

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

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# Introduction

## The IPP (*Infinitivus Pro Participio*) effect

(1) ... dat ik **ben<sub>1</sub> gebleven<sub>2</sub>**.

... that I am remained.PTCP

'... that I stayed.'

(Dutch)

(2) ... dat ik **ben<sub>1</sub> blijven<sub>2</sub>** / \***gebleven<sub>2</sub>** eten<sub>3</sub>.

... that I am remain.INF remain.PTCP eat.INF

'... that I carried on eating.'

(Dutch)

AUX<sub>1</sub> -- MOD/ASP<sub>2</sub> – LEXICAL VERB<sub>3</sub>

# Introduction

## West Germanic picture

- The IPP effect exists in Dutch, Afrikaans and German (Schmid 2005)
- It does not exist in English, Yiddish, Frisian (Hinterhölzl 2009)
- Afrikaans: status of the phenomenon not exactly clear (Ponelis 1993, De Schutter 2001, Conradie 2012)

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= A cover term for a range of heavily contact-shaped varieties with (some of) their roots in 17<sup>th</sup> century Dutch varieties

- L1 for ca. 7 million speakers (13.5% of total population), 4.8 million (75.8%), of whom are “Coloured”
- Majority language in Western and Northern Cape Province; widespread L2
- *Major contact languages*: Malay varieties, Portuguese (Creole), Khoi varieties (den Besten 2010), Huguenot French, English, various Arabic and Bantu languages

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- barring the Khoi varieties, the other systems are predominantly SVO
  - West Germanic-style verb-clusters, a pre-requisite for IPP, not shared by other contact varieties

# Introduction

## Optionality of Afrikaans IPP

- (3) ... dat ik **ben**<sub>1</sub> **blijven**<sub>2</sub> / \***gebleven**<sub>2</sub> eten<sub>3</sub>.  
... that I am remain.INF remain.PTCP eat.INF  
'... that I carried on eating.' (Dutch)
- (4) ... dat ek **bly**<sub>2</sub> / **gebly**<sub>2</sub> eet<sub>3</sub> **het**<sub>1</sub>.  
... that I remain.INF remain.PTCP eat.INF have  
'... that I carried on eating.' (Afrikaans)

# Introduction

## **Three perspectives on the Afrikaans IPP from the existing literature**

- I. The IPP is alive and well, in recognisably West Germanic form (Schmid 2005)
- II. The IPP is dead – no longer an active part of Afrikaans grammar (Ponelis 1993, Conradie 2012)
- III. The IPP has reinvented itself in a distinctive form (De Schutter 2001)

# Introduction

## Aims of the talk

- Give a clear empirical overview of the IPP effect in (varieties of) Afrikaans
- Show what role inheritance and language contact respectively have played in shaping Afrikaans IPP
- Discuss the implications for a generative theory of language contact and contact-induced change

# Outline

1. Introduction
2. The IPP in Afrikaans: empirical facts
  - 'Standard' Afrikaans vs Dutch
  - Colloquial varieties of Afrikaans
3. The role of inheritance and contact
  - loss of IPP: modals
  - innovated IPP verbs and the Quirky V2 connection
  - optional *ge-* in IPP-contexts and *ge*-related alternations
4. Theoretical implications

# The IPP in Afrikaans: empirical facts

# 'Standard' Afrikaans vs Dutch

- (5) ... dat ik **ben<sub>1</sub>** **blijven<sub>2</sub>** / \***gebleven<sub>2</sub>** eten<sub>3</sub>.  
... that I am remain.INF remain.PTCP eat.INF  
'... that I carried on eating.' (Dutch)
- (6) ... dat ek **bly<sub>2</sub>** / **gebly<sub>2</sub>** eet<sub>3</sub> **het<sub>1</sub>**.  
... that I remain.INF remain.PTCP eat.INF have  
'... that I carried on eating.' (Afrikaans)

# 'Standard' Afrikaans vs Dutch

(7) ... dat ek bly<sub>2</sub> / ??gebly<sub>2</sub> eet<sub>3</sub> het<sub>1</sub>.

... that I remain.<sub>INF</sub> remain.<sub>PTCP</sub> eat.<sub>INF</sub> have

'... that I carried on eating.'

(Afrikaans)

(8) ... dat ek die hele middag sit<sub>2</sub> / gesit<sub>2</sub> en werk<sub>3</sub> het<sub>1</sub>.

... that I the whole afternoon sit.<sub>INF</sub> sit.<sub>PTCP</sub> and work.<sub>INF</sub> have

'...that I sat and worked the entire afternoon.'

(Afrikaans)

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- Optionality is strongly influenced by different subclasses of V<sub>2</sub>

# 'Standard' Afrikaans vs Dutch

Dirix et al. (2020): corpus study (Taalkommissiecorpus)

- High rates (81.25-100%) of IPP with:
  - 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')
  - benefactive *help* 'help' and *leer* 'teach'

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    - benefactive *help* 'help' and *leer* 'teach'
- These are all subclasses exhibiting the IPP effect in Dutch (Schmid 2005)

# 'Standard' Afrikaans vs Dutch

Dirix et al. (2020): corpus study (Taalkommissiecorpus)

- 2 verbal sub-classes with distinctive behaviour:
  - motion verb *loop* 'walk' and the three cardinal posture verbs, *sit* 'sit', *staan* 'stand' and *lê* 'lie'
  - the root modal verbs *moet* 'must', *kan* 'can', *wil* 'want' and *mag* 'may'

# 'Standard' Afrikaans vs Dutch

# Motion and posture verbs in pseudocoordination (PC) constructions

- (9) ... dat ek die hele middag **sit<sub>2</sub>** / **gesit<sub>2</sub>** en werk<sub>3</sub> **het<sub>1</sub>**.  
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'...that I sat and worked the entire afternoon.' (Afrikaans)

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➤ Cavigliani-Pots (2020): striking levels of intraspeaker optionality

# 'Standard' Afrikaans vs Dutch

## Motion and posture verbs in pseudocoordination (PC) constructions

Verb	Obligatory <i>ge-</i>	Optional <i>ge-</i> /IPP	Obligatory IPP
<i>Loop</i> 'walk'	15.1 %	69.4 %	15.5 %
<i>Sit</i> 'sit'	13.1 %	84.4 %	2.5 %
<i>Staan</i> 'stand'	12.5 %	82.8 %	4.7 %
<i>Lê</i> 'lie'	8.0 %	91.0 %	1.0 %

(Cavirani-Pots 2020: 192)

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- Degree of optionality correlates with the verb's degree of grammaticalisation

# 'Standard' Afrikaans vs Dutch

## Modal verbs (core IPP-class in Dutch)

(9) ... dat ik veel heb<sub>1</sub> kunnen<sub>2</sub> / \*gekund<sub>2</sub> werken<sub>3</sub>.

... that I a.lot have can.INF can.PTCP work

'...that I managed to work a lot.'

(Dutch)

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- Afrikaans modals are different from the Dutch ones on many fronts

# 'Standard' Afrikaans vs Dutch

**Afrikaans modal verbs = special class (Donaldson 1993: 242)**

- Only Afrikaans verbs with dedicated past-tense form  
*moet–moes* 'must', *kan–kon* 'can', *wil–wou* 'want', and, marginally, *mag–mog* 'may'
- Lack a past participle form

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*moet–moes* 'must', *kan–kon* 'can', *wil–wou* 'want', and, marginally, *mag–mog* 'may'
  - Lack a past participle form
- Do not exhibit the IPP effect in Afrikaans (Dirix et al. 2020, De Schutter 2001)

# 'Standard' Afrikaans vs Dutch

## 'Standard' Afrikaans IPP verbs

- a. Aspectual: *begin* 'begin', *gaan* 'go', *kom* 'come', *bly* 'stay', *aanhou* 'continue', *ophou* 'stop'
- b. Subject control: *probeer* 'try', *durf* 'dare' and *leer* 'learn'
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- d. Perception: *hoor* 'hear' and *sien* 'see'
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# 'Standard' Afrikaans vs Dutch

## Quirky V2 (De Vos 2005; Biberauer 2019a)

- (8) a. Daar **loop**<sub>1</sub> (**en**) **vertel**<sub>2</sub> [hy<sub>SUBJECT</sub>] alweer allerhande stories!
- there walk and tell he again all.kinds stories

'There he's going around telling all kinds of stories again!'

- b. Daar **loop**<sub>1</sub> [hy<sub>SUBJECT</sub>] alweer allerhande stories **en** **vertel**<sub>2</sub>!
- there walk he again all.kinds stories and tell

(Biberauer 2019a:6)

# 'Standard' Afrikaans vs Dutch

## Quirky V2 (De Vos 2005; Biberauer 2019a)

Common property linking Quirky V2 and IPP = **Structural proximity**

- *Quirky V2*: V2 movement of a multi-part verb that appears to the syntax as a head-unit
- *IPP*: infinitive spellout reflects 2 verbs within a spellout domain that is “too small” for them (Kjeldahl 2010)

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## Three patterns of interest:

1. combination of *ge-* with other verbal prefixes and particles
2. surfacing of *ge-* on V<sub>3</sub> rather than V<sub>2</sub> in IPP-contexts
3. drop of auxiliary *het* ‘have’ in the presence of *ge-* on the lexical V

# Colloquial varieties of Afrikaans

## Property 1: combination of *ge-* with other verbal prefixes and particles

- Std Afrikaans (& Dutch): participial *ge-* is absent with verbs prefixed with *be-*, *er-*, *her-*, *ont-* and *ver-*

[avoids Weak-Weak-Strong stress contour %ge<sub>Weak</sub>-be<sub>Weak</sub>-GIN<sub>Strong</sub> - 'began']

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Griqua Afrikaans and other colloquial varieties:

- (9) **gebeginne** – 'begun'; **geérken** – 'acknowledged'; **geherken** 'recognised';  
**geonthou** – 'remembered'; **geverneem** – 'enquired' (Rademeyer 1938:62-3)

# Colloquial varieties of Afrikaans

## Property 1: combination of *ge-* with other verbal prefixes and particles

Griqua Afrikaans in particular: greater positional freedom for *ge-*

- (10) a. Standard Afrikaans: **op**gebel**** (up.GE.call – ‘called’); **neergesit** (down.GE-sit – ‘put down’)
- b. Griqua Afrikaans: **ge**opbel****; **ge**neersit**** (Rademeyer 1938:62)

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(11) Ek het nou nie **geskool** **gegan** nie.

I have now not GE.school GE.gone not

‘I did not really attend school.’ (Rademeyer 1938:63)

# Colloquial varieties of Afrikaans

## Property 2: surfacing of *ge-* on V<sub>3</sub> rather than V<sub>2</sub> in IPP-contexts

Knysna Boswerker Afrikaans, Baster Afrikaans, Velddrifse Vissertaal (De Vos 2003)

- (12) Ons **het**<sub>1</sub> nou sy kopklip ... in Delport **lop**<sub>2</sub> **opgemak**<sub>3</sub>.  
us have now his headstone ... in Delport walk up.GE.make  
'We have now erected his headstone in Delport.' (Conradie 2012:133)

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- Cavigani-Pots (2020): 14/201 speakers accepted *ge-* on V<sub>3</sub> in pseudo-coordinations with *loop* ('walk') as V<sub>2</sub>, and 35 speakers with *sit* as V<sub>2</sub>

# Colloquial varieties of Afrikaans

## Property 3: drop of *het* in presence of *ge-* on lexical V

### Griqua Afrikaans

(13) a. Ek [**HET<sub>1</sub>**] by hille daarie klom jare **gebly<sub>2</sub>**.

I by them that bunch years PTCP.stay

'I stayed with them all those years.'

(Van Rensburg et al. 1984:869)

b. Die ene wat my broer se vrou **gevat<sub>2</sub>** [**HET<sub>1</sub>**].

the one what my brother poss wife PTCP.take

'The one who stole my brother's wife.'

(Van Rensburg et al. 1984:1019)

# Colloquial varieties of Afrikaans

**Colloquial varieties exhibit:**

1. Greater optionality of the IPP effect
2. Greater syntactic freedom of *ge-*
3. Optionality of auxiliary *het*

# Interim summary

## Empirical picture of Afrikaans IPP

- Structures with infinitives replacing participles are part of modern Afrikaans, though to varying extents in different varieties
- Some core West Germanic IPP patterns are absent: IPP with core modals
- There are also IPP innovations: motion and posture verbs, aspectual particle verbs *aanhou* ('continue') and *ophou* ('stop')
- IPP structures alternate with *ge*-marked participles in a way that's not attested in European West Germanic

# Interim summary

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## Interim conclusion on the status of the IPP effect in Afrikaans

- It's not dead, but seems a reinvention/elaboration on an old Dutch theme
- *Our next objective:* consideration of the factors – deriving from both inheritance and contact – shaping the Afrikaans IPP

# The role of inheritance and contact

# The explananda

- (14) a. loss of IPP: modals
- b. innovated IPP: motion and posture verbs, and the Quirky V2 connection
- c. optional *ge-* in IPP-contexts and *ge*-related alternations

# Our proposal

**(14a-c) are all reflexes of a reorganisation of the Afrikaans tense system**

The verbal and particularly the tense system underwent reorganisation as a consequence of a complex interplay of

- a. formal (phonological, morphological, lexical and syntactic) and
- b. sociolinguistic factors

# Verbal inflection in 17<sup>th</sup> century Dutch

17<sup>th</sup> century Dutch had morphologically marked tense, agreement and finiteness distinctions, plus auxiliary selection (*hebben* vs *zijn*)

- 17<sup>th</sup> century Dutch verbal inflection already contained many syncretisms

	SG	PL
1	<i>Ik loop</i> 'I walk'	<i>Wij lopen</i> 'we walk'
2	<i>Jij loopt/Loop je</i> 'You walk'	<i>Jullie loopt/lopen</i> 'you walk'
3	<i>Hij/zij/het loopt</i> 'He/she/it walks'	<i>Zij lopen</i> 'they walk'

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Weak verbs	
Infinitive	Participle
<i>werken</i> 'to work'	<i>gewerkt</i> 'worked'
<i>kammen</i> 'to comb'	<i>gekamd</i> 'combed'

Strong verbs	
Infinitive	Participle
<i>denken</i> 'to think'	<i>gedacht</i> 'thought'
<i>kopen</i> 'to buy'	<i>gekocht</i> 'bought'

- Colloquial 17<sup>th</sup> century Dutch feature [t]-apocope

# Cape Dutch

- **Spoken by:**
  - Dutch settlers (Hollandic varieties)
  - Slaves from the East Indies and Africa (India, Madagascar, Indonesia; Mozambique, Angola, Guinea)
  - Khoi traders and acculturated Khoi (Ponelis 1993: chapter 1)
- High concentration of L2 speakers
- weak 'vertical' ties (Warren 1964) among the L1 speakers.

Year	Europeans	Free Blacks	Slaves	Khoekhoe	Prop. L2 ( $\sigma$ )
1670	125	13	52	—	[0.17, 0.34]
1690	788	48	381	—	[0.18, 0.35]
1711	1,693	63	1,771	—	[0.26, 0.52]
1730	2,540	221	4,037	—	[0.31, 0.63]
1750	4,511	349	5,327	—	[0.28, 0.56]
1770	7,736	352	8,220	—	[0.26, 0.53]
1798	c. 20,000	c. 1,700	25,754	14,447	[0.34, 0.68]
1820	42,975	1,932	31,779	26,975	[0.29, 0.59]

**Table 2:** Demographics of Dutch Cape Colony, 1670–1820 (Giliomee & Elphick 1979: 360), together with estimated range for the fraction of people speaking Dutch as L2,  $\sigma$  (see text). Column for Khoekhoe includes people of mixed background; these data are not available prior to 1798.

From Kauhanen (2022:20)

# Cape Dutch

- Early developments in the verbal system:
  - already existing colloquial patterns in 17<sup>th</sup> century Dutch amplified
    - e.g. generalisation of [t]-apocope (distinguishing 2<sup>nd</sup> and 3<sup>rd</sup> person from 1<sup>st</sup> person in the singular)
  - loss of the acoustically weak nasal endings marking the plural and the infinitive
- loss of verbal agreement and finiteness marking

# Verbal inflection in modern Afrikaans

- **Modern-day Afrikaans** no longer has morphologically marked tense, agreement and finiteness distinctions, or auxiliary selection.
  - all lexical verbs are invariant in form:  
e.g. *loop* = all present-tense persons, infinitive, imperative
  - one exception: the modals retain a present-preterite distinction:  
e.g. *kan/kon* – ‘can/could’; *sal/sou* – ‘shall/should’ = future ‘will/would’; *wil/wou* – ‘want(ed) to’; *moet/moes* – ‘must/had to’
  - general loss of preterite > all pasts expressed via the “perfect” *het ... ge-*
  - loss of auxiliary selection (late 19<sup>th</sup> century): HAVE has taken over all active BE-environments (Conradie 2015)
  - loss of tense, agreement and finiteness marking
    - (a lot of) invariant *het*

And: *het*-placement is fixed, in contrast to 17<sup>th</sup> century and modern Dutch

# Loss of optionality: 2-verb clusters

## A. PARTICIPLE-AUXILIARY

(16) a. *Dutch*

... dat zij heeft<sub>1</sub> gelachen<sub>2</sub>/ gelachen<sub>2</sub> heeft<sub>1</sub>. (Pauwels 1953)  
that she have PTCP.laugh PTCP.laugh have  
'... that she has laughed'

b. *Afrikaans*

... dat sy \*het<sub>1</sub> gelag<sub>2</sub>/gelag<sub>2</sub> het<sub>1</sub>.

- only the green (2-1) order [established by 1779; Scholtz 1963:166]
- *het* always follows the lexical verb in two-verb clusters (suffixation environment)

# Loss of optionality: 2-verb clusters

## B. MODAL/ASPECTUAL-INITIATIVE

(17) a. *Dutch*

... dat je de speld in de hooimijt *gaat<sub>1</sub> vinden<sub>2</sub>/vinden<sub>2</sub> gaat<sub>1</sub>*.  
that you.SG the needle in the haystack go find.INF find.INF must

'... that you must find the needle in the haystack' (adapted from Conradie 2023)

b. *Afrikaans*

... dat jy die naald in die hooimied *gaan<sub>1</sub> vind<sub>2</sub>/\*vind<sub>2</sub> gaan<sub>1</sub>*.

- only the red (1-2) order
- the (perspectively oriented) MOD/ASP element will always be cluster-initial

# Consequences for the IPP: the role of acquisition

- Because of the way three-verb clusters are acquired, the ordering rigidification also has consequences for IPP-structures (basic pattern:  $\text{Aux}_1$  -  $\text{Asp}_2$ -  $\text{Lexical V}_3$ )
- 3-verb clusters aren't acquired independently; children harness their already-existing knowledge of the ordering of 2-verb clusters (van Kampen 2017)
  - they maximise minimal means (Biberauer 2018, 2019), piggybacking on earlier-acquired knowledge

Thus for Afrikaans:

- (18) a. participle + auxiliary = **2-1 ordering**  
b. aspectual + infinitive = **1-2 ordering**
- basic IPP-template = [[**aspectual<sub>2</sub>-infinitive<sub>3</sub>**]-auxiliary<sub>1</sub>] = **fixed 2-3-1 ordering**
- |      |       |      |
|------|-------|------|
| loop | skryf | het  |
| walk | write | have |

➤ *het* is consistently final in IPP-structures; and the perspective-marking aspectual is initial

- Contrast Dutch: **123** and with **231** as an additional option in some dialects (Schmid 2005, Haegeman & Oosterhof 2012, Barbiers, Bennis & Hendriks 2016, Wurmbrand 2017)

# *Het* in modern Afrikaans

- Modern-day Afrikaans final *het* ('have') has evolved into a **tense clitic** or even **inflection** (Conradie 2007, in press Zwart 2017)
- Consider the orthographic representation in modern-day Kaaps (19) and Sandveld Afrikaans (20):

(19) a. ... voo hy nog 'n vrag in sy mon **gegooiet** (=gegooi *het*) [Spoekie; A. Trantraal 2019:7]  
before he still a load in his mouth PTCP.throw.HAVE  
'...before he threw another handful into his mouth'

b. ... wat my die boek **gegieret** (=gegee *het*) [Spoekie; A. Trantraal 2019:6]  
what me the book GE.give.HAVE  
'... who gave me the book'

(20) a. As jou kamer se nommer nou vyf **gewees't**... (=geword *het*) [Sandveldstories; Deist 1989:37]  
if your room POSS number now 5 PTCP.be.HAVE  
'If your room number was, say, 5 ...'

b. ... oorlat hy haar uitdruklik **geverbied't** ...\* (=verbied *het*) [Sandveldstories; Deist 1989:25]  
over.that he her expressly PTCP.forbid.HAVE  
'... because he expressly forbade her ...'

\* NB: *ge-* co-occurs with *ver-* here see (10)

# Back to the IPP explananda

- (14) a. loss of IPP: modals
- b. innovated IPP: motion and posture verbs, and the Quirky V2 connection
- c. optional *ge-* in IPP-contexts and *ge*-related alternations

# Back to the IPP explananda

## (14) a. loss of IPP: modals

- The modals = a class of exceptions to the innovated *het*-suffixation tense-inflection pattern

(21) a. Lexically specified tense forms: *kan/kon; sal/sou; wil/wou; moet/moes*

b. Elsewhere: V-*het*

➤ IPP structure: Mod<sub>2</sub>-LexV<sub>3</sub>-Aux<sub>1</sub>

i.e. the IPP centers on rendering a past-tense modal meaning;

blocked by (21a) - hence a preference for 2-verb *kon lees* (lit: 'could read') over *kan/kon lees het* (lit: can/could read have') and the absence of modal-based IPP in Afrikaans.

# Back to the IPP explananda

- (14) a. loss of IPP: modals ✓
- b. innovated IPP: motion and posture verbs, and the Quirky V2 connection
- c. optional *ge-* in IPP-contexts and *ge*-related alternations

# Novel IPP-verbs

- (14) a. loss of IPP: modals ✓
- b. **innovated IPP: motion and posture verbs, and the Quirky V2 connection**
- c. optional *ge-* in IPP-contexts and *ge*-related alternations

# Novel IPP-verbs

- Recall the link between Quirky V2 and IPP-verbs:

- (22) a. Gister **loop vertel** hulle my ek kan Parys toe gaan. [Quirky V2]  
yesterday walk tell they me I can Paris to go  
'Yesterday they came and told me I can go to Paris.
- b. Gister **het<sub>1</sub>** hulle my **loop<sub>2</sub> vertel<sub>3</sub>** ek kan Parys toe gaan. [IPP with V2]  
yesterday have they me walk tell I can Paris to go
- c. ... dat hulle my gister **loop<sub>2</sub> vertel<sub>3</sub> het<sub>1</sub>** ek kan Parys toe gaan. [IPP without V2]

➤ Why the additional IPP verbs, and why the connection to Quirky V2?

# Expanding the class of aspectual verbs

- The innovated V<sub>2</sub>s: *gaan* ('go'), *kom* ('come'), *ophou* ('stop') and *aanhou* ('continue'); and *loop* ('walk'), *staan* ('stand'), *sit* ('sit') and *lê* 'lie'
- All the innovated V<sub>2</sub>s express **aspectual** and **perspective-oriented** meaning
  - no inflectionally marked aspect in Dutch or Afrikaans (see Diesing 1997 on "compensatory" light verbs in Yiddish)
  - (inter)subjectively oriented meanings = a priority in spoken interaction, particularly in complex sociolinguistic settings
  - such meanings are also a frequent (necessary?) starting point for grammaticalisation (Jespersenian 'cycles'; van Gelderen 2011, Mosegaard-Hansen 2020, Biberauer 2018, 2023)

# Novel IPP-verbs

- Motion and posture verbs also serve an aspectual function in Dutch (Cavirani-Pots 2020).
- The Afrikaans verbs are more grammaticalised, though:
  - (mostly) part of a monoclausal structure
  - specialised as members of a quite large class of light verbs (first-merged in v)
- Additionally, the **extreme deflection** of the Afrikaans verbal system – finite and non-finite lexical verbs = formally identical barring the *ge*-marked participle – creates a **univerbation** opportunity absent in other IPP-languages.
  - Recall (3-4):

(3) Dutch: Ik **ben<sub>1</sub>** **blijven<sub>2</sub>** eten<sub>3</sub>.  
I am remain.INF eat.INF  
'I carried on eating.'

(4) Afrikaans: Ek **het<sub>1</sub>** **bly<sub>2</sub>** eet.  
I have remain.INF eat.INF  
'I carried on eating.'

- *blijven* = distinctively an infinitive (-en marking); *bly* could be a finite/non-finite verb

# Intersubjectively oriented univerbation

- Quirky V2 forms:

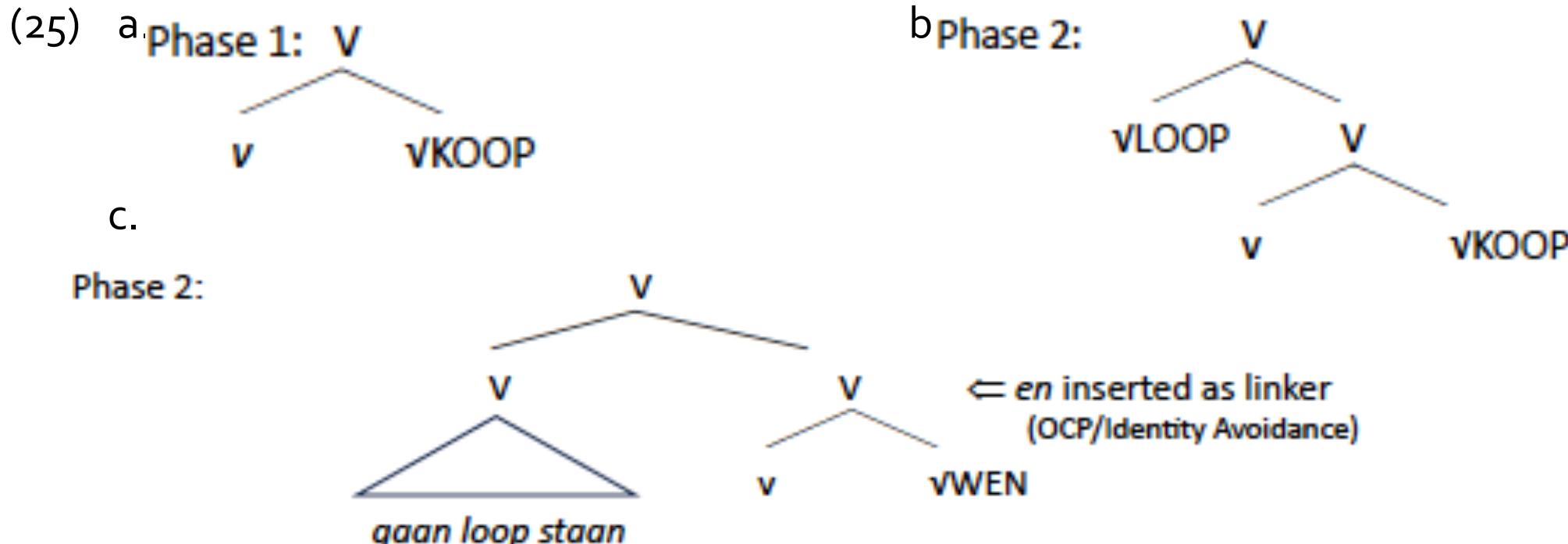
- (23) a. *loop haal* – literally: walk fetch – ‘go (and) get’  
b. *kom/gaan vertel* – literally: come/go tell – ‘come/go and tell’  
c. *gaan loop staan (en) wen* – literally: go walk stand and win – ‘go and win’

- (24) Toe **gaan loop staan en wen** sy die 10k!  
then go walk stand and win she the 10km  
'And then she went and won the 10k(m race)!'

➤ verbal compounding

# Intersubjectively oriented univerbation

- Lexical categories (V, N, etc.) = phases (Marantz 2007)
  - “regular” V-outputting Lexical Array (monophasal):  $\sqrt{\text{LEXICAL VERB}}, v$  (25a)
  - intersubjectively modified V-outputting Lexical Arrays (biphasal):
    - lower phase:  $\sqrt{\text{LEXICAL VERB}}, v$ ;
    - higher phase:  $\sqrt{\text{MODIFYING ROOT}}$  (25b), or phrasal compound verb (25c)



- $\sqrt{\cdot}$  or (atomized) head (“phrasal”) adjunction to the regular lexical verb (Botha 1981)
- the “quirky V2”-verb = a verbal compound

# Root and XP recycling and perspectival meaning

- Where does the intersubjective (perspectival) meaning come from?
- Biberauer (2018, 2023): structural (phase) edges = the ‘way in’ for novel material (including borrowed and “recycled” material)
  - In a grammatical system, this is the ‘**edge of chaos**’ familiar from dynamic systems, i.e. the creativity zone where innovations are introduced (Bosch 2022), which may subsequently become more/less fully integrated into the existing system (semi-grammaticalisation > full grammaticalisation)
  - Given the (inter)subjective functions of many (all?) initially newly integrated elements (Traugott 2007, 2010), this ‘edge of ‘chaos’ perspective leads us to expect intersubjectively marked elements to be phase-peripheral (the **Peripheral Speaker-Hearer Hypothesis**)
  - Formally, if newly integrated elements are (formal featureless) roots or idiom-like chunks, which cannot select or be selected, we expect them to be “last out” of their Lexical Array > phase-peripheral.
  - Quirky V2 = the case where a root or phrasal compound is “last out” of the Lexical Array associated with a lexical verb.

# Back to the IPP explananda

- (14) a. loss of IPP: modals ✓
- b. innovated IPP: motion and posture verbs, and the Quirky V2 connection ✓

# Back to the IPP explananda

- (14) a. loss of IPP: modals ✓
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- c. optional *ge-* in IPP-contexts and *ge-*-related alternations

# Optional *ge-*

- In Quirky V2 structures, it is clear that 2 verbs are formally in fact just one.
- Recall that Afrikaans final *het* behaves like a clitic/inflection, and that *het ge-* is the regular past-tense form.

(26) a. .... dat ek **ge**[loop<sub>2</sub>]- **het**<sub>1</sub>.  
that I PTCP.walk- HAVE  
'... that I walked'

b. ... dat hulle my [loop"<sub>2</sub>" **vertel**"<sub>3</sub>]<sub>2</sub> **het**<sub>1</sub>  
that they me walk tell HAVE  
'... that they went and told me.'

c. ... dat hulle my **ge** [loop **vertel**] **het**<sub>1</sub>  
that they me PTCP.walk tell HAVE  
'... that they went and told me'

- “extra” *ge-* in IPP-structures of this kind = overgeneralization of a bipartite past spellout pattern (26a)
  - Over-extending an Elsewhere pattern
- *ge-less* form reflects standard Afrikaans-oriented prosodically conditioned exception (26b)
  - Weak-Weak-Strong stress contour [%ge<sub>weak</sub>-be<sub>weak</sub>-GIN<sub>strong</sub> - ‘began’]

# A closer look at *het*

- V2 and final *het* must be distinct elements > lexical split:
  - realisational evidence

(27) a. **final *het*** = clitic/suffixal inflection (Conradie 2007, Zwart 2017)

➤ [ət], but fully phonologically integrated (see (19-20))

b. **V2 *het*** = full [het]/hət] or contracted [t]

- Proposal:
  - Final *het* = a pure tense marker; no argument-structure connection as in Dutch
  - v > T upwards reanalysis, plus reanalysis from independent head to clitic/inflection (PF spellout)

[V2 *het* = an independent functional head, encoding [tense, finiteness] and consistently spelled out – in full or contracted form – in C]

# A closer look at *ge-*

- Modern Afrikaans *ge-*: no connection to perfectivity as in Dutch and West Germanic more generally (Zwart 2007).

(28) a. Ek het **amper** die boek gelees.

I have almost the book PTCP.read

'I almost started reading the book.'

b. Ek het amper die boek **klaar** gelees.

I have almost the book finished PTCP.read

'I have almost finished reading the book.'

- *ge-* lacks the Dutch [+perf] specification (De Vos 2003); perfectivity expressed via adjunction (adverbial at phrasal VP/vP level)

# A closer look at *ge-*

- Afrikaans *ge-* lacks the Dutch [+perf] specification; aspectual specifications expressed via light verbs and adjunction (adverbial at the V- or vP-level)
- *ge-* also looks like it's undergone upwards reanalysis (De Vos 2003):

(29) a. Dutch <i>ge-</i>	V	-t	b. Afrikaans: <i>ge-</i>	V
	[PERF]	[PAST]		[PAST]

# A closer look at *ge-*

- De Vos (2003:522)

- (30) a. Dutch:  $[_{T_1} \text{AUX} \dots [_{vP} \text{SUBJ} \vee [_{T_2} -t [_{VP} V [_{\text{AspP}} \text{OBJ } ge-]]]]]$
- b. Afrikaans:  $[_{T_1} \text{AUX} \dots [_{vP} \text{SUBJ} \vee [_{T_2} ge- [_{VP} V [_{\text{AspP}} \text{OBJ } ]]]]]$

- Travis (1991, 2000) (see also Julien 2007 on higher/lower Tense):

- Inner Aspect (AspP): action completion (Res-related)
- Outer Aspect (T<sub>2</sub>): action initiation (Init-related)

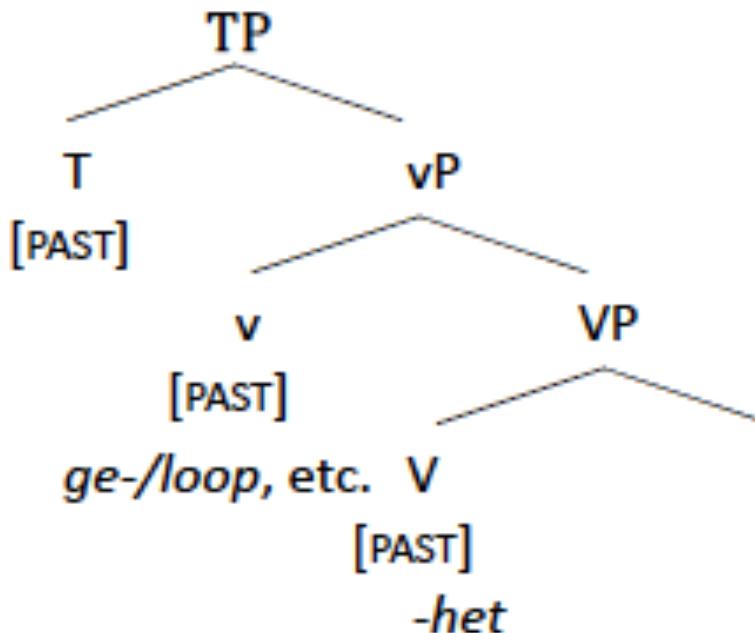
- Afrikaans *ge-* spells out Outer Aspect/T<sub>2</sub>/lower Tense

- Afrikaans motion and posture verbs also spell out Outer Aspect/T<sub>2</sub>/lower Tense > complementary distribution in Standard Afrikaans

# *Het ge-* in Modern Afrikaans

- Proposed analysis for standard Afrikaans:
  - both *het* and *ge-* are spellouts of agreement with T[PAST]
  - final *het* = ('affix-lowered') spellout of Agree of T[PAST] with V
  - *ge-* = spellout of Agree of T[PAST] with Outer Aspect-expressing v

(31)



(in complementary distribution  
with light verbs)

# *ge*-placement in colloquial varieties

- *ge*- in Griqua Afrikaans:

(10) a. **gebeginne** – ‘begun’; **geerken** – ‘acknowledged’; **geherken** ‘recognised’;  
**geonthou** – ‘remembered’; **geverneem** –‘enquired’

- generalised spellout of v-associated [PAST]-marking *ge*- on past-marked lexical verbs > overrides prosodic conditioning
  - b. **geopbel**; **geneersit**; **geaanteel** (Rademeyer 1938:62)
- generalised **initial** spellout of *ge*-, irrespective of particle separability

Thus: 2 PF-centred differences from the standard Afrikaans system.

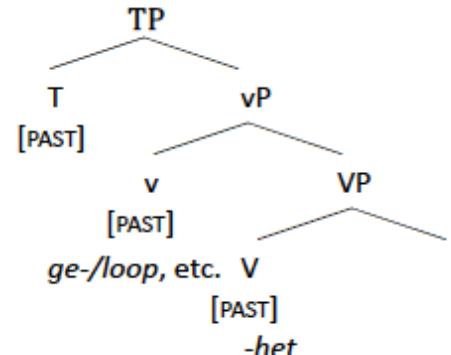
# *ge*-placement in colloquial varieties

- And some further PF-centred differences in Griqua Afrikaans: *ge*-doubling

(12) Ek het nou nie **ge-** skool **ge-** gan nie. [Ek het nou nie skool**ge**gaan nie.]  
I have now not PTCP- school PTCP -go not  
'I did not really attend school.' (Rademeyer 1938:63)

➤ both v- and V-associated [PAST] spelled out as *ge*-

(32) a. Standard Afrikaans: [<sub>vP</sub> skool *ge*- [<sub>VP</sub> gaan]-*het*] [<sub>vP</sub>klaar... *ge*-[<sub>VP</sub> eet]-*het*]  
school PTCP - go HAVE finished PTCP- eat HAVE  
b. Griqua Afrikaans: [<sub>vP</sub> *ge*-skool [<sub>VP</sub> *ge*-gan]]



# *Het*-dropping in Griqua Afrikaans

(13) a. Ek [HET<sub>1</sub>] by hille daarie klom jare **gebly**<sub>2</sub>.

I by them that bunch years PTCP.stay

'I stayed with them all those years.'

(Van Rensburg et al. 1984:869)

b. Die ene wat my broer se vrou **gevat**<sub>2</sub> [HET<sub>1</sub>].

the one what my brother POSS wife PTCP.take

'The one who stole my brother's wife.'

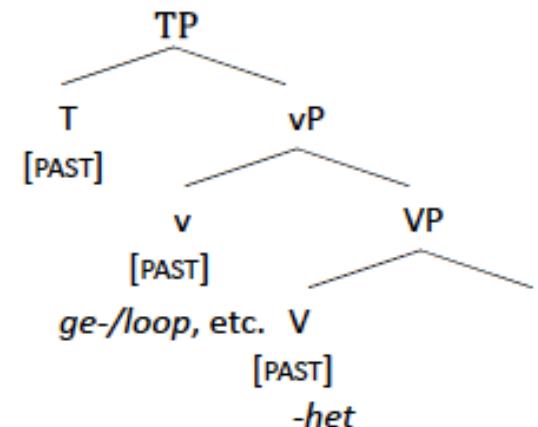
(Van Rensburg et al. 1984:1019)

- Both (13a, b) feature T[PAST] rather than T[FIN, PAST]

➤ no V<sub>2</sub> *het*

- *ge-* on V<sub>2</sub> in (13b) spells out "standard" *ge-*, i.e. [PAST] on v;

- V lacks [PAST]; so no final *het* in (13b)



# More low *ge*-placement

Knysna Boswerker Afrikaans, Baster Afrikaans, Velddrifse Vissertaal (De Vos 2003)

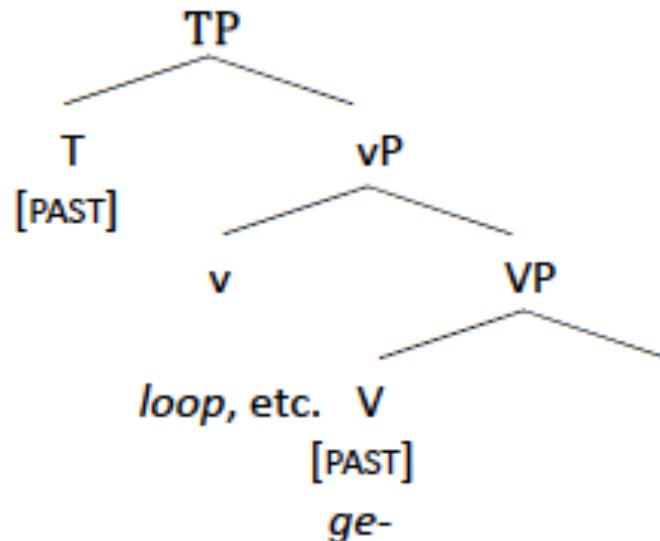
(12) Ons **het<sub>1</sub>** nou sy kopklip ... in Delport **lop<sub>2</sub>** **opg<sub>3</sub>emak<sub>3</sub>**.

us have now his headstone ... in Delport walk up.GE.make

'We have now erected his headstone in Delport.' (Conradie 2012:133)

- In some varieties, the innovated light verbs are not specified for [TENSE]
- T probes for the next [TENSE]-bearing element, V > *opg<sub>3</sub>emak<sub>3</sub>*

(33)



# **Conclusions and Outlook: Implications for a generative theory of language contact and contact-induced change**

# The Afrikaans IPP: some conclusions

- The Afrikaans IPP differs significantly from its European Germanic counterpart.
- Lost IPP: the modals fall outside the *het*-based past-marking system
  - no longer available in IPP-structures, where *het* = V<sub>1</sub>
- Gained IPP: the innovative motion and posture verbs = light vs and can also Merge with V to create verbal compounds (ASPECTUAL MODIFIER-VERB), which undergo “quirky V<sub>2</sub>”
- ge-peculiarities: indicative of the reorganisation of the tense system (*ge-* = spellout of [PAST] on v and potentially V; final *het* = spellout of [PAST] on V), and different regularisation patterns:
  - prosodic in standard Afrikaans: \*WEAK-WEAK-STRONG (\**ge-be-gin*)
  - morphosyntactic in other varieties: generalised use of *ge-* with *het*, potentially with further generalised initial *ge*-placement (even with particle verbs)
    - Largely PF (externalization) variation
- Importantly, the IPP/*ge*-alternation is **not** automatically indicative of on-going IPP-loss across varieties; the Afrikaans IPP in its distinctive reinvented form is productive, albeit to varying extents in different varieties.

# The Afrikaans IPP: the role of contact?

- Closer investigation reveals many 'contact effects', including:

- (34) a. morphological impoverishment – verbal deflection (agreement and finiteness)  
b. rise of aspect- and perspective-marking light verbs  
c. reorganisation of the tense system
  - (i) dedicated [past]-marking final *het*
  - (ii) emergence of the modals as a special class (preterite vs present forms)d. order rigidification (231 only)

➤(a-c(i)) and (d) suggest **increasing analyticisation**

BUT: we also see new formal options, including:

- (40) a. verbal compounds (the 'quirky V2' verbs) > "edge" exploitation  
b. clitic/inflectional final *het* as entirely distinct exponent of T-marking from V2 *het*

➤ (b) instantiates an **increase in inflection**

# The Afrikaans IPP:

- Significantly, the apparently contact-induced variation builds on a strikingly stable West-Germanic base:  
(35) a. the basic V2/V-final system
  - early-acquired in L1 acquisition (Wexler 1998, Tsimpli 2014)
  - b. verb clusters
  - “piggy-backing” learning (van Kampen 2017)
- There is significant “recycling” of plausible verbs/roots:
  - “regular” upwards grammaticalisation
  - root-based modification (common in analytic systems)
- Degrees of grammaticalisation in play:
  - stronger/weaker (inter)subjective/stance element
- All familiar from “non-contact” settings:  
earlier-acquired grammar = formal basis for later-acquired or subsequently innovated grammar

# Theoretical implications

- Our Afrikaans IPP study points to the feasibility of a fully 'internal' theory of contact-induced change, where:
  - the (bi/multilingual) acquirer/learner/speaker is the contact 'site' (Weinreich 1953),
  - the formal specification of earlier-acquired grammatical elements is key in determining the integration of later-acquired elements, and acquisition biases like MMM both 'shape' irregular patterns (e.g. inconsistent or opaque morphology) and exploit the availability of structural edges as innovation sites.
- The null hypothesis: these factors will always be sufficient in accounting for change, contact-induced or otherwise.

**THANK YOU!**  
**BAIE DANKIE!**  
**DANK U WEL!**  
**MERCI!**

# EXTRA SLIDE: Tense reorganisation in Brazilian Pomeranian

- Note: While tense reorganisation isn't unfamiliar in contact situations (Kaufmann 2022), it is clear that the form that this takes depends very heavily on the formal make-up of the linguistic systems that are in contact, the L<sub>1</sub>/L<sub>2</sub>/L<sub>n</sub> status of these systems, and the wider sociolinguistic situation (including what functions the languages have in the society, the strength of horizontal and vertical ties (Warren 1964), etc.)
  - Compare tense organization in **another V<sub>2</sub>, but non-IPP variety, Brazilian Pomeranian/Pomerano** (Postma 2019, Kaufmann 2022)

(1) a. Gistern hätten Sie sich nicht so sehr darüber aufgereggt.  
b. Ich habe gestern Abend nicht geschlafen.

yesterday has.3SG.PRS can.1SG.PST I.1SG.NOM the ring sold.PP had.PP have.INF

'Yesterday I could have sold the ring.' (Kaufmann 2022:342)

b. Hät              mücht hai              dat trecht måkt häwa?

has.3SG.PRS may.PP he.3SG.NOM that ready made have.INF

'Should he have finished it?' (Postma 2019:110)

### ➤ Alternative form of “quirky V2”

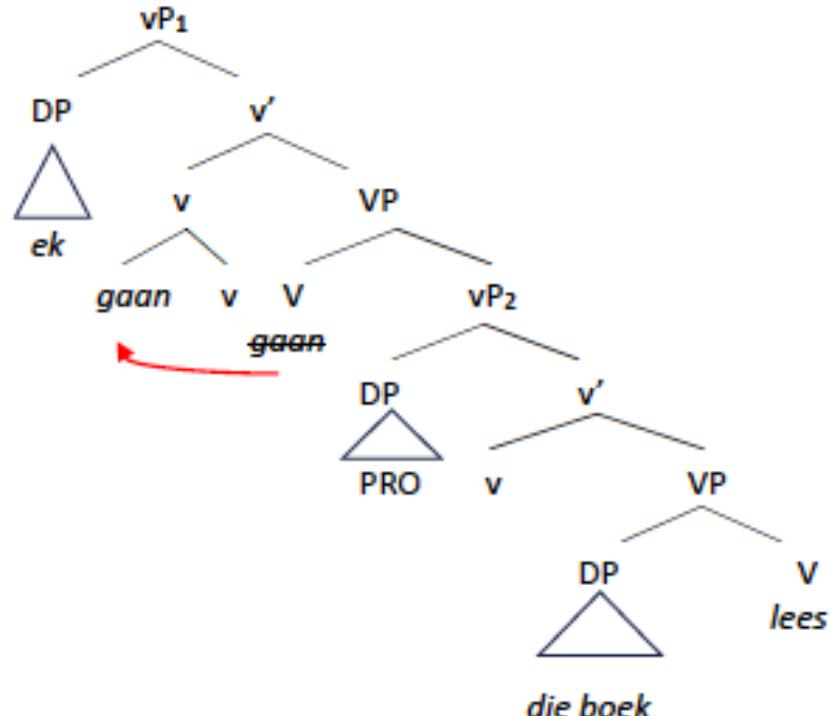
# EXTRA slide: Aspectual verbs and differing degrees of grammaticalisation

- The innovated aspectual verbs exhibit varying degrees of grammaticalisation:
  - *aanhoud* and *ophoud* are much less grammaticalized than *kom* ('come'), *gaan* ('go'), *loop* ('walk') and similar.
    - *kom*, etc. = light vs
    - *aanhoud/ophoud* = lexical Vs selecting "small" vP-complements, i.e. restructuring verbs (Wurmbrand 2004)
    - ditto perception *hoor* ('hear') and *sien* ('see') > biclausal structures
- Only the light vs, which are part of the same clause as the lexical V, can combine with lexical V to create the "quirky V2" verbal compound.

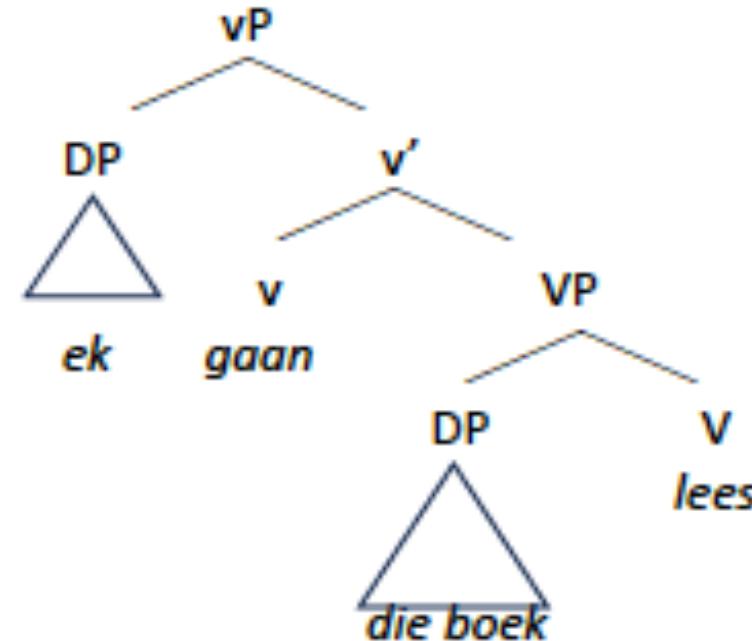
# EXTRA slide: Grammaticalising aspectual verbs

- (1a): biclausal structure with aspectual motion verb *gaan* ('go')
  - *gaan* in V = restructuring verb
  - *gaan* raising to v = more grammaticalised aspectual (V-to-v; upwards grammaticalisation)
- (1b): monoclausal structure
  - *gaan* first-merged in v = fully grammaticalised light verb (1b)

(1) a.



b.



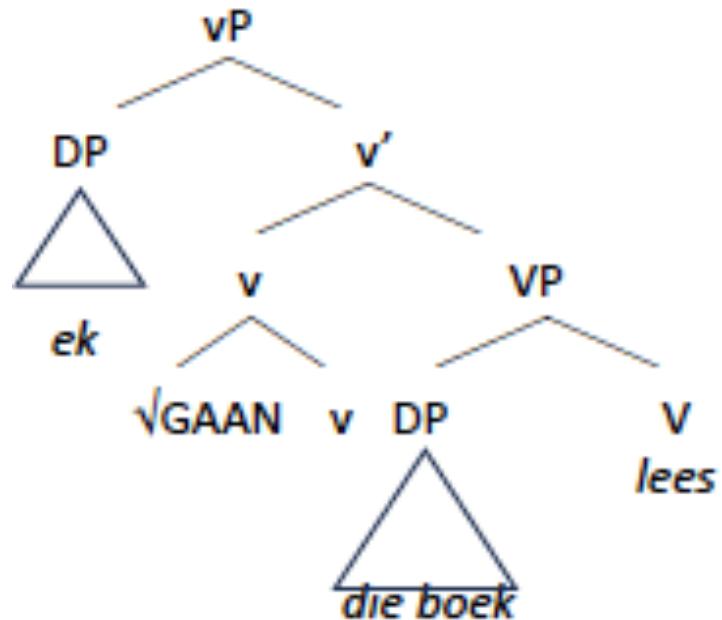
# EXTRA slide: root recycling in grammaticalisation

- An alternative to upwards grammaticalisation in analytic systems (see also Song 2019, Cavigani-Pots 2020)
- In analytic languages, roots have Merge flexibility absent in inflectionally richer languages

(1) Merge options:

- a. with a categoriser ("standard" DM)
- b. with an existing functional head (e.g. v, Asp; see (2) below)
- c. with a categorised lexical head (compounded, as discussed for Quirky V2)

(2)



# EXTRA SLIDE: The edge of chaos in emergent systems



- **Edge-of-chaos = creative zone** ('progress niche') where progress/creativity happens  
But note that **progress/creativity** builds on and **develops already-established structure**
  - **structural homology**
- **Maximise the available means**
  - 2 means that are always available in a grammatical system with some already-acquired structure (defined by features [F]s in current theory)
    - (i) **the [F]-defined structure and**
    - (ii) **the [F]-defined structure's edge.**

# EXTRA slide: Why Part-Aux and not Aux-Part?

- the loss of optionality in 2-verb clusters driven by:
  - (i) morphological reduction > phonological regularization (Conradie 2012, in press)
    - a. auxiliary = V<sub>1</sub>: inflecting *hebben* > *het* > [ət]/t
    - b. infinitives = V<sub>2</sub> and V<sub>3</sub>: loss of infinitival –en
  - (ii) L2 learning (simplification as in Trudgill 2011), which reinforces (and speeds up) the morphological reduction (Walkden & Breitbarth 2019), and
  - (iii) the general cognitive bias to make maximal use of minimal means (Biberauer 2019) – here: rhythmic patterns
- Importantly, inheritance also plays a role in establishing Part-Aux and not Aux-Part:
  - Arfs (2007): corpus study demonstrating rhythmical factors determining the ordering preferences for AUX and PART in Dutch:
    - (19) a. initial primary stress in PART (*ópgebeld* ('called up/phoned')): AUX-PART *heeft opgebeld*
    - b. medial primary stress in PART (*gelézen* ('read')): both options *heeft gelezen/gelezen heeft*
    - c. final primary stress in PART (*betááld* ('paid')): PART-AUX *betaald heeft*
  - Conradie (in press): Afrikaans past participles became weaker (lost of participle-final /t/: *ópgebeld* > *ópgebel*; *betááld* > *betáál*; and of –en: *gelezen* > *gelees*) and the systematic loss of –en as in *gelézen* and in “strong” (ablaut) participles also produced bisyllabic participles with a consistently rising stress contour (*gespréken* > *gespréék* 'spoken'; *bespréken* > *bespréék* ('discussed/booked/reserved')
- Initial *het* would produce %Weak-Weak-Strong; Final *het* gives Weak-Strong-Weak

# EXTRA slide: Modals and the Afrikaans IPP

- Robbers (1997:56-7): speakers use other structures where Dutch speakers would opt for the IPP-pattern:

(1) Jan **het**<sub>1</sub> hard **kan**<sub>2</sub>      **werk**<sub>3</sub>. [Dutch: *Jan heeft<sub>1</sub> hard kunnen<sub>2</sub> werken<sub>3</sub>.*] **absent in corpora**  
Jan have hard can.INF work.  
'Jan can work hard.'

(2) a. Jan **kon**<sub>1</sub> hard **werk**<sub>2</sub>. favoured in place of (1)  
Jan can.PST hard work. INF

b. Jan **het<sub>1</sub>** hard **kon<sub>2</sub>**      **werk<sub>3</sub>**.      innovated (past-tense) IPP – **absent in corpora**  
Jan have hard can.PST work. NF

c. Jan **kon<sub>1</sub>** hard **gewerk<sub>3</sub>** **het<sub>2</sub>**. favoured in place of (1) [preteritive assimilation; Ponelis 1979]  
 Jan can.PST hard PTCP.work have

d. Jan **kan**<sub>1</sub> hard **gewerk**<sub>3</sub> **het**<sub>2</sub>. frequent in Kaaps (Hendriks 2016)  
Jan can.PRES hard PTCP.work have

# EXTRA slide: Different types of *het*

- The modern English auxiliary system (MacKenzie 2013) features auxiliaries of varying “strengths”:
  - (1) Modern English auxiliaries:
    - a. full: *have, has, had*
    - b. intermediate: [əv], [əs], [əd]    *always derived*
    - c. contracted: [v], [s], [d]
  - Modern Afrikaans *het* also takes 3 forms with different distributions:
    - (2) a. full *het* [het]/[hət]: V2 position
    - b. intermediate *het* [ət]: V-final position
    - c. contracted *het* [t]: V2 position
- Final *het* has a distinctive reduced form

# EXTRA slide: different types of *het*

(3) a. Julle [**het**] die boeke gelees. [full *het*]  
you.PL have the books PTCP.read  
'You read the books.'

(3) a. Piet [**het**] die boeke gelees. [full *het*]  
Pete have the books PTCP.read  
*het*

(4) a. ... dat julle/ Piet die boeke gelees[ət]/\*[t] [intermediate *het*]  
that you.PL Pete the books PTCP.read.HAVE  
'... that you/Pete read the books.'

b. ... dat julle/Piet die boeke gelees **HET**. [full *het*]

> only as a metalinguistic correction of some kind, e.g. if *het* was initially left out or the pastness needs additional emphasis, i.e. strengthening only under the condition where any element can be "strong":

(5) a. BEstaan, nie VERstaan  
BE.stand (=exist) not VER.stand (=understand) POL  
'Exist not understand!'

> This is different from the polarity reinforcement reading we get when V2 *het* is stressed (Julle HET die boeke gelees = 'You DID read the books', as in English)

- Thus: The proposal that final *het* = an inflection (affix/clitic) formally distinct from V2 *het* is supported by realisational regularities.

# EXTRA slide: *het* and tense agreement?

- Manenberg Kaaps\*: *het*-doubling on **low adverbials** (place, instrument, location)

- (1) [Thinking back on rare childhood excursions to the beach.]

Ek kannie gewagget [om my kaasel te gebouet met dai sannit  
I can.not wait.PART.HET INF.C my castle to build.PART.HET with that sand.HET  
oppie beach~~tie~~.]  
on.the beach.HET.POL

- (2) [Thinking back on the close-knit community of the speaker's childhood.]

[As jy nie gehettit in jou huis~~tie~~] dan was daa nou ieman annes wat  
if you not have.PART.HET in your house.HET.POL then was there now someone other what  
vi jou gegieret.  
for you give.PART.HET

'If you didn't have [food] in your house, then there was always someone else who would give to you (i.e. look after you).'

\*The Manenberg Kaaps data were collected by UWC-Utrecht PhD student Chevān van Rooi (see also Van Rooi 2022)



# EXTRA slide: *het* and tense agreement?

(3) [Recalling a historic mugging incident.]

... wat vir my innie rondte gerikket by my sakket.  
what for me in.the round pull.PART.HET by my bag.HET  
‘... which pulled me around by my bag.’

➤ *Het* surfaces in positions it isn't usually thought to have merged in ...

## PP-edges

- These structures don't seem amenable to a multiple-spellout analysis (Biberauer 2022)
- They instead call to mind **tense agreement** of the kind that is observed in Malagasy.

# Tense agreement in Malagasy

- In Malagasy (Austronesian), **low adverbials** (instrument, location, etc.) are inflected with a **t**-prefix in past-tense clauses.

- (4) a. Mandidy mofo amin' ny antsy Rabe.  
AT.cut bread with det knife Rabe [AT = 'actor topic']  
'Rabe is cutting bread with the knife.'
- b. Handidy mofo amin' ny antsy Rabe.  
Irr.AT.cut bread with det knife Rabe  
'Rabe will cut bread with the knife.'
- c. **Nt**amin 'ny antsy Rabe.  
**pst**.AT.cut bread T.with det knife Rabe  
'Rabe cut bread with the knife.' (Pearson 2018:333)

# EXTRA slide: Edge innovations

- Differential Object Marking (DOM):

- (1) a. Ek groet/*like* (**vir**) Piet /Marie/*die* bure.  
I greet/like for Piet Marie the neighbours  
'I greet/like Piet/Marie/the neighbours.' **human**
- b. Hy was (**vir**) die hond.  
he wash for the dog  
'He washes the dog.' **animate**
- c. Ek sien/sê/ hoor/ verstaan/ ken (**vir**) jou/ ?dit/ hom  
I see say hear understand know for you it him.INANIMATE  
'I see you/him.'  
> no affinity possible with *dit* **human/animate personal pronouns**
- d. Ons ondersteun (**vir**) studente.  
us support for students  
'We support the students/students.' **definite/empathised-with indefinites**

# EXTRA slide: Edge innovations

- Words are phases (Marantz 1997)
- Afrikaans exhibits considerable innovation at word edges (verbal, nominal, adjectival):

(2) Wat **loop** koop jy met daardie geld van jou?  
what walk buy you with that money of you  
'What are you off (not necessarily on foot) to buy with that money of yours?'

[Quirky V2; de Vos 2005]

(3) 'n mooi-**e** meisie-**tjie** – **tjie** [kə]-[ki] or [ki]-[tʃi]  
a pretty-E girl- DIM- DIM  
'such a pretty (sweet) little girl (much affection!)'

# EXTRA slide: Theoretical implications

- A generative perspective on the Afrikaans IPP-developments:
  - the (bi/multilingual) acquirer/learner/speaker is the contact 'site' (Weinreich 1953 *et seq.*)
  - 3 factors interact to shape the I-language grammar (Chomsky 2005 *et seq.*):  
(41) UG + input/intake + general cognitive (3<sup>rd</sup>) factors → Adult grammar
    - *Factor 1:* Merge (Internal & External) & Agree; [F]-template
    - *Factor 2:* intake = the component of the input the acquirer can parse on the basis of existing knowledge (i.a. Evers & van Kampen 2008, Gagliardi 2012)
    - *Factor 3:* includes the acquisition and more general bias to Maximise Minimal Means (Biberauer 2018, 2019b)

# EXTRA slide: Theoretical implications

- The input in contact situations = more complex, containing a greater range of (irregular) variation than in "monolingual" situations (Aboh 2015)
  - sociological factors determine the timing, quantity and nature of input
    - e.g. simultaneous vs successive bi/multilingualism vs L<sub>1</sub>(s) and L<sub>2</sub>s, range of 'high' and 'low' functions, formal education/literacy, 'vertical' connections (e.g. here to European Dutch), 'horizontal' connections (e.g. here to different types of speakers of Cape Dutch/Afrikaans), etc.
  - domains of socially unconditioned irregularity = vulnerable > potential source of innovated inter-speaker/community variation
- M(aximise) M(inimal) M(eans):
  - L<sub>1</sub>-acquiring children regularise (impose a system on) irregularities, harnessing existing formal knowledge (Singleton & Newport 2004, Hudson-Kam & Newport 2005, 2009)
  - Later L<sub>2</sub> learners can too (Perfors 2016), but in different ways, not exclusively drawing on formal knowledge, and not being equally adept at accessing prosodic and inflectional cues.
  - Sociological factors again determine the fate of irregularities: null, fully generalized, or generalised on the basis of some L<sub>1</sub>-type (formal) or L<sub>2</sub>-type pattern.