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ARTICLE

The IPP-Effect in Afrikaans: Something Old, Something New

Theresa Biberauer[1,2,3,4] and Cora Cavirani-Pots[1]

[1]University of Cambridge, [2]Stellenbosch University, [3]University of the Western Cape and [4]CRISSP KU Leuven
Corresponding author: Theresa Biberauer; Email: mtb23@cam.ac.uk

Abstract

This article concerns the so-called *Infinitivus Pro Participio* (*IPP*) effect – in terms of which what appears to be an infinitive surfaces where a selected past participle is expected – as it manifests in modern Afrikaans. Prior research has highlighted the apparent optionality of this effect, leading to conflicting conclusions regarding the continued existence of a productive IPP-effect in contemporary Afrikaans. Here we draw on recent corpus- and questionnaire-based investigations to consider the optionality of the IPP-effect in Afrikaans in more empirical detail, with the objective of establishing (i) the status of the IPP in Afrikaans and (ii) how it differs from the IPP in Dutch. The article's second objective is to consider the role of language contact in shaping the IPP-effect as it is currently attested in (varieties of) Afrikaans.*

Keywords: Afrikaans; Dutch; grammaticalization; Infinitivus Pro Participio (IPP); L1 and L2 acquisition; optionality; verb clusters

1. Introduction

This article concerns the Infinitivus Pro Participio (IPP) effect in modern Afrikaans. The IPP-effect centers on the unexpected occurrence of something that looks like an infinitival form where a selected perfect participle would be expected. Consider the difference in form between Afrikaans (1a) and (1b):

(1) a. . . . dat ek **geleer**$_2$ het$_1$.
that I PTCP.learn have
'. . . that I have learned.'

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b. . . . dat ek **leer**$_2$ luister$_3$ het$_1$.
that I learn.INF listen.INF have
'. . . that I've learned to listen.'

In (1a), the perfect auxiliary *het* 'have' selects a *ge*-marked perfect participle *geleer* 'learned'. Linguists traditionally label *het* in these constructions with the number *1* and refer to it as *V$_1$* to reflect the fact that it occupies the highest structural position in the verbal cluster. *Geleer* is V$_2$ in this case. In (1b), V$_1$ *het* still selects for a perfect participle. However, when the verb that is selected by the perfect auxiliary itself selects a third verb (V$_3$; *luister* 'listen' in 1b), V$_2$ no longer appears in perfect-participle form; instead, it surfaces in an unmarked form that could, by virtue of Afrikaans' extreme deflection (Ponelis 1993, Donaldson 1993, Deumert 2004, Conradie 2007, 2024), in principle be either the infinitive or a finite present-tense form. As clause-final *het* is clearly the finite form in these structures (finiteness being restricted to a single verb in Germanic, as in other languages)[1] and participles can replace infinitives in other contexts (so-called PARTICIPIO PRO INFINITIVO structures), it is traditional to describe the V$_2$s in (1b)-type structures as IPP-forms. The IPP-effect occurs in (varieties of) German and Dutch (Schmid 2005), but is absent in other West Germanic languages, including Frisian and contact varieties like English and Yiddish (Zwart 2007, Hinterhölzl 2009).

The IPP-effect in Afrikaans has been claimed to be optional (Ponelis 1979, Robbers 1997, De Vos 2001, Zwart 2007; cf. Donaldson 1993). An example of this optionality is given in (2):[2]

(2) . . . dat ek die hele middag (ge)sit$_2$ en werk$_3$ het$_1$.
that I the whole afternoon PTCP.sit and work have
'. . . that I spent the whole afternoon working.'
(literally: '. . . that I sat and worked the whole afternoon')

In sentences like (2), both the perfect participle and the IPP-form are grammatical; and the alternation is semantically vacuous: with and without *ge*-, there is a pseudocoordination-based interpretation of the kind indicated above.[3] Scholars who

[1] Compare main-clause *Ek* ***het*** *gou leer luister* (literally: I have quickly learn listen, i.e. 'I learned to listen quickly'), where *het* is the verb that undergoes V-to-C raising, an operation reserved for finite verbs (Vikner 2020).

[2] Note that the verbs that trigger the IPP-effect in Afrikaans include both so-called DIRECT and INDIRECT LINKING VERBS (Ponelis 1993:326–328). The former combine directly with the verb that they select, in the way that *leer* ('learn') in (1b) does, whereas the latter combine with this verb via an intermediate linking element, the coordinator *en*, as shown in (2). ILV-containing structures are effectively pseudocoordination structures; see Biberauer 2017a and the discussion in section 2.3.

[3] Note that the *ge*-containing variant in (2), given as (ia) here, does not mean the same as that in (ib):

(i) a. . . . dat ek die hele middag gesit$_2$ en werk$_3$ het$_1$.
that I the whole afternoon PTCP.sit and work have
'. . . that I spent the whole afternoon working.'
b. . . . dat ek die hele middag gesit en gewerk het.
that I the whole afternoon PTCP.sit and PTCP.work have
'. . . that I intentionally sat and worked the whole afternoon.'

That is, the *ge*-containing variant of the IPP-structure (ia) has the same pseudocoordination-based reading as the *ge*-less variant in (2) (see again the previous note). The variant in (iib), by contrast, has a

have written about IPP in Afrikaans do not, however, all agree that it is in fact still an active part of the grammar. Ponelis (1993) and Conradie (2012), for instance, claim that it is either a mere residue or may not even exist at all in modern Afrikaans; and, as an anonymous reviewer points out, to the extent that Afrikaans does not formally distinguish between infinitives and finite verbs (e.g. by operating with underspecified verbal forms, which are systematically spelled out without inflection), it is quite clear that this language cannot be said to be retaining a Dutch-type IPP and, further, that one might completely deny even the possibility of Afrikaans being an IPP-language.[4] By contrast, De Schutter (2001:205) argues that the IPP has started to 'live its own life' in Afrikaans, and that it should thus be seen as a phenomenon governed by an adapted rule compared to that which came into the language via earlier stages of Dutch.

The aim of this article is twofold. First, we want to consider the optionality of the Afrikaans IPP-effect in more empirical detail to establish whether the effect (i) still exists in the language, and (ii) how it differs from the IPP in Dutch. Second, we want to consider the role of language contact in shaping the IPP-effect as it is currently attested in (varieties of) Afrikaans.

The article is structured as follows: In section 2, we sketch a clear empirical picture of the nature of the optionality surrounding the IPP-effect in Afrikaans, incorporating insights from two recent corpus studies. In section 3, we discuss some of the internal and contact factors that appear to have resulted in this IPP-profile. Section 4 concludes the article and presents directions for future research.

2. The empirical picture

As mentioned in the introduction, the IPP-effect in Afrikaans is often taken to be optional. However, there is a clear difference in the frequency of the IPP- and the past-participle form in IPP-contexts if one considers the various V_2 subclasses. This is shown in a recent study by Dirix et al. (2020), who conducted a corpus study using the *Taalkommissie* ('Language Commission') corpus and the Wikipedia corpus (https://viva-afrikaans.org/). Their study shows that aspectual verbs (*begin* 'begin', *gaan* 'go', *kom* 'come', *bly* 'stay', *aanhou* 'continue', and *ophou* 'stop'), subject control verbs (*probeer* 'try', *durf* 'dare', and *leer* 'learn'), causative *laat* 'let', perception verbs (*sien* 'see' and *hoor* 'hear'), and benefactive (*help* 'help' and *leer* 'teach') show very high frequencies of the IPP-form, ranging from 81.25 to 100 percent. These are also all subclasses of verbs which exhibit the IPP-effect in Dutch (Schmid 2005).[5]

genuine coordination reading: The speaker performed both the sitting and working actions throughout the afternoon. Comparing this to Dutch, the example in (ia) can only be translated as *dat ik de hele middag heb zitten werken*, an IPP-structure, and not as *dat ik de hele middag gezeten en gewerkt heb*, the latter being a true coordination construction.

[4] If one defines the IPP-effect as centering on the "missing" expected participial marker *ge-*, on the other hand, the question surrounding Afrikaans' IPP-status remains meaningful.

[5] The Afrikaans aspectual subclass includes two innovative aspectual verbs, *aanhou* (literally: on.hold = 'start') and *ophou* (literally: up.hold = 'stop'), which are not IPP-triggering verbs in Dutch. The causative subclass has been said to include *maak* ('maak'), which does not exist as a causative verb in Dutch. We leave this verb aside here as it only seems to trigger IPP infrequently (see Dirix et al. 2020:12 and Cavirani-Pots 2020:245) and there also appear to be verb-specific factors in play that distinguish productive causative *laat* from *maak*.

Two subclasses of Afrikaans verbs which show different IPP-behavior compared to Dutch, however, are (i) motion verb *loop* 'walk' and the three cardinal posture verbs, *sit* 'sit', *staan* 'stand', and *lê* 'lie', and (ii) the root modal verbs *moet* 'must', *kan* 'can', *wil* 'want', and *mag* 'may'. In the following subsections, we discuss these subclasses in detail.

2.1 Motion and posture verbs

In Afrikaans, the motion verb *loop* 'walk' and the posture verbs *sit* 'sit', *staan* 'stand', and *lê* 'lie' occur in pseudocoordination constructions (see footnote 2 and De Vos 2005 for detailed discussion). Consider again (2) above. In Robbers (1997), De Vos (2001, 2005), and Dirix et al. (2020) it has been noted that this set of verbs in particular exhibits optional IPP. Cavirani-Pots (2020) additionally shows that this optionality is reflected both in corpus data and in large-scale native-speaker judgments. The latter is an important addition to the discussion surrounding the optionality of the IPP-effect in Afrikaans because corpus results typically cannot tell us anything about speaker-internal optionality. Cavirani-Pots' data are based on the collected judgments of 201 Afrikaans native-speakers who assessed three-verb clusters featuring the above four verbs in the correct IPP-context.[6] They reveal a high degree of intraspeaker optionality regarding the IPP- and non-IPP-forms in IPP-contexts. An adapted version of the relevant data table is given here in table 1.[7]

Table 1. Optionality of *ge-* per motion or posture verb (%) (Cavirani-Pots 2020:192)

Verb	Obligatory *ge-*	Optional *ge-*	Obligatory no *ge-*
loop 'walk'	15.1	69.4	15.5
sit 'sit'	13.1	84.4	2.5
staan 'stand'	12.5	82.8	4.7
lê 'lie'	8.0	91.0	1.0

As the table shows, for the majority of speakers surveyed, *ge-* is truly optional in IPP-contexts featuring motion and posture verbs. Interestingly, the extent to which speakers permit both IPP- and non-IPP-forms mirrors the extent to which the verb in question has been grammaticalized (De Vos 2005, Breed 2017, Cavirani-Pots 2020):[8] Most speakers permit both IPP- and non-IPP-forms with *lê*, the least grammaticalized posture verb, with *sit* and *staan* less generally permitting both options, and strongly

[6] This is where V_1 is a finite auxiliary, V_2 belongs to the class of IPP-verbs, and V_3 is a lexical verb which also surfaces in the infinitive form (see again (1b), and the description in section 1). In Afrikaans, these structures always exhibit 231 ordering, a point we return to in section 3.

[7] In the original table in Cavirani-Pots 2020:192, two types of *loop* 'walk' are given, one that is used to indicate progressive aspect, and one that encodes andative aspect. Given that this semantic difference is not relevant for the purposes of this article, we only give the average of both uses in table 1.

[8] One reflex of the difference in how grammaticalized the relevant verbs are is the extent to which speakers require a literal interpretation of the motion/posture verb in IPP-structures, i.e. the degree of semantic bleaching: a literal interpretation is nearly always required for *lê*, while this is less so for *sit* and *staan*, with *loop* quite readily being interpreted as a general motion verb, similar to *gaan* (another IPP-trigger).

grammaticalized *loop* doing so least of all. Similarly, the number of speakers requiring an IPP-form (no *ge-*) is highest for *loop* and lowest for *lê* with *sit* and *staan* behaving more like this least grammaticalized verb.

For the four verbs under consideration here, then, IPP evidently can be truly optional for many modern-day speakers. However, as discussed in Cavirani-Pots (2020:276), these data do not represent all varieties of Afrikaans, and exclude especially those regions that are hard to reach via online questionnaires (e.g. the Northern Cape province). We return to consider IPP in colloquial varieties of Afrikaans, including, notably, some that were not covered in Cavirani-Pots' survey, in section 2.4.

2.2. *Modal verbs*

The class of modal verbs in Afrikaans behaves significantly differently to the other subclasses of IPP-verbs in the language. Modal verbs are morphologically special as they have a dedicated past-tense form, which the other IPP-verbs, thanks to PRÄTERITUMSCHWUND ('preterite loss'; see Conradie 2007), do not: compare *moet–moes* 'must', *kan–kon* 'can', *wil–wou* 'want', *sal–sou* 'will', and, marginally, *mag–mog* 'may' (*mog* is an archaic verb, absent from the active lexicon of most present-day speakers of Afrikaans). Furthermore, they lack a perfect-participle form (Donaldson 1993:242). Dirix et al. (2020) show, based on a corpus study, that the classic IPP perfect-tense construction (MOD_2-V_3-het_1) is virtually non-existent in the corpus. Specifically, they tested Robbers' (1997:56–57) claim that a sentence like (3) can have five different past-tense forms associated with different degrees of acceptability:

(3) Jan kan$_1$ hard werk$_2$.
Jan can hard work.INF
'Jan can work hard.'

The different options are given in (4):

(4) a. Jan **kon$_1$** hard werk$_2$.
Jan can.PST hard work
b. Jan het$_1$ hard **kon$_2$** werk$_3$.
Jan have hard can.PST work.INF
c. Jan het$_1$ hard **kan$_2$** werk$_3$.
Jan have hard can work.INF
d. Jan **kon$_1$** hard gewerk$_3$ het$_2$.
Jan can.PST hard PTCP.work have
e. Jan **kan$_1$** hard gewerk$_3$ het$_2$.
Jan can hard PTCP.work have

Table 2 presents the associated corpus results from Dirix et al. (2020:130–131)[9] showing the frequencies of the construction type in (4a) – $PRET_1$-INF_2 – versus all

[9] In their paper, Dirix et al. (2020) separate the results from the *Taalkommissiecorpus* from that of the *Wikipedia corpus*. For ease of exposition, we have taken both results together in tables 2 and 3 here. We have furthermore left out the datapoints regarding the semi-modals *hoef* 'need to' and *behoort* 'need to',

Table 2. Frequencies of $PRET_1$-INF_2 construction versus those with *het* (Dirix et al. 2020:130–131)

Modal verb	Without *het* ($PRET_1$-INF_2 – e.g. (4a)) *n* (%)	All constructions with *het* (4b–e) *n* (%)
kan 'can'	25,237 (95.9)	1,081 (4.1)
sal 'will'	22,852 (94.6)	1,315 (5.4)
moet 'must'	12,878 (94.5)	748 (5.5)
wil 'want'	8,136 (96.7)	275 (3.3)
mag 'may'	12 (15.6)	65 (84.4)
Total	69,115 (95.2)	3,484 (4.8)

constructions with *het* 'have' – i.e. (4b–e) taken together – per modal verb. As can be seen from this table, the construction type in (4a) occurs in the vast majority of the relevant data points (95.2%). This means that modal verbs generally occur only very infrequently in IPP-contexts.

Table 3 presents the corpus results from the same study for the frequencies of the constructions in (4b–e) and shows that within the constructions with *het*, the construction type in (4d) is by far the most frequent.

Insofar as we can label one of the options given in (4) as being 'IPP-like' (compare the Dutch IPP-form: *Jan heeft*$_1$ *hard* ***kunnen***$_2$ *werken*$_3$), it would at first sight be (4c): Here we have a modal that is selected by perfect auxiliary *het* 'have', with the modal itself selecting a third verb, and not surfacing as a participle (**gekan*), but in *ge*-less form. The fact that the modal does not appear as a participle is unsurprising as most varieties of Afrikaans lack modal participles.[10] It, however, turns out that exactly this option – which speakers judge as being available in the context of grammaticality judgments[11] – is virtually absent in the corpus search executed by Dirix et al. (2020). This can be seen from table 3: 0.2 percent of the datapoints relate to this option. This replicates the findings of De Schutter's (2001) smaller, fiction-based corpus study. Like De Schutter, Dirix et al. also found that (4a)-type structures are very common in contexts where an IPP-structure could have surfaced in Dutch; that is, Afrikaans

given that the overall frequencies are extremely low. We refer the interested reader to Dirix et al. 2020: 130–132 for more details.

[10] *Gekan*/*gekon* (PTCP.can/ PTCP.can.PST) and *gewil*/*gewou* (PTCP.will/ PTCP.will.PST) are still available to some speakers of some varieties, such as Kaaps, a heavily contact-influenced variety spoken on the Cape Peninsula (Hendricks 2016, 2024). Importantly, these participles do not seem to be compatible with IPP-structures (Chevân Van Rooi, p.c.), i.e. the restricted availability of modal participles does not produce optional IPP in Kaaps.

[11] The first author conducted a mini-grammaticality judgement survey centering on non-contextualized instances of these structures among 18–45-year-old native speakers of Afrikaans. All participants accepted modal-containing IPP-structures. This also accords with the first author's own native-speaker judgments. Follow-up discussion with a subset of the participants, however, indicated that they were uncertain about contexts in which they would use these structures. This is unsurprising, given the corpus results, which suggest that these structures may no longer be used or that they may only be used in very restricted contexts and possibly also not by all speakers. The details are a matter for future research.

Table 3. Frequencies of different *het*-constructions (Dirix et al. 2020:132)

Modal verb	het_1-PRET$_2$-V$_3$ (4b) *n* (%)	het_1-MOD$_2$-V$_3$ (4c) *n* (%)	PRET$_1$-V3-het_2 (4d) *n* (%)	MOD$_1$-V3-het_2 (4e) *n* (%)
kan 'can'	13 (31.7)	1 (12.5)	1,056 (32.3)	11 (6.7)
sal 'will'	19 (46.3)	0 (0.0)	1,281 (39.2)	15 (9.1)
moet 'must'	6 (14.6)	0 (0.0)	670 (20.5)	72 (43.6)
wil 'want'	3 (7.3)	4 (50.0)	263 (8.0)	5 (3.0)
mag 'may'	0 (0.0)	3 (37.5)	0 (0.0)	62 (37.6)
Total	41 (1.2)	8 (0.2)	3,270 (93.9)	165 (4.7)

speakers favor the use of a two-verb past-marked modal (MOD$_1$-V$_2$) pattern where Dutch speakers harness the classic IPP perfect-tense MOD$_2$-V$_3$-AUX$_1$ pattern.

The other commonly occurring pattern is (4d) (93.9% of the datapoints), a construction in which an apparently past-marked modal selects the perfect auxiliary, which in turn selects V$_3$.[12] These so-called PRETERITIVE ASSIMILATIONS (Ponelis 1979) are very common whereas (4e)-type structures, where the modal is present/unmarked, exhibit a much more restricted distribution (4.7% of the datapoints). This is true in more standardly oriented varieties; it is worth noting that (4e)-type structures are not uncommon in Kaaps (see again Hendricks 2016, 2024).

We also see past-doubling in (4b), where both auxiliary *het* and *kon* superficially express the past tense. This structure is interesting as *kon* could in fact be an infinitive form: as part of the reanalysis of perfect-auxiliary *het* (see section 3 below), Afrikaans has innovated a past-tense modal infinitive structure which permits speakers to produce structures like (5) (see Conradie 2007, 2024 for extensive discussion):[13]

(5) Om destyds daar te kon$_2$ werk$_3$ het$_1$ was 'n voorreg.
INF.C that.time there to can.INF werk.INF have was a privilege
'To have been able to work there was a privilege.'

(4b) therefore constitutes another IPP-innovation. Like (4c), though, this structure barely surfaces in Dirix et al.'s study (0.2% of the datapoints). What speakers prefer instead is (4d), . . . *om daar te kon gewerk het*, the *ge*-containing variant of (4c) (93.9% of the data points for (4d) versus 0.2% for (4c)).

In sum, given that Afrikaans modals essentially (see note 10) have no perfect-participle form, morphological restrictions categorically rule out optional IPP for this

[12] As in other languages with superficially past-marked modal-forms, it is not clear that the preterite finite modal (*kon*) does in fact express tense. In keeping with the use of [past] in other modal domains (e.g. in conditionals; see Iatridou 2000 and Ritter & Wiltschko 2014), the marking on the modal seems rather to signal greater non-coincidence with a given world than would be the case for *kan*, i.e. it signals irrealis (mood).

[13] The example in (5) was recorded by the first author. The speaker was a female native speaker in her early 70s.

class of verbs from the outset: Only the IPP-form is expected to be possible. In practice, modals do not seem to occur in IPP-contexts, however, as speakers instead prefer either a past-tense form with just one selected main verb (4a) or so-called preteritive assimilation constructions, in which the modal is no longer the cluster's V_2, with the result that it cannot 'show IPP' (4d). This class thus behaves very differently from its cognates in Dutch. This is a significant consideration, given that modals constitute the core class of IPP-verbs in that language, and in West Germanic more generally (Schmid 2005).

2.3. *IPP verbs and quirky V2*

So far, we have seen that there are six subclasses of Afrikaans verbs that show the IPP-effect either (almost) obligatorily or optionally:

(6) a. Aspectual: *begin* 'begin', *gaan* 'go', *kom* 'come', *bly* 'stay', *aanhou* 'continue', *ophou* 'stop'
b. Subject control: *probeer* 'try', *durf* 'dare', and *leer* 'learn'
c. Causative: *laat* 'let'
d. Perception: *hoor* 'hear' and *sien* 'see'
e. Benefactive: *help* 'help' and *leer* 'teach'
f. Pseudocoordination: *loop* 'walk', *sit* 'sit', *staan* 'stand', and *lê* 'lie'

Interestingly, the majority of these verbs have another type of morphosyntactic behavior in common, namely that they are able to occur in the so-called QUIRKY VERB SECOND (henceforth QUIRKY V2) constructions (De Vos 2005; see also Ponelis 1993:325–330 on so-called COMPLEX INITIALS and Roberge (1994) for diachronically oriented discussion of so-called VERBAL HENDIADYS). An illustration of the construction is given in (7a); compare this with the standard V2 configuration in (7b).

(7) a. Daar **loop (en) vertel** hy alweer allerhande stories!
there walk and tell he again all.kinds stories
'There he's going around telling all kinds of stories again!'/'There he goes again, telling all kinds of stories.'
b. Daar **loop** hy alweer allerhande stories **en** **vertel**!
there walk he again all.kinds stories and tell
'There he's going around telling all kinds of stories again!'/'There he goes again, telling all kinds of stories.'

In (7a), the entire pseudocoordination(-like) complex (*loop (en) vertel*) appears in V2-position; this is quirky V2. In (7b), only the finite verb, *loop* 'walk', appears there. In Dutch, quirky V2 is completely ungrammatical. Interpretively, the Afrikaans quirky V2 structures in (7) overlap, i.e. the alternation between them can be semantically vacuous, but this may be a restricted alternation; further research is required on this matter, so we leave it aside here.

The only verbs listed above that cannot occur in quirky V2-structures are the perception verbs, and *aanhou* 'continue', *ophou* 'stop', and *durf* 'dare'. The nature of the excluded verbs suggests that the possibility of participating in quirky V2 depends on the size of the verbal complement a given verb takes. That is, verbs that do not

require their own subject and that select a structurally very restricted complement (potentially, in the sense of Wurmbrand 2010, 2024) can combine with a lexical verb in order to create a quirky V2 verbal complex (effectively a verbal compound; see section 3 below for brief further discussion); verbs that independently select for an external argument and that require a larger complement cannot.

For perception verbs, then, we assume quirky V2 to be ruled out because these verbs select their own subjects, which requires the projection of independent vPs (i.e. thematic/argument-structure domains). This seems justified, given that the relevant perception verbs, *hoor* ('hear') and *sien* ('see') retain their core lexical semantics – one cannot employ the relevant verbs in IPP-structures without the subject hearing and seeing what is encoded by V_3 and its associated arguments and modifiers; *hoor* and *sien* are therefore not (partly) grammaticalized evidentials of the kind found in many languages (Aikenvald 2014). *Aanhou* 'continue' and *ophou* 'stop', in turn, are particle verbs, which obligatorily strand their particles under V2. Consider (8):[14]

(8) a. Hy **hou** **aan** oor sy stukkende fiets neul.
he hold on over his broken bike whine
'He keeps whining about his broken bike.'
b. . . . dat hy oor sy stukkende fiets **aanhou** neul.
that he over his broken bike on.hold whine
'. . . that he keeps on whining about his broken bike.'

As their component parts are necessarily separated under V2, these verbs are independently incapable of forming a unit with the lexical verb that undergoes movement to the V2-position. As for *durf* 'dare', the semantic connection between this verb and the class of root modals, and the fact that Dutch *durven* groups with the root modals in respect of its fixed *plaatscategorie* ('positional category') in verb clusters (Coussé & Bouma 2022:126) lead us to expect that this verb will pattern with the modals. And this is correct: the modals can never occur in quirky V2 structures:[15]

(9) a. *Sy **moet** **help** die kinders.
she must help the children
'She must help the children.'
b. Sy **moet** die kinders **help**.

It is of theoretical importance that IPP-verbs that lack an independent subject requirement and take small verbal complements feature in quirky V2 structures while those, like the individual verbs just discussed, that require an independent subject, take larger complements and/or consist of separable parts do not: This shows us that

[14] This is another attested example, produced by a native-speaker in her mid-40s.

[15] Postma (2019) and Kaufmann (2022) report a distinct kind of quirky V2 pattern in the Pomeranian varieties of German that are spoken in the Espírito Santo province of Brazil (referred to as Brazilian Pomeranian and Pomerano by the relevant authors). Here the complex V2 verb systematically consists of a modal and a past-tense auxiliary, i.e. a completely different pattern to that observed in Afrikaans, but again one involving a member of the IPP-class. The differences between Afrikaans and Brazilian German quirky V2 would seem to relate to key, in part contact-induced differences in the make-up of their tense-aspect-mood/TAM systems, a topic we leave to future research.

Afrikaans IPP-verbs are verbs that combine very closely with the lexical verbs they select. That is, in order to be able to co-occur in V2 position, the two verbs combined must appear to the syntax as one complex verb,[16] and, moreover, as one in which the component parts are more tightly bound than those of particle verbs (which, as shown in (8) above, are separated under V2). This perspective picks up on earlier discussion of IPP-phenomena which views it as the reflex of the co-occurrence of two or more verbs which have to share a domain which is in fact too small for them (see Kjeldahl 2010 for discussion and references). A full theoretical analysis of the Afrikaans IPP-effect and how the relevant subset of IPP-verbs facilitate quirky V2 is beyond the scope of this article. In section 3 below, we will, however, offer some initial thoughts, focusing specifically on the interaction between pre-existing Dutch-derived properties and Afrikaans' development in a contact environment.

2.4 IPP in colloquial Afrikaans

The last component of our empirical sketch concerns a discrepancy between more and less standard-oriented colloquial varieties of Afrikaans. Donaldson (1993:225-226) notes for colloquial varieties in general that the presence of *ge-* on V_2 in IPP-contexts is strongly preferred. Other scholars also mention specific varieties that seem to prefer *ge-* on V_2 in IPP-contexts, e.g. Griqua/Griekwa Afrikaans, Knysna Boswerker ('Knysna Forest worker') Afrikaans, and Kaaps (De Vos 2003, Conradie 2012, Hendricks 2016, 2024).

In the absence of detailed empirical studies of any of these varieties, the true extent of the preference for *ge-* must be viewed as an open question. What can already be established at this stage, however, is that the strong preference for *ge-* on V_2 seems to correlate with other non-standard behaviors of the prefix, and also with some further relevant morphosyntactic properties. Three of the properties discussed in De Vos (2003) and Conradie (2012) are briefly presented here, namely (i) the combination of *ge-* with other verbal prefixes and particles, (ii) *ge-* occurring on V_3 rather than on V_2 in IPP-contexts, and (iii) auxiliary *het* (V_1) being dropped in the presence of *ge-* on V_2 in IPP-contexts.

In Griqua Afrikaans, and also in less standard-oriented varieties more generally, *ge-* frequently occurs on perfect-participle forms which already contain a verbal prefix like *be-, er-, her-, ont-*, or *ver-*. Rademeyer (1938:62-63) gives ***ge****begene* 'begun', ***ge****ërken* 'acknowledged', ***ge****herken* 'recognized', ***ge****onthou* 'remembered', and ***ge****verneem* 'enquired' as examples. These forms indicate that *ge-* has greater freedom in the relevant varieties than in standard Afrikaans, where *ge-* is obligatorily absent in the presence of these prefixes (Donaldson 1993:225-226, Conradie 2012). In Griqua Afrikaans, *ge-* exhibits even greater positional freedom: where *ge-* consistently appears between the particle and the verbal stem in Dutch and also in most varieties of Afrikaans (e.g. *op****ge****bel* – up.PTCP.call –'called'), it can attach to the outside of the

[16] The proposal is therefore essentially that the verbs occurring in a quirky V2-complex have undergone a form of univerbation. Unlike grammaticalized univerbation (e.g. of forms like English *maybe* (< *may* + *be*)), however, quirky V2-complexes are not lexically stored (*pace* Breed & Brisard 2015:21); they are constructed during the course of the derivation – at the stage (possibly, the word-level phase; Marantz 2007) where the properties of the lexical verb are configured (see section 3 below for brief further discussion).

entire particle-verb complex in Griqua Afrikaans, as in ***ge**opbel* 'called'. Examples from Rademeyer (1938) are ***ge**neersit* 'put down' and ***ge**aanteel* 'reproduce'. Further, according to Rademeyer, *ge-* can even occur in both positions simultaneously. Consider (10) in this connection:

(10) Ek het nou nie **ge-** skool **ge-** gan nie.
I have now not PTCP- school PTCP- gone not
'I did not really attend school.' (Rademeyer 1938:63)

The second deviation from standard varieties with respect to *ge-*placement that Griqua Afrikaans shows – and this it shares with other less standard-oriented varieties such as Knysna Boswerker Afrikaans, Baster Afrikaans, Velddrifse Vissertaal ('Velddrif Fishermen's Language'; De Vos 2003) – is that *ge-* can also occur on the lexical verb (V_3) in IPP-contexts rather than on V2. Consider (11):

(11) Ons het_1 nou sy kopklip ... in Delport lop_2 op**ge**mak_3.
us have now his headstone in Delport walk up.PTCP.make
'We have now erected his headstone in Delport.' (Conradie 2012:133)

This option may be more widespread than just the varieties mentioned by De Vos (2003). Cavirani-Pots' (2020) questionnaire study did not target dialectal varieties per se but found that *ge-* on V_3 was accepted by 14 speakers in pseudocoordination constructions in IPP-contexts with *loop* 'walk' as V_2, and by 35 speakers in similar constructions with *sit* 'sit' as V_2. Future work should probe this in more detail.

The final morphosyntactic property that Griqua Afrikaans specifically has that combines with its preference for *ge-* in IPP-contexts is that it often drops auxiliary *het* 'have'. Consider (12) ([HET] *marks the position of the omitted* V_1 *auxiliary):*

(12) a. Ek [HET] by hille daarie klom jare **ge**bly.
I by them that bunch years GE.stay
'I stayed with them all those years.' (Van Rensburg 1984:869)
b. Die ene wat my broer se vrou **ge**vat [HET].
the one what my brother POSS wife GE.take
'The one who stole my brother's wife.' (Van Rensburg 1984:1019)

Taking the data in this subsection together, we see that there appear to be colloquial varieties of Afrikaans, including Griqua Afrikaans, in which the IPP-effect is much less strongly attested than in standard and standard-oriented varieties of Afrikaans. Significantly, for at least some of these varieties, this fact correlates with further distinctive morphosyntactic behavior, notably of *ge-* and of the perfect auxiliary *het.* In the following section, we consider how the "un-Dutch" behavior of these and other elements discussed above may shed light on the nature of IPP in contemporary Afrikaans.

3. Inheritance and contact in the making of Afrikaans IPP

In the preceding discussion, we have seen that the IPP-effect is still a feature of modern Afrikaans, albeit to varying extents in different varieties. The internal

make-up of the most commonly attested IPP-structures is quite different from that found in Dutch and West Germanic more generally, however. Where modal-centered IPP is common to all Continental IPP-systems, constituting an IPP-"baseline" (Schmid 2005), this option seems only to be rarely attested in Afrikaans production (section 2.2). On the other hand, Afrikaans does feature a comparatively speaking wide range of IPP-verbs, including several innovated ones (e.g. *aanhou* 'continue' and motion *loop* 'walk'). Furthermore, these IPP-structures can alternate with *ge*-marked structures in a way that is not possible in Dutch varieties (sections 2.1, 2.3, and 2.4). In this section, we will offer some initial consideration of factors – both "internal" and "external" – that may have played a role in creating the IPP-picture that has emerged from our empirical investigation.

Firstly, it is important to note that Afrikaans IPP-clusters consistently require 231-clustering.[17] This contrasts with the usual Dutch pattern, which is 123, with 231 being an additional option in some dialects (Wurmbrand 2017). The fact that Afrikaans permits only the 231-order plausibly follows from two factors:

(13) a. the loss of ordering options in two-verb clusters:[18] Unlike Dutch, which permits ordering permutation, Afrikaans systematically requires modals and other infinitival verb/clause-selecting verbal elements to precede their complements (i.e. 1-2 or "red" ordering as in (14a)), while auxiliaries consistently follow their selected participle (i.e. 2-1 or "green" ordering as in (14b)); and

b. the way in which three-verb clusters are acquired, namely by combining the relative ordering requirements of the component verbs (Van Kampen 2017). Three-verb clusters are thus effectively acquired by combining earlier-acquired knowledge of the ordering of two-verb clusters (see below for further discussion).

(14) a. … dat ek die boek sal_1 $lees_2$/*$lees_2$ sal_1 [1-2 ordering: modal-lexical V]
that I the book shall read read shall
'… that I will read the book.'

b. … dat ek die boek $gelees_2$ het_1/*het_1 $gelees_2$ [2-1 ordering: auxiliary-participle]
that I the book read.PTCP have have read.PTCP
'… that I (have) read the book.'

The loss of optionality in two-verb clusters may be a contact effect. In the sense that free-variation-type optionality, of the kind available in Dutch verb clusters, entails the existence of more than one linguistic form per meaning, it instantiates complexity (Forker 2021; see also Kroch 1994 on the instability that frequently arises in contexts featuring doublets where only one is a productive part of the system). This

[17] *Pace* Schmid (2005: chapter 3), who registers 123 and even 213 as alternative/preferred orders. Note that we, following the tradition in the literature, confine our discussion to verb-**clustering** structures, i.e. to the ordering in embedded-clause structures; the fact that the sequence of verbal elements is 123 in main-clause contexts – where the finite (i.e. highest) verb (V_1) has undergone raising to C and is therefore no longer part of a verb cluster – is thus not relevant to the discussion here.

[18] This is part of a wider rigidification of cluster ordering in Afrikaans.

type of complexity is known to be vulnerable in situations involving adult L2-learners (Smith & Wonnacott 2010, Perfors 2016).[19] More generally, simplification has been suggested to be the outcome in contact situations involving significant numbers of adult L2-speakers (Trudgill 2011), a scenario which certainly held at the Cape during the period of Dutch rule (1652–1806; see Ponelis 1993:chapter 1, and Groenewald 2024).

While contact may therefore have played into the loss of ordering optionality in Afrikaans, the way in which the innovated aspectual and pseudocoordination verbs were integrated into the existing 231 IPP-pattern, however, reflects the internal organization of the grammar. More specifically, the innovated IPP-verbs exhibit the 1-2 ordering associated with modal verbs (see (14a) above); for verb-clustering purposes, they therefore became part of the existing grammatical class to which modal verbs belong. More precisely, the innovative IPP-verbs – which are all aspectually and perspectivally oriented in semantic terms (see below) – joined the class of MODAL-PATTERNERS, which require their selected verbal complement to follow them, i.e. MOD_1-INF_2 as in (14a).

This can be interpreted as a consequence of the acquisition biases that drive L1-acquirers to make maximal use of minimal means (MMM; Biberauer 2019b).[20] That is, where possible, newly grammaticalized verbs will be assigned to already-existing grammatical categories, adopting their characteristic properties. This is in preference to the newly grammaticalized verbs exhibiting distinctive behavior and initiating a novel category of their own. In our case, all the innovative verbs therefore adopted the 1-2 ordering characteristic of Afrikaans modals, as in (14a), with the light verb (V_2 in the cluster) preceding the verb it selects.

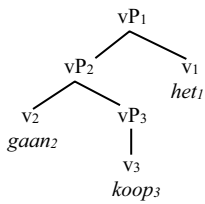
[19] An anonymous reviewer questions the proposal that free variation/true optionality in a grammatical system introduces complexity, pointing to the potentially quite long-standing availability of a semantically vacuous V2-V-final alternation in embedded *wh*-complements in Afrikaans (Biberauer 2017b). This case differs from free variation in the ordering of the members of a verb cluster in that the "extra" embedded option – the V2 *wh*-structure; embedded clauses are standardly V-final – is independently required in main clauses. By contrast, there is never an obligatory context/requirement for either of the alternating cluster orderings: Only one is in principle necessary. Where the source of the V2-V-final alternation can thus be attributed to overgeneralization/extension of a main-clause pattern, i.e. two structures that are acquired separately, the main-clause V2 one prior to the embedded V-final one, the 2-1 versus 1-2 alternation in verb clusters would seemingly require acquirers either to learn two interpretively identical orderings – a violation of Avoidance of Synonymy/the Mutual Exclusivity bias (Markman & Wachtel 1988, Hurford 2003), and of the Blocking discussed in Kroch (1994) – or to acquire the variable orderings as part of distinct varieties/registers in an established bi/multilingual society. Particularly also because variation in verb-cluster ordering seems to be sensitive to rather nuanced prosodic, lexical and syntactico-semantic factors (Swerts & Van Wijk 2005, Bloem 2021), it seems plausible that this option may have constituted complexity in the context of the unstable, rapidly changing multilingual environment at the Cape in the seventeenth and eighteenth centuries.

[20] In the terminology of Chomsky (2005), MMM is a so-called THIRD FACTOR, i.e. a general cognitive factor (Factor 3) that operates alongside a sparse Universal Grammar (Factor 1) and the input (Factor 2) in structuring natural-language grammars. Chomsky identifies "principles of data analysis … used in language acquisition and other domains"; Chomsky 2005:6), and constraints on the make-up and workings of the computational system underpinning human language ("principles of structural architecture" and "principles of efficient computation"; *ibid.*) as instantiations of Factor 3 (see Biberauer 2019b for further discussion).

Further, the fact that acquisition of three-verb clusters "piggy-backs" on the already-acquired ordering of two-verb clusters (see again Van Kampen 2017) reflects MMM in two additional ways. Firstly, it reflects the general computational fact (see footnote 20) that syntactic structure is always built up via successive binary Merge operations; superficially three-member structures will therefore always consist of nested binary structures, as illustrated in (15) for a familiar three-membered derivational form and in (16) for the 231-structures that are our focus here:

(15) a. *undoable* 'cannot be done' b. *undoable* 'can be undone'

(16) a. $gaan_2\ koop_3\ het_1 = [[gaan_2 + koop_3]\ het_1]$



This structural fact then plays into the second MMM-reflex, namely the already-mentioned acquisitional fact (see again footnote 20) that three-part structures are acquired by combining two pieces of earlier-acquired knowledge (see (13b) above): That the modal is initial in relation to its selected verb (1-2 ordering) whereas the auxiliary is final in relation to its selected verbal complement (2-1 ordering). Binary Merge produces two nested substructures (e.g. $gaan_2\ koop_3\ het_1$ as in (16) is $[[gaan_2 + koop_3]\ het_1]$), which acquirers learn independently and then combine to give the IPP-ordering.

Having considered the internal and external factors that appear to have shaped the 231-ordering that characterizes Afrikaans IPP-clusters, let us consider why this ordering is significant in understanding their distinctive properties. That IPP-structures are 231 is significant as this order ensures (i) the cluster-initiality of the IPP-verb (V_2), (ii) the adjacency of the IPP-verb (V_2) and the lexical verb (V_3), and (iii) the cluster-finality of *het* (V_1). (ii) matters as it creates the structural conditions required for the "derivational univerbation" (see below) observed in many Afrikaans IPP-clusters, while (i) ensures that a perspectival element surfaces cluster-initially, and (iii) facilitates key tense-related developments that have not occurred elsewhere in Germanic. Let us consider these points in a little more detail.

All the IPP-verbs (V_2s) are in some sense point-of-view/speaker-oriented (i.e. perspective- or stance-marking elements), and there has been significant innovation in the Afrikaans point-of-view-centered aspectual domain. More specifically, comparison with Dutch shows that "light" verbs familiar from Dutch (e.g. *gaan* 'go', *kom* 'come', *loop* 'walk', and *staan* 'stand') have become more grammaticalized in Afrikaans than is the case for their Dutch counterparts (see, among others, Breed 2017, Biberauer 2019a, Cavirani-Pots 2020). At the same time, aspectual

pseudocoordinations have also been established (De Vos 2005, Biberauer & Vikner 2017, Biberauer 2017a, 2019a, Cavirani-Pots 2020), and additional lexical items (e.g. *aanhou* 'continue' and *ophou* 'stop') have joined the class of IPP-verbs, potentially as an early step in an incipient grammaticalization process. These developments can be thought of as 'internal' to the extent that grammaticalization is an internal process.

Here it is worth noting, however, that the aspectual developments in Afrikaans are strongly tied to intersubjective meanings, that is to meanings that are particularly strongly associated with interactional contexts, which, in the case of Afrikaans, would also have been sociolinguistically complex throughout its history. In such contexts, it is useful for speakers to have a robust inventory of interactionally oriented lexical and grammatical structures facilitating effective communication.[21] Plausibly, then, the impetus for the grammaticalization – or, registering Traugott's (2009) subjectification > intersubjectification pathway and important work by, among others, Diewald (2011) and Müller & Axel-Tober (2025), plausibly, the pragmaticalization – observed in Afrikaans was both internal and external.

Importantly, the quirky V2 phenomena presented in section 2.3 demonstrate the extent to which some of the aspectual forms – crucially, those internally/grammatically licensed to do so (see again section 2.3 on the contrast between *aanhou/ophou* and the other forms, and the discussion to follow) – have grammaticalized: they effectively serve as adverbal modifiers adjoined directly to the finite verb and creating a syntactically indivisible unit that is effectively a compound verb (see Biberauer & Vikner 2017 for some initial discussion of what this might entail in formal terms). Had (ii) not held, the formal conditions for the rise of quirky V2 would have been compromised, with knock-on effects for the rise of the IPP-patterns seen in Afrikaans.

More specifically, quirky V2 arises where verbs that are combined via Merge – that is, verbs that are structurally adjacent (Merge sisters) – come to be treated as a single syntactic unit (via a derivational univerbation process, the formal details of which we leave aside here). This applies to the lower verbs in IPP-structures (V_2 and V_3) wherever V_2 directly selects V_3. The "size" considerations discussed in section 2.3 therefore become relevant: only V_2s selecting very small complements (specifically, subjectless vPs) will produce V_2-V_3 Merge sisters, and only these verbs are therefore predicted to be compatible with quirky V2 (where they, of course, are part of a two- rather than three-verb cluster).[22]

[21] See, among others, Wiltschko (2021) on the formal make-up of interactional grammar, and Biberauer (2018) for a proposal as to how interactionally oriented elements, particularly also innovative ones, are integrated into grammars. Significantly in the present context, Wiltschko (2014) characterizes the aspectual domain – i.e. the locus of the innovations under discussion here – as that associated with point-of-view.

[22] Significantly, this consideration also precludes an IPP-verb-plus-*het* complex from surfacing in quirky V2-structures: Regardless of the categorial nature of *het* (i.e. whether it is a v- or a T-element), it cannot merge with an IPP-verb to produce the input to a quirky V2 configuration; it will necessarily combine with a vP featuring a complete argument-structure complex. This correctly reflects the empirical facts for Afrikaans. If our proposal is on the right track, the Brazilian Pomeranian quirky V2 variant (see note 15) requires direct Merge of modal and tense heads. This seems plausible, taking into account the discussion in Postma 2019 and Kauffmann 2022.

Hierarchy aside, the linear aspect of the structural adjacency between V_2 and V_3, highlighted in (ii) above, is also important. The initial placement of V_2 (i.e. the initial verb in a Quirky V2 verbal complex) arguably enables these verbs to serve as modifiers in a complex verb, parallelling what we see in other attributive compounds in Afrikaans more generally (Van Huyssteen 2020, 2023). In practice, then, many Afrikaans 231-clusters are therefore actually two-verb clusters, with V_2-V_3 constituting an initial verbal compound and V_1 the second cluster-member, that is, [[*gaan*$_2$ + *koop*$_3$] *het*$_1$] as in (13) is effectively [[*gaan-koop*]$_2$ *het*$_1$]. This pattern matches the invariant 2-1 ordering found with auxiliary *het* in verb clusters (see again (14b)). Compressed verbal structures of this kind are systematically unavailable in Dutch, where the presence of verbal inflection (contrasting finite and non-finite forms, which require additional functional structure) presumably precludes the derivational univerbation observed in Afrikaans. Internal grammatical factors have therefore served to integrate the 2-3 component of Afrikaans IPP-clusters in a distinctive way.

Turning to the placement of cluster-final *het*, (iii) above was, in turn, crucial to the developments that have affected clause-final *het* more generally (see Conradie 2007, Zwart 2017). The precise formal status of final *het* need not concern us here;[23] what matters is that the absolute requirement that non-V2 *het* be verb-cluster-final and necessarily adjacent to its selected participle/IPP-infinitive[24] (see (14b)) has clearly fed into its formal reduction: as is well known, rigid placement of this kind feeds morphologization (Hopper & Traugott 1993:132, Conradie 2007). And this reduction has, in turn, led to a significant restructuring of the Afrikaans tense system, which we will now briefly consider.

In Dutch, *ge-* is often analyzed as a completive-aspect marker (Zwart 2007). In Afrikaans, it appears to have undergone further grammaticalization (Asp > T, effectively), becoming a tense-related marker in modern-day Afrikaans (De Vos 2003).[25] The proposal that *ge-* may in fact be a tense-marker of some kind would, for example, account for dialectal data like that from Griqua Afrikaans, which permits *het*-dropping (see again the data in (12) above). The *ge-*to-tense grammaticalization process may have its origins in the Cape Dutch pidgin that fed into the structure of Afrikaans: Roberge (2002:93) notes that *ge-/ga-* in the Cape Dutch pidgin thought to have been spoken in the Cape from the early eighteenth century "marked events situated in the past," and he mentions the possibility that this usage was reinforced by Khoekhoe preterital particles of similar form. In most modern Afrikaans varieties, however, *ge-* still systematically combines with *het*, which has also undergone further grammaticalization in all varieties of Afrikaans.

[23] See Conradie 2007 and Zwart 2017 for discussion of final *het* as potentially instantiating either an inflectional clitic or an affix. Importantly, V2 *het* must then be formally distinct from clause-final *het* in Afrikaans, an analytical position that seems well justified in light of empirical patterns that we do not have the space to discuss here. See also note 26.

[24] An anonymous reviewer correctly notes that *het* does not superficially appear to be directly adjacent to the IPP-verb in IPP-structures. As we go on to show, appearances are in fact deceptive, however, as the majority of Afrikaans IPP-structures (all those containing V_2s that participate in quirky V2) are two- rather than three-verb clusters.

[25] This development also seems to be relevant in understanding the rise of innovative aspectual forms in Afrikaans: The loss of completive-marking *ge-* seems to go hand-in-hand with the rise of numerous inceptive and process-oriented "light" verbs; see again the list in (5).

Focusing first on *ge-*: its distribution in colloquial varieties (other than Griqua Afrikaans) suggests that it has become part of a superficially circumfixal tense-marking structure (*ge*-V-*het*).[26] As such, the tendency for speakers to include it in (some of the) IPP-structures can be understood as a tendency to regularize the expression of past tense in Afrikaans such that it includes both the *het-* and the *ge-* components. This impetus to regularize may well be reinforced by the existence of superficial 231-structures that are in fact two-verb 2-1 clusters, namely, those containing V_2s that participate in quirky V2. Example (17) illustrates the relevant structural configuration:

(17) $[[gaan_2 + koop_3]\ het_1] \Rightarrow [[gaan\text{-}koop]_2\ het_1]$

As 2-1 structures are participial structures in Afrikaans (see (14b)), the occurrence of *ge*-marking in IPP-structures featuring quirky V2 V_2-verbs is not unexpected: This pattern simply reflects the verbal complex being treated in the same way as the majority of simplex verbs in Afrikaans, which take *ge-* in participial contexts.

Given the fact that *ge-* is, however, not consistently realized in non-IPP contexts either – standard-oriented varieties in particular retain (versions of) the Dutch-derived *ge*-prefixing constraint – optionality is to be expected. According to the *ge*-prefixing constraint that is active in standard Afrikaans (as it is in standard Dutch), verbs with unstressed initial syllables do not take *ge-*: thus *het (*ge)probeer/(*ge) verstaan/(*ge)begin* ('have tried/understood/started'). Interestingly, Conradie (2012) points to phonological considerations that appear to condition the realization of *ge*-marking in standard-oriented varieties: Participles are characterized by a rising stress-pattern, in the absence of which *ge-* is obligatory; thus *gegáán* 'went' versus (**ge*) *probéér* 'tried'. In less standard-oriented varieties, this phonological consideration is loosened under the influence of what can be viewed as "competing" morphosyntactically based *ge*-generalization/regularization pressure. This then gives rise to forms like those introduced in section 2.4.

Since IPP-structures effectively feature a two-part participle in Afrikaans (see again (17)), with V_3 serving as a stressed component (e.g. *gaan éét* 'go eat'), we expect the *ge*-less structure to be preserved in more standard-oriented varieties where *ge*-marking is prosodically conditioned. This, then, supports the retention of IPP-structures. Where morphosyntactically driven *ge*-generalization is in play, however,

[26] If *ge*-V-*het* is indeed circumfixal in some sense (see below), *het* in V2-position clearly requires explanation, as already noted in note 23 (see also Zwart 2017). A formal distinction between Afrikaans' full and reduced *het*s paralleling that proposed in MacKenzie (2013) for the English non-modal auxiliaries strikes us as promising in this regard. This would imply that final and V2 *het* do not instantiate the same functional head. Note, too, that our characterization of *ge- … het* as "circumfixal tense-marking" should be interpreted in descriptive rather than analytical terms; there are various empirical indications that *ge-* and *het* function independently in modern Afrikaans varieties, as they do in West Germanic, and that *ge-* is structurally closer to the verb than *het* is. Further, Conradie and Zwart's discussions raise various questions about the extent to which final *het* has weakened – Is it a clitic? Is it an affix? – which we cannot go into here, relevant though they clearly are to a complete understanding of IPP-structures. Many details go beyond the remit of the present article. Finally, as an anonymous reviewer points out, the proposed *ge*-V-*het* perspective on modern Afrikaans past-tense marking in some ways suggests that Afrikaans may have come full circle, having initially lost the participial *-t*-suffix.

optionality emerges. Against this backdrop, the fact that Afrikaans IPP-structures may be *ge*-marked therefore follows from internal factors (the considerations determining the realization of *ge*-) and the differing formal generalizations that speakers of different varieties postulate – possibly to varying extents in different registers – regarding those internal factors.

Returning to *het*: Its formal reduction has not just affected the realization of participial structures; it also seems to be an important consideration in the reorganization of the modal system. Specifically, if *het* has become a tense suffix, as tentatively proposed by Zwart (2017), it becomes possible to analyze past-marked modals as suppletive forms which will not therefore co-occur with *het*: They are already tense-marked. To the extent that speakers' grammars contain inflectional *het*, both (4b) and (4c) are therefore expected to be absent from production, as observed. Similarly, (4a) is expected to be common, again as observed. Space considerations preclude full engagement with the patterns discussed in section 2.2, but what again seems clear is that the differences between Afrikaans and Dutch in the modal domain are at least partly the result of contact (the factors affecting the reanalysis of *het* and *ge*-) and partly of the kind of internal reorganization that is familiar from systems in which key elements undergo reanalysis.

4. Conclusion and outlook

In this article, we set out to probe the optionality of the IPP-effect in Afrikaans, and to consider the factors that have produced the IPP-picture that we see today. We have established that the IPP continues to exist, albeit in altered form compared to Dutch, with some core patterns having been lost, while new ones were innovated. In colloquial varieties, IPP-forms alternate – often interpretively vacuously – with *ge*-marked forms, a phenomenon that appears to follow from partly independent changes to the tense system, which also account for the loss of modal-centered IPP. In considering the innovative patterns, we see clear continuity with the Dutch formal system, but also various uncontroversial contact influences that have led to reorganizations of this system. These include the need for Afrikaans to be a viable interaction-oriented spoken-language system in a sociolinguistically complex setting, that is, one which, among other things, lacks undue free variation and contains sufficient devices to enable speakers to convey perspectival and stance-related meanings. Ponelis (1993) and Conradie (2012) were therefore correct – in Afrikaans, Dutch-style IPP is dead; but De Schutter (2001) was also correct – the IPP is indeed living its own life. Probing the form that this takes in different varieties of Afrikaans, how the various systems came about, and to what extent the attested optionality is genuinely interpretively vacuous are just some of the questions that now suggest themselves.

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