Restrictions on long passives in English and Brazilian Portuguese: a phase-based account[*]

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Abstract

To explain seemingly idiosyncratic restrictions on long passivization of causative/perception verbs in Brazilian Portuguese and English, we show that: (i) long passives are blocked wherever the complement of a causative/perception verb constitutes a voiceP/progP phase; (ii) both TP complements and VP complements facilitate long passivization. To account for these patterns, we propose that A-movement can only cross a single phase head due to Chomsky's (2001) (second) *Phase Impenetrability Condition*, and cannot use phase-edge escape hatches, but T's EPP feature serves to feed A-movement into the matrix clause. In essence, successive cyclic A-movement is possible only where embedded T is present to facilitate it.

Key words: EPP, A-movement, long A-movement, perception verbs, causatives, PIC

1 Introduction: phases and movement restrictions

1.1 Movement restrictions and phase theory

Since Ross (1967), discussions of movement restrictions have mainly focused on Ā-movement (e.g., wh-movement, relativization, focus-movement). See, for example, (1a), an instance of the complex NP constraint and (1b), an instance of the co-ordinate structure constraint, blocking wh-movement as well as other kinds of Ā-movement.

(1) a. *What$_i$ do you know [a man who likes t$_i$]?

b. *What$_i$ did Sue buy [oranges and t$_i$]?

These restrictions are striking because, in other respects, Ā-movement is unbounded – it can span an infinitely large number of clauses. While there is still no widely agreed analysis of island effects of these kinds, many minimalist analyses have been formulated in terms of phases, building on Chomsky (2000, 2001, et seq.). In this kind of approach, syntactic structures are assembled in phases and periodically transferred to the interfaces, and so a notion of phase impenetrability arises naturally, the idea being that once a phase is complete, it can no longer be tampered with, ruling out sub-extraction. To make phases compatible with the unbounded nature of Ā-movement, Chomsky proposes that it proceeds cyclically through the phase edge, as per the simplified representation in (2):

(2) Who did Mary say **[<who>** that Sam had offended <who>]]?

The claim that long distance Ā-movement proceeds in this way finds support in a number of unrelated languages (see recent overviews by Lahne 2008, Abels 2012, Georgi 2014, van Urk 2019), and we take it to be uncontroversial.

The challenge for phase theory, of course, is how to reconcile the possibility of successive cyclic movement with the kinds of extraction restrictions (island effects)

discovered by Ross. Without independent assumptions, phase theory will never actually restrict Ā-movement, because phase edge 'escape hatches' will always be available, wrongly predicting that movement should be possible, as in the simplified representation in (3):

(3) *What do you know [<what> a man [<what> who likes <what>]]?

For this reason, phase-based analyses of the restrictions on Ā-movement always require another ingredient to limit movement through the phase edge. Many different options have been proposed, including:

i. restricting edges/edge features (Nunes and Uriagereka 2000),
ii. restricting the timing of movement (Müller 2010),
iii. 'trapping' at the phase edge (Aldridge 2004, Coon, Mateo, and Preminger 2014, Holmberg, Sheehan, and van de Wal 2019),
iv. banning movement that is too local (anti-locality) (Bošković 1994, 2005, 2013, 2014, Grohmann 2003, Abels 2003, 2012, and many others).

These kinds of approaches are each able to model some of the restrictions on Ā-extraction, but they provide only indirect evidence for the existence of phases, and this perhaps explains why phases remain a somewhat controversial theoretical construct in generative grammar. It remains a matter of debate which phrases

constitute phases in any given language (see Müller 2004, Gallego 2007, Den Dikken 2007, Poole 2020 among others) and whether phasehood is subject to cross-linguistic variation (see Abels 2003, Bošković 2005, 2014 amongst others). In the remainder of this article, we argue that restrictions on long A-movement provide a much clearer window on phases and show that, at least in English and Brazilian Portuguese (henceforth BP), there is a v-related phase. The evidence from A-movement is much clearer precisely because this kind of movement is *not* unbounded, as has long been observed, suggesting that A-movement cannot simply use phase-edges as 'escape hatches'. In fact, as we shall see, long A-movement is possible only in very restricted contexts in these two languages and this, we argue, provides very clear insights regarding the size and nature of the v-related phase.

1.2 A-movement and phase theory

It is interesting to note that restrictions on A-movement have not been much discussed in connection to phase theory (but see Sauerland 2003, Alexiadou, Anagnostopoulou, and Wurmbrand 2014). Chomsky (2001) revises the *Phase Impenetrability Condition* (PIC) to deal with long-distance A-dependencies but restrictions on long passivization, for example, have not been part of the core empirical basis for the development of phase theory. This is particularly interesting and surprising when we consider the puzzling restrictions on long passivization attested with causative and perception verbs. In many languages, causative/perception verbs limit long passivization in seemingly idiosyncratic ways, as shown in (4), for

English and (5)-(6), for BP (see also Higginbotham 1983, Williams 1983, Basilico 2003, Folli and Harley 2007, 2013, G. Johnson 2014).[1]

(4) a. *She was {seen/heard/ made/let/had} leave the room.

b. She was {seen/heard/made/*let/*had} to leave the room.

(5) Os meninos foram {*feitos/vistos/ mandados/deixados} sair.

the boys were made.MPL/seen.MPL/had.MPL/let.MPL leave.INF

Lit. 'The boys were had/let (to) leave.'

(6) Os meninos foram {*feitos/*vistos/mandados/deixados} comer (a sopa).

the boys were made.MPL/seen.MPL/had.MPL/let.MPL eat.INF (the soup)

Lit. 'The boys were had/let (to) eat (the soup).'

It is interesting to compare these two languages because syntactically they have much in common. Both languages allow ECM complements of causative/perception verbs (see Sheehan and Cyrino 2016 on BP), form periphrastic passives with the verb *be*, have very low, if any, verb movement (see Emonds 1978 on English; Cyrino and Matos 2005, Cyrino 2013, a.o. on BP), allow VP ellipsis (Sag 1976 on English; Cyrino and Matos 2002, Cyrino and Matos 2016, a.o.) and have predominantly SV order, with some kind of preverbal subject position (Berlinck 1995, 1989; Kato 1992, a.o.). And yet the two languages display distinct restrictions on long passivization. In English, *make* and verbs of perception permit long passivization involving promotion of a causee only where *to* is present in their complement. *Let* and *have* can never be

passivized where they surface with a clausal complement, however - though note that they can be passivized where they take a DP complement. In BP, we see what looks like the opposite pattern, in many respects. Causative *fazer* 'make' resists long passivization altogether. The verb of perception *ver* 'see', on the other hand, allows long passives only where its complement is an unaccusative verb, whereas *mandar* 'have' and *deixar* 'let' allow passivization even with transitive embedded verbs (for some speakers at least). The differing behavior of these two languages immediately suggests that these restrictions are syntactic rather than semantic in nature and raises the question of whether it is possible to offer a principled unified account of what seem to be, on the surface, distinct patterns. We argue such a thing is possible.

Our main claim is that a phase-based approach has the advantage of offering a principled syntactic analyse which can, at the same time, form the basis of an explanatory account of variation within and across languages. Moreover, the parameterization that is required finds independent syntactic and semantic support in the BP and English data that we discuss. In essence, our claim is that restrictions on passives of causatives/perception verbs can be straightforwardly derived from phase theory if (i) we adopt the weaker version of the PIC in Chomsky (2001) and (ii) we adopt the assumption that A-movement cannot use phase-edge escape hatches to escape transfer.

Our paper is organized as follows. Section 2 reviews long passivization patterns with causative/perception verbs in English and BP and shows that these verbs take complements of differing sizes, larger than a phase but only some large enough to

include a TP projection. This leads us to the generalization that long passives of these verbs are only possible where the complement is either: (i) smaller than a phase, or (ii) large enough to include a T-project. The complement of *ver* 'see' in BP, we argue, can be a VP, lacking an external argument altogether whereas *to*-infinitival complements in English and the complements of *mandar/deixar* in BP are TPs (albeit with a defective future-oriented tense specification common to non-finite clauses – Wurmbrand 2014). Section 3 provides a phase-base account of this pattern and sketches some broader cross-linguistic implications, outlining the predictions of this approach and discussing some other kinds of complements in English and BP which appear, on the surface, to be problematic for our analysis, but which are not, upon closer inspection. Finally, section 4 addresses a challenge from Sauerland's (2003) claim that A-movement in English transits through the v-related phase edge before going on to briefly consider broader cross-linguistic evidence for our approach.

2 Long passives in English and BP

2.1 The basic patterns

Verbs of perception, like causative/permissive verbs, permit 'bare verbal complements' in English (see Declerck 1981; Mittwoch 1990; Felser 1998, 1999 on perception verbs; Ritter and Rosen 1993, 1997, on causatives and Higginbotham 1983 for an early comparison of the two classes), as seen in (7):

(7) a. We saw/watched/heard/noticed [the boy fall].

b. We had/made/let/helped [the boy fall].

These verbs also permit different kinds of reduced/non-finite complements, as in (8):

(8) a. I had/saw/watched/heard/listened to [him singing for ten minutes].

b. I had/saw/heard [the national anthem sung by my team].

c. I saw/heard [him to be a nice person].

The bare verbal complements in (7) have obligatory subjects (9a), but ban complementizers (9b), high adverbials and modals (9c, d), require temporal simultaneity (9e) and place semantic restrictions on the argument structure/event-type of their complement (9f) (see Mittwoch 1990, Felser 1998, 1999, Pires 2006, Ritter and Rosen 1993, Myler 2014).

(9) a. *I had/made/saw/heard PRO sing the song.

b. *I had/made/saw/heard for him buy some flowers.

c. *We had/made/saw/heard regrettably John walk away.

d. *We had/made John might walk away.[2]

e. #Yesterday I had/made/saw/heard him leave this morning.

f. #I had/made/saw/heard the lamp stand in the corner.

These patterns suggest that these complements are at least as big as vP but smaller than TP, and that not all kinds of vP events are permitted. We will show that this is essentially correct, but that, actually, these complements are larger than vP and that it is this fact which makes them phasal, according to independently established diagnostics.

A slightly different picture is seen in BP.[3] Unlike European Portuguese, colloquial BP lacks *faire-infinitif* and *faire-par* causatives (in the sense of Kayne 1975) and makes greater use of ECM with these verbs in addition to permitting larger inflected infinitival complements (Cyrino 2010a, b; Bonfim and Salles 2016, Sheehan and Cyrino 2016), as shown in (10):

(10) A Maria fez/mandou/deixou/viu/ouviu [os meninos cantar a música].
the Maria made/had/let/saw/heard the boys sing.INF the music
'Maria made/had/let/saw/heard the boys sing the song.'

Where the causee is 1st/2nd person, it can be realized as an object clitic (though 1st/2nd person object clitics are not morphologically distinguished for accusative and dative), but this is not possible with 3rd person causees, as colloquial BP has lost 3rd person clitics. A further complication is that inflected infinitives are also possible in this context, as noted above, but inflection is only overt (for many BP speakers) where the subject is 2PL or 3PL. For this reason, we use only 3PL causees to be sure that we are dealing with an ECM complement rather than an inflected infinitive with zero

inflection. This is important because inflected infinitival complements behave like full CPs in permitting topicalization (11) and lacking selectional restrictions (12), unlike ECM complements.

(11) Eu fiz, a água, todas as meninas beber*(em).
I made the water all the girls drink.INF(.3PL)
'The water, I made all the girls drink.'

(12) a. Eu mandei as madeiras chegar*(em) cedo.
I had the logs arrive.INF(.3PL) early

b. Eu mandei que as madeiras chegassem cedo.
I had that the logs arrived.SUBJ.3PL early
'I had the logs arrive early.'

Example (11) shows that it is only possible to have an embedded topic where the complement clause contains an inflected infinitive. Examples (12a-b) show that with both inflected infinitival complements and finite CP complements the embedded subject can be inanimate, whereas where the complement verb is not inflected an animate causee is required. These two facts strongly suggest that the inflected infinitive involves the embedding of a larger structure, more similar to a finite CP than a bare infinitive, permitting any kind of embedded vP event. With 3rd person plural causees the difference between the two structures is manifest, as noted, and this

makes it clear that only (uninflected) ECM complements permit long passivization, as seen in (13):

(13) Os meninos foram mandados/deixados sair(*em).
the boys were had.MPL/let.MPL leave.INF(*.3PL)
'The boys were ordered/allowed to leave.'

Note, finally, that these uninflected complements do not involve object control, so this cannot be the explanation for their passivizability. This is apparent from the fact that the embedded clause can be clefted, unlike that which is observed with object control verbs like *persuadir* 'persuade' and *convencer* 'convince', as in (14):

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

This is because the causee and the non-finite verb form a constituent in (14a), but the same cannot be said for the object and embedded verb in (14b). As a result, we conclude that inflected infinitival complements are full CPs, whereas bare infinitival complements are smaller, involve ECM and allowing passivization with *mandar* 'have' and *deixar* 'let' (and, with unaccusative complements, also *ver* 'see').

Although, there appears to be variation regarding the acceptability of long passives in BP, data from the *Corpus do Português: Web/Dialects* (1 billion words) supports our claim that there is a difference between *mandar/deixar* vs. *ver* vs. *fazer*. A search for "SER mandad* *r" checked for false positives and manually tagged picks up 34 genuine examples of long passives from the Brazilian Portuguese part of the corpus (655,680,510 words at the time of searching). Of these, 13 are unambiguous passive of ECM examples such as the following (15), where an external argument is promoted. By way of comparison, no such examples are found in the European Portuguese part of the corpus (326,648,351 words at the time of searching).

(15) Especialmente considerando o fato de que **ela** provavelmente
especially considering the fact of that she probably
foi mandada [**t** fazer isso]?
was had do.INF that
["Scream and Shout": um Vídeo de Britney Spears sob o Controle, Brazil, Blog]

What is interesting is that we also find a small number (five) of double long passives, where in order to promote an embedded object, the embedded clause is also passivized (16). Again, no such examples are found in the European Portuguese part of the corpus.

(16) [**A Catedral Ortodoxa**] foi mandada [**t** ser reconstruída t]

the cathedral orthodox was had.FSG be.INF rebuilt.FSG
com dinheiro público.
with money public
'The Orthodox Cathedral was ordered to be rebuilt with public money.'

Such examples are predicted to be possible if *mandar* embeds a complement larger than voiceP in Brazilian Portuguese (as we argue below).

What is unexpected, given what we say above is that there are also 19 examples of long object passives in the Brazilian Portuguese part of the corpus, most of them with the embedded verb *construir* 'build', as in (17):

(17) **A residência** foi mandada construir **t** em 1626 pelo Papa Urbano VIII
the residency was had.FSG build.INF in 1626 by-the Pope Urban VIII
'The residency was ordered to be built in 1626 by Pope Urban VIII.'
[Como é Castel Gandolfo, o local que acolherá Bento XVI, Brazil, general]

These examples are found in more formal writing, however, which adheres to archaic norms which no longer hold in colloquial Brazilian Portuguese. Indeed, this construction is found more commonly in European Portuguese in the corpus. In sum, then, the existence of long passives of ECM causatives, albeit in small numbers, in informal Brazilian blogs lends support to our claim that long passives of *mandar* are

possible for many Brazilian Portuguese speakers. Moreover, Brazilian Portuguese clearly differs in this respect from European Portuguese.

If we compare the behavior of *mandar* with *deixar*, *fazer* and *ver* in the same corpus, we also find support for our claim that *deixar* patterns with *mandar* whereas the other two verbs are different. There are only 10 long passive examples in the Brazilian corpus with *fazer*, six of which are with *passar* 'pass' and all but one of which occur in religious texts, suggesting, again, an association with antiquated language. There are 12 examples of long passives of *ver* in the Brazilian Portuguese corpus. All of these examples occur with non-agentive unaccusative verbs such as *ser* 'be', *ir* 'go', *voltar* 'return', *entrar* 'enter' and *funcionar* 'work'. While two of the long passives with *ver* are in conservative religious texts, not all are. Consider the following example from a fandom encyclopaedia entry:

(18) No entanto, **ele** foi visto ser **t** bastante respeitoso, em especial
however he was seen.MSG be.INF quite respectful in special
pelos fracos e mortos.
for-the weak and dead
'However, he was seen as very respectful, in special for the weak and the dead.'
[Nagato - Wiki Naruto – Wikia, Brazil, general]

It can therefore be concluded that long passives are severely limited with *fazer* and restricted to unaccusative complements of *ver*. What about *deixar*? There are 24

examples of long passives in the Brazilian Portuguese corpus, many more than with *ver/fazer* and examples can be found with unergative complements and in informal writing such as blogs.

(19) [os atuais líderes europeus]... são deixados **t** governar
the current leaders European are let.MPL govern.INF
por um povo bovino e manipulado.
by a people bovine and manipulated
'The current European leaders are allowed to govern by a bovine and manipulated populace.'
[Porque é que Passos Coelho não defendeu Portugal na última, Brazil, blog]

In sum, although the number of tokens in the corpus is small, there is evidence that long passives promoting external arguments from an ECM complement are permitted only with the verbs *mandar* and (to a lesser extent) *deixar* in Brazilian Portuguese.

2.2 Determining complement size

The distribution of auxiliary verbs and temporal modification shows that ECM complements of causatives/perception verbs are of different sizes both within and across languages. We adopt a version of the approach to auxiliaries in Adger (2003) and Bjorkman (2011), whereby they realize heads above vP, with the passive

auxiliary *be/ser* realizing *voice*, the progressive auxiliary *be/estar* realizing *prog*, and the perfective auxiliary *have/ter* realizing *perf*.[4] With these assumptions, we can use auxiliary distribution to diagnose potential complement size with the assumption that the possibility of a given auxiliary in a given complement implies the potential presence of that v-related projection in the case of *prog/perf*. We treat the voice head slightly differently, assuming that wherever passive voice is possible, active voice cannot arise as a default but rather implies the presence of a covert active voice head, even though this is never overtly realized via a functional head in these languages. As seen in (20), passive auxiliaries are possible in all of these bare ECM complements in English and BP, meaning these complements are at least as large as voicePs.

(20) a. I made/had/let/saw/heard the teachers **be** fired.

b. Eu fiz/mandei/ deixei/vi/ouvi os professores **ser** despedidos.
I made/had/let/saw/heard the teachers.MPL be.INF fired.MPL
'I made/had/let/saw/heard the teachers be fired.'

Progressive auxiliaries (prog), on the other hand are not possible with verbs of perception but may occur with all causatives/permissives in both languages.

(21) a. I made/?had/?let/*saw the kids be reading when the head was due to visit.

b. Eu {fiz/mandei/?deixei/*vi/*ouvi} as meninas estar lendo
I made/had/let/saw/heard the girls be reading

na hora em que o diretor chegasse.

in-the hour in that the head arrived

Lit. ‘I made/had/?let/*saw/*heard the girls be reading at the time when the director arrived.’

Only *make* allows the perfective auxiliary *have* (perf) in English (somewhat marginally for many speakers).

(22) I’ll {?make/*have/*let/*see} my students have read the paper before the seminar.

A potential issue for the idea that these bare verbal complements are reduced in size comes from the availability of *there* expletives. Interestingly, *there* is possible only with causative and not perception verbs, as seen in (23):

(23) I {*saw/*heard/had/made/let} there be several people at the party.

Bowers (2002), Deal (2009), M. Richards (2007), M. Richards and Biberauer (2005) and Harwood (2015b) all argue that *there* is actually inserted in the v-related phase edge, rather than in spec TP. The data in (23) suggest that *there* must be inserted in spec progP specifically. Because the complements of *see*/*hear* are only voicePs, *there* insertion is, therefore, ruled out.

In BP, however, *fazer* ‘make’, *mandar* ‘have’ and *deixar* ‘let’ permit the auxiliary *ter* (a realization of *perf*, see fn 4) in ECM complements more easily.

(24) Eu fiz/mandei/ deixei/*vi/*ouvi as meninas ter lido
I made/had/let/saw/heard the girls have read
aquele livro antes de a gente se encontrar.
that book before of the people SE meet
Lit. ‘I made/had/let/*saw/*heard the girls have read that book before we met.

This shows that these complements are at least as large as perfP. Moreover, ECM complements of *mandar* ‘have’ and *deixar* ‘let’ permit future-oriented temporal reference, unlike ECM complements of *fazer* ‘make’ and *ver* ‘see’.

(25) 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.’

We take the possibility of future-oriented temporal reference to be connected to complement size, indicating that there is a T-related projection in the embedded clause. More specifically, following Wurmbrand (2014), we assume that future temporal reference indicates the presence of a covert future modal *woll*, which is a

realization of T. Where *fazer* 'make' takes a finite clause (26), independent temporal modification is fully acceptable, but this is not possible where it takes a non-finite complement in (25). The same can be said of English (27). The role of complement size suggests that this is not a semantic restriction but rather must be structural in nature.

(26) Ontem a Maria fez [com que o marido viajasse amanhã].
Yesterday the Maria made with that the husband traveled.SUBJ tomorrow
'Yesterday Maria made it so that her husband would travel tomorrow.'

(27) Yesterday I heard [that John will leave tomorrow].

In English, ECM complements with *to* also permit future-oriented temporal reference, but only where they occur with predicates that can take eventive complements. Where ECM complements introduced by *to* are stative, as is the case under the non-agentive verbs of perception *see/hear*, future-oriented temporal reference is not possible.

(28) a. Yesterday, Sam expected/required [Kim to leave tomorrow].
b. *Yesterday, Sam found/saw [Kim to leave (tomorrow)]
c. Yesterday, Kim found/saw [Sam to be sad (*tomorrow)]

Assuming that *to* is a realization of (a semantically defective) T in English, the contrasts in (28a-c) show that having a T projection is a necessary but not sufficient

condition to permit future-oriented temporal reference. Nonetheless, we assume that where *to* is present in English, T is present. Where the complement of a causative/perception verb is smaller than TP, temporal simultaneity necessarily results (29a) (see also Higginbotham 1983, Mittwoch 1990, Ramchand 2011) leading also to veridicality of the embedded situation/event, as seen in (29b) (Barwise 1981):[5]

(29) a. *Yesterday I had/made/saw/heard him leave this morning.

b. John saw/had/made the director be fired, #but he wasn't.

We assume that this is because two eventive vP projections are both anchored to the same T projection in such cases. Complements containing TP behave differently: future-oriented temporal reference is possible, as shown in (25), and, crucially, veridicality also fails with *mandar* 'have', as shown here in (30):

(30) Eu mandei/*fiz/*vi as crianças estudar o livro mas elas
I had/made/saw the kids study.INF the book but they.F
não fizeram isso.
not did that
Lit. 'I had/*made/*saw the kids study the book, but they didn't do it.'

As noted by Jackendoff (1976:112), with permissive verbs like *let*, veridicality entailments are reversed: 'I let her leave' does not entail that she left, but 'I didn't let

her leave' entails that she did not leave in English. This reversed veridicality entailment also fails to hold with BP *deixar*; the following is perfectly natural (in contrast with the English translation), as can be seen in (31):

(31) Eu não deixei as crianças viajar mas elas viajaram.
I not let the kids travel.INF but they.F traveled.PL
'I didn't let the kids travel #but they did.'

In essence then, BP *mandar* and *deixar,* in taking a complement which contains a T-related projection, fail to behave like other causative/perception verbs in terms of veridicality and temporal reference as well as allowing long passivization. This follows if veridicality results where a single T head scopes over two events, but not where the embedded clause has its own T projection.

A note is required here on BP *ver* 'see'. Although it can take a voiceP ECM complement, as discussed above, it can also take a smaller kind of (VP) complement lacking an external argument. In a sense, this looks like a variant of the *faire par* construction described by Kayne (1975) for French, but without the possibility of expressing the causee overtly as a by phrase.

(32) Aqui vimos construir barcos.
here saw.1PL build.INF boats
'We saw people build boats here.'

In Sheehan and Cyrino (2016) we discuss superficially similar examples with *mandar* 'have' in BP, which, however, do not have any of the properties of the *faire par* construction (as described by Kayne 1975 for French and Burzio 1986 for Italian). It turns out that examples like (32) are different, however, as they share the core properties of the *faire par* construction in being incompatible with: (i) non-passivizable idioms (e.g. *abrir o coração* 'to open up') (33a), (ii) verbs expressing relations of inalienable possession (33b) and (crucially) (iii) in not containing a projected causee which can bind PRO (33d).

(33) a. O Pedro {mandou/#viu} abrir o coração na conversa.
the Pedro had/saw open.INF the heart in-the talk
'Pedro ordered people to open up in the chat.'
#'Pedro saw people open up in the chat.'

b. A professora {mandou/*viu } [levantar a mão].
the teacher had/saw lift.INF the hand
'The teacher had/*saw people put their hands up.'

c. A Maria mandou pro_i entregar todas as tarefas
the Maria ordered hand.in.INF all the assignments
para PRO_i poder passar de ano.
to be.able.INF pass of year

‘Maria had people hand in all the assignments in order for them to be able to pass the year.’

d. A Maria$_i$ viu entregar todas as tarefas
the Maria saw hand.in.INF all the assignments
para PRO$_i$ poder passar de ano.
to be.able.INF pass of year
‘Maria saw people hand in all the assignments in order for her to be able to pass the year.’

Crucially, in example (33c), with *mandar* ‘have’, it is those who hand in all the assignments that will pass the year (by doing so), whereas (33d) with *ver* ‘see’ it has to be Maria who will pass the year if other people hand in all their assignments (for example, if she is a trainee teacher and this is a course requirement for her). This means that the pattern with *ver* ‘see’ is the same as that observed in Italian, French and Catalan under the FACERE cognate verb in the same construction and, following Burzio (1986), these properties are generally attributed to the fact that the causee argument is simply not syntactically projected (property (iii) is particularly revealing in this regard). The combination of examples (33a-d) strongly suggests that *ver*, in addition to taking a voiceP ECM complement, can also take a smaller complement lacking a projected external argument. We take this to be a VP (see also Folli and Harley 2007, Guasti 2017). In the following section, we explain how this possibility

explains the peculiar long passivization pattern observed with *ver* 'see' in BP, whereby only internal arguments can be promoted.

In sum, we have seen that bare verbal ECM complements can be of differing sizes within and across languages. The following presents a summary of complementation patterns of causative/perception verbs in English and BP:

(34) Complements of causative and perception verbs:

ver (with no causee)	[$_{VP}$ VP]
see/hear/*ver/ouvir* (perception verbs)	[$_{voiceP}$ **voice** [$_{vP}$ vP]]
have/let (causative/permissive verbs)	[$_{progP}$ prog [$_{voiceP}$ **voice** [$_{vP}$ vP]]]
make/*fazer* (causative verbs)	[$_{PerfP}$ Perf [$_{progP}$ prog [$_{voiceP}$ **voice** [$_{vP}$ vP]]]]
mandar/deixar/see/hear (inferential)	[$_{TP}$ *woll/to* [$_{PerfP}$ Perf [$_{progP}$ prog [$_{voiceP}$ **voice** [$_{vP}$ vP]]]]]

In the following section, we show how these minimal size differences derive patterns of long passivization in the two languages from phase theory, assuming that anything at least as large as voiceP is a phase.

3 Long passives and the importance of phases

3.1 Phases and the ban on long passivization

In this section, we will see that, of all the complements in (34), only VP and TP permit long passivization for principled reasons. This derives the fact that while both

internal and external arguments can be promoted in long passives of *mandar/deixar* 'have/let', and *see/hear* (inferential), only internal arguments can undergo long passivization with *ver* 'see', as discussed in section 1.1.[6]

(35) Os meninos foram {*feitos/vistos/mandados/deixados} sair.
the boys were made.MPL/seen.MPL/had.MPL/let.MPL leave.INF
Lit. 'The boys were had/let (to) leave.'

(36) Os meninos foram {*feitos/*vistos/mandados/ deixados} comer (a sopa).
the boys were made.MPL/seen.MPL/had.MPL/let.MPL eat.INF the soup
Lit. 'The boys were *made/*seen/had/let (to) eat (the soup).'

We begin by discussing VP complements in BP before turning our attention to TP complements in English and BP.

As shown in (35)-(36), BP permits long passives of *ver* 'see' only when internal arguments are targeted for promotion. As Folli and Harley (2007) note, this is the pattern expected if VP complements in the *faire par* construction are compatible with long passivization.

(37) Os meninos foram vistos [VP sair t].
the boys were seen.MPL leave.INF
'The boys were seen to leave.'

In terms of phase theory, this is as expected if VP does not constitute a phase meaning that in (37) only a single phase head intervenes between matrix T and the subject of embedded *sair* (the matrix voiceP). No matter which version of the phase impenetrability condition we assume, it is expected that the internal argument of *sair* 'leave' will be visible to matrix T, as this makes (37) parallel to a monoclausal passive.

If we assume that it is voiceP/progP which constitutes the v-related phase in BP and English (as has been convincingly argued for English by Aelbrecht 2010, Aelbrecht and Harwood 2015, Harwood 2015a, Ramchand 2018), then the complements of the causative and perception verbs in (ii)-(iv) constitute phases in *both* English and BP, and the passivization patterns follow from the *Phase Impenetrability Condition* (PIC).[7] We assume a dynamic approach to phase-head status and following Bobaljik and Wurmbrand (2005), Bošković (2014), and Wurmbrand (2017). More concretely, we assume that (i) *voice* is a phase head in the absence of *prog*, (ii) *prog* becomes the phase head where present, but, crucially, (iii) structures smaller than voiceP do not count as phases. Note that it is crucial for us that the v-related phase head in the languages under discussion be external to vP, higher than the external argument, in order to capture the fact that there is no pattern in the languages under discussion where external arguments can undergo long passivization whereas internal arguments cannot. Although this is at odds with some proposals regarding the v-related phase, we assume that the phasal domain includes the full thematic domain as well as at least one functional head above v. On this view, neither

VP nor vP are phases by themselves.[8] This means that causative/perception verbs usually select a v-related phase lacking any T-related projection. It is the phasal nature of these complements, we claim, which rules out long passivization in such cases.

We adopt the less strict version of phasal transfer often labelled PIC2 (from Chomsky 2001). PIC2 differs from the *Phase Impenetrability Condition* version 1 (PIC1, Chomsky 2000) in providing a 'window of opportunity' after the construction of the v-related phase during which A-movement can take place (before the next phase head is merged). This window of opportunity means that we don't need to posit A-movement through the phase edge in cases of simple passivization, even given the evidence that there is a v-related phase in passive/unaccusative contexts (Legate 2003). In all such cases, internal arguments can raise directly to spec TP over a single intervening *voice* phase head, as shown in Figure 1:

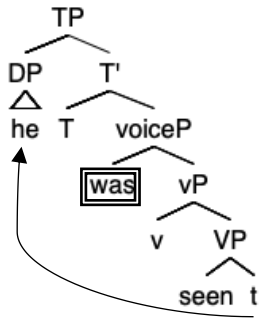

Figure 1: short passivization under PIC2

This is crucially different from the implications for A-movement arising from the stricter PIC1. On this stricter view of phases, the complement of the phase head is

transferred to the interfaces as soon as the phase head has satisfied all its features. This means that the only way for anything to escape phasal transfer is by moving through the phase edge. It follows then, that if the v-related phase remains in passive/unaccusative contexts, then, even in simple cases of passivization, an intermediate movement step is required to the phase edge, as illustrated in Figure 2:

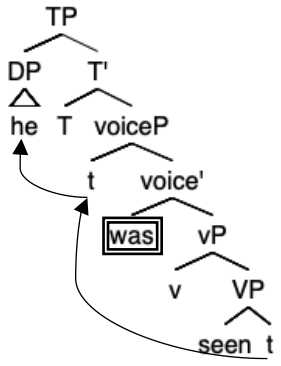

Figure 2: short passivization under PIC1

This may seem like a notational difference without consequence but as we shall show here, it is not. If A-movement were required to transit through the phase edge in contexts like Figure 2, then it would be expected to be able to do so also in cases of long passivization, and if this were the case then long A-movement would be predicted to be possible across the board, contrary to fact. Rather, as we have seen, long passivization is blocked wherever the complement of a causative/perception verb is phasal. Now consider how this fact follows from PIC2 if A-movement is not allowed to use the phase-edge escape hatch as a means to escape phasal spell-out.[9] In Figure 3, two (voice) phase heads intervene between the matrix T and the arguments

of the most embedded verb. If A-movement cannot access phase-edge escape hatches, it follows that long passivization will not be possible here, as appears to be the case. In essence, the DP 'she' is simply too far from T to be accessible to it: the complement of the lower voice is spelled out when the higher voice head is merged.

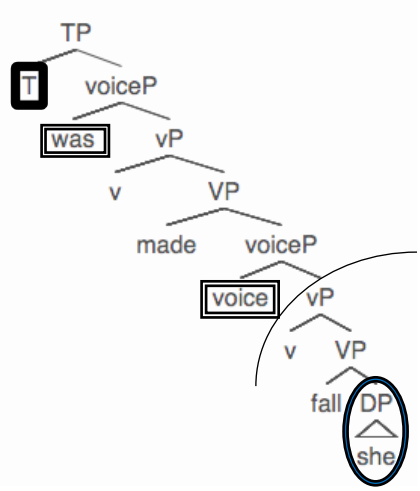

Figure 3: the ban on long passives (PIC2)

It is not clear how to explain this effect under PIC1. Because PIC1 necessitates A-movement to transit through the phase edge in simple cases (see Figure 2), we would expect this to be possible also in more complex cases (such as those in Figure 3), wrongly predicting that long passives should in fact be generally possible under causative/perception verbs. The frequent ban on passivization of causative/perception verbs therefore provides strong evidence against PIC1 and in favor of PIC2 and also favors the simple assumption that A-movement differs from Ā-movement in not generally proceeding through the phase edge, hence its more local nature.

A number of questions arise at this point, not least:

I. Why is it that A-movement *cannot* transit through the phase edge?

II. How is accusative case assignment possible in active (ECM) contexts?

III. Why does the presence of embedded T make long passivization possible?

IV. Why is it that other complements of these verbs (notably *-ing* complements) permit long passivization, unlike bare verbal/infinitival ECM complements?

We address these questions one by one in the following subsections.

3.2 Movement triggers and successive cyclicity

Why would it be the case that A-movement cannot access phase edge escape hatches? A potential explanation emerges in a model where all movement is feature driven. In this kind of model, movement to the phase edge must be triggered by some kind of feature on phase heads (see Chomsky 2000, 2001, Abels 2012, van Urk 2015, van Urk and N. Richards 2015). According to the account in van Urk and N. Richards (2015), for example, phase heads always enter the derivation bearing a [wh] feature. This serves to attract the closest element (or, in some languages, all elements) bearing a wh-feature (broadly construed to cover also focus movement and other kinds of Ā-movement). Like all features, this [wh] feature is not a derivational time-bomb – it need not be valued (see Preminger 2014). However, wherever there is an XP inside a phase that needs to undergo Ā-movement it will be attracted to the phase edge (subject to superiority in some languages). If there is no generalized A-feature equivalent to [wh] on phase heads, then it follows that there will be no general A-

movement through the phase edge. A-movement, rather, is more restricted, allowed to only cross one phase head in most cases (because of PIC2).

This is not to say, of course, that there cannot be A-movement to or through the phase edge. Van Urk (2015) and Fong (2019) both make a strong case that where the relevant features happen to be on a phase head in a given language, A-movement can target a phase edge position and this movement can then serve to feed further (long) A-movements. Fong offers an analysis of so-called hyper-raising in exactly these terms (see also Nevins 2005). Crucially, though, in these cases, the phase head in question independently bears the features to trigger A-movement so movement to the phase edge does not happen purely to facilitate successive cyclic movement. In a sense then, A-movement can transit through the phase edge provided movement to the phase edge would otherwise occur. What is not possible is movement through the phase edge purely to feed successive cyclicity. This is as expected in the approach to successive cyclicity in van Urk and N. Richards (2015) where all movement is feature driven if there is no generalized trigger for A-movement on phase heads.[10]

3.3 ECM as raising to object

Our proposal also raises the question of the status of active ECM constructions in both English and BP. It must be explained how it is that the highest argument of the embedded clause always appears to occur at the left edge of the embedded voiceP in examples like (20), repeated here as (38):

(38) a. I made/had/let/saw/heard [**the teachers**]$_i$ be fired t_i.

b. Eu fiz/mandei/deixei/vi/ouvi [**os professores**]$_i$ ser despedidos t_i.

I made/had/let/saw/heard the teachers be.INF fired

'I made/had/let/saw/heard the teachers be fired.'

The teachers/*os professores* both originate as internal arguments and yet they surface at the left edge of the embedded clause. If the derivation involved movement to spec voiceP (the phase edge) then this would undermine the analysis in section 3.1 as independently triggered movement to the phase edge ought to then be able to feed successive cyclic movement.

(39) a. I [$_{TP}$ T [$_{voiceP}$ voice [$_{vP}$ v [$_{VP}$ let [$_{voiceP}$ [**the teachers**]$_i$ be$_{voice}$ fired t_i]]]]]

b. *[$_{TP}$ T [$_{voiceP}$ were$_{voice}$ [$_{vP}$ v [$_{VP}$ let [$_{voiceP}$ [**the teachers**]$_i$ read t_i]]]]]

For our analysis to hold, then, it cannot be the case that active ECM complements involve movement of the accusative argument to the embedded spec voiceP. Rather, we are pushed towards the proposal that ECM involves raising to object (Postal 1974, K. Johnson 1991, Lasnik 2001), meaning that *the teachers*/*os professores* raise not to embedded spec voiceP but rather to a position in the matrix clause, as shown in (40):

(40) I [$_{vP}$ made/had/let/saw/heard [$_{VP}$ [**the teachers**]$_i$ t$_V$ [$_{voiceP}$ be fired t_i].

This movement, we assume, is connected to accusative case assignment, targeting spec VP of the matrix clause, with the perception/causative verb raising higher to v. This derives the correct word order without the need to posit an EPP on embedded voice. Crucially, as this movement is connected to accusative case assignment, where the matrix verb is passivized, there is no movement of the embedded subject to matrix spec VP because no accusative case is assigned. This means that all arguments of the lower verb are spelled out before matrix T probes, ruling out passivization, as in Fig 3 above.

An *LI* reviewer asks whether the arguments devised by Postal (1974) and Lasnik (2001) can be applied to causative and perception verbs in English and Brazilian Portuguese. In English, one test involves the possibility of an adverb from the matrix clause following the raised object and this appears to be possible also with causative and perception verbs, as shown in (41):

(41) a. I saw John, without a doubt, leave.

b. I made John, unfortunately, leave.

This test does not work in BP for reasons we do not understand but there is independent evidence of raising to object from word order in BP. Although BP canonical word order is SVO, unaccusatives may surface with VS order in out of the blue contexts in BP (Berlinck 1985, 1989, Silva 2001).

(42) Chegou umas pecinhas aqui para reposição

arrived some pieces.DIM here for replacement

'Some little pieces for replacement arrived here.'

Interestingly, this VS order is not possible under causative *deixar*, suggesting that in these contexts there is movement which differs from EPP-related movement.

(43) a. Eu deixei umas pecinhas chegar aqui para reposição

I let some pieces.DIM arrive here for replacement

'I let some little pieces for replacement arrive here.'

b. *Eu deixei chegar umas pecinhas aqui para reposição.

In both languages, then, there is suggestive evidence that the SV order in ECM complements of causative/perception verbs results from raising to object.

3.4 The presence of embedded T

It is fairly uncontroversial that both English and BP have an EPP feature/requirement which forces subjects to raise to spec TP in finite clauses (see Sheehan 2018 for a potential account of the difference between the EPP in English vs. BP). We assume that T has the same property in non-finite contexts. Recall, from Section 1, that English and BP permit long passivization where the complement of a causative/perception verb contains T.

(44) a. *She was {seen/heard/ made/let/had} leave the room.

b. She was {seen/heard/made/*let/*had} to leave the room.

(45) Os meninos foram {mandados/deixados} comer (a sopa).

the boys were had.MPL / let.MPL eat the soup)

Lit. 'The boys were had/let (to) eat (the soup).'

In English this is apparent from the distribution of the morpheme *to* (a realization of non-finite T), whereas in BP the evidence that T is present under *mandar/deixar* comes from the possibility of a future-oriented temporal specification and the failure of veridicality.

The problem with non-passivizable causative/perception verbs in both English and BP, as we have seen, is that that they involve A-movement which crosses two *voice* phase heads, without any intervening T-related head.

(46) *[$_{TP}$ DP$_i$ T [$_{voiceP}$ **voice** [$_{vP}$ v [$_{voiceP}$ **voice** ~~[$_{vP}$ t$_i$ v [$_{VP}$ V DP]~~]]]]]

The presence of a T head (even a defective *woll*) between these two voice heads has the effect of attracting the highest argument of the embedded clause out of the phasal spell-out domain (because of its EPP feature) and making it accessible to matrix T.

(47) [$_{TP}$ T [$_{voiceP}$ **voice** [$_{vP}$ v [$_{TP}$ DP$_i$ *woll* [$_{voiceP}$ **voice** ~~[$_{vP}$ t$_i$ v [$_{VP}$ V DP]~~]]]]]

Note that this means that, strictly speaking, there is no long A-movement across two phase heads, there is just successive cyclic A-movement facilitated by the presence of T in non-finite contexts. From this perspective, then, *mandar/deixar* allow 'long' passivization in BP because they take a *TP* complement. The presence of an EPP feature on T means that the highest argument of the embedded clause raises to spec TP, escaping the lower spell-out domain.

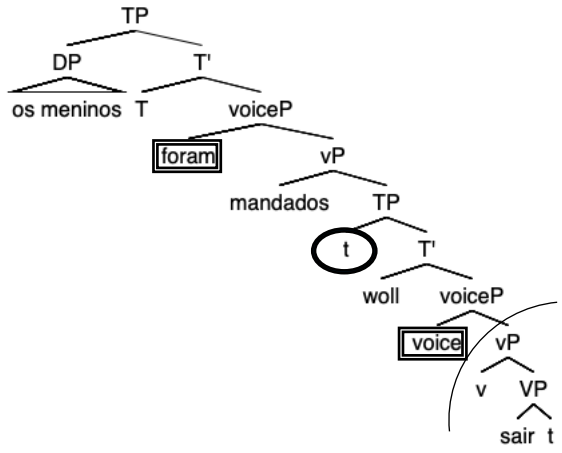

Figure 4: TP complements in BP

The same holds for the English *make* and *see/hear*, which allow long passives only with *to* in their complement domain. An added complication in English is that there is an active/passive asymmetry here. *Make* fails to allow *to*-complements in the active and *see/here* allow only stative complements in the active but all three verbs allow eventive *to*-complements in the passive, as seen in (48):

(48) a. *They saw/heard/made [us to fail].

b. I saw/heard [the children to be sorry].

c. We cannot be seen/heard/made [to fail].

The reason why (48c) is grammatical is clear on our story: the presence of an embedded non-finite T projection feeds long passivization as in the BP example in Figure 4. The question, though, is why these eventive *to*-complements are possible only in the passive with these verbs, and not in the active. Without giving a full account of this pattern, we note that it is attested more generally in English (and other languages) (see Pesetsky 2019). More specifically, *make* appears to be a member of the *wager* class in English: it permits a *to*-complement not only where the subject has been A-moved (in long passives) but also in instances of Ā-extraction (David Pesetsky, pers. comm.).[11]

(49) a. Every child who he had made to feel stupid hated him.

b. Which child did she make to feel like an idiot?

Whatever explains the behavior of the *wager* class is therefore likely also to extend to *make* (see Pesetsky 2019 for a potential analysis). The eventive/stative asymmetry observed with *see/hear,* however, remains more mysterious.

3.5 Passives of -ing *complements in English and Brazilian Portuguese*

Note that verbs of perception/causation also permit passivization where they function as transitive verbs or take non-verbal small clauses or gerunds (in both BP and English), as shown in (50)-(51):

(50) a. [Many films]$_i$ have been seen/watched t_i in this cinema.

b. Sam$_i$ was made [t_i angry] by the news.

c. Kim was seen/heard [t_i singing].

(51) a. [Muitos filmes]$_i$ foram vistos t_i neste cinema.

Many films were seen.MPL in-this cinema

'Many films were seen in this cinema.'

b. A Sandra foi vista/ouvida [t_i cantando].

the Sandra was seen /heard.FSG singing

'Sandra was seen/heard singing.'

This is further evidence that the restrictions on long passives under discussion have a structural explanation. On our approach, the acceptability of (50a-b) is immediately explained if these complements are smaller than a phase so that only a single (matrix) *voice* head intervenes between matrix T and its goal. The grammaticality of (50c) and its BP counterpart (51b) is, however, more surprising because these *-ing* complements can contain a passive auxiliary (52), suggesting that they might be at least as large as voice:

(52) a. I saw the children **being** told off

b. Vi as crianças **sendo** repreendidas.

saw.1SG the children being told.off.FPL

Previous research has established that these gerundive complements in English have at least two possible structures, only one of which is clausal (Felser 1998, Borgonovo 1996, Declerck 1982).

(53) a. I heard [Kim singing] gerund and DP form constituent

b. I heard Kim [PRO singing] gerund is depictive

Even complements of the (53a) type do not behave like ECM complements, unlike their bare verbal counterparts, as their subjects receive case clause-internally (Reuland 1983, Pires 2006).[12] For this reason, they can stand alone as answers, and be clefted, for example:

(54) a. What did you hear?

b. Kim sing*(ing) in the shower.

c. Kim sing*(ing) in the shower is what I heard.

d. What I heard was Kim sing*(ing) in the shower.

Crucially for us, unambiguous clausal gerundive complements cannot be passivized, as Borgonovo (1996) has shown (55)-(56) (see also Declerck 1982, Felser 1998, for the same conclusion). Compare this with parallel (real) ECM contexts, where passivization is fine, as in (57)-(58):

(55) a. I saw it raining this morning.

b. ??It was seen raining this morning. (adapted from Borgonovo 1996:8)

(56) a. I can see there being several possible solutions.

b. *There can be seen being several possible solutions.

(57) a. I expect it to rain.

b. It is expected to rain.

(58) a. I expect there to be a solution.

b. There is expected to be a solution.

The implication is that examples like (50c) involves passivization of a simple transitive verb with a depictive gerund. Such examples are not, therefore, problematic for the analysis put forth here. There are no *-ing* ECM complements, and certainly none that are compatible with long passivization in English. Further evidence for this position comes from the fact that passives with *-ing* complements denote direct perception only, in line with the depictive reading and differently from active contexts (Mark Baker, p.c.).

(59) a. I saw Mary doing a puppet show, but only the puppets were visible.

b. Mary was seen doing a puppet show, #but only the puppets were visible.

In BP, things are even simpler as clausal gerunds cannot surface as the complements of perception verbs: the only possibility is a DP complement plus depictive. For this reason, weather predicates as in (60a) are simply not possible.

(60) a.*Vi chovendo/nevando.
saw.1SG raining/ snowing
b. Vi chover/ nevar.
saw.1SG rain.INF/ snow.INF

This seems to be because gerunds can only be predicates and not arguments in BP – there is no BP equivalent to the English *acc*-ing, as shown in the following:

(61) a.*O Pedro se preocupou em Maria sendo/estando atrasada
the Pedro SE worried in Maria being/being late.FSG
b. *O Pedro aparecendo no jantar surpreendeu a todos.
the Pedro appearing in.the dinner surprised to all

In BP too, then, it is clear that 'long' passivization with gerunds (51b) actually involves passivization of a transitive construction with a depictive gerund rather than

a long passive involving the promotion of the subject of a clausal complement to *ver* 'see'.

4 Remaining issues

4.1 Sauerland 2003

It is crucial to our argument that A-movement does not have access to phase-edge escape hatches in English and BP. However, Sauerland (2003) argues that A-movement does proceed through the edge of the v-related phase based on raising structures such as (62):

(62) Every child$_i$ [$_{vP}$ doesn't seem to his$_i$ father [$_{TP}$ t$_i$ to be t$_i$ smart]]

(Sauerland 2003: 310)

To explain sentences like (62), with the intended interpretation, Sauerland claims that there must be reconstruction of [every child] under negation but above the bound pronoun *his*, yielding the structure in Figure 5 (Sauerland 2003: 311).

(63) A child$_i$ doesn't seem to his$_i$ father t$_i$ to be smart.

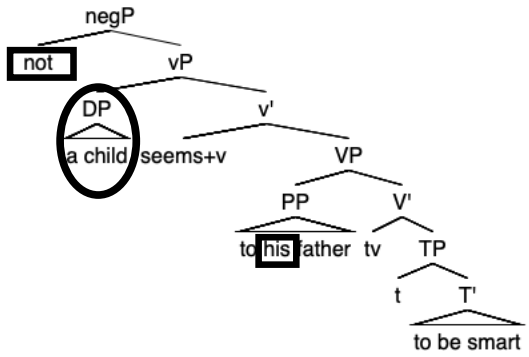

Figure 5: A-movement through spec vP

If correct, this would pose a serious challenge for our analysis because, if A-movement must proceed through the v-related phase edge, then our whole account of the restrictions on long A-movement cannot hold.

Here, we raise some potential objections to the empirical basis of Sauerland's claim. First, the relevant reading is much harder to get with subject quantifiers than with than indefinite articles, as further shown in (64), from Sauerland 2003: 311):

(64) a. Every participant$_1$ didn't seem to his$_1$ coach t_1 to be in bad shape.

b. All linguists$_1$ didn't seem to their$_1$ employer t_1 to work hard.

The intended reading is only possible where the subject is stressed and focused and this is true for most of Sauerland's examples.

Second, subject reconstruction below negation is difficult in English, not everyone allows it, and it is especially hard with indefinites, as shown in (65):

(65) Everybody/a child doesn't like chocolate.

Moreover, genuine indefinites are known to be infelicitous subjects of individual level predicates, as they are bad topics (66). They seem to be possible only under generic readings (67).

(66) #A student likes linguistics. (Erteschik-Shir 2004:125)
(67) A good student likes studying.

So, example (63), even without the negation, has only a generic reading. These facts make the empirical basis of Sauerland's claim somewhat suspect.

Additionally, we observe that many languages, BP included, do not allow raising over a full DP experiencer with seem (see Rizzi 1990).[13]

(69) *Um menino não parece para seu pai ser inteligente.
a boy not seem to his father be intelligent

Such examples are grammatical with the experiencer in the following order, however:

(71) Um menino não parece ser inteligente para seu pai.
a boy not seem be intelligent to his father
'A boy doesn't seem to his father to be intelligent.'

In these cases, the word order suggests that the experiencer is generated much lower in the structure, below the base position of the quantifier. If the PP occupies this position, there is no need for an intermediate position for *toda criança* in the specifier of vP, as the base position of the quantifier is both below negation and above the bound pronoun.

We propose that the English example may have the same basic structure as in BP but with the additional possibility of topicalizing the experiencer PP in the embedded clause in (73b).

(73) a. Every child$_i$ doesn't seem t_i to be smart to his$_i$ father.

b. Every child$_i$ doesn't seem [to his$_i$ father]$_j$ t_i to be smart t_j.

The fact that English appears to allow raising over a PP experiencer, unlike many other languages, is therefore an illusion, as predicted if defective intervention holds (see Chomsky 2000, but also Bruening 2014 for challenges). Evidence that this proposal might be along the right lines comes from contexts where the PP cannot topicalize since there is no clausal embedding and thus nowhere for the PP to land.

(74) a. Every child seems smart to his father.

b.*Every child seems to his father smart.

If our interpretation of these patterns is correct, then Sauerland's data do not actually provide evidence that A-movement proceeds through the v-related phase edge.

4.2 The broader cross-linguistic picture

Thus far, we have focused narrowly on English and Brazilian Portuguese to lay out our proposal in detail, but our analysis is intended to apply more broadly, of course. Indeed, selective long passivization restrictions can be observed in many Indo-European languages: German (Pitteroff 2015), Danish (Sten Vikner, p.c.), Swedish (Anders Holmberg, p.c.), Dutch (Bennis and Hoekstra 1989/2004), European Portuguese (Hornstein, Nunes and Martins 2010), Spanish (Cano Aguilar 1977, Treviño 1993, Tubino-Blanco 2010, 2011), French (Kayne 1975, 2010) and Italian (Folli and Harley 2007), as well as in unrelated languages like Hungarian (András Bárány, p.c.), Korean (Jung 2014, Harley 2017) and Japanese (Harley 1995). In this section, we illustrate the cross-linguistic predictions of our approach in relation to an extended version of the typology of causative complements developed by Pylkkänen (2008) and others.[14] We then provide initial suggestive evidence that the account holds up cross-linguistically, though thorough investigation of individual languages is, of course, necessary to test this claim. For space reasons, we discuss only causatives here, leaving perception verbs to one side.

It is by now well established that causative verbs can select complements of different sizes with concomitantly different syntactic properties. The following table expands Pylkkänen's (2008) original three-way distinction to include C-

phase and TP-embedding causatives as well as distinguishing between vP and v-phase selecting predicates (a distinction which we return to below). It also lays out our predictions regarding long passivization.

Type	**Example**	**Long passivization?**
Root selecting	Lexical causatives *(open the door*)	Yes
VP selecting	Romance *faire-par*, causee optional adjunct, one binding domain, clause union	Yes
vP selecting	Italian *faire-inf*, causee obligatory argument, two binding domains, clause union	Yes
v-phase selecting	English and Romance ECM, causee obligatory argument, more biclausal, voice present in complement, no tense	No
TP selecting	BP *mandar* and *deixar,* future time reference, high adverbs possible	Yes
C-phase selecting	BP/EP inflected INF, Spanish/Catalan finite CPs, future time reference	No

Table 1: Typology of causative complements

As is obvious from table 1, the prediction is *not* that long passives of causatives will be generally be banned, rather only that those targeting a structure with a phasal

complement will be. We have discussed v-phase selecting complements in English and Brazilian Portuguese. Other examples are ECM complements of causative (and perception verbs) across many Romance languages, which overwhelmingly resist passivization (see Casalicchio and Sheehan in progress for discussion). In Spanish, for example, the verb *hacer* can select either ECM or clause union complements, and yet long passives can never target external arguments (Cano Aguilar 1977, Treviño 1993, Tubino Blanco 2010).

(75) *Fui hecho traer un regalo [Spanish]
was.1SG made bring a present (Treviño 1993:70)

Importantly, we also see this restriction on long passivization in languages with morphological as opposed to periphrastic causatives. In Korean, for example, long passives of syntactic causatives are banned, as shown in (76):

(76) *Mary-ka ppang-ul kwup-**keyha**-eci-ess-ta. [Korean]
Mary- NOM bread- ACC bake- SYN.CAUS-PASS-PST-C
Intended: Mary was made to bake bread. (Harley 2017: 25)

(77) Koki-ka cal kwuw-eci-**keyha**-lyemyen, cacwu twicip-ci-ma-se-yo.
meat-NOM well grill-PASS?-CAUS- in.order.to often flip-CL-don't-POLITE-C.
'In order for the meat to be let grill well, do not flip it too often.'

(Jung 2014: 161, fn 16)

As (77) shows, these causatives can embed passive voice (somewhat marginally), suggesting that they may be v-phase (voice) embedding. This suggests that what is crucial is not the morphological/periphrastic divide but rather the size of complement selected, as we predict.

C-phase-selecting causatives also block long passivization. We have already seen that this is the case with BP inflected infinitives. It is also true with Spanish finite complements, which are more obviously full CP complements, and which block long passivization, as in (78b):

(78) a. El amor de mis padres hizo que me sintiera muy privilegiada
The love of my parents made that myself=felt very privileged
b. *Fui hecho que me=sintiera privilegiada por el amor de mis padres
was.1SG made that myself=felt privileged for the love of my parents

In fact, on our approach, movement from a finite complement is blocked for exactly the same reason as movement from a v-phase complement: the ban on crossing two phase heads (C and matrix voice).

On the other hand, as expected, passives of root-selecting lexical causatives (equivalent to *The door was opened*) are generally possible, as noted by Svenonious (2005). VP-selecting causatives too generally permit long passivization. Turkish is an

example of a language in which causatives select VPs, leading to optional adjunct-like causees (Key 2013). As expected, long passives are possible in Turkish (79), with only (non-adjunct) internal arguments available for promotion:

(79) süt bütün çocuk-lar-a iç-ir-il-di [Turkish]
milk.NOM all child-PL-DAT drink-CAUS-PASS -PAST
Lit: 'The milk was made drink to the children.'
(Çetinoğlu, Butt, and Oflazer
2008: 3)

Hindi indirect causatives (80) would also be VP-selecting in our terms, as they lack a projected external argument (see Bhatt and Embick 2017: 43). As predicted, they also permit long passivization, as Ramchand (2011: 20) shows.

(80) Ram-se peṛ kaṭ-vaa-yaa ga-yaa
Ram-INSTR tree cut-CAUS-PASS go-PERF.MSG
'The tree was cut through Ram's actions.'

Likewise, Icelandic periphrastic causatives with *láta* 'let' (81) permit long passivization:

(81) Ég var látinn kyssa þorsk. [Icelandic]

I.NOM was let kiss cod.ACC

'I was made to kiss a cod fish.' (Wood 2011: 24)

Based on the discussion in Wood (2011), this must be because *láta* 'let'can select either VP (without a causee) or vP (with a causee) but nothing phasal, as evidenced by the unacceptability of embedding passives under *láta* 'let', as seen in (82):

(82) *Þeir létu hann vera/verða rekinn. [Icelandic]

they let him be/become fired (Wood 2011: 25)

The passivization status of vP-selecting causatives is more moot, and they are more difficult to distinguish from v-phase selecting causatives. The Italian *faire*-infinitive is arguably vP-embedding as no voice can be expressed in the complement of *fare*, but external argument causees must be syntactically present (though realized as dative in transitive contexts) (Burzio 1986, Guasti 1993). Note that *si* (a voice marker) is obligatorily suppressed (*pentirsi* is inherently pronominal) in (83):

(83) Questo fara pentir(*si) Giovanni] [Italian]

this make.FUT repent=self Giovanni

'This will make Giovanni repent.' (Burzio 1986: 409)

Italian appears to allow long passivization of the *faire*-infinitive (see Burzio 1986, Cinque 2003, but also Folli and Harley 2007 for a different take on such examples), as shown in (84) (see Casalicchio and Sheehan, in progress, for further discussion):

(84) La macchina$_i$ fu fatta riparare t_i a Giovanni [Italian]
the car was made repair DAT Giovanni (Burzio 1986: 258)

It would seem therefore that the initial predictions of the approach seem promising. Across a number of languages, phasal complements of causatives block passivization whereas other kinds of complements do not. Of course, much careful work is needed on individual languages to establish whether independent language-specific diagnostics for complement size serve to support these claims. As noted in table 1, the relevant diagnostics include (i) clause union diagnostics such as clitic climbing (ii) anaphor binding (iii) the argument/adjunct status of causees (ability to control PRO) (iv) temporal independence (v) the possibility of high adverbs/modals. We take this investigation up in other work.

5 Conclusions

In this paper we have shown that the long passivization is possible only where complements are smaller than voiceP or where they include a T-related projection. This follows from a version of phase theory if:

(i) The v-related phase is progP/voiceP*;*

(ii) We adopt PIC2 and the proposal that passives/unaccusatives are phasal;

(iii) A-movement does not have access to phase-edge escape hatches.

If A-movement could proceed through the phase edge, then it would be able to escape phasal complements in all contexts, contrary to what is observed. Rather, what we see is a trapping effect wherever a phasal complement is embedded without any T-related projection. The reason that this effect is observed so often with causative/perception verbs is, we propose, because these verbs often select eventive complements, which are syntactically realized without a T-projection, leading to event simultaneity and veridicality. Variation across languages can be attributed to the differing size of the complements of these verbs which, as we have seen in BP, also have syntactic and semantic effects. We have also shown that our proposal makes robust cross-linguistic predictions, building on a wealth of previous work on causative complementation patterns (Pylkkänen 2008 amongst others). Although much careful language-specific work is required, our initial investigation suggests that long passivization is indeed blocked where a matrix verb selects a phasal complement (a v-phase or C-phase).

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* This research was funded by: (i) a FAPESP (The São Paulo Research Foundation) Visiting Professorship to M. Sheehan, 2014/04565-5 (ii) a British Academy International Partnership and Mobility grant to M. Sheehan, PM150148; (iii) a CNPq (National Council for Scientific and Technological Development) grant 304574/2017-1 to S. Cyrino. We would like to thank the audiences at CamVoice in Cambridge, VI Congresso Internacional de Estudos Linguísticos in Brasília, North East Linguistics Society in Iceland and Going Romance in Bucharest, where earlier versions of this work were presented. An early, non-peer-reviewed draft of this paper was published as Sheehan & Cyrino (2018). Thanks also to the MIT graduate students who took Michelle's mini-course on passives of causatives and offered many useful suggestions which helped with the development of the final section of this paper. All errors are our own, of course.

[1]There have been numerous different accounts of these seemingly idiosyncratic restrictions, but they have not, as far as we know, been analysed as an effect of phase theory (see Higginbotham 1983 for a semantic account; Williams 1983, Bennis and Hoekstra 1989/2004, Felser 1999 for morphological

approaches; Folli and Harley 2007 for a defective verb approach; Wurmbrand 2001, Folli and Harley 2013 for competition analyses; Cinque 2003, G. Johnson 2014 for functional sequence accounts; Basilico 2003 for an intervention account; and Hornstein, Nunes and Martins 2010 for a Case-based analysis). Space restrictions preclude a comparison of our approach with these alternatives, but we note that a phase-based approach has the distinct advantage of offering a principled account of variation in the availability of long passivization both within and across languages.

[2]The following is of course, fully grammatical:

(i) I saw/heard John might walk away.

This is because *see/hear* can also take finite CP complements allowing the complementiser *that* as well as high adverbs, independent temporal reference and non-eventive complements:

(ii) Yesterday, I saw/heard that (regrettably) John might walk away today.

[3]The BP examples discussed in this paper are based on the acceptability judgments of the second author, who is a speaker of Standard BP, but they have also been checked with several native speaker linguists. We supplement these judgments with corpora examples too, in places. As a reviewer notes, some BP speakers are less permissive in their acceptance of long passives in BP and we assume that these speakers have a minimally different grammar in which the complements of these verbs are smaller or larger than TP. The prediction is that these size differences could be diagnosed by the diagnostics we apply in 2.2. We leave the investigation of this variation to future work.

[4]In fact, the auxiliary *ter* 'have' does not always have a perfective function in Portuguese (see Raposo 2013: 1258-1263). More specifically, as Raposo (2013) notes for European Portuguese, in the present indicative *ter* actually has an iterative, imperfective function which renders it incompatible with unique events (example from Raposo 2013: 1258-9):

(i) O Cristiano Ronaldo tem marcado muitos golos/#um golo.
the Cristiano Ronaldo has scored many goals/a goal

In other tenses and moods, the *ter* auxiliary behaves more like a perfective auxiliary, taking on a meaning more similar to the English auxiliary *have:*

(ii) Quando chegarmos ao estádio, já o Rui Costa
when arrive.1pl to.the stadium, already the Rui Costa
terá marcado um golo.
have.fut scored a goal (Raposo 2013: 1261)

BP patterns alike in this respect. We nonetheless assume that *ter* is a syntactic realisation of the head *perf* above *prog*, but that it has a marked [-perf] interpretation in the present indicative and a [+perf] value elsewhere.

[5]Higginbotham (1983: 105) notes that veridicality fails under *see* where the complement contains a negative quantifier:

(i) If John saw somebody leave, then somebody left.

(ii) #If John saw nobody leave, then nobody left.

He offers an account of this via his individual-event analysis, along the lines in (iii):

(iii) There is nobody whom John sees leave.

We do not discuss this issue here, but see van der Leek (1992).

[6]An anonymous reviewer asks whether unergative verbs follow the pattern of transitive ones given in examples (36). The answer is that they do, as shown in (i):

(i) Os meninos foram {*feitos/*vistos/mandados/deixados} trabalhar.
the boys were made/seen/had/let work
Lit. 'The boys were *made/*seen/had/let work.'

[7]Wurmbrand (2017:346) too discusses evidence suggesting that different types of aspect belong to different syntactic cycles –while perfect belongs with the tense/C cycle, progressive is part of the lower clausal cycle (the v-related phase).

[8]An anonymous reviewer asks why VP (and vP) do not inherit phasehood status in the absence of *voice* or *prog*. It is true that if phasehood were truly dynamic as outlined by Bošković (2014), then this would be expected to happen. It seems, however, that there is a lower as well as an upper boundary on the v-related phase, so that vP/VP are never phasal. This might be due ultimately to semantic factors (see Ramchand 2018 for a semantic rationale for v-related phasehood). The reviewer also asks why TP does not inherit phasehood status. In fact, for us, it is not crucial whether T inherits phasehood status or not as it bears an EPP feature so will not serve to block A-movement. In the literature, though, there are many arguments against assuming phasal status for TP (see Abels 2003, Harwood 2015, Wurmbrand 2013, 2014 a.o.).

[9]An anonymous reviewer notes that while PIC2 makes it possible to assume that A-movement does not *need* to transit through the edge of the v-related phase, it does not, in and of itself, *prevent* A-movement from transiting through the phase

edge. Our point here is that PIC2 is at least compatible with this more restrictive view. In Section 3.2, we note that, if all movement is feature driven then this diference between A- and Ā-movement can easily be stated in feature-based terms.

[10]An anonymous reviewer asks why A- and Ā-movement would differ in this way. While this is an interesting question, like many questions about human language, it is difficult to answer with any degree of certainty. It seems to be a fact that filler gap dependencies involving wh-phrases and/or *foci*/topics can be construed over longer distances than argument-predicate relations and this appears to be encoded in grammar. Our proposal is that this difference is to do with the (un-)availability of phasal escape hatches, and so, ultimately, the feature specification of phase heads.

[11]The fact that *make* allows ECM of this kind but *have*/*let* do not can be attributed to the more general fact that ECM is blocked with agentive predicates (Pesetsky 1991) as *have*/*let* seem to differ from *make* in requiring an agentive subject for many English speakers:

(i) Her tone of voice made/*had/*let me pay attention.

[12]Example (53a) is what has been called *acc*-ing. Iordăchioaia (2020) argues that *acc*-ing gerunds project a TP, hence the fact that they support high adverbs and *there* insertion:

(i) [Mary probably being responsible for the accident] was considered by the DA.

(ii) Paul counted on [there being many people in the party].

(ex. (26) in Iordăchioaia 2020:13)

While we reject the possibility of *there* insertion as a TP diagnostic (see Section 2.2), the distribution of high adverbs does indeed suggest that *acc*-ing gerunds include a T projection. The data in (55)-(56), however, clearly show that *acc*-ing gerunds are not compatible with long passivization, so this is not a challenge for our proposal. We thank an anonymous reviewer for asking us to clarify this point.

[13]In addition to BP, Italian, Spanish, Catalan, Galician, Romanian, French and Greek all have restrictions on raising over an experiencer (see Rizzi 1990, Torrego 1996, 1998, Anagnostopoulou 2003, Ausín and Depiante 2000). Our proposal is similar to Torrego's (1996) in ascribing an adjunct structure to the experiencer, which is an optional argument in raising constructions with *seem* (see also the analysis in Anagnostopoulou 2003).

[14]Pylkännen does not distinguish between vP selecting and v-phase selecting causatives because she assumes that the head introducing the external argument (her voice) is the v-related phase head, something that we reject, at least for the languages under discussion here. Her voice head is therefore equivalent to what we call v, in terms of this function. The restrictions on long passivization seem to show that the phase head in English and Brazilian Portuguese must be higher than the head introducing the external argument. Pylkännen's 'verb selecting' causatives are directly equivalent to what we call VP-selecting causatives (which lack a projected external argument).