Semi-lexicality and optionality

Grammaticalisation of Afrikaans 'loop', 'sit', 'staan', and 'lê'

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Introduction: semi-lexicality

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(1)   Ek het **sit** en lees.
       I   have sit and read.
       'I have been reading.'

Introduction: semi-lexicality

- ▶ The use of these verbs is *semi-lexical*, as they show functional and lexical behaviour at the same time

Introduction: semi-lexicality

- *Functional*: being able to express aspect

Introduction: semi-lexicality

- *Functional*: being able to express aspect
- *Lexical*: having lexical semantics

Introduction: semi-lexicality

- ▶ Having lexical semantics:

(2) ??Hy het **sit en** **swem**.
    He has sit and swim
    Intended: 'He has been swimming.'

Introduction: optionality

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- Linking element *en* is optional (for some speakers, with some verbs)

(3) Sal jy net gou vir my die groente **loop** (*en*)
     shall you just quickly for me the vegetables walk and
     bring?
     bring
     'Can you just quickly go and get me vegetables?'
     (Biberauer 2019:11)

Introduction: optionality

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(4)   Hulle het   op die stoep (***ge-***)**sit en rook**.
         they have on the porch GE-sit   and smoke
         'They were (sitting and) smoking on the porch.'

                                       (Roberge 1994:46)

Introduction: optionality

► Optionality of the amount of structure in V2

Introduction: optionality

▶ Optionality of the amount of structure in V2 (normal vs quirky V2 (De Vos 2005))

(5)   a.   Hy **lê** die heeldag   na die wolke **en kyk**.
            He lies the whole.day at the clouds and look

      b.   Hy **lê en kyk** die heeldag   na die wolke.
            He lies and watch the whole.day at the clouds
            'He is (lying and) looking at the clouds the entire
            day.'   (Robbers 1997: 65)

Introduction: empirical domain

- The morphosyntactic behavior of *sit*, *staan*, *lê* and *loop*

Introduction: empirical domain

- The morphosyntactic behavior of *sit*, *staan*, *lê* and *loop*
- Since these verbs occur in so-called pseudocoordination (De Vos 2005): henceforth **PC verbs**

Introduction: main research questions

1. How do we formally analyse elements that show both functional and lexical properties?

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1. How do we formally analyse elements that show both functional and lexical properties?
2. How can we account for the high degree of morphosyntactic optionality displayed by semi-lexical elements?
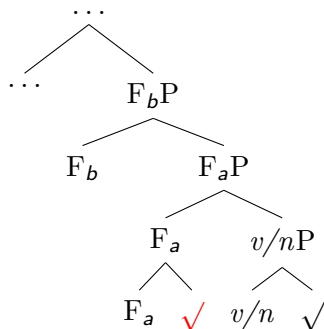
Introduction: main proposal

- ▶ I argue that semi-lexicality is the result of a root being inserted in the functional domain of another root (Klockmann 2017; Cavirani-Pots 2020; Cavirani-Pots et al. 2021; cf. Song 2019)

Introduction: main proposal
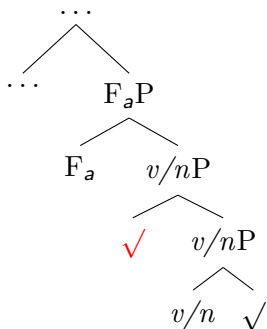
(6) **Semi-lexical stage I** (7) **Semi-lexical stage II**

$\rightarrow$ The red root is the semi-lexically used root.

Introduction: today's focus

▶ Today's talk focusses on the empirical dimension

Outline

Methodology: design

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Large-scale questionnaire study

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▶ Verb clusters with PC verbs were tested

Methodology: design

Large-scale questionnaire study

- ► Verb clusters with PC verbs were tested
- ► For the constructions with *loop*, both progressive and andative use was tested

Methodology: design

Test sentence with progressive use of *loop*:

(8)   Steve sê   dat Cornelia gisteraand baie **loop en**
        Steve says that Cornelia yesterday a.lot walk and
        praat het.
        talk   het.
        'Steve says Cornelia has been talking a lot yesterday.'

Methodology: design

Test sentence with andative use of *loop* :

(9) Paul sê   dat Lisa verlede week 'n splinternuwe
     Paul says that Lisa last   week a completely.new
     motor **loop en   koop het**.
     car   walk and buy   has.
     'Paul says Lisa went and bought a completely new car
     last week.'

Methodology: design

Test sentence with *sit*:

(10)   Simon sê   dat Thomas die hele   middag   **sit en**
         Simon says that Thomas the entire afternoon sit and
         lees het.
         read has
         'Simon says Thomas has been reading the entire
         afternoon.'

Methodology: design

Test sentence with *staan*:

(11) Susan sê   dat Elsa vir ure   met haar ma   op die
      Susan says that Elsa for hours with her   mom at the
      telefoon **staan** **en**   **praat** **het**.
      phone   stand   and talk   has
      'Susan says Elsa has been talking on the phone for
      hours with her mom.'

Methodology: design

Test sentence with *lê*:

(12)   Eric sê   dat Michael die hele   naweek **lê en slaap**
       Eric says that Michael the entire week   lie and sleep
       het.
       has
       'Eric says Michael has been sleeping the entire
       weekend.'

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- ▶ Test the optionality of *en*, *ge*- and quirky V2 in PC constructions
- ▶ Test this on both an intraspeaker level as an interspeaker level
- ▶ Test the amount of semantic bleaching of the PC verbs

Methodology: design

Two conditions

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1. Embedded condition

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2. V2 condition

Methodology: design

Three factors

Methodology: design

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1. Presence/absence *en* (both conditions)

Methodology: design

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Methodology: design

Three factors

1. Presence/absence *en* (both conditions)
2. Presence/absence *ge-* (embedded condition)
3. Amount of structure in V2 position (V2 condition)

Methodology: design

8 different versions of all PC verbs:

1. X en V het (embedded)
2. X V het (embedded)
3. ge-X en V het (embedded)
4. ge-X V het (embedded)
5. X en V . . . (V2)
6. X V . . . (V2)
7. X . . . en V (V2)
8. X . . . V (V2)

Methodology: design

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- ▶ Some other constructions were tested as well
- ▶ 63 test items, 12 filler items, 4 practice items

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- ▶ Informants received a second question if they rated the V2 condition sentences with a 4 or 5
- ▶ The question they would be asked to answer was: 'Is Jan besig om te loop/sit/staan/lê?'
- ▶ The informants could answer this question with 'yes', 'no', or 'uncertain'

Methodology: task and procedure

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- ▶ Judgment task, using a 5-point Likert scale

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Methodology: task and procedure

Task

- ▶ Judgment task, using a 5-point Likert scale
- ▶ Online written questionnaire, created in LimeSurvey©
- ▶ Test items presented in randomized order, preceded by a practice round (4 practice items, same order for all participants)

Methodology: task and procedure

Instructions

▶ Participants were asked to answer the following question on a 5-point Likert scale after reading the test sentence out loud:

'Is this a possible sentence in Afrikaans as it is spoken in your immediate environment?'

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  ▶ 'Immediate environment' was defined as 'friends, family, town or city'
  ▶ 5 = 'certainly', 1 = 'certainly not'; they could also assign 2, 3, 4 or 'I don't know', and comment on their rating in a comment field

Methodology: participants

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- ▶ 157 female, 47 male

Methodology: participants

Participants

- ► 204 Afrikaans speakers completed the questionnaire
- ► 157 female, 47 male
- ► Mean age: 49,6 (SD=30.4, range 20-88)

Participants
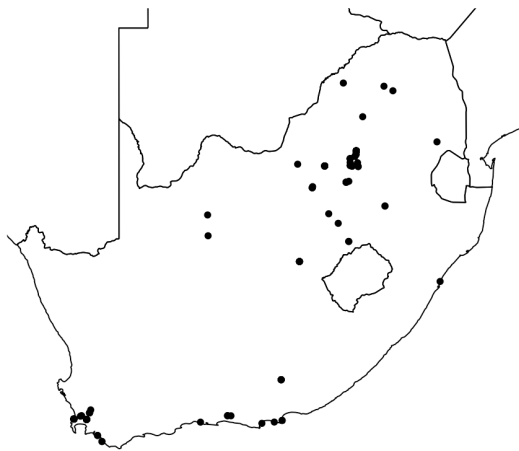
Figure 1: Locations of participants

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- ▶ A rating of 4 or 5 $\rightarrow$ construction is grammatical for that speaker

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- ▶ A rating of 4 or 5 → construction is grammatical for that speaker
- ▶ A rating of 1, 2 or 3 → construction is ungrammatical for that speaker
- ▶ A construction is optional for a speaker if she/he rates both versions with a 4 or 5 (intraspeaker optionality)
- ▶ A construction is obligatory for a speaker if she/he rates only one version with a 4 or 5 (still possible: interspeaker variation)

Results: optionality of ge-

(13)   ...dat   hy   (**ge**)-X en   V het.
           ...that he GE-X   and V has
           '...that he has been V-ing.'

Results: optionality of ge-

Verb	Oblig. *ge*-	Optional *ge*-	Oblig. no *ge*-	Total
Loop_{progressive}	39 (24,2%)	104 (64,6%)	18 (11,2%)	161 (100%)
Loop_{andative}	10 (6,0%)	123 (74,1%)	33 (19,9%)	166 (100%)
Sit	26 (13,1%)	168 (84,4%)	4 (2,5%)	198 (100%)
Staan	24 (12,5%)	159 (82,8%)	9 (4,7%)	192 (100%)
Lê	16 (8,0%)	182 (91,0%)	2 (1,0%)	200 (100%)

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- ▶ *Ge-* is highly optional across all PC verbs
- ▶ Both uses of *loop* have higher percentages for obligatory no *ge-* than the other PC verbs
- ▶ Similar patterns all over the geographical space

Results: optionality of en

(14)   . . . dat   hy (ge)-X **en**   V het.
         . . . that he GE-X   and V has
         '. . . that he has been V-ing.'

Results: optionality of en

(15)　　…dat　hy (ge)-X (**en**) V het.
　　　　…that he GE-X　and　V has
　　　　'…that he has been V-ing.'

(16)　　a.　Hy X die N (**en**) V.
　　　　　he　X the N and　V
　　　b.　Hy X (**en**) V die N.
　　　　　he　X and　V the N
　　　　　'He X and V the N.'

Results: optionality of en

Verb	Oblig. *en*	Optional *en*	Oblig. no *en*	Total
*Loop*_{prog}	83 (68,0%)	31 (25,4%)	8 (6,6%)	122 (100%)
Ge-*loop*_{prog}	114 (79,7%)	27 (18,9%)	2 (1,4%)	143 (100%)
*Loop*_{and}	12 (7,7%)	61 (39,1%)	83 (53,2%)	156 (100%)
Ge-*loop*_{and}	25 (18,8%)	54 (40,6%)	54 (40,6%)	133 (100%)
Sit	149 (72,5%)	22 (27,0%)	1 (0,5%)	172 (100%)
Ge-*sit*	170 (87,6%)	23 (11,9%)	1 (0,5%)	194 (100%)
Staan	126 (75,0%)	37 (22,0%)	5 (3,0%)	168 (100%)
Ge-*staan*	128 (69,9%)	52 (28,4%)	3 (1,7%)	183 (100%)
Lê	153 (83,2%)	28 (15,2%)	3 (1,6%)	184 (100%)
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Table 2: Optionality of *en* per PC verb

Results: optionality of en

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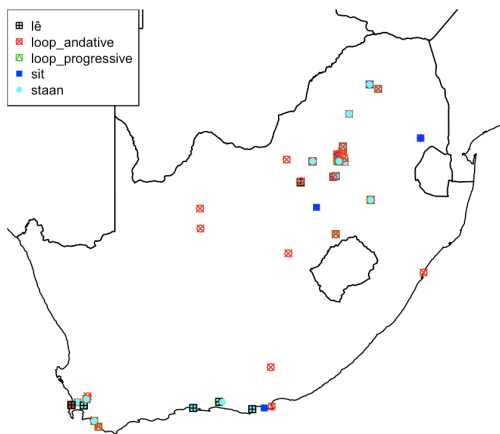
Results: optionality of en

Figure 2: Locations in which *en* absence is allowed – all PC verbs
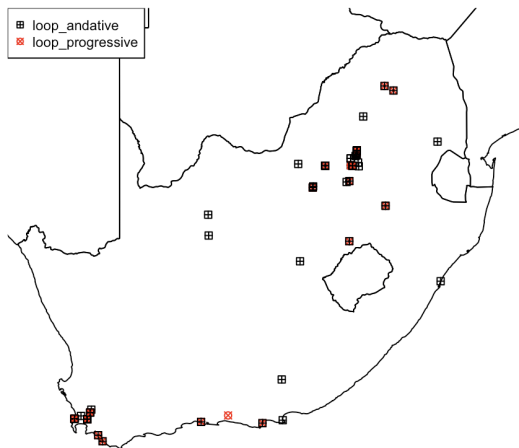
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Figure 3: Locations in which *en* absence is allowed – *loop* PCs

Results: optionality of quirky V2

(17)　a.　Hy **X** die N **en V**.
　　　　　he X the N and V

　　　b.　Hy **X en V** die N.
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Results: optionality of quirky V2

PC	Oblig. normal V2	Opt. quirky V2	Oblig. quirky V2	Total
Loop$_{prog}$ en V	18 (10,2%)	117 (66,1%)	42 (23,7%)	177 (100%)
Loop$_{prog}$ V	8 (9,8%)	10 (12,2%)	64 (78,0%)	82 (100%)
Sit en V	11 (5,6%)	179 (90,9%)	7 (3,5%)	197 (100%)
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▶ With *en* present:
- ▶ Almost complete optionality of V2 construction with posture verbs
- ▶ Higher percentage of oblig. quirky V2 with *loop*

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Sit en V	11 (5,6%)	179 (90,9%)	7 (3,5%)	197 (100%)
Sit V	14 (36,8%)	6 (15,8%)	18 (47,6%)	38 (100%)
Staan en V	9 (4,6%)	181 (93,3%)	4 (2,1%)	194 (100%)
Staan V	10 (15,2%)	47 (71,2%)	9 (13,6%)	66 (100%)
Lê en V	6 (3,0%)	184 (92,5%)	9 (4,5%)	199 (100%)
Lê V	12 (25,0%)	12 (25,1%)	24 (50,0%)	48 (100%)

Table 5: Optionality of normal and quirky V2 per PC verb

▶ With *en* absent:

Results: optionality of quirky V2

PC	Oblig. normal V2	Opt. quirky V2	Oblig. quirky V2	Total
Loop$_{prog}$ en V	18 (10,2%)	117 (66,1%)	42 (23,7%)	177 (100%)
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► With *en* absent:
  ► Mostly allowed with *loop$_{prog}$*, then *staan*, *lê* and least with *sit*
  ► Mostly oblig. quirky V2 (cf. *staan*)

Results: general optionality across PC verbs

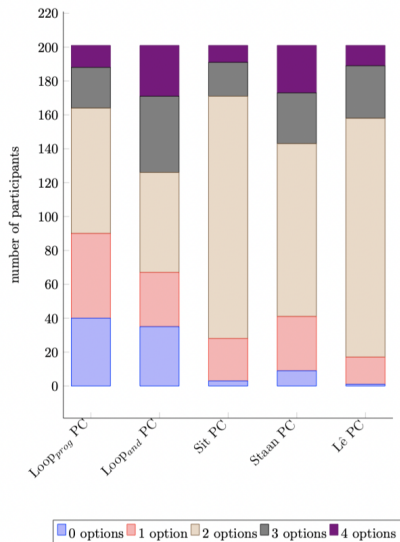# Results: general optionality across PC verbs

Figure 4: Degree of optionality across verbs – embedded condition
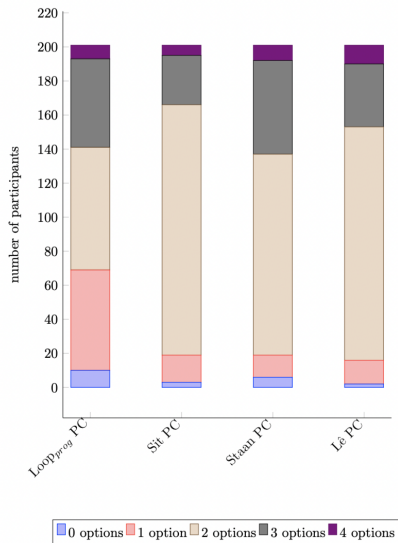
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Figure 5: Degree of optionality across verbs – V2 condition

Results: semantic bleaching

(18)   a.   Hy X en V.
               he X and V

           b.   Is hy aan die X?
               is he at   the X
               'Is he X-ing?'

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▶ Yes → no bleaching

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► Yes → no bleaching

► No → bleaching

Results: semantic bleaching

Type of PC	No walking implied	Walking implied	Unclear	Total
Normal V2, *en*	52 (56,5%)	25 (27,2%)	15 (16,3%)	92 (100%)
Quirky V2, *en*	75 (59,1%)	33 (25,9%)	19 (15,0%)	127 (100%)
Normal V2, no *en*	11 (84,6%)	1 (7,7%)	1 (7,7%)	13 (100%)
Quirky V2, no *en*	50 (84,7%)	6 (10,2%)	3 (5,1%)	59 (100%)

Table 6: Semantic bleaching in normal and quirky V2 with *loop_{prog}*

Results: semantic bleaching

Type of PC	No walking implied	Walking implied	Unclear	Total
Normal V2, *en*	52 (56,5%)	25 (27,2%)	15 (16,3%)	92 (100%)
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▶ Quite high degrees of semantic bleaching with *loop$_{prog}$*
  overall

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Table 6: Semantic bleaching in normal and quirky V2 with $loop_{prog}$

► Quite high degrees of semantic bleaching with $loop_{prog}$ overall

► Higher percentages semantic bleaching when *en* is absent

Results: semantic bleaching

Type of PC	No sitting implied	Sitting implied	Unclear	Total
Normal V2, *en*	34 (24,8%)	88 (64,2%)	15 (11,0%)	137 (100%)
Quirky V2, *en*	32 (24,6%)	87 (66,9%)	11 (8,5%)	130 (100%)
Normal V2, no *en*	11 (61,1%)	6 (33,3%)	1 (5,6%)	18 (100%)
Quirky V2, no *en*	4 (25,0%)	11 (68,8%)	1 (6,2%)	16 (100%)

Table 7: Semantic bleaching in normal and quirky V2 with *sit*

Results: semantic bleaching

Type of PC	No sitting implied	Sitting implied	Unclear	Total
Normal V2, *en*	34 (24,8%)	88 (64,2%)	15 (11,0%)	137 (100%)
Quirky V2, *en*	32 (24,6%)	87 (66,9%)	11 (8,5%)	130 (100%)
Normal V2, no *en*	11 (61,1%)	6 (33,3%)	1 (5,6%)	18 (100%)
Quirky V2, no *en*	4 (25,0%)	11 (68,8%)	1 (6,2%)	16 (100%)

Table 7: Semantic bleaching in normal and quirky V2 with *sit*

▶ Much lower percentages overall of semantic bleaching compared to *loop*

Results: semantic bleaching

Type of PC	No standing implied	Standing implied	Unclear	Total
Normal V2, *en*	82 (56,6%)	50 (34,5%)	13 (9,0%)	145 (100%)
Quirky V2, *en*	99 (68,8%)	31 (21,5%)	14 (9,7%)	144 (100%)
Normal V2, no *en*	13 (81,3%)	3 (8,7%)	0 (0,0%)	16 (100%)
Quirky V2, no *en*	34 (79,1%)	5 (11,6%)	4 (9,3%)	43 (100%)

Table 8: Semantic bleaching in normal and quirky V2 with *staan*

Results: semantic bleaching

Type of PC	No standing implied	Standing implied	Unclear	Total
Normal V2, *en*	82 (56,6%)	50 (34,5%)	13 (9,0%)	145 (100%)
Quirky V2, *en*	99 (68,8%)	31 (21,5%)	14 (9,7%)	144 (100%)
Normal V2, no *en*	13 (81,3%)	3 (8,7%)	0 (0,0%)	16 (100%)
Quirky V2, no *en*	34 (79,1%)	5 (11,6%)	4 (9,3%)	43 (100%)

Table 8: Semantic bleaching in normal and quirky V2 with *staan*

▶ Higher percentages of semantic bleaching than *sit*, close to percentages of *loop*

Results: semantic bleaching

Type of PC	No lying implied	Lying implied	Unclear	Total
Normal V2, *en*	18 (14,3%)	103 (81,7%)	5 (4,0%)	126 (100%)
Quirky V2, *en*	20 (13,8%)	122 (84,1%)	3 (2,1%)	145 (100%)
Normal V2, no *en*	3 (20,0%)	12 (80,0%)	0 (3,5%)	15 (100%)
Quirky V2, no *en*	10 (37,0%)	13 (48,1%)	4 (14,9%)	27 (100%)

Table 9: Semantic bleaching in normal and quirky V2 with *lê*

Results: semantic bleaching

Type of PC	No lying implied	Lying implied	Unclear	Total
Normal V2, *en*	18 (14,3%)	103 (81,7%)	5 (4,0%)	126 (100%)
Quirky V2, *en*	20 (13,8%)	122 (84,1%)	3 (2,1%)	145 (100%)
Normal V2, no *en*	3 (20,0%)	12 (80,0%)	0 (3,5%)	15 (100%)
Quirky V2, no *en*	10 (37,0%)	13 (48,1%)	4 (14,9%)	27 (100%)

Table 9: Semantic bleaching in normal and quirky V2 with *lê*

▶ Lowest percentages of semantic bleaching of all verbs

Results: semantic bleaching

- Hierarchy with respect to semantic bleaching (cf. Breed 2017; Biberauer 2019):

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- Hierarchy with respect to semantic bleaching (cf. Breed 2017; Biberauer 2019):

  loop$_{prog}$ > *staan* > *sit* > *lê*

- This hierarchy corresponds with the hierarchy of degree of *en*-absence

- I.e. the more semantically bleached a PC verb, the less it occurs with *en*

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- PC verb *loop* shows the most morphosyntactic optionality, and is the most bleached

- The most in its andative use

Main gist of the analysis

Theoretical prerequisites (I)

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Theoretical prerequisites (I)

- ▶ Semi-lexicality is the result of early grammaticalisation (Haider 2001, Hagemijer 2001, Klockmann 2017)
- ▶ A lexical item is a featureless root; a functional item is a (bundle of) functional feature(s) (Halle & Marantz 1993; Harley & Noyer 1999; Borer 2005a);

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Theoretical prerequisites (II)

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► Semi-lexicality is the result of a root being inserted in the functional domain of another root (Klockmann 2017; Cavirani-Pots 2020; see also Song 2019);

► v and n a mere categorizers of roots, not introducing any arguments (Kratzer 1996; Lin 2001; Marantz 2005; Bowers 2010; Lohndal 2014; cf. Borer 2005b).
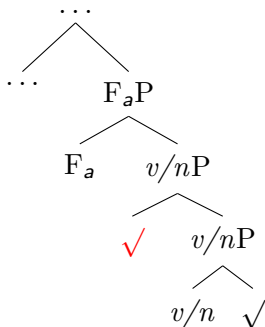
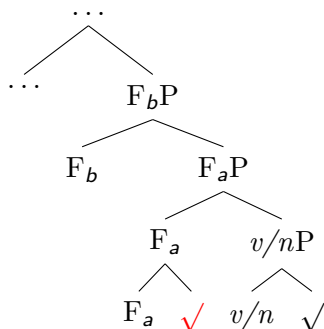# Main gist of the analysis

Main proposal

- There are two stages of semi-lexicality, which are early steps on a grammaticalisation path

Main gist of the analysis

(19) **Semi-lexical stage I**   (20) **Semi-lexical stage II**

→ The red root is the semi-lexically used root.

Main gist of the analysis

► Revision of standard grammaticalisation path (cf. Hopper & Traugott 1993)

(21) $A_{lexical} > B_{functional}/A_{lexical} (> B_{functional})$

Main gist of the analysis

▶ Revision of standard grammaticalisation path (cf. Hopper & Traugott 1993)

Stage	Vocabulary items
Stage 0	$A_{lexical}$
Stage I	$A_{lexical}$ + semi-lexical use$_{stageI}$ of $A_{lexical}$
Stage II	$A_{lexical}$ + semi-lexical use$_{stageII}$ of $A_{lexical}$
Stage III	$B_{functional}$ $(+ A_{lexical})$

Main gist of the analysis

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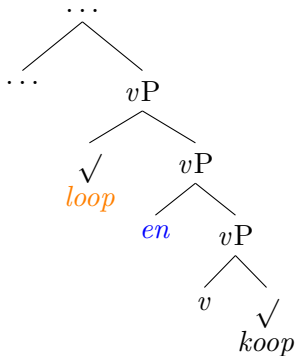
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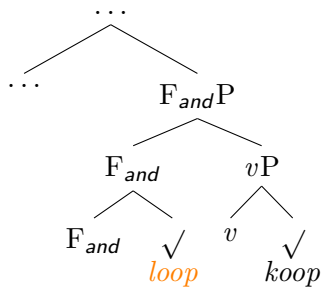- For some speakers, *staan* is moving towards stage II

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- $Loop_{prog}$ is moving towards stage II

- For most speakers, posture verbs are exclusively in stage I

- For some speakers, $staan$ is moving towards stage II

- En is an uncategorized element, which can only occur between two roots (cf. Philip 2012, Weisser 2015, Biberauer 2017, Song 2019)

Main gist of the analysis

(22) **Semi-lexical stage I**

```
            ···
          /     \
       ···        vP
                /    \
             √        vP
           loop     /    \
                  en       vP
                         /    \
                        v      √
                             koop
```

(23) **Semi-lexical stage II**

```
              ···
            /     \
         ···        F_and P
                  /        \
             F_and          vP
            /     \        /    \
       F_and       √      v      √
                 loop          koop
```

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- ▶ I have shown that they also show a high degree of morphoysyntactic varation
- ▶ Higher degrees of morphosyntactic variation correlate with higher degrees of semantic bleaching
- ▶ I have argued that this is an indication for a shift from stage I to stage II

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- In future work, I hope to collect data from regions that I did not manage to reach
- Futhermore, I want to get a clear picture of the degree of *ge-* and quirky V2 optionality with other semi-lexical and functional verbs in Afrikaans