

Regular and athematic participles in Brazilian Portuguese*

Abstract

In Brazilian Portuguese, a handful of verbs allow for both a regular and an athematic form of the participle. In verbal passives, either a regular or an athematic PTC may be used, while in adjectival passives, only an athematic PTC is allowed, and, in absolute constructions, only a regular PTC is. I propose that the athematic PTC arises as a consequence of a Fusion rule targeting v and the root ($\sqrt{\quad}$). Whether that rule applies depends on the size of a construction, which in turn determines how much structure is Spelled-Out. In absolute participles, v and $\sqrt{\quad}$ are Spelled-Out separately, so Fusion cannot apply; only a regular PTC can be realized. In adjectival passives, v and $\sqrt{\quad}$ are Spelled-Out together, so Fusion applies; an athematic PTC can be realized. In verbal passives, I stipulate that two derivations are possible: (i) v and $\sqrt{\quad}$ are Spelled-Out separately, hence why a regular PTC arises. (ii) v and $\sqrt{\quad}$ are Spelled-Out together, hence why an athematic PTC arises.

*Acknowledgments to be added.

1 Introduction

The participle (PTC) in Brazilian Portuguese (BP) is realized by the forms *-a-d-o* or *-i-d-o*, where *a* and *i* are theme vowels, *-d* is the PTC itself, and *-o/a(s)* is agreement morphology for number and gender inflection. (The latter is not discussed in this paper.) In BP, the theme vowels are *-a* (1st conjugation, (1a)), *-e* (2nd, (1b)), and *-i* (3rd, (1c)).¹

- | | | | | | | |
|-----|----|-----------------|----|----------------|----|------------------|
| (1) | a. | pass-a-d-o/a(s) | b. | com-i-d-/a(s) | c. | part-i-d-o/a(s) |
| | | iron-TH-PTC-AGR | | eat-TH-PTC-AGR | | leave-TH-PTC-AGR |
| | | ‘ironed’ | | ‘eaten’ | | ‘left’ |

In addition to the PTC above, some verbs idiosyncratically allow for an additional, shorter form that lacks the participle affix (*-d*) and a theme vowel; only agreement morphology occurs in this PTC form. Due to the lack of a theme vowel, these participles are called ‘athematic’ (Souza 2011: i.a.), though one must bear in mind that that athematic PTCs lack both a theme vowel and the PTC morpheme *-d*.

- | | | | |
|-----|---------------------------|----------------------------------|-----------------------------|
| (2) | <i>Regular participle</i> | | <i>Athematic participle</i> |
| | a. | ganh-a-d-as ‘win-TH-PTC-AGR’ | ganh-as ‘win-AGR’ |
| | b. | limp-a-d-as ‘clean-TH-PTC-AGR’ | limp-as ‘clean-AGR’ |
| | c. | prend-i-d-as ‘arrest-TH-PTC-AGR’ | pres-as ‘arrest-AGR’ |
| | | ... | |

Once we consider the constructions where the PTC is used, we see that there are restrictions in the occurrence of regular and athematic participles.

The PTC can be used in at least three types of constructions in BP: verbal passives (3a), adjectival passives (3b), and absolute participles (3c).

¹Abbreviations: AGR: agreement; AUX1: auxiliary *ser* ‘be’; AUX2: auxiliary *estar* ‘be’; INF: infinitive; PRES: present; PST: past; PTC: participle; TH: theme vowel.

- (3) a. Essa camisa foi **pass-a-d-a** pelo João.
 this shirt AUX1.PST iron-TH-PTC-AGR by.the João
 ‘This shirt was ironed by João.’
- b. Essa camisa está/permanece **pass-a-d-a**.
 this shirt AUX2.PRES/remains iron-TH-PTC-AGR
 ‘This shirt is/remains ironed.’
- c. [**Pass-a-d-a** a última camisa], o João pôde
 [iron-TH-PTC-AGR the last shirt] the João could
 descansar.
 rest.INF
 ‘Having ironed the last shirt, João could go rest.’

In (3), the verb is *passar* ‘iron’, which accepts only the regular PTC. In fact, the majority of verbs in BP only allow for a regular PTC. Nevertheless, given that there are also verbs that accept a second, athematic participial form (2), we may ask what happens when a verb of this class is used to build the participial constructions in (3). Verbal passives (4a) allow for either PTC form, regular or athematic. Adjectival passives and absolute participles allow for one PTC form only: adjectival passives (4b) allow for the athematic PTC only, while absolute participles (4c) allow for the regular PTC only.²

- (4) a. As gavetas foram **limp-a-d-as** / **limp-as**.
 the drawers AUX1.PST clean-TH-PTC-AGR / clean-AGR
 ‘The drawers were cleaned.’
- b. As gavetas estão/permanecem ***limp-a-d-as** / **limp-as**.
 the drawers AUX2.PRES/remain *clean-TH-PTC-AGR / clean-AGR
 ‘The drawers are/remain clean.’
- c. [**Limp-a-d-as** / ***Limp-as** as gavetas], ...
 [clean-TH-PTC-AGR / *clean-AGR the drawers]
 ‘The drawers having been cleaned, ...’

²This restriction imposed on absolute participles was first brought to my attention by [redacted].

One could object that adjectival passives are formed with true adjectives and that *limpas* in (4b) is the adjectival form of \sqrt{LIMP} . However, this would not account for why this form is also acceptable in the verbal passive (4a). Instead, it seems desirable to provide a uniform analysis that accounts for the occurrence of athematic forms in both verbal and adjectival passives.

To account for the restrictions in the occurrence of the PTC form in the three constructions in (4), I will put forth an analysis where the main tool to derive athematic PTCs will be a fusion rule that creates a single node from a complex head formed by v and $\sqrt{}$. The absence of a theme vowel and an overt morpheme in athematic PTCs will be a consequence of the application of that rule or the failure thereof, coupled with accessory assumptions about phases and spell-out domains. Fusion will be constrained by locality, which is in turn constrained by how much structure is Spelled-Out.

2 Morphosyntactic differences

In this section, we will look at how PTC constructions behave with respect to the licensing of manner adverbs, of agentive *by*-phrases, and of unaccusative predicates. Besides helping establish that verbal passives, adjectival passives, and absolute participles are different constructions, we will discuss ways in which their differences and similarities can be modeled in syntactic terms.

There is a distinction among the PTC constructions examined here with respect to the licensing of manner adverbs like *cuidadosamente* ‘carefully’ (cf. Embick 2004). Verbal passives (5a) and absolute participles (5c) allow for this type of modifier, but adjectival passives (5b) do not.

- (5) a. O armário foi limp(-a-d)-o **cuidadosamente**.
 the wardrobe AUX1.PST clean-(-TH-PTC)-AGR carefully
 ‘The wardrobe was carefully cleaned.’
- b. O armário permanece/está aber-t-o
 the wardrobe remains/AUX2.PRES open-PTC-AGR
 (***cuidadosamente**).
 (*carefully)
 Int.: ‘The wardrobe is/remains carefully opened.’
- c. [Aber-t-o o armário **cuidadosamente**], ...
 [open-PTC-AGR the wardrobe carefully] ...
 ‘The wardrobe having been carefully opened, ...’

I will try to capture the similarity between verbal passives and absolute participles by saying that their highest categorizing head is *v*, under the assumption that *v* is necessary in the licensing of manner adverbs. Adjectival passives in turn have an additional *a* categorizer on top of *v*, which I assume to prevent the occurrence of a manner adverb. Due to analysis-internal reasons, I assume that a *v* is still present in adjectival passives: the need is justified by the assumption that the theme vowel is adjoined post-syntactically to *v*.

The proposal that adjectival passives contain a *a* categorizer can be argued for on the basis of a comparison between verbs and their deverbal adjective counterparts: the former can be modified by manner adverbs and instrumental phrases, while the latter cannot.³

- (6) a. A Maria justificou a proposta **minuciosamente**.
 the Maria justified the proposal minutely
 ‘Maria thoroughly justified the proposal.’
- b. Essa proposta é / permanece justificável
 this proposal AUX2.PRES / remains justifiable
 (***minuciosamente**).
 (*minutely)

³Thank you to [redacted] for this useful suggestion. Thank you to [redacted] for discussion and criticism.

‘This proposal is/remains justifiable (*thoroughly).’

- (7) a. A Rosa aceitou a proposta **vigorosamente**.
the Rosa accepted the proposal vigorously
‘Rosa vigorously accepted the proposal.’
- b. A proposta é / permanece aceitável
the proposal AUX2.PRES / remains acceptable
(***vigoramente**).
(*vigorously)
‘The proposal is/remains justifiable (*vigorously).’

A way to account for this contrast is perhaps again to say that verbs in each contain a *v* as their highest projection, while their adjectival counterparts contain a *a* as their highest projection. This could corroborate the proposal made above that the highest categorizer in verbal passives and absolute participles is *v*, while that of adjectival passives, *a*.

Going back to PTC constructions, a second difference has to do with the presence of an agent. By assumption, this property can be diagnosed by the occurrence of an agentive *by*-phrase. It distinguishes between verbal passives (8a), which allow for a *by*-phrase, from both adjectival passives (8b) and absolute participles (8c), which do not.

- (8) a. As gavetas foram organiz-a-d-as /
the drawers AUX1.PST organized-TH-PTC-AGR /
limp(-a-d)-as **pelo Otávio**.
clean(-TH-PTC)-AGR by.the Otávio
‘The drawers were organized/cleaned by Otávio.’
- b. As gavetas permanecem/estão organiz-a-d-as /
the drawers remain/AUX2.PRES organized-TH-PTC-AGR /
limp(*-a-d)-as (***pelo Otávio**).
clean(*-TH-PTC)-AGR (*by.the Otávio)
‘The drawers remain/are clean (*by Otávio).’
- c. [Organiz-a-d-as / Limp*(-a-d)-as as gavetas
[organize-TH-PTC-AGR / clean*(-TH-PTC)-AGR the drawers

(***pelo** **Otávio**)], ...
 (*by.the Otávio)]
 ‘The drawers having been organized/cleaned (*by Otávio), ...’

Corroborating this division, verbal passives (9a) are different from adjectival passives (9b) and absolute participies (9c) in not allowing an unaccusative.

- (9) a. * Os manifestantes foram **desaparec-i-d-os** pela
 the demonstrators were disappear-TH-PTC-AGR by.the
 polícia militar.
 police military
- b. Os manifestantes estão/permanecem
 the demonstrators are/remain
desaparec-i-d-os (*pela polícia militar).
 disappear-TH-PTC-AGR (*by.the police military)
 ‘The demonstrators remain disappeared.’
- c. [**Desaparec-i-d-os** vários manifestantes], ...
 [disappear-TH-PTC-AGR several demonstrators]
 ‘Several demonstrators having disappeared, ...’

A way to account for (8) would be to assume that the licensing of a *by*-phrase requires the projection of a VoiceP. Verbal passives would thus have this projection, while adjectival passives and absolute participles would lack it. The unaccusative data in (9) could also be accounted for by this proposal if we assume that unaccusatives are incompatible with VoiceP. If this is the case, then verbal passives are expected not to be derivable from unaccusatives, as is indeed the case. Conversely, adjectival passives and absolute participles are expected to be compatible with this type of predicate, given the absence of a VoiceP layer in their respective structures.

2.1 The structure of PTC constructions

In the previous section, we examined some differences and similarities among PTC constructions, motivating a three-way distinction:

| (10) | Verbal passive | Adjectival passive | Absolute participle |
|-------------------|----------------|--------------------|---------------------|
| Manner adverb | ✓ | * | ✓ |
| <i>By</i> -phrase | ✓ | * | * |
| Unaccusative | * | ✓ | ✓ |

I assume that the minimal structure that a PTC form may have is (11) (agreement morphology omitted).

$$(11) \quad [{}_{\text{PtcP}} \sqrt{+v} + \text{Ptc} \underbrace{[{}_{\text{vP}} \sqrt{+v}]}_{\text{VoiceP}} \underbrace{[{}_{\text{vP}} \sqrt{v}]}_{a\text{P}}]]$$

This is the minimal structure because it contains only nodes that expone the observable PTC pieces, namely, the root, the theme vowel, which I take to be the exponent of the categorizer v , following Embick's (2015) take of Oltra Massuet's (1999) proposal, and the PTC itself.

Based on the distinctions examined in this section and the minimal structure (11), I propose that verbal passives (12a) and adjectival passives (12b) contain each an extra layer of projection on top of the minimal structure, VoiceP and *a*P, respectively. VoiceP in verbal passives is justified by the ability to license a *by*-phrase and the incompatibility with unaccusative predicates. To recall, these properties are missing in the other PTC constructions, hence why they lack VoiceP. *a*P in adjectival passives is motivated by their adjective-like behavior. Finally, absolute participles (12c) have the smallest structure of all three, containing only the minimal PTC structure argued for

in (11). Besides PtcP, the only functional projection in (12c) is vP, which is justified by the analysis-internal assumption that *v* expones the theme vowel.

- (12) a. Verbal passive: [VoiceP Voice [PtcP Ptc [vP v [_√P √]]]]
- b. Adjectival passive: [_aP *a* [PtcP Ptc [vP v [_√P √]]]]
- c. Absolute participle: [PtcP Ptc [vP v [_√P √]]]]

2.2 PTC differences

For those verbs that have two PTC forms (2), there is a difference in which form is acceptable in the constructions examined here. In the verbal passive, either PTC is accepted.

- (13) a. As gavetas foram **limp-a-d-as** / **limp-as** pelo João.
 the drawers were clean-TH-PTC-AGR / clean-AGR by.the João
 'The drawers were cleaned by João.'
- b. A partida foi **ganh-a-d-a** / **ganh-a** pela
 the match AUX1.PST win-TH-PTC-AGR / win-AGR by.the
 Seleção.
 national.soccer.team
 'The match was won by the Brazilian NT.'

On the other hand, adjective passives and absolute participles allow for only one PTC. Adjectival passives are only compatible with the athematic PTC.

- (14) a. O armário permanece / está ***limp-a-d-o** /
 the wardrobe remains / AUX2.PRES ***clean-TH-PTC-AGR** /
limp-o.
 clean-AGR
 'The wardrobe remains/is clean.'
- b. Essa proposta permanece / está bem
 this proposal remains / AUX2.PRES well
?*aceit-a-d-a / **aceit-a.**
?*accept-TH-PTC-AGR / accept-AGR
 'This proposal remains/is well accepted.'

Conversely, absolute participles accept the regular PTC only.

- (15) a. [**Limp-a-d-as** / ***Limp-as** as gavetas], ...
[clean-TH-PTC-AGR / *clean-AGR the drawers]
'The drawers having been cleaned, ...'
- b. [**Cheg-a-dos** / ***Cheg-os** os trens na estação], ...
[arrive-TH-PTC-AGR / *arrive-AGR the trains in.the station]
'The trains having arrived at the station, ...'

Given these data, one may want to ask the following questions:

- (16) i. For the roots that are compatible with more than one PTC form, why are verbal passives compatible with either a regular or an athematic participle?
- ii. Why is there a restriction in the participial form that can occur in adjectival passives and absolute participles?
- iii. What could explain the directionality of this restriction?

3 Towards an analysis

In order to try to answer these questions, I will capitalize on the structures arrived at in §2 and relate them to the form of the PTC that occur in them. Specifically, the analysis will take advantage of the difference in structural complexity. To recall, I proposed that absolute participles (12c) have the smallest PTC structure; in fact, they project just the the minimal PTC structure. This is also the PTC construction where only a regular form is acceptable when there is more than one form available. Furthermore, I proposed that verbal passives (12a) and adjectival passives (12b) contain an additional layer on top of the minimal structure, VoiceP and *a*P, respectively. These are

also the PTC constructions where an athematic participle is possible. Nevertheless, it is necessary to distinguish between verbal and adjectival passives, as only the former allows for the athematic PTC to alternate with the regular one. This will be done in the next section, where I lay out the assumptions and stipulations of the analysis.

3.1 Assumptions and stipulations

The first set of assumptions concerns phases. Following Marantz (2007) and Embick (2010), I assume that categorizers like *a* and *v* are word-internal phases. I will extend the configurational approach to phases (Wurmbrand 2017 and references therein) to the word-internal domain. Specifically, I assume the following definition:

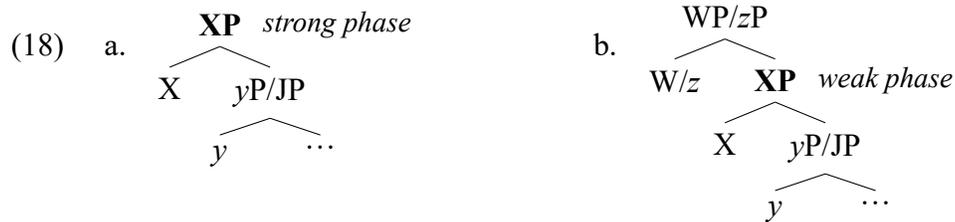
(17) *Configurational definition of a phase* (Wurmbrand 2017: (11))

- a. The highest projection of a cyclic domain constitutes a phase.
- b. The cyclic domains of a clause are *i.* the extended thematic domain of V and *ii.* the combined T and C domains.

Furthermore, I stipulate a distinction between strong and weak phases. Strong phases are phases in the traditional sense (Chomsky 2001), according to which phases are part of a syntactic derivation that determine the moment when Spell-Out should take place and, additionally, how much structure should be spelled-out. Weak phases in turn perform only half of these tasks: they determine how much structure should be spelled-out, but they do not determine when Spell-Out should occur. I further stipulate that the categorizing heads mentioned above are inherently strong phases, while non-categorizing functional heads may be strong or weak, depending on their

surrounding environment, in keeping with the configurational approach to phasehood mentioned above. Specifically, if some functional projection XP is the topmost projection in a given domain, it is a strong phase (irrespective of the fact that it is not a categorizing projection). However, if it is dominated by some other projection, XP only qualifies as a weak phase. The projection that dominates XP may be another noncategorizing projection WP or a categorizing projection.

The combination between the configurational approach to phases and the distinction between strong (18a) and weak (18b) phases is diagrammed below.



The consequence of extending a configurational approach to phases to the word-internal domain and coupling it with a stipulated distinction between weak and strong phases is that the same functional projection XP can be a strong or a weak phase, depending on the surrounding structure.

Still regarding phases, I also assume the weak version of the Phase Impenetrability Condition (PIC). According to the weak PIC, what is spelled-out is the complement of a phase and this happens only when the next higher phase is derived. Thus, the effect of the weak PIC is that the Spell-Out of a given phase is delayed until the next higher phase.

There are two consequences for the present analysis. First, upon the completion of a phase αP , if there is no lower phase within αP , then Spell-Out cannot occur at this point of the derivation. Second, as is going to be

stated shortly, athematic PTCs will be proposed to arise as a consequence of a fusion rule. The timing of Spell-out determined by the weak PIC is going to be relevant in whether or not that fusion rule below applies in a given PTC construction. This will in turn determine which form of the PTC arises.

As just mentioned, I propose that the athematic form of the PTC is the consequence of the application of a Fusion rule (Halle 2000) that applies to a complex head formed by the categorizer v and a particular root ($\sqrt{\quad}$) when this complex head is adjacent to the a PTC head.

(19) **Fusion:** $[_v [\sqrt{R}] [v]] \rightarrow [_v \sqrt{R} v] / \text{--- PTC, where } R \in (2).$

This rule has two relevant properties. First, it is a context-sensitive rule that makes reference to the presence of a PTC head. This is necessary, since it is undesirable for Fusion to apply whenever there is a categorizer v adjacent to a root. Second, (19) only applies to certain roots. It seems that any analysis of the distribution of athematic PTCs has to make reference to the particular set of verbs that allow for them. The present analysis encodes this information in the definition of the Fusion rule (19).

The result of the application of this rule is that the internal structure of the complex head formed by v and $\sqrt{\quad}$ is lost, so that these two elements become a single head. To foreshadow the analysis, absolute participles are structured in such a way that v and $\sqrt{\quad}$ belong to different Spell-Out domains, so that Fusion cannot apply. As such, athematic PTCs cannot occur in this type of PTC construction. In adjectival passives, v and $\sqrt{\quad}$ belong to the same Spell-Out domain, so that the Fusion can apply. As a result, athematic PTCs can occur. Finally, I will postulate two possible derivations for verbal passives. In one of them, v and $\sqrt{\quad}$ are in different Spell-Out domains, so that Fusion

cannot apply, just as in absolute participles. In the other possible derivation, Fusion can apply, just as in adjectival passives.

I assume, following Oltra Massuet (1999), that theme vowels are disassociative morphemes that are inserted post-syntactically:

$$(20) \textbf{ Theme vowel insertion: } [{}_{vP} v \check{v}] \rightarrow [{}_{vP} [v v \textbf{TH}] \check{v}]$$

(based on Oltra Massuet 1999)

If Fusion applies, v becomes invisible to the derivation, so that the theme vowel insertion rule cannot apply. The combination between Fusion and the resulting bleeding of the the vowel insertion rule is supposed to take care of the concomitant absence of a theme vowel and a PTC morpheme in athematic forms.

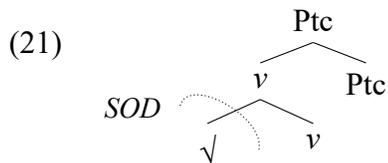
To allow two derivations for verbal passives, the last ingredient of the analysis is a stipulation about how the morphemes a PTC form is composed can be organized in a Numeration. A Numeration is defined as “a set of pairs (LI, i) , where LI is an item of the lexicon and i is its index, understood to be the number of times that LI is selected.” (Chomsky 1995). I stipulate that Voice, may be part of the same numeration as the rest of the pieces of the PTC in a verbal passive or it may be part of a separate numeration. This is going to be illustrated in §3.4, when we look at the derivation of verbal passives. This proposal is inspired by the Merge-over-Move debate by Chomsky (2000); I stipulate that Voice can be part of different numerations too, similarly to *there*. The analysis-internal motivation behind singling out Voice as the element that can be part of different numerations is that this is the projection that only verbal passives have (12a).

With these ingredients in hand, we can now proceed to the derivation of

each PTC construction examined in this paper.

3.2 *Absolute participles*

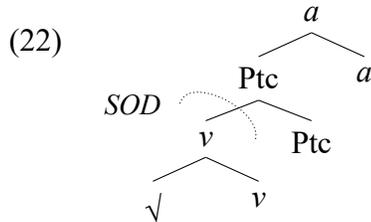
We start with absolute participles. To recall, for the verbs that are compatible with both a regular and athematic PTC, absolute participles are compatible only with the former, as indicated in (4c). (21) is the result of applying head movement to the structure for absolute participles proposed in (12c).



Absolute participles have the smallest structure, projecting only the minimal PTC structure (11). The head Ptc in (21) counts as a strong phase head because there is no higher phase head above it. As such, there are two strong phase heads in (21), v , a strong head by virtue of being a categorizer, and Ptc, a strong phase head given the configurational approach to phases assumed here. By the Weak PIC, the complement domain of the lower phase head v is Spelled-Out once the next higher phase head Ptc enters the derivation. This Spell-Out domain includes the root $\sqrt{\quad}$, but not v . The context for the application of the Fusion rule (19) is thus bled, since $\sqrt{\quad}$ and v are not part of the same Spell-Out domain. Consequently, only the regular PTC can surface, regardless of whether the root is compatible with just the regular form or if it belongs to the set of roots that allow for an athematic form.

3.3 *Adjectival passive*

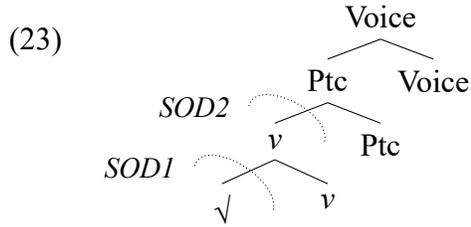
We now turn to adjectival passives. In case the root in this type of construction is compatible with more than one PTC form, the only one that adjectival passives accept is the athematic one (4b). (22) is the result of applying head movement to the structure for adjectival passives proposed in (12b).



Adjectival passives were proposed to contain an *aP* layer above the minimal PTC structure, *a* being inherently a strong phase head, since it is a categorizer. Because it is not the highest head in this structure, Ptc is only a weak phase. By the weak PIC, when *a* enters the derivation, it triggers the Spell-Out of the complement domain of the lower phase, Ptc. This Spell-Out domain includes both $\sqrt{\quad}$ and *v*. The context of application of the Fusion rule (19) is met, so that, if the root is in the set (2), it will fuse with *v*. If the root is compatible only with a regular form, the fusion rule cannot apply. When Fusion can indeed be applied, a byproduct is that the context for the application of the theme vowel insertion rule is now bled. The final result is a PTC form that lacks a theme vowel, that is, an athematic form. Conversely, if the root used in the derivation is not specified in the Fusion rule, it cannot apply and, as such, the theme vowel insertion rule can apply, giving rise to a regular PTC form, as desired.

3.4 Verbal passive

Unlike absolute participles and adjectival passives, verbal passives are compatible with either a regular or an athematic form of the PTC (4a). (23) is the outcome of applying head movement to the structure proposed in (12a). The variable Spell-Out domains (*SOD1* and *SOD2*) indicated in (23) are a preview of the analysis to be put forward.

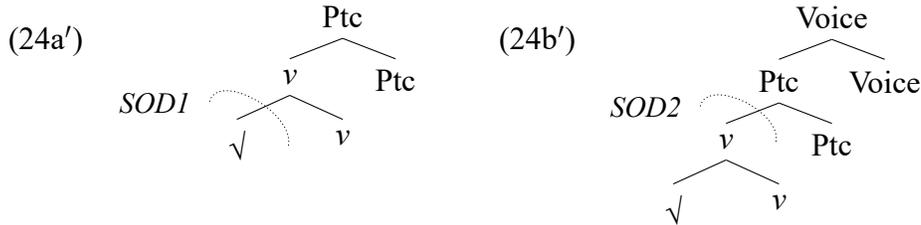


I stipulated that Voice can be part of a Numeration of its own, separate from the other components of a PTC (24a) or it can be part of one single numeration (24b).

- (24) a. i. Numeration 1/2: $\{\sqrt{R}, v, \text{Ptc}, \dots\}$
 ii. Numeration 2/2: $\{\text{Voice}, \dots\}$
 b. Numeration 1/1: $\{\sqrt{R}, v, \text{Ptc}, \text{Voice}, \dots\}$

Accordingly, the first step of the derivation will be different in each case. Starting with (24a), first, the derivation exhausts numeration (24a-i). In that case, the structure constructed is identical to that of an absolute participle (24a'). The final outcome, as discussed in §3.2, is always a regular PTC form, given the impossibility of applying the Fusion rule (19). Specifically, in the absence of Voice in the numeration, Ptc is the highest projection at the point of the derivation in (24a'). It is therefore a strong phase. As such, the root $\sqrt{}$ and *v* are Spelled-Out at different points in the derivation, preventing

the fusion rule (19) from applying. Even if the root does allow for more than one PTC form, only the regular one can be expounded in this derivation of the verbal passive. By the time Voice in Numeration (24a-ii) is added to the structure, the regular form of the PTC has already been Spelled-out.



Alternatively, Voice can be part of the same numeration as the other components of the PTC. In that case, the structure derived resembles that of an adjectival passive (24b'), as discussed in §3.3. The difference between the adjectival structure in (22) and the verbal passive derived from Numeration (24b) lies in the identity of the topmost projection, *a*P and VoiceP, respectively. *a* is always a strong phase, given that it is a categorizing head. Voice, in this case, also classifies as a strong phase head because it is the highest functional projection in this structure. It triggers the Spell-Out of *v*, Ptc being a weak phase here. As a result, the root $\sqrt{\quad}$ and *v* are Spelled-Out together, allowing the Fusion rule (19) to apply. Once again, this bleeds the application of the theme vowel insertion rule. If the root is one that allows for more than one PTC form, the athematic participle can be realized, just as in adjectival passives.

In brief, the “optionality” of using either a regular or an athematic PTC form in verbal passives is modeled here as the result of two possible derivations, one which is similar to that of an absolute participle and one that resembles that of an adjectival passive.

4 Concluding remarks

This paper was an attempt to answer the questions in (16). What is special about verbal passives is the combination between (a) the presence of a projection above the minimal PTC structure (Voice), (b) the postulations about the timing of Spell-Out, and, crucially, (c) the postulation that Voice can optionally be part of different numerations. The reason why there is a restriction in the PTC form that can occur in adjectival passives, and absolute participles is that they lack Voice. Absolute participles only have the minimal PTC structure, while adjectival passives do have an additional layer, but it is an *aP*, which, by stipulation, does not have the same effects as the projection of a VoiceP. Finally, the directionality of that restriction is captured by (a) the structure proposed for each of these PTC constructions, in combination with the (b) the postulations about the timing of Spell-Out and how much structure is Spelled-Out. In absolute participles, Ptc is the highest head. Given the assumption that the highest projection is a strong phase, it triggers the Spell-Out of the complement of the lower phase, *v*. Consequently, the root and *v* are Spelled-Out separately, giving no chance for Fusion (19) to apply. Adjectival passives have an additional layer, which acts as a Spell-Out trigger. What is Spelled-Out is the combination between *v* and the root, giving the stipulated distinction between weak and strong phases. This allows Fusion (19) to apply, if the root is the appropriate one.

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