

Change-of-state without morphology in Daakaka*

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1. Introduction

In previous research, Daakaka (Central Vanuatu, Oceanic, Austronesian) has been shown to lack morphological strategies to express causative semantics. Instead, such semantics must be realized by either resultative serial verb constructions (RSVCs) (1a) or periphrastic constructions (1b) (Hopperdietzel 2021, 2020).

- (1) a. *Adam ma *(doko) vyop-ane kaliko ente.*
Adam REAL pull be.long-TR clothes DEM
'Adam widened his clothes *(by pulling).'
- b. *Adam ma gene kaliko ente ma vyop.*
Adam REAL make clothes DEM REAL be.long
'Adam made the clothes wide.'

In this paper, I demonstrate that inchoativization shows a similar pattern, being realized either by stative predicates in eventive contexts, e.g. in combination with the rate adverbial *ma perper* 'quickly' (2a), or in periphrastic constructions (2b) (cf. state/change-of-state lability; Koontz-Garboden 2007).

- (2) a. *Vy-un ma vyop #(ma perper).*
hair-3SG.POSS REAL be.long REAL be.quick
'His hair got long #(quickly).'
- b. *Vy-un mwe me vyop.*
hair-3SG.POSS REAL INCH be.long
'His hair got long.'

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Consequently, I argue that Daakaka lacks morphosemantic strategies to introduce change-of-state meaning altogether.

To account for these observations, I adopt Smith et al.’s (2023) type-shift analysis of state/change-of-state lability. Accordingly, change-of-state semantics is introduced post-syntactically to resolve type-mismatches, in the absence of dedicated morphology (cf. Kratzer 2005, Bittner 1999). Extending their analysis to causative predicates, I sketch out a unified analysis of both phenomena, taking into consideration that causativization via type-shift is more restricted than inchoativization. In particular, it requires the presence of agentive semantics in the constituent that triggers the type-shift, as illustrated by the obligatory (agentive) means adjunct *doko* ‘pull’ in the context the eventive rate adverbial below.

- (3) *Adam ma *(doko) vyop-ane kaliko ma perper.*
 Adam REAL pull be.long-TR clothes REAL be.quick
 ‘Adam widened the clothes quickly *(by pulling).’

Adopting a contextual approach to Voice semantics (Oikonomou & Alexiadou 2022, Wood 2016), I suggest that Causative Shift fails to satisfy the spell-out conditions for agentive Voice, and agentive semantics needs to be introduced by the trigger instead.

This paper is structured as follows: Section 2 provides a brief background on the absence of causative morphology in Daakaka. Section 3 extends this observation to inchoative morphology. Section 4 proposes a unified analysis of both phenomena along the lines of Smith et al.’s (2023) Causative Shift. Section 5 attributes the agentivity restriction on causatives to Voice allophony, and Section 6 concludes.

2. Causatives

After a brief typological background on Daakaka, I summarize the arguments for a serializing condition on causative predicates in Daakaka for which the presence of a manner verb in RSVCs is necessary.

2.1 Typological and methodological background

Daakaka, a Central Vanuatu, Southern Oceanic, Austronesian language, is spoken by about 1,000 speakers on the island of Ambrym, Vanuatu (von Prince 2015). The language exhibits an SVO word order with preverbal TMA marking and subject agreement, suffixal transitivity marking, and clause-final adverbial modifiers (4).

- (4) *[Vyanten ente]_{SUBJ} [ya-m kuk-ane]_{VERB} [webir ente]_{OBJ} [ma perper]_{ADV}.*
 man DEM 3PL-REAL cook-TR taro DEM REAL be.fast
 ‘The men cooked the taro quickly.’

The data comes from my own fieldwork with three native speakers in the village of Em-yotungan (Ambrym) and Port Vila (Efate) since 2017 and is based on picture and storyboard elicitations as well as judgment tasks of manipulated sentences.

2.2 A serializing condition on causatives

Unlike other Oceanic languages, Daakaka lost its reflex of the Proto-Oceanic causative prefix *pa(ka)-* (cf. Evans 2003). To express causative semantics, stative verbs must appear

in their transitive form in combination with a manner verb that specifies the causing action. Transitive statives are otherwise ungrammatical in isolation (Hopperdietzel 2021, 2020).

- (5) *Adam ma *(doko) vyop-ane kaliko.*
 Adam REAL pull be.long-TR clothes
 ‘Adam widened the clothes quickly *(by pulling).’

Crucially, the transitive marker *-ane* does not introduce causative semantics itself but merely indicates transitivity as it is also found in non-causative contexts, such as with transitively used manner verbs like *kolir* ‘sing’ (Hopperdietzel 2020, cf. von Prince 2015).

- (6) a. *Angela mo kolir-ane bwe ente.*
 Angela REAL sing-TR song DEM
 ‘Angela sang this song.’
 b. *Angela mo kolir.*
 Angela REAL sing .INTR
 ‘Angela sang.’

Causative predication is thus subject to a serialization condition in that it requires the presence of a manner verb in RSVCs in the absence of designated causative morphology.

2.3 Manner verbs as means adjuncts

Despite their obligatory status, manner verbs in RSVCs behave as syntactic adjuncts, as indicated by the following diagnostics (see Hopperdietzel 2021, 2020 for further discussion and diagnostics):

Firstly, manner verbs can be independently modified by rate adverbs that occur in between the two verbs of an RSVC.

- (7) *Adam ma doko perper vyop-ane kaliko ente.*
 Adam REAL pull be.fast be.long-TR clothes DEM
 ‘Adam widened the clothes by pulling them quickly.’

Secondly, manner verbs can be independently targeted by repetitive modifiers like *tetes* ‘again’ to the exclusion of the (causative) result verb (cf. Hopperdietzel 2022).

- (8) *Bong ma tas tiwiye etastas ente tetes.*
 Adam REAL sit be.broken.TR chair DEM again
 ‘Bong broke the chair by sitting on it again.’ (Hopperdietzel 2020: 310)

Thirdly, transitive Voice morphology on the non-initial result verb only indicates its status as the main predicate in a local relationship with both arguments (cf. Nie 2020).

- (9) *Bong mwe sye-p mwelili-ane lee ente.*
 Bong REAL slice-INTR be.small-TR tree DEM
 ‘Bong made the tree small by cutting it.’

Consequently, the initial manner verb is adjoined to the non-initial stative verb in RSVCs, although its presence is obligatory.

2.4 Periphrastic causatives

In addition to RSVCs, causative semantics can also be expressed by biclausal periphrastic constructions based on the causative verb *gene* ‘make’ without the need to specify the manner of the causing event (cf. von Prince 2015).

- (10) *Adam ma gene kaliko ente ma vyop .*
 Adam REAL make clothes DEM REAL be.long
 ‘Bong made the clothes wide.’

Lexical and periphrastic causatives therefore differ significantly according to whether the causing event needs to be specified.

3. Inchoatives

In this section, I demonstrate that inchoative predicates show a similar pattern, being dependent on the presence of additional syntactic material.

3.1 State/change-of-state lability

In addition to the lack of causative morphology, Daakaka also lacks morphosemantic strategies to derive inchoative predicates from stative ones. Instead, stative predicates are subject to state/change-of-state lability (Koontz-Garboden 2007 on Tongan), i.e. express inchoative semantics only in the context of event-selecting material, such as rate adverbials (11a), progressive marking (11b), or perfect serialization (11c) (cf. von Prince 2015).

- (11) a. *Vy-un ma veop ma perper / medó.* RATE ADVERBIAL
 hair-3SG.POSS REAL be.long REAL be.quick be.slow
 ‘His hair got long quickly/slowly.’
- b. *Vy-un bwe veop.* PROGRESSIVE ASPECT
 hair-3SG.POSS PROG be.long
 ‘His hair is getting long.’
- c. *Vy-un ma veop mo nok.* PERFECT ASPECT
 hair-3SG.POSS REAL be.long REAL be.finished
 ‘His hair got long.’

In the absence of event-selecting material, bare stative verbs do not express change-of-state semantics, and are thus not ambiguous between a stative and inchoative interpretation.

- (12) *Vy-un ma veop.*
 hair-3SG.POSS REAL be.long
 ‘His hair is long.’ / # ‘His hair got long.’

Change-of-state semantics in Daakaka is therefore dependent on additional event-selecting material.

3.2 Periphrastic inchoatives

Inchoative semantics can also be realized by periphrastic constructions, involving the inchoative light verb *me* (from *me* ‘come’; von Prince 2015).

- (13) *Vy-un mwe me veop.*
hair-3SG.POSS REAL INCH be.long
‘His hair got long.’

As with periphrastic causative constructions, periphrastic inchoative constructions are also not subject to state/change-of-state lability, as unlike lexical inchoatives, they are not dependent on the presence of additional event-selecting material.

3.3 (Interim) Summary

To summarize, Daakaka lacks (c)overt inchoative and causative morphology to introduce change-of-state semantics entirely. Instead, both types of meanings require the presence of additional eventive material. The only exception to this generalization is periphrastic constructions.

4. Causative Shift

In this section, I adopt a type-shifting analysis of inchoative predication in Daakaka (Smith et al. 2023), before extending their analysis to causative predication in the next section.

4.1 A type-shifting analysis of state/change-of-state lability

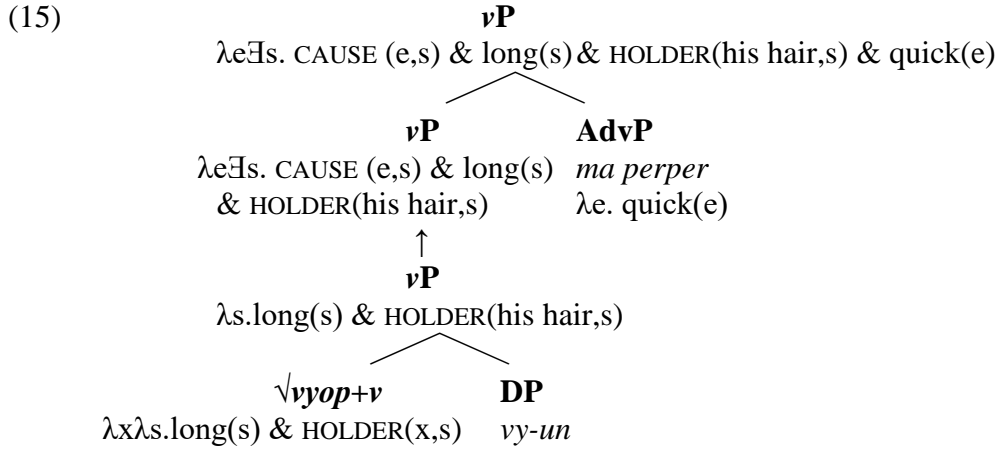
Adopting Smith et al.’s (2023) analysis of state/change-of-state lability, I assume that in labile languages, change-of-state semantics are not introduced by (c)overt morphology but by a type-shifting operation at the semantic level (cf. Kratzer 2005, Bittner 1999).² In particular, Causative Shift closes the open state variable of the stative predicate and introduces a causative relation between this state and an underspecified event.

- (14) **CAUSATIVE SHIFT** (adapted from Smith et al. 2023)³
For a verbal constituent *V* of type $\langle s, t \rangle$, $\text{shift}(V) = \lambda e \exists s. \text{CAUSE}(e, s) \ \& \ V(s)$

In the absence of designated change-of-state morphology, Causative Shift applies in contexts where the combination of a stative VP and an eventive predicate would otherwise result in a type mismatch. This is illustrated in (15) below, where the adjunction of the rate adverbial *ma perper* ‘quickly’ triggers the type-shift of the stative *vP* to a change-of-state interpretation.

² Note that this analysis only applies to languages in which change-of-state interpretations of underived stative verbs are dependent on the presence of additional event-selecting material as in Daakaka. Languages in which verbs are truly ambiguous between a stative and a change-of-state interpretation are instead the result of covert causative/inchoative morphology (cf. Smith et al. 2023).

³ In their original formulation, Smith et al. (2023) use the “Inchoative Shift”, which on their analysis introduces a BECOME relation. Here, I follow the BECOME = CAUSE hypothesis (Kratzer 2005), according to which BECOME differs from CAUSE primarily in the absence of a causer.



Without such event-selecting material, Causative Shift does not apply, and the predicate obtains a stative interpretation, i.e. stative verbs are not lexically ambiguous. Causative semantics in Daakaka is therefore introduced by a type-shifting operation instead of derivational morphology.

4.2 A blocking principle and structural alternatives

The availability of periphrastic inchoatives seems to challenge a type-shift analysis since the existence of syntactic alternatives is expected to block the application of a type-shift, which is understood as a last-resort operation (cf. Chierchia 1998). Yet, Smith et al. (2023) demonstrate that only alternatives that qualify as structural alternatives in the sense of Katzir (2007), i.e. alternatives that are *at most as* morphosyntactically complex as their competitor, block Causative Shift (also Sawada & Grano 2011).

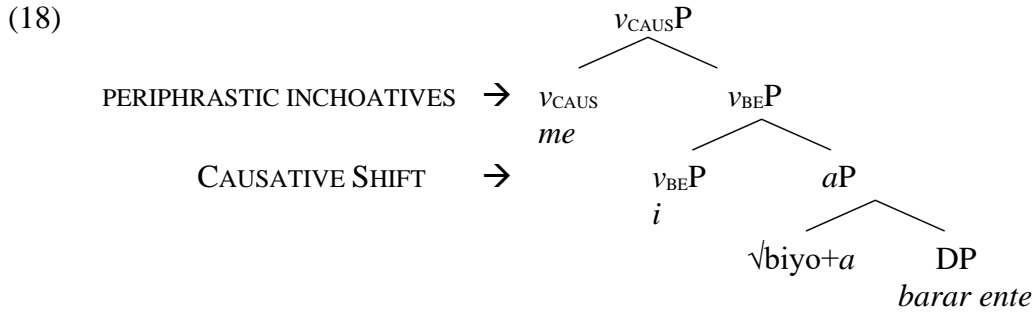
(16) **BLOCKING PRINCIPLE FOR TYPE-SHIFT** (Smith et al. 2023)

For any type-shifting operator τ and any X : $*\tau(X)$ if there is an expression Y such that $Y \in A_{str}(X)$ and $\llbracket Y \rrbracket = \llbracket \tau(X) \rrbracket$.

That periphrastic inchoatives in Daakaka are structurally more complex than type-shifted ones can be shown by the distribution of the copula in the context of stative adjectival predicates (cf. von Prince 2015). In addition to stative verbs, Daakaka exhibits a set of adjectival predicates that require the copula *i* in predicative position (17a), and which also display state/change-of-state lability (17b). Crucially, however, the copula is obligatory in periphrastic inchoative constructions, where it is embedded under the inchoative light verb *me* (17c).

- (17) a. *Barar ente mw=i biyo.*
 pig DEM REAL=COP deaf
 ‘This pig is deaf.’
- b. *Barar ente mw=i biyo ma perper.*
 pig DEM REAL=COP deaf REAL be.quick
 ‘This pig got deaf quickly.’
- c. *Barar ente mwe me i biyo.*
 pig DEM REAL INCH COP deaf
 ‘This pig got deaf.’

The inchoative light verb thus embeds stative verbal predicates, i.e. adding an extra syntactic layer, and does not operate on the same structural level as Causative Shift.



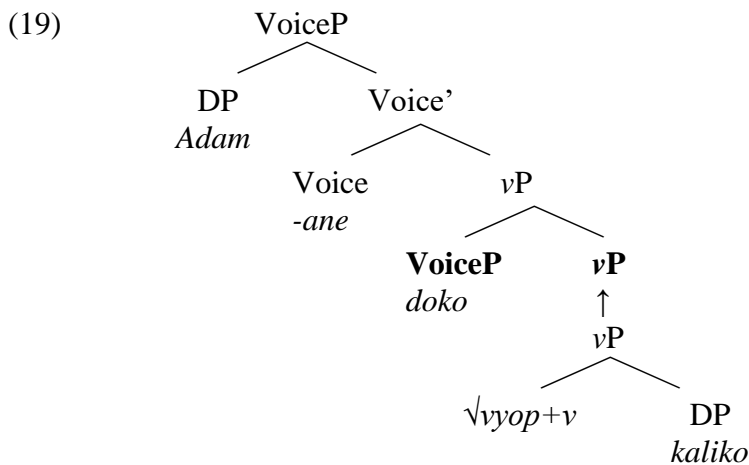
Consequently, Causative Shift and periphrastic inchoatives are not in competition and can co-occur within the same language (cf. Matthewson et al. 2015 on multiple sources of inchoative semantics within the same language).³

5. Towards a unified analysis

In the following, I extend the type-shifting analysis to causative predicates and sketch out a unified analysis of state/change-of-state lability and the serializing condition on causatives in Daakaka.

5.1 An agentivity restriction on causatives

As means adjuncts, the obligatory manner verb of an RSVC can be identified as the trigger of Causative Shift at the vP level in causative predication. On top of the causative vP , the agentive causer subject is introduced by a separate Voice head that is spelled out as the transitive marker *-ane* on the non-initial result verb (Hopperdietzel 2021, 2020), as illustrated for (1a) in (19) below.



³ Note that periphrastic inchoatives that exhibit the same syntactic complexity as their stative counterpart do block the application of Causative Shift, as illustrated for English below, where a type-shift is not available and verbal stative predicates are infelicitous in the context of rate adverbs like *slowly* (Smith et al. 2023).

- (i) a. *The door was open *(slowly).*
 b. *The door became (*be) open (slowly).*

Causatives however differ significantly from inchoatives in that the trigger of Causative Shift is subject to an additional agentivity restriction. In particular, potential non-agentive triggers like rate adverbials do not allow agentive causers to be merged.

- (20) *Adam ma *(doko) vyop-ane kaliko ma perper.*
 Adam REAL pull be.long-TR clothes REAL be.quick
 ‘Adam widened the clothes quickly *(by pulling).’

The presence of agentive semantics within the means adjunct is independently supported by the presence of overt (intransitive) Voice morphology *-p* on the adjoined manner verb (see Hopperdietzel to appear for the distribution of Voice morphology in Daakaka RSVCs).

- (21) *Bong mwe sye-p mwelili-ane lee ente.*
 Bong REAL slice-INTR be.small-TR tree DEM
 ‘Bong made the tree small by cutting it.’

Causative Shift therefore exhibits an additional agentivity restriction, restricting potentially shifting contexts to (agentive) means adjuncts.

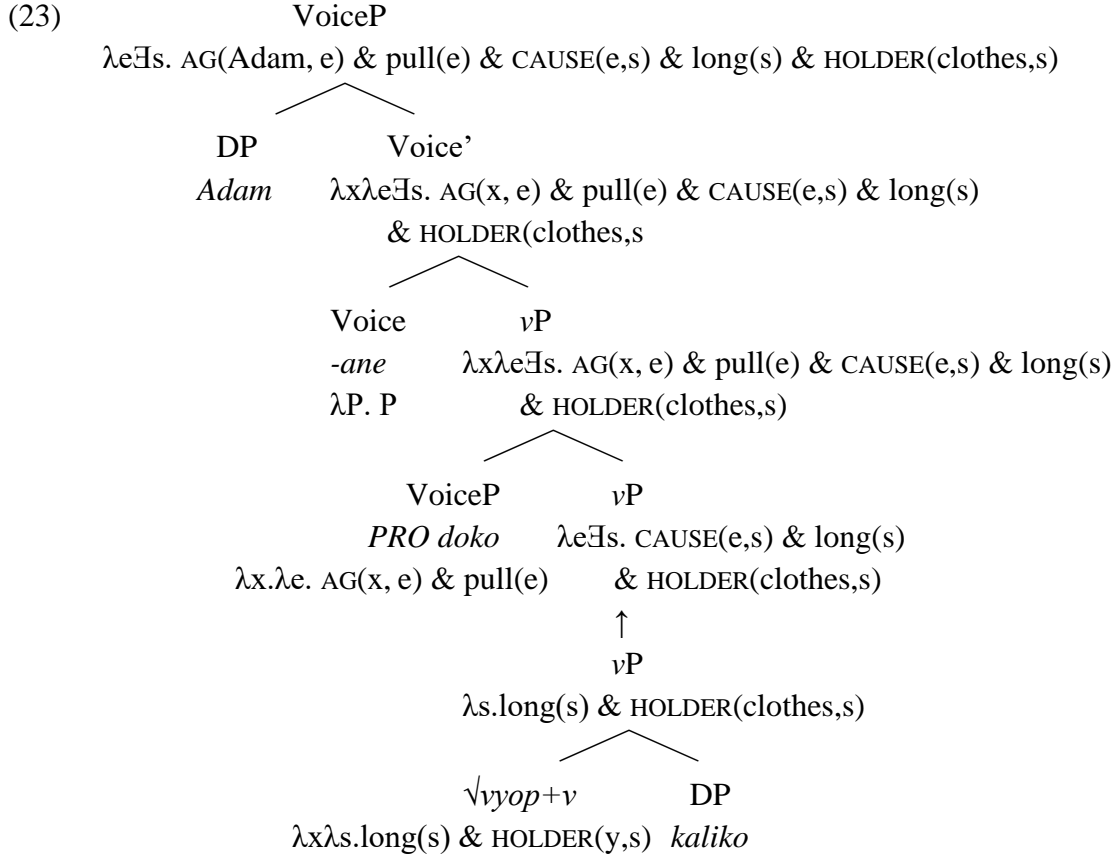
5.2 Voice and contextual allosemy

Adopting a contextual analysis of Voice (Oikonomou & Alexiadou 2022, Wood 2016), I assume that Voice semantics is sensitive to the type of *vP* Voice attaches to. In particular, if Voice merges with an agentive *vP*, it introduces an agent; if it merges with a stative *vP*, it introduces a holder. In the elsewhere condition, Voice is interpreted as an identify function, i.e. is semantically vacuous.

- (22) Voice ↔ $\lambda x \lambda e$. AGENT(x,e) / __ (agentive *vP*)
 ↔ $\lambda x \lambda e$. HOLDER(x,e) / __ (stative *vP*)
 ↔ λP . P elsewhere (Wood 2016: 18)

As a result, the introduction of agentive semantics has been argued to be conditioned by the semantics of the *vP*, whose interpretation is determined by a [+/- agentive] feature on the root (Oikonomou & Alexiadou 2022). Due to the additional agentivity restriction on agentive causer, Causative Shift alone seems insufficient to render the *vP* eligible for agentive Voice, as there is no *a priori* semantic incompatibility between the agentive Voice alloseme and the shifted (eventive) *vP*. Since stative roots in Daakaka only ever form eventive (change-of-state) predicates via Causative Shift, the absence of a [+ agentive] feature is expected since stative roots never provide the right syntactic condition for the spell-out of agentive Voice anyways. Instead, stative verbs need additional contextual support to add an agentive causer.

I, therefore, propose that the agent role must be introduced by the [+agentive] manner verb within the means adjunct that is responsible for the Causative Shift. Being realized by PRO, the agent role is passed on to the shifted matrix predicate via Event Identification (Kratzer 1996, cf. Bhatt 1999 on semantically vacuous PRO). The agent itself is then merged in the specifier of a transitive expletive Voice head that combines with the causative *vP* (cf. Schäfer 2008), as an instance of late saturation (cf. Myler 2014). This is illustrated for (1a) in (23) below. The agentivity restriction on causative predicates thus follows from the interaction of Causative Shift and Voice allosemy.



6. Conclusion

In the absence of morphosemantic processes, Daakaka solely relies on the presence of additional eventive material to convey causative and inchoative meanings. Stative predicates therefore get a causative interpretation when they co-occur with a manner verb in RSVCs and an inchoative interpretation when they combine with (non-agentive) event-selecting material more generally. Adopting a type-shift analysis (Smith et al. 2023), I sketched out a unified account of both phenomena, according to which change-of-state semantics are introduced at LF to avoid type mismatches. Addressing the additional agentivity restriction in causative contexts, I proposed that this restriction follows from additional spell-out conditions on (agentive) Voice, which requires agentive semantics to be introduced by the trigger of the type-shift, e.g. by an adjoined manner verb in RSVCs.

In future research, the connection between inchoative and causative interpretation in labile languages requires further investigation. On the one hand, similar manner restrictions on causatives have been observed for other languages that are subject to state/change-of-state lability for inchoative predicates, including typologically diverse languages such as Mandarin (cf. Tham 2013) and Wašiw (Hanink & Koontz-Garboden 2024), though with different underlying morphosyntactic configurations (e.g. adjunction vs. complementation; cf. Hopperdietzel 2022). On the other hand, a better understanding of how the agentivity restriction on Causative Shift in agentive contexts is resolved cross-linguistically may also inform our analysis of the interaction of Causative Shift and Voice allosemy. More generally, this investigation will provide a novel perspective on the nature of Voice allosemy, i.e. whether it is sensitive to features on the root (Oikonomou & Alexiadou 2022), or to the interpretation of the whole vP (Wood 2016).

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