Particle verbs and focus in Guébie*

Hannah Leigh Sande

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1 Introduction

While Germanic particle verbs have received much descriptive and theoretical attention, particle verbs are otherwise underdescribed and underanalyzed.[1]

- Here, I describe the morphophonological and syntactic properties of particle verbs in Guébie (Kru, Niger-Congo) [Côte d'Ivoire] based on original data.

- **Goals:**

    - Provide an analysis of contrastive focus constructions and the structure of particle verbs in Guébie.

    - Demonstrate that existing analyses of Germanic particle verbs extend to a typologically very different language.

- Based on evidence from focus constructions and gapping, I show that particles are syntactically situated inside a phrasal complement to V:

```
              VP
             /  \
           PP     V
           |      |
         Part   Verb
```
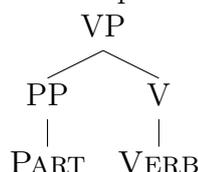
    - This is the same analysis that Koster (1975); Johnson (1991); Neeleman and Weerman (1993) propose for the structure of particle verbs in Germanic.

- But, in certain morphosyntactic environments, particles merge with V to form a single morphophonological word: [$_V$ Part-Verb].

    - The requirement that particles morphologically merge with the verb root in certain contexts is also found in Zeller (2001)'s analysis of Germanic particle verbs.

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[1]Though see, for example, Dahlstrom 1987 on Fox for a description of particle verbs in a non-Indo-European language.

2 Guébie word order

- Word order in Guébie is SAuxOV (1a), unless there is no auxiliary present, in which case we see SVO order (1b).

(1) **SVO/SAOV order**

    a. ɟaci$^{23.1}$ ji^3 su-wa$^{2.2}$ gbala$^{2.4}$
       Djatchi will tree-DEF climb

       'Djatchi will climb a tree.'

    b. ɟaci$^{23.1}$ gbala$^{2.4}$ su-wa$^{2.2}$
       Djatchi climb.PFV tree-DEF

       'Djatchi climbed the tree.'

- Auxiliaries mark aspect, mood, and negation (2).

(2) **Guébie auxiliaries**

| Aspect/Mood	Affirmative	Negative
Imperfective	*tone on verb*	*Rising tone on subject*
Perfective	*tone on verb*	la^2
Habitual	ja^3	la^3
Future	ji^3	ji^{43}
Irrealis	ka^3	ma^{31}

- In SVO sentences, the verb inflects for aspect via systematic tone changes (3).

(3) **Verbs inflect for aspect in SVO clauses**

	Perfective			Imperfective	
a.	ɔ^3 **gbala**$^{4.2}$ si^2	'He climbed trees.'	b.	ɔ^3 **gbala**$^{3.2}$ si^3	'He climbs trees.'
c.	ɔ^3 **li**^{3} ɟa^{31}	'He ate coconuts.'	d.	ɔ^3 **li**^{2}	'He eats coconuts.'
e.	ɟaci$^{2.31}$ **pa**^{31} gɔlɔ$^{3.3}$	'Jachi flipped the boat'	f.	ɟaci$^{2.31}$ **pa**^{21} gɔlɔ$^{3.3}$	'Jachi flips boats.'

- There are four level tone heights in Guébie, marked here with numbers 1-4.

- The first tone of imperfective verbs surfaces one step lower on the 4-tone scale than the perfective counterpart.

- I claim that the position of the verb in SVO sentences is T, and that the subject is in spec-T.

(4) **Structure of SVO sentences in Guébie**
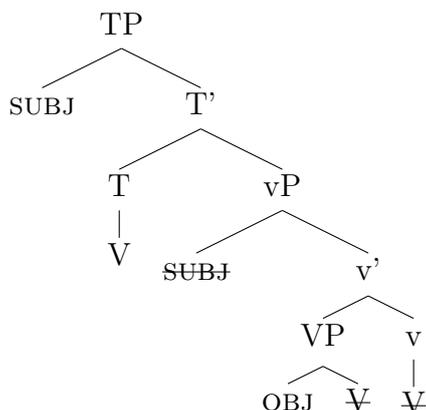
- Evidence that the position of verbs in SVO clauses is T as opposed to C comes from, among other things, the fact that the auxiliary verb need not always be in 2nd position; 3rd or 4th position is okay (5).

(5) **V3 clauses**

a. ɲɔkpa$^{3.3}$ touri$^{1.1.3}$ **ji^3** lɛtrɪ$^{3.2}$ kɔpa$^{3.23}$ na^3
who   Touri   will letter send   Q

b. *ɲɔkpa$^{3.3}$ **ji^3** touri$^{1.1.3}$ lɛtrɪ$^{3.2}$ kɔpa$^{3.23}$ na^3
who   will Touri   letter send   Q

Intended: 'To whom will Touri send a letter?'

c. bagʷɛ$^{3.1}$ ɔ^3 **ji^3** kɔpa-ɔ$^{3.23.2}$
book   he$_i$ will send-him$_j$

'It's a BOOK he will send him (as opposed to a letter).'

d. *bagʷɛ$^{3.1}$ **ji^3** ɔ^3 kɔpa-ɔ$^{3.23.2}$
book   will he$_i$ send-him$_j$

Intended: 'It's a BOOK he will send him (as opposed to a letter).'

- Additionally, the subject must always immediately precede the verb; OVS order is not permitted, which we might expect to be possible if the final landing site of V was C and not T.

(6) **Strict Subject ≫ Verb order**

a. ju^4 li^3 ɟa^{31}
boy eat.PFV coconuts

'The boy ate coconuts.'

b. *ɟa^{31} li^3 ju^4
coconuts eat.PFV boy

Intended meaning: 'The boy ate coconuts'

c. *(k)uɓə$^{3.1}$ li^3 ju^4 ɟa^{31}
yesterday   eat.PFV boy coconuts

Intended meaning: 'Yesterday The boy ate coconuts.'

- Evidence that the verb in SVO clauses is in T and not little-v comes from the fact that adverbs cannot intervene between the subject and verb (as in French).

(7) **Adverbs cannot surface between subject and verb**

a. ɟaci$^{23.1}$ ɟele$^{3.3}$ daame$^{1.3.3}$ bagʷɛ$^{3.1}$ me^3
Djatchi read.IMPF often   book   PART

'Djatchi often reads books'

b. *ɟaci$^{23.1}$ daame$^{1.3.3}$ ɟele$^{3.3}$ bagʷɛ$^{3.1}$ me^3
Djatchi often   read.IMPF book   PART

Intended: 'Djatchi often reads books'

3   Guébie particle verbs

- In SVO contexts we expect the verb to move to T; however, there is a class of verbs where one or two syllables of the lexical verb move to T, leaving the rest behind.

(8)   **Particle verbs**

    a. e^4 ji^3 ɟaci$^{23.1}$ **jokuni**$^{2.3.4}$
        I will Djatchi visit

        'I will visit Djatchi.'

    b. e^4 **ni**^{4} ɟaci$^{23.1}$ **joku**$^{2.3}$
        I visit.PFV Djatchi PART

        'I visited Djatchi.'

    c. *e^4 **jokuni**$^{2.3.4}$ ɟaci$^{23.1}$
        I   visit.PFV   Djatchi

        Intended: 'I visited Djatchi.'

- It is not the case that every polysyllabic verb undergoes this splitting process (recall /gbala/ in (1)).

- In fact, unlike (McIntyre, 2001)'s claim that stress distinguishes particles from verbal prefixes in German, there is no phonological factor determining which verbs split in Guébie.

- **Question:** How are splitting verbs different from non-splitting ones?

  – I propose that they are made up not only of a lexical verb, but of a verb root plus a *particle*.

  – These particles are often homophonous with postpositions in the language (9); however, some particles are unique to a specific particle-verb lexical meaning (e.g. /ji/ in /ji-ni$^{3.4}$/ 'see')

(9)   **Postpositions homophonous to particles**

    a. e^4 me^3 [dabara$^{4.4.4}$ **ko**^{3}]
        1.SG go.PFV market   to

        'I went to the market.'

    b. ɔ^{24} **ko**-wəri$^{3.4.4}$
        3.SG.NEG PART-be.heavy

        'He is not heavy.'

- Some particles can be used across many particle-verb constructions, while others are found with only one or two verbs.

- No particle can productively be added to verb roots to create a particle verb.

(10) **Particles present across particle verb constructions**

	/**me**/	'in'
a.	mɛ-bɔlɛ[3.3.1]	'throw away'
b.	me-druliju[3.4.2.2]	'push'
c.	me-ŋʷitu[3.3.1]	'pierce'
d.	mɛ-pra[3.2]	'return'

	/**ko**/	'on/to'
a.	ko-silije[3.3.3.1]	'straighten'
b.	kɔ-trɔ[3.4]	'be tall'
c.	kɔ-salɪ[3.3.3]	'diminish'
d.	kɔ-gbɛa[3.2.2]	'accumulate'
e.	kɔ-sɛja[3.3.1]	'throw away'
f.	kɔ-ɟɛ[3.1]	'take'
g.	kɔ-sa[3.1]	'snatch'
h.	kɔ-pʊrʊ[3.4.2]	'hurry' (from /pʊrʊ/ 'be fast')

	/**joku**/	'near'
a.	jɔkʊ-drɛ[2.3.3]	'join'
b.	joku-ki[2.3.1]	'turn over'
c.	jɔkʊ-ŋʷɔsa[2.3.3.1]	'scrape'
d.	joku-ple[2.3.3]	'pass'

	/**gʷe**/	??
a.	gʷe-bijə[1.3.1]	'hold'
b.	gʷe-ɓiə[1.31]	'finish'

	/**dɔku**/	'down'
a.	dɔkʊ-gbɔ[2.3.2]	'move'
b.	doku-gbe[2.3.3]	'sit down'
c.	doku-ɓiri[2.3.3.1]	'go down'

- Particle verbs are not uncommon in West Africa. For example, splitting verbs make up much of the verbal lexicon of Nupe (Benue-Congo, Nigeria) (Smith, 1969).

  - Nupe splitting verbs are made up of a verb root plus a nominal element or another verbal element.

    * Verb+Noun: /gãgwa/ 'escape' from /gã/ 'pass' + /egwa/ 'hand'
    * Verb+Verb: /taya/ 'to slip' from /ta/ 'to be on' + /ya/ 'to leave'

  - Like in Guébie, these Verb+X combinations act as a morphological unit when linearly adjacent, but in certain morphosyntactic contexts the primary verb root moves away from nominal or secondary verbal element.

- Unlike Nupe, splitting verbs cannot contain a nominal component, nor two verbal components. Instead, we have a verb root with a postposition-like particle.

- For the remainder of this paper I treat those particles which occur in multiple constructions the same as those which occur in just a few.

- Additionally, I treat particles that are homophonous to postpositions the same as those only found in particle-verb constructions.

4 Properties of particle verbs

- To discover the syntactic relationship between particles and verbs in particle verb constructions, we look at their morphophonological and syntactic behavior.

4.1 Morphophonological properties

- When the verb does not undergo movement to T, that is, in the presence of an auxiliary, the particle and verb surface within the same morphophonological word.

- Evidence for this claim comes from vowel harmony, a productive word-internal process in Guébie.

  – With the exception of a few suffixes that always retain their vowel quality, all affix vowels match the ATR value of root vowels.

  – Vowels within roots agree in ATR value.

(11) **Vowel harmony within particle verbs in SAuxOV only**

    a. jaci$^{2.31}$ ŋ^{w}ɔsa$^{3.1}$ ɔnɛ$^{3.3}$ gbɔgɔ$^{2.2}$ <u>joku$^{2.3}$</u>
        Jachi scrape.PFV 3SG.POSS leg   PART

        'Jachi scraped his leg'

    b. jaci$^{2.31}$ ji^{3} ɔnɛ$^{3.3}$ gbɔgɔ$^{2.2}$ <u>jɔkʊ-ŋ^{w}ɔsa$^{2.3.3.1}$</u>
        Jachi will 3SG.POSS leg   PART-scrape

        'Jachi scraped his leg'

- Particles agree in ATR with roots in clauses without verb movement to T (11b).

- Because harmony is a word-internal process in Guébie, the particle and verb must be part of the same morphophonological word in (11b).

- Note that linear adjacency is not enough to trigger harmony, as seen with intransitive verbs in (12); there must be a structural criterion as well.

(12) **Linear adjacency is not enough to trigger harmony**

    a. ɔ^{3} gbe^{3} <u>dɔkʊ$^{2.3}$</u>
        3.SG.NOM sit.PFV PART

        'He sat down.'

    b. ɔ^{3} ji^{3} <u>doku-gbe$^{2.3.3}$</u>
        3.SG.NOM will PART-sit

        'He will sit down.'

- The fact that the verb has moved structurally further from the particle in (12a), to T, prevents the particle from forming a single morphophonological word with the verb.

4.2   Syntactic properties

- There is a gapping construction in Guébie where the verb can be left out of the second of two coordinated clauses just in case the verbs of the two clauses are the same.

(13)   **Gapping**

    a. ɟaci$^{2.31}$ <u>wa^3</u>   ɟiri$^{2.2}$ [ma^2 touri$^{1.1.2}$ kokʷi-a$^{2.3.3}$]
       Djatchi like.IPFV fish   but Touri   chicken-DEF

       'Djatchi likes fish but Touri (likes) chicken.'

    b. ɟaci$^{2.31}$ ji^3 ɟiri$^{2.2}$ <u>wa^3</u> [ma^2 touri$^{1.1.2}$ kokʷi-a$^{2.3.3}$]
       Jachi <u>will</u> fish   like but Touri   chicken-DEF

       'Jachi will like the fish but Touri the chicken.'

- When the verb in a gapping construction is a particle verb, both the particle and the verb are elided in the second clause.

- It is ungrammatical to elide the particle or the verb but not both.

(14)   **Particles are elided with verbs in gapping constructions**

    a. ɟaci$^{2.31}$ <u>ni^4</u>   gogo$^{2.3}$ <u>joku$^{2.3}$</u> [ne^4 touri$^{1.1.2}$ tieri$^{1.1.2}$]
       Djatchi see.PFV Gogo   <u>PART</u> and Touri   Tierry

       'Djatchi saw Gogo and Touri (saw) Tierry.'

    b. ɟaci$^{2.31}$ ji^3 ɟiri$^{2.2}$ <u>jokuni$^{2.3.4}$</u> [ma^2 touri$^{1.1.2}$ kokʷi-a$^{2.3.3}$]
       Djatchi <u>will</u> fish   <u>see</u>

       'Djatchi likes fish but Touri (likes) chicken.'

    c. *ɟaci$^{2.31}$ <u>ni^4</u>   gogo$^{2.3}$ <u>joku$^{2.3}$</u> [ne^4 touri$^{1.1.2}$ ni^4 tieri$^{1.1.2}$]
       Djatchi see.PFV Gogo   <u>PART</u> and Touri   see.PFV Tierry

       Intended: 'Jachi saw Gogo and Touri saw Tierry'

    d. *ɟaci$^{2.31}$ <u>ni^4</u>   gogo$^{2.3}$ <u>joku$^{2.3}$</u> [ne^4 touri$^{1.1.2}$ tieri$^{1.1.2}$] joku$^{2.3}$
       Djatchi see.PFV Gogo   <u>PART</u> and Touri   Tierry   PART

       Intended: 'Jachi saw Gogo and Touri saw Tierry.'

- Johnson (1996) claims that gapping (whether analyzed as ellipsis or across-the-board movement) cannot apply to part of a PP without applying to all of it (p. 12-13).

(15)   **All-or-nothing PP deletion in gapping** (from Johnson 1996:13)

    a. Charlie wrote several books on syntax and Jill ~~wrote~~ several books on semantics.

    b. *Charlie wrote several books on syntax and Jill ~~wrote several~~ books on semantics.

    c. *Charlie wrote several books on syntax and Jill ~~wrote several books on~~ semantics.

- The fact that the particle is deleted in the gapping constructions in (14) but the direct object is left behind shows that these particles are not heads of PPs containing nominal complements.

- The structure in (16) cannot be correct for Guébie transitive particle verbs.

(16) **Impossible structure for Guébie particle verbs**

```
            VP
          /    \
        PP      V
       /  \     |
     DP    P   VERB
     |     |
    OBJ   PART
```
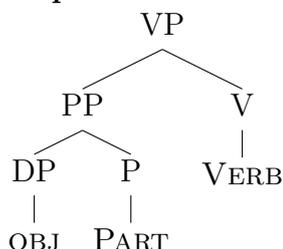
- The fact that the particle is elided with the verb in (14) suggests that the particle and verb are syntactically very close, perhaps even closer than the verb and direct object.

(17) **Proposed structure of transitive particle verb**

```
          VP
         /   \
       DP     V'
       |     /  \
      OBJ  PP    V
           |     |
           P    VERB
           |
         PART
```
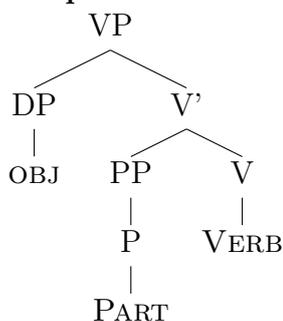
- Further evidence that particles are closely related to verbs syntactically (and lexically) is their lack of productivity.

- There is no consistent meaning contributed by any given particle; nor is there a valency requirement for any given particle.

- That is, particle verb constructions are lexicalized, memorized semantic units, much like idioms.

(18) **No consistent meaning**

|			
a.	kɔ-pʊrʊ[3.2.2]	PART-be.fast	'hurry'	intransitive
b.	ko-ɓruse[3.3.1]	PART-untie	'unwrap'	transitive
c.	kɔ-ɲɛ[3.3]	PART-give	'give back'	ditransitive
d.	mɛ-salɪ[3.3.3]	PART-?	'talk'	
e.	kɔ-salɪ[3.3.3]	PART-?	'diminish'	

- In Distributed Morphology (Halle and Marantz, 1994; Embick and Noyer, 2001), we could write a condition on vocabulary insertion of particles, listing the possible verbal roots with which they can surface.

  - This would mean that the knowledge about which particle+verb combinations are meaningful in the language is lexical.

4.3 Interim summary

- The properties of particle verbs that we have seen thus far suggest a very close morphosyntactic relationship between particles and verbs.

  - Particles and verbs form a morphophonological word when structurally and linearly adjacent (evidence from vowel harmony).
  - Particle+verb combinations have idiomatic meanings; particles cannot be productively added to verb roots like inflectional morphology can.
  - In Gapping constructions particles are elided along with verbs.

- Additionally, verbs head-move in SVO contexts, leaving the particle behind, so the two cannot be within the same head syntactically:

  - Particle+verb combinations cannot be morphologically inseparable lexical verbs:

$$
\begin{array}{c}
\text{V} \\
| \\
\textsc{Part-Verb}
\end{array}
$$

  - This is not viable base-generated position for the particle, since the verb can move without the particle in SVO clauses.
  - For the same reason, particles cannot be complement to the verb root, inside V:

$$
\begin{array}{c}
\text{V} \\
\diagup\diagdown \\
\textsc{Part}\quad\textsc{Verb}
\end{array}
$$
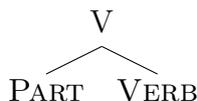
- Instead, I propose that particles are complements to the category-defining head:

$$
\begin{array}{c}
\text{VP} \\
\diagup\diagdown \\
\text{PP}\qquad\text{V} \\
|\qquad\quad| \\
\textsc{Part}\qquad\textsc{Verb}
\end{array}
$$
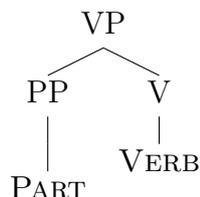
- To capture the vowel harmony facts, I claim that particles morphologically merge (Marantz, 1984, 1988) with the verb when the two are linearly and structurally adjacent:

$$
\begin{array}{c}
\text{V} \\
| \\
\textsc{Part-Verb}
\end{array}
$$

- The proposed analysis for Guébie particles is also the one proposed for German by Zeller (2001).

  - If the same analysis of particle verbs works for two typologically very different languages, we might predict that it holds for particle verbs cross-linguistically; however, I don't have time or space to test that prediction here.

- To confirm this proposed structure of particles, we turn to focus constructions.

5 Focus and verb doubling

- Contrastively focused elements in Guébie surface clause-initially.

(19) **Focus: Clause-initial**

    a. <u>touri$^{1.1.2}$</u> ɔ³   pa=ɔ$^{23.2}$ bagʷɛ$^{3.1}$ ko³
        Touri   3SG.NOM send.PFV=3SG.ACC book   PART

        'It's TOURI who sent him a book.'

    b. <u>bagʷɛ$^{3.1}$</u> ɔ³   pa=ɔ$^{23.2}$ ko³
        book   3SG.NOM$_i$ send.PFV=3SG.ACC$_j$ PART

        'It's a BOOK he sent him.'

    c. e⁴   jisa$^{2.3}$ gba¹ [ɟaci$^{23.1}$ ɔ³   ni⁴   (ɛbɔ$^{3.1}$)   kʷala$^{4.2}$ me³
        1SG.NOM know.IPFV that Djatchi 3SG see.PFV 3SG.ACC farm   on
        ji³]
        PART

        'I know that it's Djatchi he saw on the farm.'

- Along with subjects (19a) and objects (19b,c), adverbial and postpositional phrases can also occur in the fronted focus position, (20b).

(20) **Focused adverbial phrases**

    a. ɔ³   li²   kʷala$^{4.2}$ ko³ ɟa^{31}
        3SG.NOM eat.IPFV farm   at   coconuts

        'He eats coconuts at the farm.'

    b. kʷala$^{4.2}$ ko³ ɔ³   li²   ɟa^{31}
        farm   at   3SG.NOM eat.IPFV coconuts

        'It's at the farm that he eats coconuts.'

- We know that this focus position is an A-bar position (not an A-position) for multiple reasons:

    1. Full phrases can be focused.

    2. Non-arguments can be focused.

- To contrastively focus the action or event, the verb is not only fronted, but also doubled (21).

(21) **Verb focus**

    a. *<u>gbala$^{2.4}$</u> ɔ³   ~~gbala$^{2.4}$~~
        climb   3SG.NOM ~~climb~~

        Intended: 'It's climbing that he did.'

    b. <u>gbala$^{2.4}$</u> ɔ³   gbala$^{2.4}$
        climb   3SG.NOM climb

        'It's climbing that he did.'

- In verb focus constructions when an auxiliary is present, we still see doubling (22).

(22) **Verb doubling in the presence of an auxiliary**

    a. <u>gbala$^{2.4}$</u> ɔ^3 ji^3 su^3 gbala$^{2.4}$
       climb   3SG.NOM will tree climb

       'It's climbing that will do of the tree.'

    b. *<u>gbala$^{2.4}$</u> ɔ^3 ji^3 su^3 ~~gbala$^{2.4}$~~
       climb   3SG.NOM will tree climb

       Intended: 'It's climbing that he will do of the tree.'

- This shows that the verb is not head-moving to C in focus constructions, because the verb surfaces clause-initially even when there is an intervening auxiliary in T.

- When the downstairs verb shows aspect inflection, the focused verb does as well (23).

(23) **Inflection matches on doubled verbs**

    a. <u>gbala$^{2.4}$</u>   ɔ^3 gbala$^{2.4}$
       climb.PFV 3SG.NOM climb.PFV

       'It's climbing that he did.'

    b. <u>gbala$^{1.4}$</u>   ɔ^3 gbala$^{1.4}$
       climb.IPFV 3SG.NOM climb.IPFV

       'It's climbing that he is doing.'

- While the data in (23) might suggest a head movement account, for the time being I assume a VP-copy account, and I address the head movement analysis in section (6).

- When the downstairs verb is overtly marked with valency-changing morphology, or with an object enclitic, the focused copy of the verb optionally shows the same morphology (24).

(24) **Verbal morphology optionally matches on doubled verbs**

    a. <u>gbala(=ɔ)$^{2.4(.2)}$</u>   ɔ^3 gbala=ɔ$^{2.4.2}$
       climb=3SG.ACC 3SG.NOM climb=3SG.ACC

       'Climbing it is what he did.'

    b. <u>li(-li)$^{2(.2)}$</u>   ju^4 li-li$^{3.3}$ saka$^{3.3}$ ko^2
       eat.PFV-APPL boy eat.PFV-APPL rice   hand

       'It's eating that the boy did with his hand.'

- Note that verbal suffixes and clitics can optionally appear on the copy of the fronted verb, but are required on the downstairs verb (21c).

- In verb focus, but not other focus constructions, we see doubling.

- The proposed analysis: VP copying and multiple-copy spell-out (I return in section 6 to why a head movement analysis is less appealing).

  - If this is in fact VP copying (as is proposed by Koopman 1999 for Vata), objects must vacate the VP before it is fronted, because the verb cannot surface along with an object in focus constructions, (21b) vs. (25).

(25) **Objects are not fronted with verbs**

    a. *gbala$^{2.4}$ su^3 ɔ^3 ji^3 (su^3) gbala$^{2.4}$
       climb tree 3SG.NOM will tree climb

       Intended: 'It's tree climbing that he will do.'

    b. *su^3 gbala$^{2.4}$ ɔ^3 ji^3 (su^3) gbala$^{2.4}$
       tree climb 3SG.NOM will tree climb

       Intended: 'It's tree climbing that he will do.'

- This apparent problem is actually not a problem. There is independent evidence from A-scrambling that objects move higher than their base-generated position.

(26) **A-scrambling data**

    a. ɟaci$^{2.31}$ ji^3 kʷala$^{4.2}$ mɛ^3 gogo$^{2.3}$ joku-ni$^{2.3.4}$
       Jachi will farm on Gogo PART-see

       'Jachi will see Gogo on the farm.'

    b. ɟaci$^{2.31}$ ji^3 gogo$^{2.3}$ kʷala$^{4.2}$ mɛ^3 joku-ni$^{2.3.4}$
       Jachi will Gogo farm on PART-see

       'Jachi will see Gogo on the farm.'

(27) **A-scrambling structure**
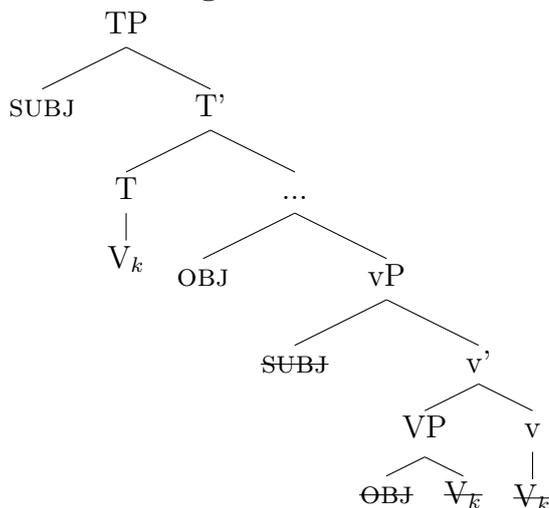
- It doesn't matter for our purposes what the landing site of A-movement is, only that direct objects move outside of VP.

- In focus constructions, what is otherwise optional movement of objects out of VP is required.

- Unlike objects, particles can not move out of VP.

- If this verb focus construction involves VP copying, we expect particles to be fronted in VP-focus constructions, surfacing with verbs in particle-verb doubling contexts: [Part-V S V O Part].

- This is not the case (28a). Only particles are fronted in particle-verb focus constructions (28b).

(28) **Particle verb focus**

    a. *joku-ni$^{2.3.4}$ ɔ^3 ni-ɔ$^{4.2}$ (joku$^{2.3}$)
       PART-see   3SG.NOM see-PFV-3SG.ACC (PART)

       Intended: 'It's seeing him that he did.'

    b. joku$^{2.3}$ ɔ^3 ni-ɔ$^{4.2}$
       PART   3SG.NOM see-PFV-3SG.ACC

       'It's seeing him that he did.'

- In particle-verb focus constructions, the verb is left downstairs and no element, particle or verb, is doubly pronounced.

(29) **No doubling in particle-verb focus**

    a. *ni^4 ɔ^3 ni-ɔ$^{4.2}$ (joku$^{2.3}$)
       see   3SG.NOM see-PFV-3SG.ACC (PART)

       Intended: 'It's seeing that he did'

    b. *joku$^{2.3}$ ɔ^3 ni-ɔ$^{4.2}$ joku$^{2.3}$
       PART   3SG.NOM see-PFV-3SG.ACC PART

       Intended: 'It's seeing that he did.'

- The above facts can be explained if the object always moves out of VP, and the verb head-moves out of VP to T, leaving only the particle inside VP.

- However, only the particle undergoes focus fronting whether the downstairs verb has moved to T (28), or not (30).

(30) **Particle verb focus with auxiliaries**

    a. joku$^{2.3}$ ɔ^3 ji^3 ɟaci$^{23.1}$ ni^4
       PART   3SG.NOM will Jachi SEE

       'It's seeing that he will do of Jachi.'

    b. mɛ^3 ɔ^3 ji=e$^{3.2}$ sa^3
       PART 3SG.NOM will=3SG.ACC remove

       'It's removing that he will do to it.'

- Verb doubling has been documented previously for a number of Kru languages (cf. Marchese 1979:180-182 on Bété de Guibéroua and Tépo, and Koopman 1984:48-49 on Vata).

- Though as far as I know, this pattern of particle verb fronting has not previously been described or analyzed.

- In the following section I propose an analysis for contrastive focus constructions in Guébie, which supports the proposed structure of particles as inside phrasal complements to V.

6 Analysis of contrastive focus

- One existing analysis of verb doubling is that the doubled verb is a cognate object (Stewart, 1998).

  (31) **Verb doubling as a cognate-object construction in Edo** (from Stewart 1998)

    òzó tué úyì òtué
    Ozo greet Uyi greeting
    'Ozo greeted Uyi a greeting'

  – The cognate-object approach does not work for Guébie, where the doubled verb shows verbal, rather than nominal morphology.

- Another approach to verb doubling involves multiple syntactic copies of the same head or phrase, where PF-conditions determine which copies to pronounce (Nunes, 2004; Landau, 2006; Kandybowicz, 2007; Aboh and Dyakonova, 2009).

  – While the syntactic details of each of these proposals are quite distinct, they all involve PF-conditions on spell-out determining which copies to pronounce.

  – This is the approach I take for Guébie.

  – Importantly, in Hebrew (Landau, 2006), Nupe (Kandybowicz, 2007), and Gungbe (Aboh and Dyakonova, 2009), the fronted verbal copy is a bare verb with no inflection (or nominal inflection).

  (32) **Nupe verb doubling** (from Kandybowicz 2002:61)

    a. gana gi gulu
       Gana eat vulture
       'Gana ate the vulture.'

    b. <u>gigi</u> gana gi gulu o
       eating Gana eat vulture FOC
       'It was eating that Gana did to the vulture.'

  – This is a crucial difference from Guébie, where the doubled verb (optionally) shows the same verbal inflection as the downstairs verb.

- The analysis proposed here involves morphophonological constraints that ensure spell-out of only certain copies of heads.

- To establish the analysis, I raise and propose answers to three questions.

- **Question 1**: What is the syntactic structure of Guébie verb-doubling constructions?

  – I propose that the Foc head has a strong [*uFOC] feature, which probes for any element containing a [FOC] feature.

(33)   **The Guébie left periphery** (from Sande and Baier 2015)

```
                    FocP
                   /    \
                  /      \
              FOCUS      Foc'
                        /    \
                       /      \
                      TP      Foc
                     /  \
                    /    \
                 SUBJ    T'
                        /  \
                     T+V    \
                            vP...
```
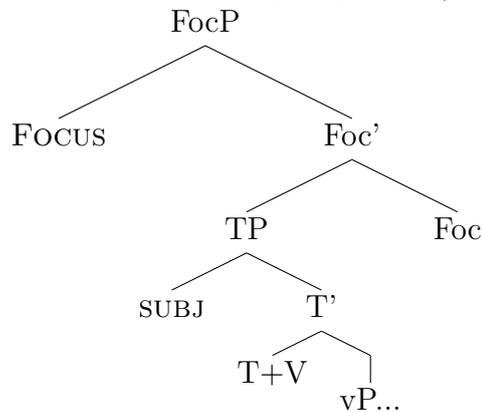
- Without saying more, the structure in (33) gets us the correct surface structure in subject, object, and adjunct focus constructions.

  – A focused object DP, for example, has a [FOC] feature, and when the Foc head probes for something to value its [*uFOC] feature, it finds that object.

  – The presence of the strong feature on Foc means that something must move to spec-Foc, in this case, the phrase carrying a focus feature.

- **Question 2**: How do we ensure verb doubling in verb-focus constructions?

  – Syntactically, the VP has a focus feature, and a copy is merged in spec-Foc.

  – To ensure that a copy of the verb is pronounced downstairs, I propose a language-specific morphological requirement that something of category V be overt within the TP domain.

  (34)   **TP-InternalVerb**: Exactly one overt copy of V must be dominated by TP.

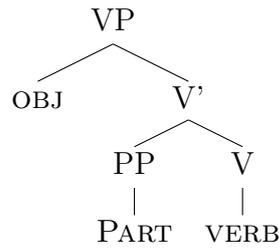 – There is also a requirement that a focused element be spelled out overtly in spec-Foc.

  (35)   **OvertFoc**: Spell out exactly one focused element in spec-Foc.

  – Because (34,35) are constraints on spell-out, I propose that they apply in the morphology.

- **Question 3:** Why are particles, not verbs, fronted in particle-verb focus constructions?

  – We have said that particles are inside a PP phrase, complement to V.

(36) **Particle verb structure**

```
              VP
           /      \
        OBJ        V'
                 /    \
               PP      V
               |       |
             PART    VERB
```

- When the VP contains a [FOC] feature, the entire phrase is copied and merged into spec-Foc.

- A morphological constraint ensures that, if possible, elements won't be multiply spelled out.

(37) ***DoubleSpellOut**: Do not spell out more than one copy of a morphosyntactic element.

- If the constraint in (37) is violable, and those in (34,35) are not, then we get doubling in verb-focus constructions, but not particle-verb focus constructions.

• While I am not claiming that these are OT constraints, I provide a tableau in (38) showing that these constraints or filters result in the correct surface form for contrastive verb focus.

(38) **Morphological constraints ensure correct surface form: Verb doubling**

FocP	TP-INTV	OVERTFOC	*DOUBLE
(tree diagram)			
☞ a. $[_{FocP}$ gbala$^{2.4}$ $[_{TP}$ ɔ^3 gbala$^{2.4}$]]			*
b. $[_{FocP}$ gbala$^{2.4}$ $[_{TP}$ ɔ^3]] Ø	*!		
c. $[_{FocP}$ $[_{TP}$ ɔ^3 gbala$^{2.4}$]]		*!	

The tree diagram for row containing FocP:

```
                    FocP
              /              \
        VP_Foc              Foc'
          |              /        \
          V            TP          Foc
          |          /    \         |
       gbala^2.4   ɔ^3     T'      uFOC
                         /    \
                      T+V      vP
                       |      /    \
                  gbala^2.4 VP_Foc  v+V
                              |      |
                              V   gbala^2.4
                              |
                          gbala^2.4
```
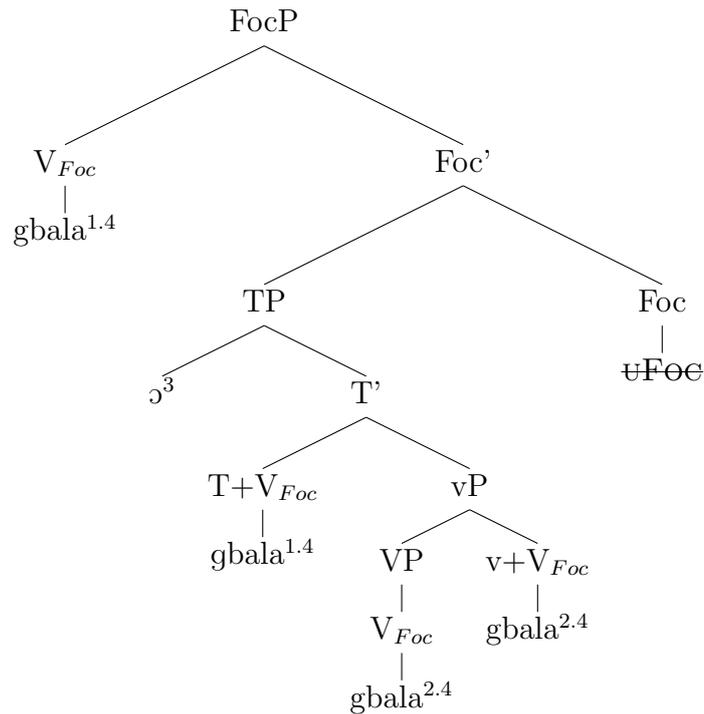
• These constraints also predict the correct surface order in particle-verb focus contexts (39).

(39) **Morphological constraints ensure correct surface form: Particle fronting**

[Syntactic tree diagram:

FocP
 ├─ VP_Foc
 │   ├─ D : ɟaci^{23.1}
 │   └─ V'
 │   ├─ PP
 │   │   └─ P : joku^{2.3}
 │   └─ V : ni^4
 └─ Foc'
     ├─ TP
     │   ├─ ɔ^3
     │   └─ T'
     │   ├─ T : ji^3
     │   └─ vP
     │   ├─ VP_Foc
     │   │   ├─ DP : ɟaci^{23.1}
     │   │   └─ V'
     │   │   ├─ PP
     │   │   │   └─ P : joku^{2.3}
     │   │   └─ V : ni^4
     │   └─ v+V : ni^4
     └─ Foc : ~~uFoc~~
]

	TP-INTV	OVERTFOC	*DOUBLE
☞ a. $[_{FocP}$ joku$^{2.3}$ $[_{TP}$ ɔ^3 ji^3 ɟaci$^{23.1}$ ni$^4]]$			
b. $[_{FocP}$ joku-ni$^{2.3.4}$ $[_{TP}$ ɔ^3 ji^3 ɟaci$^{23.1}]]$	*!		
c. $[_{FocP}$ $[_{TP}$ ɔ^3 ji^3 ɟaci$^{23.1}$ joku-ni$^{2.3.4}]]$		*!	
d. $[_{FocP}$ joku-ni$^{2.3.4}$ $[_{TP}$ ɔ^3 ji^3 ɟaci$^{23.1}$ ni$^4]]$			*!

- In a VP-copy analysis, it doesn't matter for our purposes whether the VP undergoes parallel chain formation (Kandybowicz, 2008; Aboh and Dyakonova, 2009), or is moved via a single chain up to spec-Foc (Koopman, 1999).

- Either way, the syntax requires phrasal movement to spec-Foc, and morphological constraints ensure verb doubling unless a particle is present.

- One further question: Why does inflection on the fronted verb match that of the lower verb?

- **What about a head-movement approach?**

    – One aspect of verb doubling that our VP-copy analysis cannot account for is why the fronted verb shows the same inflection as the downstairs verb.

    – A head-movement account gets this for free.

(40) **Head movement structure**: gbala$^{1.4}$ ɔ^3 gbala$^{1.4}$

$$
\begin{array}{c}
\text{FocP} \\
\diagup \qquad \diagdown \\
\text{V}_{Foc} \qquad\qquad \text{Foc'} \\
| \\
\text{gbala}^{1.4}
\end{array}
$$

FocP
- V$_{Foc}$
  - gbala$^{1.4}$
- Foc'
  - TP
    - ɔ^3
    - T'
      - T+V$_{Foc}$
        - gbala$^{1.4}$
      - vP
        - VP
          - V$_{Foc}$
            - gbala$^{2.4}$
        - v+V$_{Foc}$
          - gbala$^{2.4}$
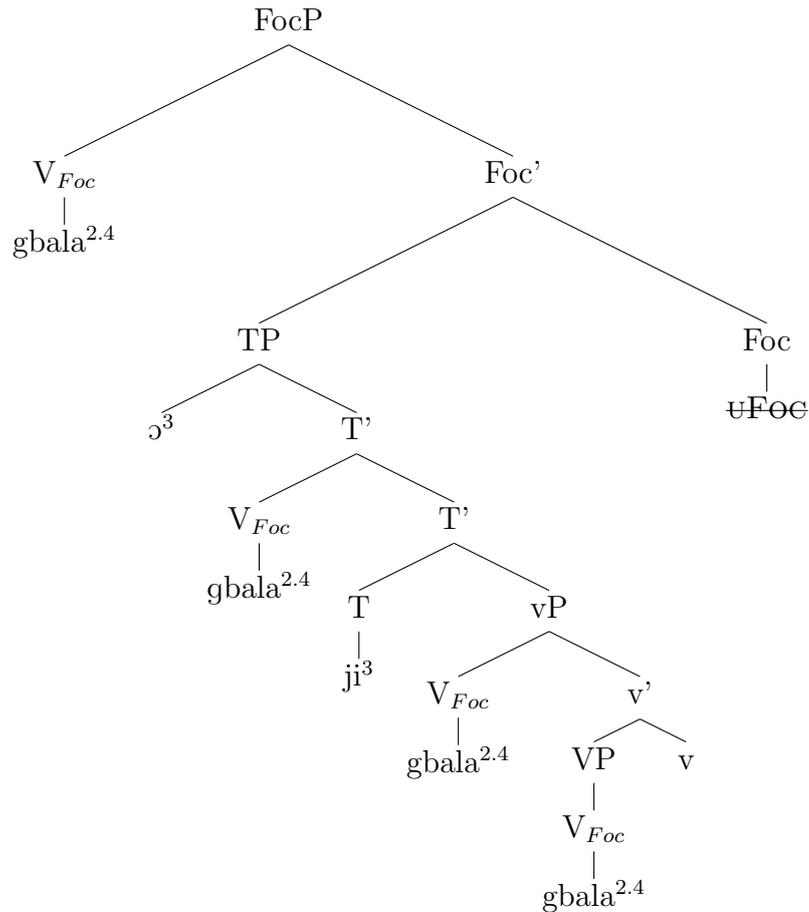 - Foc
    - ~~uFoc~~

- Traditional accounts of head-movement assume that intervening heads block movement (Travis, 1984).

- In Guébie, the presence of an overt auxiliary head in T *does not* block movement to spec-Foc.

(41) **Auxiliaries don't block movement of V to spec-Foc**

    a. <u>gbala$^{2.4}$</u> ɔ^3 gbala$^{2.4}$
        climb   3SG.NOM climb

        'It's climbing that he did.'

    b. <u>gbala$^{2.4}$</u> ɔ^3 ji^3 su^3 gbala$^{2.4}$
        climb   3SG.NOM will tree climb

        'It's climbing that he did of the tree.'

- More recent ideas about head movement (cf. Matushansky 2006), do not assume that movement is blocked by intervening heads.

- Instead, heads are merged into specifier positions and later morphologically merge into the head position.

- Adopting Matushansky (2006)'s version of head movement, overt auxiliaries are not a problem for head movement to spec-Foc.

(42) **Revised head movement structure**: gbala$^{2.4}$ ɔ^3 ji^3 gbala$^{2.4}$

```
                          FocP
                ┌──────────┴──────────┐
            V_Foc                    Foc'
              │              ┌─────────┴────────┐
          gbala^2.4         TP                 Foc
                       ┌─────┴─────┐            │
                      ɔ^3         T'          u̶F̶O̶C̶
                            ┌──────┴──────┐
                          V_Foc          T'
                            │        ┌────┴────┐
                        gbala^2.4    T         vP
                                     │     ┌───┴───┐
                                    ji^3  V_Foc    v'
                                           │     ┌──┴──┐
                                       gbala^2.4 VP    v
                                                  │
                                                V_Foc
                                                  │
                                              gbala^2.4
```

- The verb moves through spec-T, cannot merge with T because there is already an overt head there, and continues to head-move up to spec-Foc, where it stays.

- While this account could work, it raises questions such as why the verb never surfaces in spec-T?

- Additionally, it raises an ordering paradox.

  - Morphological merger happens after syntax, but movement to spec-Foc is a syntactic process with LF consequences.
  - Thus, we expect morphological merger to take place after movement to spec-Foc.
  - However, the focused V in Guébie shows inflection, which V cannot expone until it is merged with T.

(43) **Inflection matches on doubled verbs: Ordering paradox**

  a. g̲b̲a̲l̲a̲$^{2.4}$ ɔ^3 gbala$^{2.4}$
     climb.PFV 3SG.NOM climb.PFV

     'It's climbing that he did.'

  b. g̲b̲a̲l̲a̲$^{1.4}$ ɔ^3 gbala$^{1.4}$
     climb.IPFV 3SG.NOM climb.IPFV

     'It's climbing that he is doing.'

19

- Even if we can get around the ordering paradox presented by the data in (43), there are further problems with a head movement account.

- If V is head-moving to spec-Foc, how does the particle get there in sentences like (44b)?

(44) **Particles front in particle-verb focus constructions**

a. *$\underline{\text{ni}}^4$ o^3 ni-$\mathrm{o}^{4.2}$ (joku$^{2.3}$)
   see   3SG.NOM see-PFV-3SG.ACC (PART)

Intended: 'It's seeing that he did'

b. $\underline{\text{joku}^{2.3}}$ o^3 ni-$\mathrm{o}^{4.2}$
   PART   3SG.NOM see-PFV-3SG.ACC

'It's seeing that he did.'

- In order to maintain a head-movement account of event focus in Guébie, we would have to say that the particle is syntactically inside the V-head.

  - If this was true, we would expect the particle to surface in T with the verb is SVO clauses; however, this is ungrammatical.

(45) **Particles cannot move to T**

a. e^4 ji^3 ɟaci$^{23.1}$ **jokuni**$^{2.3.4}$
   I   will Djatchi visit

'I will visit Djatchi.'

b. e^4 **ni**^{4} ɟaci$^{23.1}$ **joku**$^{2.3}$
   I   visit.PFV Djatchi PART

'I visited Djatchi.'

c. *e^4 **jokuni**$^{2.3.4}$ ɟaci$^{23.1}$ **joku**$^{2.3}$
   I   visit.PFV   Djatchi

Intended: 'I visited Djatchi.'

- A head-movement account requires stipulation and leaves unanswered questions.

  - Why does verb focus (head-movement) have a different analysis than other focus constructions (A'-movement)?

  - Why doesn't the verb surface in spec-T in the presence of an auxiliary?

  - How do we handle the ordering paradox presented by the data in (43)?

  - How can the particle surface in spec-Foc if this is an instance of head-movement of V?

- For these reasons I propose that the particles are outside V, inside VP. Verb focus involves the VP-copying in Guébie, and morphophonological constraints ensure that the correct copies of the verb are spelled out.

7 Conclusion

- We have seen that Guébie particle verbs are inside of a phrasal projection complement to V.

- In the absence of verb movement to T, the particle undergoes morphological merger with the V head and the two surface as a morphophonological word.

- This analysis of particle verbs has also been proposed for Germanic (Zeller, 2001).

  - The fact that the same analysis works for both Germanic languages and a Kru language suggests that it is a promising analysis of particle verbs cross-linguistically.

- I have presented original data from contrastive focus constructions, where particle verbs show a peculiar and unexpected behavior.

  - I have argued in favor of a VP movement account of verb focus, as opposed to a head-movement account.

  - A focused VP is merged in spec-Foc and morphological constraints determine where the particle and verb are spelled out.

- **Further questions:**

  - Why is Guébie different from Nupe, Gungbe, and Hebrew in that the focused verb can show inflection matching the downstairs verb?

  - Does the analysis of particle verbs proposed by Zeller (2001) for Germanic and proposed here for Guébie account for particle verbs cross-linguistically?

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