b. [$_{TP}$ T [$_{voiceP}$ voice [$_{VP}$ see/deixar [$_{TP}$ DP$_{[ACC]}$ woll ~~[$_{PerfP}$ Perf [$_{ProgP}$ prog [$_{voiceP}$ voice …]~~]]]

This captures generalization (20) and also accounts for all the cases where causative/permissive/perception verbs permit passivisation. Essentially, the presence of any T-related head above the v-related phase provides an escape hatch for A-movement. We also show that this version of spell-out is compatible with successive cyclic movement but disallows other kinds of improper movement.