Logoori (Bantu) has several negation markers, including the prefixes *si*- and *ta*- and the clause-final particle *daave*. These negators are not freely interchangeable, though. Rather, their distribution is largely determined by clause type: *daave* (alone) in main-clause indicatives, *ta*- and *daave* co-occurring in subjunctives, and *ta*- (alone) in relative clauses:

(1) main-clause indicative
   ndori isimba mugoroova *daave*
   1SG.found book
   ‘I found the book yesterday.’

(2) subjunctive
   u-ta-sooma kitabu *daave*
   2SG-NEG-read book
   ‘[You shouldn’t / Don’t] read the book.’

(3) relative
   ndanora kitabu [kya Mary ya-ta-sooma]
   1SG.found book
   ‘I found the book [that Mary didn’t read].’

This pattern presents an interesting compositionality puzzle: How can *daave* and *ta*- each contribute negative semantics in (1) and (3) resp., without inducing a double-negation reading in (2)? Why doesn’t (2) end up meaning NEG1 + read + NEG2 = ‘Don’t not read’?

Note that the structure in (2) isn’t unusual in itself. There’s plenty of cross-linguistic precedent for this kind of *embracing* or *bipartite negation*—and it’s often taken to indicate a change in progress, viz. a *Jespersen cycle* (JC). But the question stands: Why do we find this *distinct, split* pattern in (1)-(3)?

Proposal (preview):
(i) In main clauses in (1), *grammar competition*—between two analyses of *daave*, one CP-level and one lower—has effectively driven out an older negative prefix *si*-
(ii) In (2), where MOOD > NEG scope is intended, *daave* can only adjoin below CP. There is no grammar competition, and the prefix *ta*- remains stable.
(iii) Unlike the older prefixes *si*- and *ta*-, *daave* is *speaker-oriented*, rendering it incompatible with relative clauses (3) as well as wh-questions and some conditionals.

This account is very different from—but compatible with—analyses where JC is explained as gradual weakening of NEG1 and NEG2. We’ll see that *both* kinds of analyses are needed to explain differences between Logoori and its closest (Luyia) relatives (§3)—underscoring the point that there’s more than one kind of JC (Biberauer 2009, van der Auwera 2009).

Logoori (Lulogooi, Luragoli; ISO 639-3: ng; subfamily Luyia) is spoken by about 600,000 people in western Kenya (Eberhard et al. 2019). Like many Bantu languages it is SVO, pro-drop, agglutinating, tonal, with an abundance of noun classes and verb tenses (not always distinguished in my glosses).

1. A change in progress in Logoori

Negative morphemes are cross-linguistically susceptible to reanalysis and grammaticization, as famously noted by Jespersen 1917:

(4) ‘The history of negative expressions in various languages makes us witness the following curious fluctuation: the original negative adverb is first weakened, then found insufficient and therefore strengthened, generally through some additional word, and this in turn may be felt as the negative proper.’

(5) OldEng (stage 1): *Ne* sende se deofol ða fyrr. (*The devil didn’t send fire...*)
   MidEng (stage 3): *bet ne* seide he *noht* (*‘he didn’t say that’*)
   ModEng (stage 3–5): He did *not* say ~ He didn’t *say* (*Fischer et al. 2000:ch9*)

Jespersen cycle (JC) effects are widely attested cross-linguistically (van der Auwera 2009). In many *Bantu* languages, older prefixal negators (NEG1) are reinforced or replaced by a postverbal particle (NEG2) (Devos & van der Auwera 2013).

Proto-Bantu had two prefixal NEG1’S: one ‘pre-initial’ (NEG1a) and one ‘post-initial’ (NEG1b) (Meeussen 1967, cited in Nurse 2008:30ff,ch5). The choice between NEG1a and NEG1b is usually fixed by clause type, with NEG1a in main clauses and NEG1b in relatives, subjunctives and/or infinitives. Luganda demonstrates this conservative stage-1 pattern:

(6) a. abasajja [te- ba- O- a- leet- a] emigugu ‘the men didn’t bring the bundles.’
   b. abasajja [o- ba- ta- a- leet- a] migugu ‘the men who didn’t bring bundles’

<table>
<thead>
<tr>
<th>NEGLa subject.AGR NEG1b tense root</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(Luganda)</em> (Pak 2007)</td>
</tr>
</tbody>
</table>

In later JC stages, NEG1a/b co-occurs with or is replaced by a postverbal negator (NEG2):

(7) a. *Mbugwe* siye te-kw-a-re-fen-er-a masibitali *(toko)*
   JC stage 2 1PL.PRO NEG1-1PL-TNS-run-APPL-FV hospital NEG2
   ‘We were not running to hospitals at all.’ (Gibson &Wilhelmsen 2015)
   b. *Rangi* si a-tereka nyama ira siku tuku
   JC stage 3 NEG 3SG-TNS-cook meat DEM day NEG2
   ‘S/he did not cook meat that day.’ (Gibson &Wilhelmsen 2015)
   c. *Pogulo* tu-mw-oniti *ndiri*
   JC stage 5 1PL-3SG.OBJ-see NEG2 ‘we didn’t see him’ (Nurse 2008:182)

Logoori’s closest relatives (Luyia) have a cognate of *daave* alongside an obligatory or optional NEG1a *si/-se/-shi* in MCIs. Logoori is unusual in that NEG1a (*si*) is obsolescent.

(8) abaana *shi*-ba-khol-aanga emilomo *ta(awe)*
   children NEG-3PL-work-IMPV work NEG
   ‘The children are not doing work.’

(9) vaana *(shi)-va-1-i1.1e* *ta*
   children (NEG)-3PL-eat-PFV NEG
   ‘The children didn’t eat.’

<table>
<thead>
<tr>
<th><em>(Wanga)</em> (Diercks &amp; Liu, in prep.)</th>
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<tr>
<td><em>(Tiriki)</em> (Diercks et al., to appear)</td>
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</tbody>
</table>
With this background, we can characterize the Logoori pattern from (1)-(3) as in Table 2. I provide more examples and discussion for each clause type below.

### Table 2. Jespersen cycle (JC) effects in Logoori, by clause type

<table>
<thead>
<tr>
<th>Stage</th>
<th>Main-clause indic.</th>
<th>Subjunctive</th>
<th>Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>si-verb</td>
<td>ta-verb</td>
<td>ta-verb</td>
</tr>
<tr>
<td>3</td>
<td>si-verb</td>
<td>daave</td>
<td>daave</td>
</tr>
<tr>
<td>5</td>
<td>0 verb</td>
<td>daave</td>
<td>daave</td>
</tr>
</tbody>
</table>

Main-clause indicatives (MCIs) have undergone a rapid shift from JC stage 1 to 4/5.

A 1967 *Genesis* translation (Litanga) (10a) and funeral song excerpts in Sarvasy 2016 (10b) —both likely to reflect more conservative speech—show a **stage 1** pattern in MCIs:

(10) a. na si-va-li netsisoni b. si-va-ri-nora ku vihanwa
    and NEG-3PL-COP ashamed NEG-3PL-TENSE-find LOC presents
    ‘And they were not ashamed.’ (2:25) ‘They will not find presents there.’

A 1983 grammar describes Logoori as having an intermediate **stage 2-4** pattern:

(11) si-a-rori ~ si-a-rori daave ~ a-rori daave
    (all grammatical; all mean ‘s/he didn’t see.’) (Kanyoro 1983:96ff)

But our Logoori speaker-consultant (a woman in her 70s from Kakamega, Kenya) showed a robust **stage 5** pattern: NEG2 *daave* alone, in both elicited conversations and narratives.

(12) a. va-nora ku kyo ku-rya *daave*
    3PL-find LOC 7.REL INF-eat NEG
    ‘They didn’t find anything to eat there.’ (111218-NARR2)

b. rigomja ry-a-ri-wa n-unwiigi zidi *daave*
   5.banana 5-PAST-EAT-PASS by-teacher NEG
   ‘The banana wasn’t eaten by the teacher.’ (111418-H09)

c. m-mu-heza kitabu [kya nd-a soma muhega gwaveta] *daave*
   1SG-3SG.OBJ-give 7.book 7.REL 1SG-PAST-read year past NEG
   ‘I’m not giving her the book [that I read last year].’ (111418-H27)

(13)-(14) are additional contemporary examples showing a stage 5 pattern. In contrast (15), a speaker recently interviewed by M. Diercks at least sometimes uses *si-* with *daave*:

(13) yago ne agirigare *daave*
    10.that COP 10.truth NEG
    ‘That’s not true.’ (Gluckman & Bowler 2016:1076)

(14) Kaande, kare, vakere va-arange ne zisahane zya va-aragela ko *daave*
    again old 2.women 2-have with 10.plate 10.rel 2-squeeze vuchima LOC NEG
    ‘Again, in the old days, women didn’t have plates to squeeze vuchima on.’ (Sarvasy 2019:88)

(15) ɪ njombe si-1-ra-kw-ema maveere *daave*.
    ‘The cow will not deny you milk.’ (cited by Sarvasy 2016)

When asked directly, our consultant accepted some sentences with *si-* with or without *daave.* The only context where she spontaneously produced *si-* was in biclausal structures where *si-* might disambiguate scope (16) (see also Diercks et al. to appear:§5). But even in these contexts, *si-* isn’t required; *daave* alone negates matrix ‘say’ in (17a), embedded ‘read’ in (17b).

(16) Mary si-ya-vora [Ben ya-soma kitabu] *daave*
    Mary NEG-3SG.PAST-say Ben 3SG.PAST-read book NEG
    ‘Mary didn’t say that Ben read a book.’ (111418-H14)

(17) a. John ya-va [Mary ya-ina ikahaawa] *daave*
    John 3SG.PAST-say Mary 3SG.PAST-drink coffee NEG
    ‘John didn’t say that Mary drank coffee.’

b. Mary ya-va [John ya-sooma kitabu *daave*]
    Mary 3SG.PAST-say John 3SG.PAST-read book NEG
    ‘Mary said that John didn’t read a book.’

(17)b is also noteworthy because it shows that *daave* is used in some embedded clauses; i.e. it is not strictly a ‘root phenomenon.’

### Subjunctives have shifted from JC stage 1 to 3 (ta *daave*)

Like many Bantu languages (see Wasike 2005, Ngonyani 2013), Logoori doesn’t have a true negative imperative; the negative subjunctive is used as a surrogate. In a 1967 *Genesis* translation (Litanga), negative subjunctives are marked with NEG1b *ta-* alone, no *daave*:

(18) a. u-ta-liia ku gwo b. mu-ta-liia ku-misala gyoosi gyo mulimi
    2SG-NEG-eat LOC-3 2PL-NEG-eat LOC-4.tree 4.all 4.POSS garden
    ‘Don’t eat of it [tree].’ (2:17) ‘Don’t eat of any trees of the garden.’ (3:1)

In contemporary Logoori, NEG1b *ta-* co-occurs with NEG2 *daave*. Our consultant was very consistent here, and rejected versions of these sentences that were missing *ta* or *daave.* This same pattern is found in examples from the contemporary sources in (22)-(23). Note again that *daave* can be used in the embedded clause in (21).

(19) u-ta-mu-kar-ra mugadi *daave*
    2SG-NEG-OBJ-cut-APPL bread NEG
    ‘Don’t cut the bread for her.’ (112618-H12)

(20) ku-ta-kuunga imburi *daave*
    1PL-NEG-chase goat NEG
    ‘Let’s not chase the goat.’ (112618:H11b)

(21) n-da-vor-ra Mary [a-ta-sooma kitabu *daave*]
    1SG-TNS-read-APPL-FV Mary 3SG-NEG-read book NEG
    ‘I told Mary not to read the book.’ (062619-MP19)

(22) u-ta-retta ku ijombe i-ve i-mbarava haango *daave*
    2SG-NEG-bring LOC 9.cow 9-be 9-fierce home NEG
    ‘Don’t bring home a cow that is fierce.’ (Sarvasy 2016:205)

(23) u-ta-gura *daave* ‘you shouldn’t buy’
    u-ta-va-koona *daave* ‘you shouldn’t help them’ (Odden 2018:84-85)
Relative clauses (RCs) have not shifted. *(ta- only, *daave)*

Unlike subjunctives, RCs produced by our consultant didn’t include daave. RCs were negated with NEG1b ta- alone, or periphrastically with -vura ‘lack’ + infinitive (27). *(Vura can also be used to negate other types of clauses, and it is the only way to negate infinitives: ngeriza ku-vura ku-rira ‘I’m trying not to laugh’; cf. *ngeriza ku-ta-rira.)*

1. Diercks et al. (to appear) suggest that Luyia tawe/daave is a borrowing of the negative interjection daave (‘no’) from neighboring Luo (Nilotic). Suppose that daave/daave first came into Logoori as a *clause-external tag*:  

   (33)  
   [si-arori], [daave]  ‘She didn’t see (it), daave.’  
   [u-ta-rira], [daave]  ‘Don’t cry, daave.’

   Precedent for this idea includes Schweger 1991:209 (cited in van der Auwera 2009:12), who argues that NEG2 in *Brazilian Portuguese* is derived from an ‘intentionally separate pragmatic particle,’ and Biberauer 2009:113, who makes a similar claim for *Afrikaans* NEG2 nie *(pace Bell 2005:ch.5).*

2. As daave’s use as a tag increases, the intonational boundary before it becomes less salient, especially in fast speech. Speakers begin to face the question: ‘How do I analyze [si-arori daave] as a single clause with a single semantic negation (meaning ‘s/he didn’t see (it)’)? At this point two possible analyses emerge:

   (i) daave is reanalyzed as a NPI or NCI (‘n-word’) licensed by NEG1, which remains semantically negative. *(In Zeijlstra 2004 terms, daave is nNeg and NEG1 is iNeg.)*

   (ii) daave remains semantically neg. *(iNeg); NEG1 is reanalyzed as NPI/NCI (nNeg).*

   (i) daave attaches below MoodP *(e.g. vP/AppP)* and is reanalyzed as NPI/NCI licensed by NEG1 si-ta- (which retains neg. semantics).

   (ii) daave attaches high *(CP level)* and retains its negative semantics; si- is reanalyzed as NPI/NCI.

2. Analysis

The following questions emerge from the account just given:

**Q1:** The advent of daave in Logoori apparently coincided with a rapid decline in the use of NEG1 si- in main clauses. But what exactly caused this rapid decline?

**Q2:** Why hasn’t ta- in subjunctives fallen out of use the way si- has in main clauses?

**Q3:** Why doesn’t daave appear in RCs, given how robust it is in MCI’s and subjunctives?

I hypothesize that the Logoori pattern developed as follows…

1. Unlike subjunctives, RCs produced by our consultant didn’t include daave. RCs were negated with NEG1b ta- alone, or periphratically with -vura ‘lack’ + infinitive (27). *(Vura can also be used to negate other types of clauses, and it is the only way to negate infinitives: ngeriza ku-vura ku-rira ‘I’m trying not to laugh’; cf. *ngeriza ku-ta-rira.)*

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To review: At stage 2, all speakers have daave as a vP/AppIP-level NPI/NCI (i), and some also have a version of daave that attaches at CP and is semantically negative (ii). For comparison, (i) is similar to the path taken by nohow in some English dialects:

(36)  a.  [He wouldn’t do it], [nohow].  (clause-external tag)
     b.  [He wouldn’t do it nohow\textsubscript{sec}].  (vP-level NCI licensed by n’t)

…and (ii) is more like English no way, except that no way is merged in Spec,CP:

(37)  a.  [No way], [he wouldn’t do that].  (clause-external tag)
     b.  [No way would he do that].  (CP-specifier, still semantically neg.)

3.  Logoori speakers who have high-adjoining daave (ii) can begin to produce novel structures without NEG1 si-like arori daave (38). (Such structures may in fact be preferable, since they avoid NegP structure that makes no semantic contribution.)

(38)  [CP [CP [a-a-a-rori] daave] ‘S/he didn’t see (it)’

4.  Speakers who don’t have high-adjoining daave have to find a way to parse si-less sentences like (38). One way is to admit high-adjoining daave; another is to postulate a null allomorph of Neg, which would vary be inserted instead of si- (see Zeijlstra 2004, 2008 for phonologically-null NC-licensors):

(39)  Neg ↔ (si, Ø)  possible PFs:  (si-a-ror-i daave, Ø-a-ror-i daave)

Either way, once these speakers have a way to parse arora daave, they’ll also be able to produce arora daave—thus reinforcing and perpetuating a shift to si-less structures.

This grammar-competition account allows us to explain the rapid erosion of si- [Q1]. And moreover, because there is no ta-less structure competing with the negative subjunctive in (i’), it is unsurprising that ta- remains stable (unless main-clause si-) [Q2].

Regarding [Q2], my provisional hypothesis is that daave is incompatible with RCs (as well as some wh-questions and conditionals) because it has—in addition to and independent of its Neg/iNeg feature—a speaker-oriented semantics (e.g. ‘I say no’).

- Speaker-oriented adverbs are a heterogeneous class including discourse-related, evaluative, modal and epistemic adverbs (40) (Ernst 2009, Morzycki 2014). But they have in common a restriction to root or root-like clauses. For example, they are barred from RCs and conditionals (41):

(40)  a.  The car [that John (‘seriously’ bought) cost him a year’s salary].
     b.  If she has (*luckily) been offered the job, I will be very happy.  (Ernst 2009)

- But they’re fine in complements of ‘say’ and ‘tell’ (indirect-discourse embedding, Emonds 2004), and in echoic conditionals (Danckaert & Haegeman 2012):

(42)  a.  John says that Mary has (seriously / luckily) been offered the job.
     b.  A: I frankly can’t stand John.
       B: If you frankly can’t stand John, you should move.

- While the motivation behind this pattern is not fully understood (see e.g. Danckaert & Haegeman 2012, Ernst 2009, Heycock 2006), it’s clear that Logoori daave fits: daave is fine in root clauses and embedded clauses under ‘say’/‘tell’ ((17)b,(21)), but not in RCs ((24)ff), and only marginally in conditionals ((31)-(32)).

   (Also, given that our consultant accepted daave in conditionals only immediately after producing the same sentence without daave, it’s at least possible that she was interpreting the conditional as echoic, consistent with (42)b.)

- I’ll hypothesize, then, that Logoori daave has a speaker-oriented semantics independent of and in addition to its Neg/iNeg feature. In its original tag use, daave might mean ‘no, I deny/forbid that’; later, as a clause-internal adverb, daave might denote the (non-)existence of the preceding vP/AppIP in the speaker’s belief set, roughly akin to (‘not) by my reckoning’ or (‘not) to my knowledge.’

(43)  a.  [si-arori], [daave]  ‘S/he didn’t see (it), no (I deny that).’
     b.  [si-[arori] daave\textsubscript{NPI/NCI}]  ‘S/he didn’t see (it) by my reckoning.’

Exactly why daave is prohibited in RCs remains to be explained. The explanation could end up being syntactic (e.g. an intervention effect) or semantic (involving the oddsiness of referring to the speaker’s belief set within a presupposition), and will be informed by further work on both Logoori and speaker-oriented adverbs in general.

3.  Some implications: Jespersen cycles in Luyia

Logoori’s split pattern in Table 2 is unique as far as I am aware. Other Luyia languages have cognates of si-/ta- and daave (Kanyoro 1983), but their distribution doesn’t vary by clause type to the same degree. In e.g. Wanga and Bukusu, both NEG1a and NEG2 are obligatory in main-clause indicatives:

(44)  abanaa shi-ba-khol-aanga  emilomo ta(ave)
     children NEG1a-3PL-work-IMPV  work NEG2  ‘The children are not doing work.’
     Wanga  (repeated from (x))

(45)  Wekesa se-a-a-kona  ta
     Wekesa NEG1a-3SG-PAST-sleep NEG2  ‘Wekesa didn’t sleep.’  Bukusu  (Wasiye 2002:585; Bell 2004:74ff)

…and unlike Logoori, both Wanga and Bukusu allow (in fact require) NEG2 in RCs:

(46)  amapwoni [aka abailmi ba-la-achesere  ta]  Wanga  (Diercks & Liu in prep.)
     potatoes REL farmers 2PL-NEG1b-harvest NEG2  ‘the potatoes that the farmers didn’t harvest’

(47)  enju [niyo Wafula a-a-kho-ombakha  ta]
     house REL Wafuala 3SG-PAST-NEG1b-build NEG2  ‘a house which Wafula didn’t build’  Bukusu  (Wasiye 2002:585)

What this suggests is that Jespersen cycles can have very different underlying causes, and different concomitant surface effects, even in very closely related languages.

In §3 I argued that Logoori daave starts off as a negative tag (‘no’) and becomes reanalyzed by at least some speakers as a high-adjoining sentential NEG (ii). Importantly, in order for
this change to happen, *daave* needs to have become frequent enough in discourse to be a plausible sentential negator. (If *daave* were used in only a small subset of negative sentences, speakers wouldn’t entertain the hypothesis that it could be sentential NEG itself.)

The speaker-oriented semantics that I posit in (43a)—where tag *daave* means something like ‘I say no; I deny’—is indeed compatible with a wide range of negative utterances. At some point, then (perhaps boosted by sociolinguistic factors), a threshold was reached that enabled the grammar competition described in §3 to take off.

Suppose that in Wanga and Bukusu, the *daave* tag borrowed from Luo started off with a slightly different semantics—e.g. emphatic ‘no, not at all.’ In this case, its frequency would be lower, restricted to utterances where emphatic negation was intended.

- *Daave* is still reanalyzed as clause-internal in Wanga and Bukusu (cf. §3, step 2), but its only available analysis is as a low(er)-adjoining emphatic adverb, an NPI/NCI licensed by NEG1 *si*-. (High-adjoining *daave* is unavailable because *daave* is too infrequent to be a plausible sentential NEG morpheme.)

\[(48) \text{[NegP se a-a-[VP kona daave]]} \quad \text{‘s/he didn’t sleep at all’}\]

- Over time, *daave* in Wanga and Bukusu loses its emphatic semantics (and is phonetically weakened to *ta*). But crucially, the same semantic weakening that enables *daave* to become a NEG morpheme also enables it to occur in RCs (46)-(47)—unlike Logoori *daave*, which retains a speaker-oriented semantics that bars it from RCs.

If this idea is on the right track, we can understand why NEG1 *se-*/*shi-/*si- is stable in Wanga and Bukusu but obsolescent in Logoori. In Wanga and Bukusu, there is never a stage when a *se-*/*shi-/*si- less structure would be a candidate for competition, since *tawe* was not a plausible sentential negator at the point when it became clause-internal.

**Wrap-up.** I have proposed an analysis of negation in Logoori (Bantu, Luyia), where Jespersen-cycle (JC) effects vary by clause type (Table 2). I argued that the innovative clause-final particle *daave* is ambiguous (for at least some speakers) between a CP-level adverb that carries its own semantic negation and a lower-adjoining NCI/NPI licensed by Neg si-or *tawe*, and that grammar competition drives a rapid shift to JC stage 5. I then showed that JC effects take a very different form in Wanga and Bukusu, calling for an analysis involving gradual semantic and phonological weakening rather than grammar competition. In other words, JC effects can be motivated by very different underlying factors even in closely related languages—underscoring the point that there’s more than one kind of Jespersen cycle (Biberauer 2009, van der Auwera 2009).

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