Aspectual applicatives and the position of roots

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1 Introduction

Despite the introduction of new arguments being commonly assumed to be a core property of applicatives, several languages have applicative constructions which do not seem to introduce any new argument, but affect aspectual properties of the predicate. In this paper, I discuss various instances of these aspectual applicatives and note their common properties. Cross-linguistic patterns in aspectual applicatives suggest they must amount to something beyond mere coincidence, and there is some fundamental character of applicativization intertwined with event structure.

I propose a potential analysis where the syntactic head of applicative morphology introduces an event. The nature of Appl is called into question and its relation to v. I show how the introduction of an additional event to the syntax accounts for a range of phenomena seen in aspectual applicatives, such as pluractionality, perfectivity, degree strengthening, and thematic role alternations.

Section 2 provides a brief overview of aspectual applicatives across languages

and language families. I show that aspectual applicatives in Bantu (2.1), Spanish (2.2), and Austronesian languages (2). In section 3, I discuss a potential analysis and its shortcomings before proposing my solution. I conclude in section 5.

2 Aspectual applicatives

2.1 Bantu applicatives

Non-valency-increasing applicatives have a range of aspectual functions across Bantu languages. I describe their various uses in this section before comparing their functions to other languages.

A point of clarification is needed in this section. When referring to applicatives in Bantu languages, I only refer to the sort of applicative which stems from the Proto-Bantu *-*d* (Pacchiarotti, 2016). Bantu languages typically have rich systems of valency-affecting verbal morphology, and there are often dedicated morphemes which introduce causers and instrumental arguments. I do not discuss causatives or instrumental applicatives in this section and only focus on the multi-functional applicative.

First, applicatives may delimit an event and indicate that is carried out to its natural endpoint or degree. This can be manifest in several ways. For example, in Pogoro, applicativized verbs may indicate that the event denoted by the base verb is done thoroughly or completely.

(1) *Pogoro*

a. -itir-a
-pour-FV
'pour'

b. -itir-ir-a
-pour-APPL-FV
'pour completely'

(2) a. -tugir-a
-escape-FV
'escape'

b. -tugir-ir-a
-escape-APPL-FV
'escape completely'

(3) a. -meger-a
-distribute-FV
'distribute'

b. -meger-er-a
-distribute-APPL-FV
'distribute everything'
(Marten, 2003)

Amos (2020) shows a similar pattern in Ruruuli-Luyala in the examples below.

(4) *Ruruuli-Luyala*

Y-e-ey-i-ire kakyarumwei ekibiina
1SM-PST-sweep-APPL-PERF completely 7.classroom

'He completely/*very swept the classroom.'

(5) OPetero y-a-li-i-re kakyarumwei ekiduuma.
Peter 1SM-PST-eat-APPL-PERF completely 7.maize
'Peter ate maize completely/ *a lot.'

(adapted from Amos, 2020)

The applicative in (4-5) semantically licenses the degree adverbial *kakyarumwei*. *kakyarumwei* expresses a high degree and can be translated as 'completely' or 'very

much/ a lot' depending on the event it modifies. As the applicative indicates maximal degree in the examples above with a closed scale predicate, *kakyarumwei* can only be interpreted as 'completely'.

Another way that applicatives may indicate an event is carried out to its maximal degree is by indicating a result or endpoint. In sentences where applicatives are not accompanied by any rise in valency, this can be accomplished by altering the thematic roles of existing arguments, as observed in the examples below.

(6) *Shona*

a. Mai va-ka-tum-a mw-ana ku-na mbuya
1-mother 1SM-PST-send-FV 1-child LOC 1-grandmother
Mother sent the child towards grandmother

b. Mai va-ka-tum-ir-a mw-ana mbuya
1-mother 2SM-PST-send-APPL-FV 1-child 1-grandmother
Mother sent the child **to** grandmother

c. Mai va-ka-tum-ir-a mw-ana ku-na mbuya
1-mother 2SM-PST-send-APPL-FV 1-child LOC 1-grandmother
Mother sent the child **to** grandmother

(7) a. Mw-ana a-ka-mhany-a ku-na mai
1-child 2SM-PST-run-FV LOC 1-mother
The child ran towards mother

b. Mw-ana a-ka-mhany-ir-a ku-na mai[1]
1-child 2SM-PST-run-APPL-FV LOC 1-mother
The child ran **to** mother

(Mabugu, 2001)

(8) *Setswana*

a. Ke-tlaa-tabog-a ko tseleng
1SG.SM-FUT-run-FV PREP 9.road.LOC

I will run on the road.

b. Ke-tlaa-tabog-el-a ko tseleng
1SG.SM-FUT-run-APPL-FV PREP 9.road.LOC
I will run **to** the road.

(Creissels, 2004, cited in Gibson et al., 2022)

In the sentences above from Shona and Setswana, respectively, the addition of the applicative morpheme affects not valency, but the interpretation of arguments. The locative arguments in non-applied sentences are interpreted as a direction or location, but have no relationship to any result state. In (8a), the event of running must take place on the road at some point, but the running need not end when the speaker reaches the road and the speaker being on the road is not necessarily a result of their running. In (8b), on the other hand, the event of running takes place on a path, with the road acting as the endpoint of that path. The event of running then ends with and results in the speaker arriving at the road. In other words, the road is a central coincidence in (8a) and a terminal coincidence in (8b) (Rapoport, 2014). This same pattern is observed in the Shona examples.

In Kinyarwanda, applicatives may also indicate a transfer of possession not otherwise entailed. Consider the example below.

(9) *Kinyarwanda*

a. Karemera y-a-tey-e ibuye Nkusi.
Karemera 1SM-PST-throw-PERF rock Nkusi
'Karemera threw the rock at Nkusi.' (No transfer of possession entailed)

[1]Note that Bantu locative phrases are argumental (K. Jerro, 2015), so they cannot be straightforwardly analyzed as adjuncts in some cases and arguments in others.

b. Karemera y-a-ter-ey-e ibuye Nkusi.
Karemera 1SM-PST-throw-APPL-PERF rock Nkusi
'Karemera threw the rock **to** Nkusi.' (Entails a transfer of possession)
(K. Jerro, 2023)

In (9a), Karemera throws the rock in the direction of Nkusi and may even hit him, but Nkusi does not necessarily gain possession of the rock as a result. In the applied variant, (9b), everything is the same, except now, with the applicative suffix, there is an entailed transfer of possession such that Nkusi must gain possession of the rock as a result of Karemera throwing it.

Bantu applicatives have aspectual functions beyond delimiting events or indicating endpoints. Applicative morphology may also introduce pluractional readings or intensify a predicate. When introducing pluractionality, the event can either be iterative or habitual.

Example of both iterative and habitual readings in Swahili are given below.

(10) *Swahili*

a. mpishi a-li-pik-a jiko-ni
cook 1SM-PST-cook-FV kitchen-LOC
The cook was cooking in the kitchen.'

b. mpishi a-li-pik-i-a jiko-ni
cook 1SM-PST-cook-APPL-FV kitchen-LOC
The cook was cooking in the kitchen habitually.'

(10) a. Juma a-li-pig-a m-sumari
Juma 1SM-PST-hit-FV 3-nail
Juma hit the nail.

b. Juma a-li-pig-i-li-a m-sumari[2]
Juma 1SM-PST-hit-APPL-APPL-FV 3-nail

Juma hit the nail repeatedly.

(Adapted from Marten, 2003)

(10a) expresses a single event of cooking in the kitchen. (10b) is identical in every way to (10a) except for the presence of the applicative suffix *-i*. The applicative suffix in (10b) does not introduce any argument, but introduces the interpretation of the sentence where multiple events of cooking are repeated over some period of time. Similarly, the applicative suffix in (10b) does not introduce a new argument, but indicates that the event of hitting is repeated iteratively.

This pluractional function of applicatives is seen across several Bantu languages, as the data from Nyole and Shona show.

(11) *Nyole*

a. ba-hayuh-ir-a aba-ana
2SM-shout-APPL-FV 2-children
'They shout at the children.'

b. ba-hayuh-ir-ir-a aba-ana
2SM-shout-APPL-APPL-FV 2-children
'They are always shouting at the children.'

(Wicks 2006: 107, cited in Pacchiarotti, 2016, p. 138)

(12) *Shona*

a. mu-biki a-no-bik-a sazda pa-moto
1-cook 1SM-PRES-cook-FV 5-sazda LOC$_1$6-CL9.fire
The cook is cooking sazda on an open fire.

b. mu-biki a-no-bik-ir-a sazda pa-moto
1-cook 1SM-PRES-cook-APPL-FV 5-sazda LOC$_1$6-CL9.fire
The cook cooks sazda on an open fire.

(Cann & Mabugu 2007: 19, cited Pacchiarotti, 2016, p. 181)

There are also other instances of applicatives seemingly intensifying predicates, such as those shown below in Citumbuka and Ruruuli-Luyaala.

(13) *Citumbuka*

a. Maji gha-kw-end-a.
6.water 6.SM-PRES-walk-FV
The water is flowing.

b. Maji gha-kw-end-el-el-a.
6.water 6.SM-PRES-walk-APPL-APPL-FV
The water is overflowing.
(Chavula, 2016, p. 135)

Ruruuli-Luyaala

(14) ekiwulu ki-a-gaziwal-i-ire kakyarumwei
7.hole 7SM-PST-widen-APPL-PERF much
'The hole widened *completely/ a lot'

(15) e-kyoma ki-ni ki-gum-i-ire kakyarumwei
7.metal 7.this 7SMbe.hard-APPL-PERF much
'This metal is very/extremely/*completely hard.'
(adapted from Amos, 2020)

The degree adverbial *kakyarumwei* in Ruruuli-Luyaala appears again in the above examples. In these cases, it is interpreted as meaning *very much/ a lot* as it combines with an open-scale predicate, indicating that the applicative expresses an intensive degree with open-scale predicates and a maximal degree with closed-scale predicates.

In summary, applicatives in Bantu languages have the ability to delimit events, indicate maximal degree or endpoints, alter thematic roles, or introduce pluractionality, all without introducing any argument. The following section showcases similar data from Spanish.

2.2 Spanish *se*

Where NVI applicatives in Bantu have remained largely undiscussed, there has been much more attention paid to so-called "aspectual *se*" in Spanish (García-Pardo, 2020; MacDonald, 2017; Nishida, 1994, among others). While the clitic *se* in Spanish appears in a varied array of constructions (ex. anticausatives, reflexives, benefactives, etc.), there is a particular construction where it seems to signal some sort of aspectual alternation. This use of *se* is labelled "aspectual *se*" to account for the fact that it seems to delimit or telicize predicates. Consider the examples below.

(16) a. María (*se) comió helado.
María (SE) ate ice-cream
María ate ice-cream.

b. María se comió el helado.
María SE ate the ice-cream
María ate up the ice-cream.

(17) a. Juan (*se) bebió cerveza.
Juan (SE) drank beer
'Juan drank beer.'

b. Juan se bebió la cerveza.
Juan SE drank the beer
'Juan drank (up) the beer.'

(adapted from MacDonald, 2017, pp. 2–3)

With these transitive verbs of consumption, aspectual *se* introduces a reading where the event of consumption is complete. In (17a), *se* cannot appear as there is a non-quantized incremental theme. Assuming that incremental themes must be quantized for a predicate to be telic (Borer, 2005), the inability for *se* to appear

is thus a result of the inherent atelicity of the event in (17a). (17b), on the other hand, is a telic predicate with a quantized theme. As such, *se* appears.

There is evidence that *se* is not only licensed by telic predicates, but seemingly functions as a overt means of making a predicate telic. The sentences in (18) show the aspectual effect of *se* through the distribution of *in/for*-adverbials.

(18) *Spanish*

a. El paciente mejoró en /durante una semana.
the patient got.better in /for a week

b. El paciente **se** mejoró en /*durante una semana.
the patient SE got.better in /*for a week
(Vivanco, 2021, p. 293)

In (18a), the event can be interpreted as either telic or atelic and thus both *in-* and *for*-adverbials are licensed. In (18b), the presence of *se* delimits the event, making the *for*-adverbial incompatible with the predicate.

Similar to aspectual applicatives in Bantu languages, the presence of *se* can indicate that an event is carried out to its maximal degree, as illustrated by (19).

(19) a. Antonio dejó enmohecer el tomate.
Antonio let go.moldy the tomato
'Antonio let the tomato (begin to) get moldy.'
(Antonio controls the start of the process)

b. Antonio dejó enmohecer**se** el tomate.
Antonio let go.moldy.SE the tomato
'Antonio let the tomato (begin and finish) getting moldy.'
(Antonio controls the start and result of the process)
(Vivanco, 2021, p. 299)

In (19a), Antonio oversees the initiation of the tomatos getting moldy. In (19b), Antonio oversees the entirety of the molding, such that Antonio controls both the initiation and the end result.

Also similar to Bantu, aspectual *se* can affect the interpretation of arguments and indicate endpoints.

(20) a. Antonio (se) fue al cine.
Antonio SE went to.the cinema
'Antonio went to the cinema.'

b. Antonio (*se) fue del cine.
Antonio SE went of.the cinema
'Antonio left the cinema.'

(Vivanco, 2021, p. 303)

In (20a), *se* is able to appear when the locative argument denotes a goal or endpoint of the motion event. When the locative argument is not an endpoint, but a source, as in (20b), *se* cannot appear.

Following Cuervo (2003, 2020), I assume that the presence of *se* to be indicative of an ApplP located somewhere within the verbal domain. With this assumption in mind, it is clear how this discussion of aspectual *se* relates to the topic of aspectual applicatives and the similarities it shares with applicatives in Bantu languages.

It is also important to note that *se* in its aspectual use is distinct from a standard dative argument clitic. This is demonstrated by (21b), where the presence of a standard dative clitic results in ill-formedness.

(21) a. Jose y yo ya **nos** sabemos toda la leccion.
Joe and I already SE know all the lesson.

'Joe and I already know the whole lesson.'

b. * Jose y yo ya **le** sabemos toda la leccion.
Joe and I already 3SG.DAT know all the lesson.
'Joe and I already know the whole lesson.'[3]

(adapted from Nishida, 1994, pp. 426–428)

We may even take the presence of *se* to indicate an increase in valency, making this not a true NVI applicative. However, even if *se* is an additional argument, it is not clearly referential, and its primary function seems to be aspectual in nature. Thus, aspectual *se* fits in with our discussion of aspectual applicatives and shares similar properties to aspectual applicatives in Bantu languages. In the next section, I discuss aspectual applicatives in Austronesian languages.

2.3 Austronesian applicatives

The last group of aspectual applicatives I discuss in this paper are applicatives found in Austronesian languages. There is comparatively less discussion in the literature on Austronesian aspectual applicatives than there is for those seen in Bantu or Spanish, but there is still enough data to make generalizations.

The primary role of aspectual applicatives in Austronesian languages seems to be introducing pluractional or intensive readings of predicates. In this regard, they share a quality with applicatives in Bantu languages. Consider the sentences below from Javanese.

(22) *Javanese*

a. Tono ngantem Toni
Tono hit Toni
'Tono hit Toni.'

b. Tono ngantem-i Toni (#se-pisan)
Tono hit-APPL Toni (one-time)
'Tono hit Toni (multiple times).'

(Vander Klok, 2020)

(23) a. ibu-ku ng-gupuk kasur nganggó sapu
mother-1SG.POSS AV-hit mattress AV.use broom
my mother beat the mattress using the broom

(adapted from Hemmings, 2013, p. 171)

b. ibu-ku ng-gupuk-i kasur nganggó sapu
mother-1SG.POSS AV-hit-APPL mattress AV.use broom
my mother beat the mattress using the broom (many times)

(adapted from Hemmings, 2013, p. 171)

The applicative in the above examples seemingly have no function but to introduce pluractional readings. We see this pattern in more languages than just Javanese. The examples below from Karo Batak illustrate how the pluractional function of applicativization can derive iterative or habitual interpretations.

(24) *Karo Batak*

a. pekpek 'hit'
pekpek-**i** 'hit repeatedly'

b. pelawes 'send away'
pelawes-**i** 'send many away'

c. nangko 'steal'
nangko-**i** 'steal all the time'

(Woollams 1996: 5051, cited in Truong and McDonnell, 2022)

Applicatives may also introduce intensive readings in Austronesian languages.

This is seen in the examples below from Tukang Besi and Indonesian, respectively.

(25) *Tukang Besi*

a. pepe slap

pepe-**ki** slap forcefully

b. busu punch

busu-**ki** punch with forward fist

(Donohue 1999, cited in Truong and McDonnell, 2022, p. 425)

(26) *Indonesian*

a. mem-(p)egang hold

mem-(p)egang-*i* grip, hold tightly

b. me-lihat 'see'

me-lihat-**i** scrutinize, look at intently

(Sneddon et al. 2010:99, cited in Truong and McDonnell, 2022)

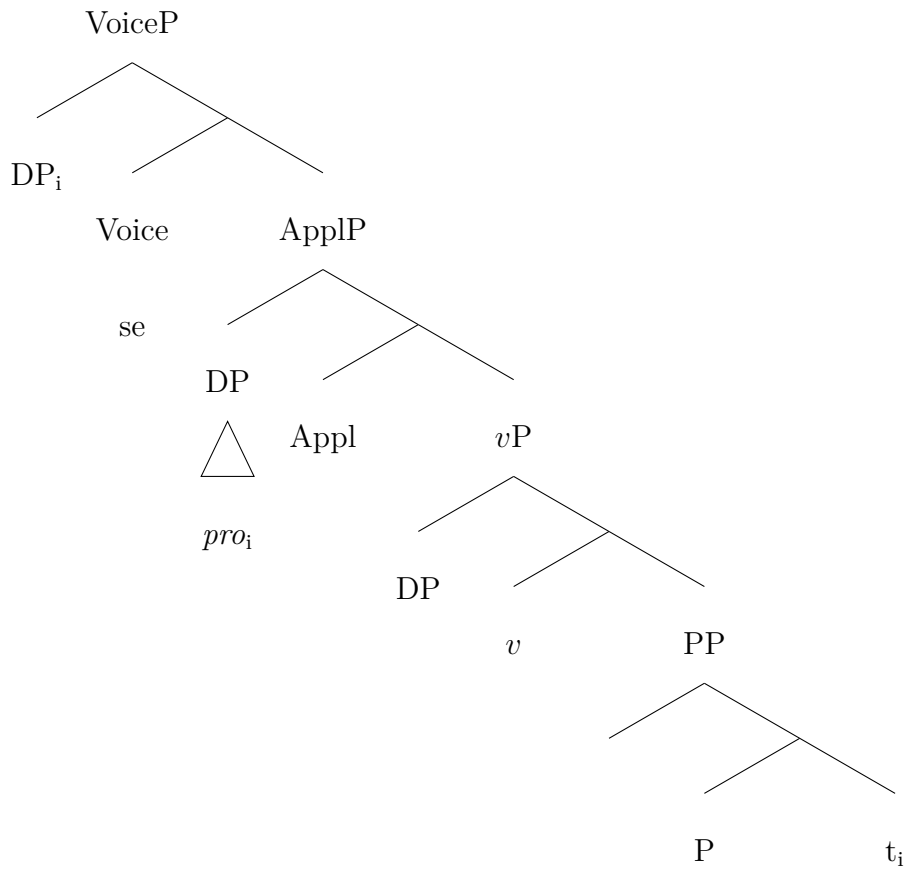
There is little evidence in the literature to suggest that Austronesian applicatives may delimit events or introduce results/ endpoints without altering valency. As such, I consider Austronesian NVI applicatives to only introduce pluractional or intensive readings. In this respect, Austronesian applicatives share a function with Bantu applicatives, but not Spanish *se*. Bantu applicatives showcase the full range of possible interpretations of aspectual applicatives across all three language groups. They may delimit events, introduce results, pluractionality, and intensive readings. For this reason, the remainder of this paper focuses primarily on aspectual applicatives in Bantu languages. In the next section, I discuss possible approaches to the aspectual applicatives.

3 Null indirect objects

Before moving onto my proposal, I present MacDonald's (2017) account of aspectual *se*. Though I believe their approach is on the right track, I ultimately reject the proposal as it fails to account for the full range of properties and requires some unsatisfactory stipulations.

At the core of his proposal, MacDonald claims that aspectual *se* constructions involve a PP small clause which selects a null *pro*, coreferential with the external subject, as its ground argument. The null ground argument begins as a complement of P before moving to the specifier of an ApplP and VP and Voice, which is headed by *se* and introduces the external argument. The structure of this proposal

(27)



The lower theme DP, at Spec,vP, is taken to be an inner subject of the small clause formed by vP and PP. MacDonald's account attempts to relate aspectual *se* constructions to double object constructions by proposing they have the same structure. His argumentation rests on restrictions placed on the theme DP, a lack of telicity in stative predicates, PCC effects in the CPLD leísta dialect, and a central/terminal coincidence relation between the theme and external argument in sentences with *se*. Leaving aside the discussion of PCC effects, I briefly review his other arguments and their shortcomings.

First, MacDonald claims that aspectual *se* only introduces telicity with already dynamic predicates. Stative predicates, he claims, remain atelic with aspec-

tual *se*. He compares this behaviour to goal PPs in English, which make dynamic predicates telic but not stative predicates. Noting the similarity to goal PPs, he claims the aspectual effects of *se* result from a null PP. I won't dispute his claims here, but will note in that his judgements are not shared. Nishida (1994) and García-Pardo (2020) both seem to share the judgement that even stative predicates are telicized by aspectual *se*. The important part of MacDonald's discussion here, however, is relating aspectual *se* to goal PPs and theme DPs to inner subjects, which explains a restriction set on bare nouns in aspectual *se* constructions.

MacDonald introduces Cuervo's (2003) *Naked Noun Phrase Constraint Revised* (NNPCR) which states that "An unmodified common noun cannot be the subject of a predicate under conditions of normal stress and intonation." This constraint is meant to account for the inability of bare nouns to appear as the subject of a predicate, as illustrated by (28).

(28) a. Estos/los/unos científicos estudian el asunto.
Those/the/some scientists study the issue
Those/the/some scientists are studying the issue.

b. * Científicos estudian el asunto.
Scientists study the issue
Scientists are studying the issue.

(MacDonald, 2017, p. 14)

He uses this constraint to address a restriction put on aspectual *se* which forbids the theme argument to be a bare noun, illustrated by (29).

(29) a. El león se comió a estos/los/unos científicos
The lion SE ate DOM those/the/some scientists.
The lion ate up those/the/some scientists.

b. * El león se comió a científicos
The lion SE ate DOM scientists.
The lion ate up scientists.

As MacDonald's argumentation follows, themes in aspectual *se* sentences are subject to the NNPCR and thus cannot be bare nouns. This suggests they must be inner subjects of a predicate, which MacDonald proposes is the small clause formed by vP and PP.

MacDonald's argumentation here seems reasonable enough and I do not argue against it. There is sound enough reason to assume the presence of a small clause in aspectual *se* constructions, and I will ultimately adopt this aspect of his approach. However, his claim that there is a null *pro* serving as ground argument and co-referential with the external argument is more dubious.

MacDonald rests this assumption on an apparent 'on/with entailment' seen in some verbs involving possession. Consider the set of sentences in (30).

(30) a. Juan abrochó la camisa.
Juan closed the shirt
Juan buttoned the shirt.

b. Juan se abrochó la camisa.
Juan SE closed the shirt
Juan buttoned the shirt (while it was on him).

(MacDonald, 2017)

In (30a), the shirt can be either on or off of Juan's body when he buttons it up. In (30b), it must be on him at the time he buttons it up. MacDonald characterizes this as a central coincidence relation where the shirt is the figure and Juan is the ground. As such, he claims that all aspectual *se* sentences have a null

pro ground co-referential with the subject. I take several issues with this line of argumentation.

First, (30b) is not a clear use of *se* in its aspectual function. It seems to be relating two arguments primarily. As such, it seems more appropriate to characterize it as an external possession construction derived from a stative LowApplP, following Cuervo (2003).

Second, there are uses of aspectual *se* where the external argument is clearly the figure argument, such as (31a).

(31) a. Antonio (se) fue al cine.
Antonio SE went to.the cinema
'Antonio went to the cinema.'

b. Antonio (*se) fue del cine.
Antonio SE went of.the cinema
'Antonio left the cinema.'

(Vivanco, 2021, p. 303)

In (31), we see an instance of aspectual *se* where the external argument is a figure. There is a clear ground argument as well in *al cine*. It is unclear how MacDonald's approach could account for this use of aspectual *se* if the ground is necessarily the same referent as the external argument.

Finally, it is unclear how MacDonald's approach explains aspectual *se* with unnaccusative predicates, such as (32).

(32) Antonio dejó enmohecer**se** el tomate.
Antonio let go.moldy.SE the tomato
'Antonio let the tomato (begin and finish) getting moldy.'

(Antonio controls the start and result of the process)

(Vivanco, 2021, p. 299)

These issues are left unaddressed by MacDonald's analysis and I accordingly reject his proposal of a null *pro* ground argument. Additionally, this account would fail to address a significant number of uses of aspectual applicatives that we see in Bantu and Austronesian languages and the cross-linguistic appeal is lost. In the following section, I introduce my proposal and make the case for its merits.

4 Small clauses and root position

The current task at hand is multifaceted. An account of aspectual applicatives should address the cross-linguistic prevalence of NVI applicatives and uniformly derive their aspectual contribution. Our approach should avoid stipulating syncretism without valid reason (i.e. *-ir* should not be an applicative suffix in one context but an iterative suffix in another). Lastly, an ideal analysis might account for the different types of aspectual applicatives across the three language types surveyed.

I propose a solution capable of all of this which manipulates the roots position of merge and subsequent event structure. I follow Acedo–Matellán and Mateu (2014) and Pylkkänen (2000, 2008) in assuming that v denotes an event while p is adpositional. Central and terminal coincidence, in my analysis, are derived via a single p-projection and double p-projection, respectively (Acedo–Matellán & Mateu, 2014). Finally, a crucial yet unorthodox assumption I make is that there is no There is no categorial difference between v and HighAppl. In assuming this, I follow Harley (2013) and Wood and Marantz (2017), who argue this based on the

distribution of Voice. A consequential result of this is that the presence of applicative morphology indicates an additional v, which introduces an event. I demonstrate first how this analysis derives the delimiting effects of aspectual applicatives before discussing how it may account for intensive/pluractional applicatives.

4.1 Delimiting applicatives and result states

In my analysis, aspectual applicatives are the result of a root merged below the highest vP. The position where the root is introduced may vary across constructions, but the key factor is the introduction of an event above the position of the root. Consider a demonstration of this analysis with the Kinyarwanda applicative transfer of possession alternation in (9), repeated here as (33).

(33) *Kinyarwanda*

a. Karemera y-a-tey-e ibuye Nkusi.
Karemera 1SM-PST-throw-PERF rock Nkusi
'Karemera threw the rock at Nkusi.' (No transfer of possession entailed)

b. Karemera y-a-ter-ey-e ibuye Nkusi.
Karemera 1SM-PST-throw-APPL-PERF rock Nkusi
'Karemera threw the rock **to** Nkusi.' (Entails a transfer of possession)

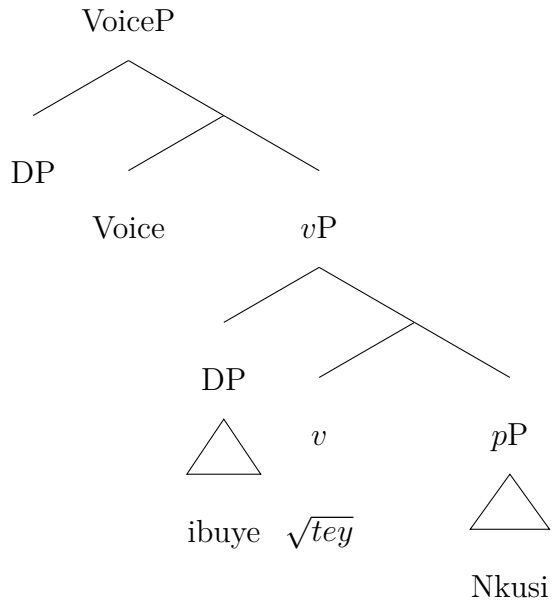
(K. Jerro, 2023)

In (33a), there is no transfer of possession. There is a single event of rock throwing which is directed towards Nkusi. The applied variant in (33b), on the other hand, has at least two components which need to be address; the initial event of rock throwing, and the resulting transfer of possession of the rock to

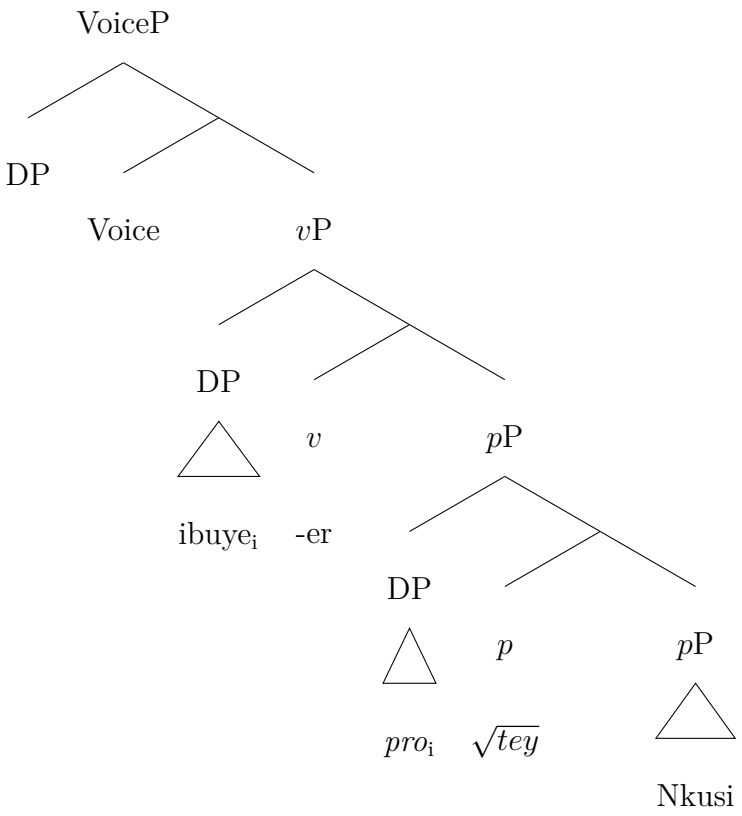
Nkusi. The question then, is how the applicative is able to add this additional transfer of possession entailment.

My analysis straightforwardly addresses this issue by positing the root is actually adjoined to a lower predication in (33b) than (33a). The structures of (33a) and (33b) are represented by (34) and (35), respectively.

(34)



(35)



In (34), the root adjoins directly to v, which results in it being interpreted as the manner of the event denoted by v. The structure of (34) expresses an event of throwing which is directed at Nkusi which involves a rock as the theme and Karemera as the initiator of the event.

In (35), on the other hand, there is a double p-projection, deriving a terminal coincidence relation between figure and ground, with the root adjoining to the higher p. A higher v introduces an additional event and is spelled out by the applicative suffix and introduces an internal argument with a thematic role determined by the root (K. Jerro, 2016, 2017; K. J. Jerro, 2021; Wood & Marantz, 2017). The higher p conflates to v and the root determines the interpretation of the event introduced by v. We end up with an event of throwing denoted by the

verbal head involving a rock as the theme and a subsequent terminal coincidence relationship with a *pro* figure (co-indexed by the theme DP[4]) and Nkusi as the ground. Having the root start lower in the structure before raising to a higher v headed by the applicative thus derives the alternation we see.

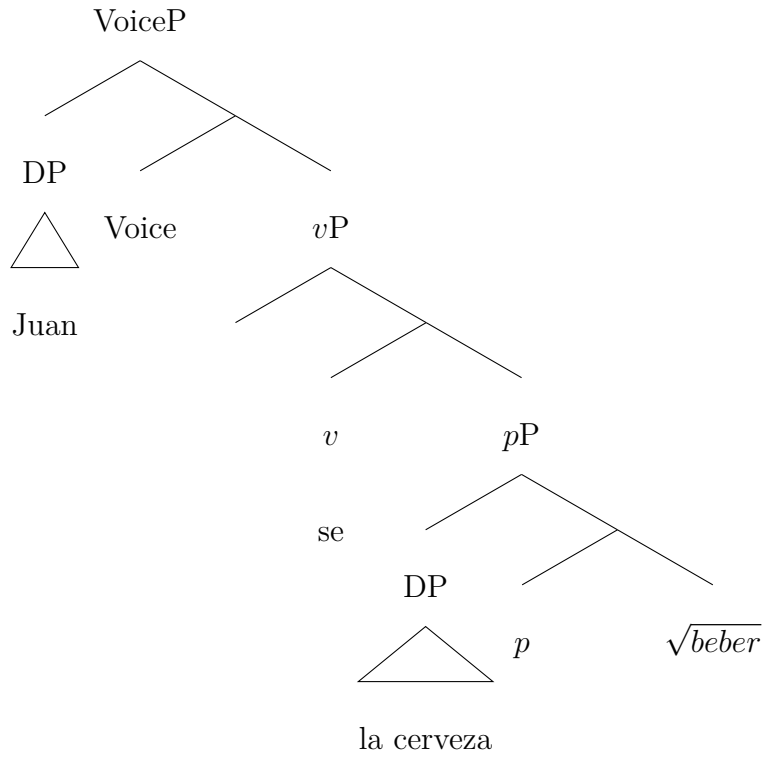
Let us consider how this analysis might address aspectual applicatives without a verb of directed motion. A similar derivation accounts for the contribution of aspectual *se* in (36).

(36) Juan se bebió la cerveza.
Juan SE drank the beer
'Juan drank (up) the beer.'

(adapted from MacDonald, 2017, pp. 2–3)

[4]Proposing a *pro* as figure allows us to have the same referent be involved in both the throwing event and the terminal coincidence relation without having to assign multiple theta-roles to the same DP. This is somewhat stipulative as there are multiple potential other ways to implement this.

(37)



Assume that *se* heads v and the root is merged as complement of p as in (37). *la cerveza* acts as the inner subject of a small clause with the predicate's interpretation determined by the root complement. The root incorporates to p before p is again conflated to v, where it denotes the manner of the verbal event. We derive an event of drinking with a subsequent small clause of the bottle being drunk. We derive the telic interpretation of *se* through a small clause without having to stipulate any metaphorical figure-ground relationship between the bottle and Juan.

Lastly, this account explains the delimiting affect of aspectual applicatives/*se* in sentences where the external argument acts as the figure, such as in (38b) and (38a).

(38) *Shona*

a. Mw-ana a-ka-mhany-a ku-na mai
1-child 2SM-PST-run-FV LOC 1-mother
The child ran towards mother

b. Mw-ana a-ka-mhany-ir-a ku-na mai[5]
1-child 2SM-PST-run-APPL-FV LOC 1-mother
The child ran **to** mother

(Mabugu, 2001)

(38) *Spanish*

a. Antonio (se) fue al cine.
Antonio SE went to.the cinema
'Antonio went to the cinema.'

b. Antonio (*se) fue del cine.
Antonio SE went of.the cinema
'Antonio left the cinema.'

(Vivanco, 2021, p. 303)

MacDonald's proposal could not account for (38a) as he assumed the external argument to always be the ground argument. The analysis advocated here, however, is less concerned with which argument becomes figure or ground than where the root is inserted. We can thus easily account for (38a) and (38b) by assuming the external argument controls a small clause subject *pro* which acts as the figure argument.

Next, I show how this approach derives pluractional and intensive readings of aspectual applicatives.

4.2 Event repetition

I have argued that the result-denoting property of aspectual applicatives is derived from root insertion within pP followed by an eventive v headed by the applicative morpheme. Importantly, the v above the small clause denoting the result contributes an event. I argue that pluractional applicatives can be derived in largely the same way as delimiting applicatives. The only difference between the pluractional and delimiting applicative is the category to which the root is initially adjoined.

While the root is either adjoined to p or introduced as a complement of p in delimiting applicatives, the root in pluractional applicatives is adjoined directly to v. The most crucial component of iterativity and habituality is the repetition an event dispersed either within a single point in time or across a period of time (Bertinetto & Lenci, 2012; Xrakovskij, 1997). Assume that the verbal root in both (39a) and (39b) is adjoined directly to v.

(39) *Swahili*

a. mpishi a-li-pik-a jiko-ni
cook 1SM-PST-cook-FV kitchen-LOC
'The cook was cooking in the kitchen.'

b. mpishi a-li-pik-i-a jiko-ni
cook 1SM-PST-cook-APPL-FV kitchen-LOC
'The cook was cooking in the kitchen habitually.'

While the delimiting applicative suffix heads a v which takes a pP complement, the pluractional applicative suffix in (39b) heads a v which takes a vP complement. The result is two vPs (39b), each of which introduces an event which has the manner specified by the verbal root. The introduction of multiple events

thus contributes a pluractional interpretation of the predicate, which can then be interpreted as either iterative or habitual.

Not only does this offer an intuitive account of pluractional applicatives, it helps us understand the relationship between pluractional applicatives and delimiting applicatives. Both pluractional and delimiting types of aspectual applicatives are essentially the same phenomena which select different complements. Additionally, we can account for the availability of different aspectual applicatives across language types.

Recall that Austronesian-type languages allow pluractional applicatives, and Spanish-type languages allow delimiting applicatives, while Bantu-type languages allow both. We can account for this difference across languages by assuming the applicative v in each language type has different selectional restrictions. In other words, applicative v in Austronesian languages selects for a vP complement, applicative v in Spanish selects for a pP complement, and applicative v in Bantu languages may select for either complement.

Before concluding, I briefly discuss potential extensions to this approach in the next two subsections.

4.2.1 A potential relation to antipassives and causatives

I have earlier suggested that aspectual applicative constructions may introduce a null *pro*. While there are certainly other ways to account for a single argument having two thematic roles, there is some evidence in favour of a null *pro* in found in Bantu causatives and antipassives.

Tyler (2022) discusses a phenomenon similar to aspectual applicatives, which

he terms non-valency-increasing causatives. NVI causatives seem to share a few notable properties with aspectual applicatives. Of course, both NVI causatives and aspectual applicatives are instances of valency-increasing operations which seemingly do not affect the clause's valency. Not only this, but both phenomena lead to a predicate being interpreted as either pluractional or intensive in some way, such as in (40).

(40) *Tariana*

a. emipeni-nuku nu-a
child.PL-TOP.NON.A/S 1SG-go
nu-pita-i-**ta**-de
1SG-bathe-CAUS1-CAUS2-FUT.CERT
I will bathe the child (all over and a lot).' (**intensive**, Santa Rosa dialect)

b. emipeni-nuku nu-a
child.PL-TOP.NON.A/S 1SG-go
nu-pita-i-**ta**-de
1SG-bathe-CAUS1-CAUS2-FUT.CERT
I will bathe the children' (**pluractional**, Periquitos dialect)

(Aikhenvald 2011, as cited in Tyler, 2022, p. 34)

According to Tyler, (40a) is an intensive reading while (40b) is a pluractional reading. It does seem that both of these could be considered pluractional at their core, with (40b) describing multiple events of bathing different children across some period of time, while (40a) describes multiple events of bathing a single child within a specific time. Nevertheless, pluractionality in NVI causatives and NVI applicatives suggests there is some link between the phenomena.

Tyler proposes that NVI causatives are the result of a Caus which selects an incomplete projection of Voice. As Voice is incomplete, it is unable to introduce

an external argument and both theta-roles from Caus and Voice are saturated by the external argument introduced by Caus. This derives the increased volitionality typically associated with the agent in NVI causatives.

Another account of NVI causatives might be to suggest they are similar to control constructions. A null *pro* would be introduced at Spec,VoiceP, which is binded by the higher external argument introduced at Spec,CausP. The increased volitionality of the agent in NVI causatives would then be similar to an increased volitionality in English periphrastic causatives such as "John forced himself to study".

Bantu antipassives offer evidence which supports this alternative to NVI causatives while relating them to aspectual applicatives. It is standardly assumed the function of the Bantu antipassive suffix *-an* is to reduce the valency of a clause by demoting the internal argument. However, there are instances across Bantu languages of the antipassive introducing a pluractional reading without altering valency when in combination with the causative suffix (Persohn, 2017). Consider the examples below from Nyakyusa.

(41) *Nyakyusa*

a. buut-a
cut-FV
'to cut'

b. buut-an-i-a
cut-ANTIPASS-CAUS-FV
'to cut into pieces'

(42) a. meny-a
break-FV
'to break'

b. meny-an-i-a
break-ANTIPASS-CAUS-FV
'to break into pieces'

(43) a. bujs-a
return-FV
'to return'

b. bujs-an-i-a
return-ANTIPASS-CAUS-FV
'to go & return'

(Persohn, 2017, p. 108)

Now at first glance, these verbs may not seem to offer anything new to Tyler's discussion of NVI causatives. They feature causative morphology without an increase in valency. The lack of valency increase may even be explained by the antipassive, in which case, an apparent NVI causative is actually expected.

What is important to note, however, is that the antipassive in Bantu does not necessarily remove an argument from an otherwise transitive clause, but rather, it provides a licensing position which can only be saturated by an argument void of φ-features. Consider the sentences below from Kirundi.

(44) *Kirundi*

a. Abo bagoré ba-a-tamb-ye.
those women 2SM-PST-dance-ASP
Those women danced.

b. * Abo bagoré ba-a-i-tamb-ye.
those women 2SM-PST-REFL-dance-ASP
Those women danced themselves.

(adapted from Ndayiragije, 2006, p. 279)

The sentences show nothing unexpected. (44a) indicates that the verb *tamb-*

('dance') is unergative, taking only an external argument. Predictably, inserting the reflexive object clitic in (44b) results in ill-formedness, as there is can be no object of an unergative predicate.

However, watch what happens with the addition of the antipassive.

(45) a. Abo bagoré ba-a-i-tamb-an-ye.
those women 2SM-PST-REFL-dance-ANTIPASS-ASP
Those women danced with themselves.

(adapted from Ndayiragije, 2006, p. 279)

b. * Abo bagoré ba-a-ba-tamb-an-ye.
those women 2SM-PST-2OM-dance-ANTIPASS-ASP
Those women danced with them.

(adapted from Ndayiragije, 2006, p. 279)

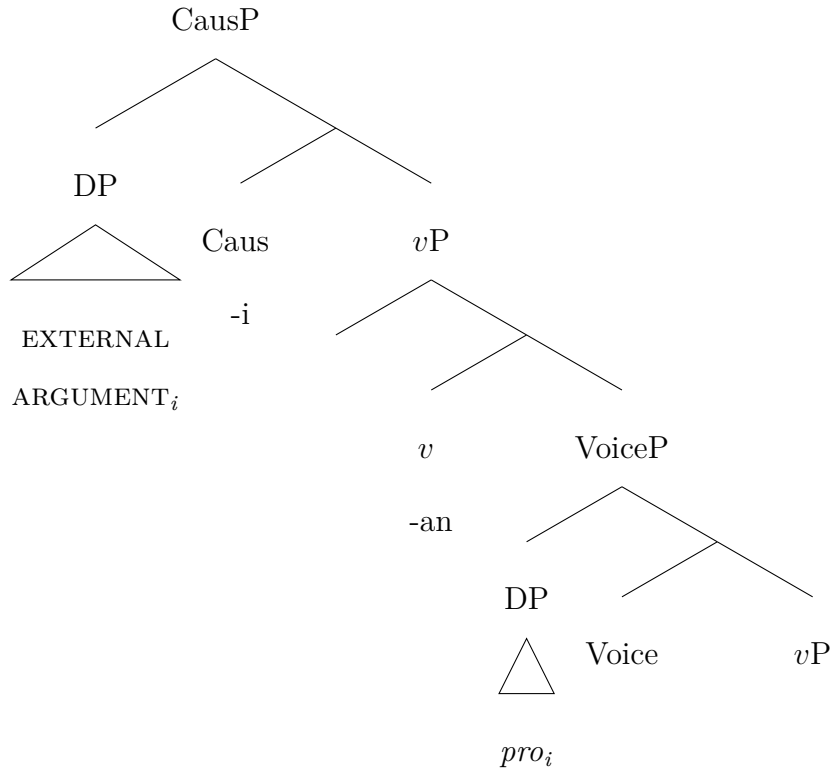
Suddenly, the reflexive object clitic is licensed with the unergative predicate by the addition of the antipassive, and (45a) is grammatical. Importantly, only the reflexive object clitic may appear. (45b) demonstrates that the antipassive cannot license another object clitic, as the class 2 object marker results in ill-formedness.

Ndayiragije (2006) accounts for this behaviour by proposing the antipassive is actually a v head which is φ-defective with a [Null Case] feature. Assuming that internal arguments standardly raise to Spec,vP for Case valuation, a [Null Case] v is unable to license full DPs. The only argument that can be merged as the internal argument then is a null *pro* or reflexive clitic which lacks φ-features and need not be licensed for Case. Thus, the antipassive does not actually reduce valency, but merely restricts the type of element that can be the internal argument.

What this means then, for the pluractional verbs in (41-43), is that they are not truly valency-neutral or valency-reduced. In fact, we can assume they are

fundamentally no different than standard causatives. The causative suffix does indicate the licensing of an additional causer argument. However, what makes these appear to be different is that the antipassive precedes the causative and restricts the range of possible arguments such that one must be a null *pro*, such as in the proposed structure in (46).

(46)



The antipassive v restricts the appearance of the argument introduced at Spec,VoiceP to a null *pro*, co-referential with the external argument introduced by Caus. The two vPs introduce multiple events, as with our account of pluractional applicatives. Thus, we are able to account for NVI causatives the same as aspectual applicatives with an additional v.

4.2.2 A potential relation to reduplication

Lastly, it is worth commenting on the similar function of aspectual applicatives and verbal reduplication in Bantu and Austronesian languages. I will very briefly discuss verb reduplication in Swahili and its potential connection.

While they appear initially unrelated, both reduplication and applicativization in Swahili share a common function in introducing intensive or pluractional readings of verbs (Gibson & Yoneda, 2018; Nassenstein, 2017; Novotna, 2000). Given the analysis of pluractionality presented in this paper, it is tempting to consider the notion that verbal reduplication may be syntactic in nature. In such an approach, we might assume that verbal reduplication is essentially the same root being adjoined to two distinct v heads. As such, each v head would be spelled out as the verbal root and introduce a new event.

While this would certainly be a controversial approach, there is reason to not reject it wholeheartedly. First, there are some instances of valency-increasing reduplication in Swahili, such as that seen in

(47) *Swahili*

a. si-li-ita-ita ba-jirani ba-mbuzi
1PL.SM-PST-call-call 2-neighbor 2-goat
we called the neighbors goats (/insulted them as goats)

b. * si-li-ita ba-jirani ba-mbuzi
1PL.SM-PST-call 2-neighbor 2-goat
(Nassenstein, 2017, p. 217)

In (47a), the reduplicated verb is able to take three total arguments. In (47b), the verb is not reduplicated and loses its ditransitivity. It becomes only capable of taking one internal argument. While valency-neutral reduplication is not nec-

essarily the norm, it does suggest a potential relationship between reduplication and applicativization.

Additionally, there are instances of so-called 'verb-external reduplication' in Swahili. This type of reduplication features an inflected verb followed by a separate bare verbal root and is used to express that the event is carried out to completeness or in its totality (Gibson & Yoneda, 2018).

(48) Mchuzi huu u-me-nyoror-a.
3.stew DEM.3 SM3-PRF-boil-FV
This stew has been boiled (and become) soft.

(49) Mchuzi huu u-me-nyoror-a nyororo.
3.stew DEM.3 SM3-PRF-boil-FV REDUP
This stew has been boiled (and become) completely soft.
(Gibson & Yoneda, 2018)

This type of reduplication appears to resemble the delimiting type of applicative I have discussed in this paper. Though there is not enough data in the literature to fully make the argument, the appearance of the root external from the verb may provide evidence for adpositional use of the root and thus evidence for p conflation. I rest this line of inquiry for further investigation.

5 Conclusion

This paper has discussed a prevalent pattern of applicatives cross-linguistically to introduce aspectual contributions without transparently affecting valency. I have provided an overview of aspectual applicatives across Bantu, Spanish, and Austronesian languages. The primary types of aspectual applicatives, delimiting

and pluractional applicatives, are derived from a uniform account with differences amounting to different selectional restrictions of the applicative head across language types.

I have proposed aspectual applicatives to be in actuality an alternation in the position where the root is first introduced. In delimiting applicatives, the verbal root is introduced within a small clause pP as either a complement of p or adjoined to p. The applicative heads a higher v which contributes an event to the structure. In pluractional applicatives, the verbal root is introduced at v, with an additional v, headed by the applicative, contributing an additional event to derive pluractionality. From this uniform account there are implications and potential extensions to the treatment of NVI causatives and verbal reduplication.

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