Ellipsis does not bleed Lowering. Evidence from *do*-support and fragment answers in Finno-Ugric

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**Claim:** We provide evidence from the behavior of negation in the Finno-Ugric languages Mari and Udmurt that ellipsis does not bleed post-syntactic operations like Lowering, contrary to claims in the literature (Saab & Liptak 2016, Murphy 2018). Building on previous work, we show that negation and the main verb in these languages form a complex head derived by means of postsyntactic lowering and then go on to investigate the interactions of lowering with other processes. ① We show that, in contexts where there is no suitable verb to lower onto, a *do*-support-like operation takes place, inserting a dummy copula, suggesting that negation in these languages needs a host. We will argue that the repair takes place at PF ②. We show that negation can survive ellipsis of the verb it governs; crucially, there is no *do*-support in these environments. We will argue that this shows that ellipsis in fact does not bleed lowering. Rather, lowering takes place whenever the relevant syntactic context is present. ③ Our results clash with the claims in Liptak & Saab (2016) and Murphy (2018). We will show that their data can be straightforwardly reanalyzed under our assumptions. ④ Finally, we claim that our model of the interaction of lowering and ellipsis is architecturally more plausible; furthermore, the fact that lowering does not lead to affixation in the context of ellipsis is directly compatible with the assumption that lowering is a morphosyntactic process which simply proceeds in a non-teleological fashion if its structural context is met (see Embick 2010).

**Background:** Negation in Mari and Udmurt is expressed by a finite negative auxiliary (bearing tense and agreement inflection) that obligatorily takes scope above all verbs and governs a special form of dependent auxiliaries or verbs, referred to as the connegative stem (glossed: CN), cf. (1) (Edygarova 2015, Saarinen 2015) suggesting that Neg⁰ is the highest verbal head in the verb cluster.

(1) a. pušš-da give-PST-2PL
   ‘you gave’
   b. ăš-da pu NEG-PST-2PL give.CN
   ‘you did not give’  *Mari*

But despite its high syntactic position, we present arguments that, morphologically, it forms a complex head with the highest verb: (i) Unlike with regular auxiliaries, nothing can ever intervene between the negation and the verb; (ii) unlike with regular auxiliaries, which can follow the verb they govern, negation must precede the verb; (iii) Several phonological properties such as stress placement or vowel reduction suggest that negation and the highest verb are one complex in the phonology. Based on these arguments, we propose that the complex head consisting of negation and the connegative verb is formed by means of postsyntactic lowering (Embick & Noyer 2001) of T via Neg to v. We argue that both negation and T have a morphosyntactic requirement to appear in a complex head with v. The derivation is given in (2).

(2) ![Diagram](image)

This derives (i) the high scope of negation since lowering does not affect scope, (ii) unlike a competing approach where the complex head is formed via head-movement, a lowering account predicts the correct cluster-internal constituency. Morphological processes (e.g. allomorphy) suggest that negation and T form a constituent to the exclusion of V. This is predicted under a lowering account but not under a competing head-movement approach, which predicts [[Neg V] T] with the result that tense+agr should affix onto V, contrary to fact.

**When Lowering is possible and When it isn’t:** ① **Constituent Negation:** In this talk, we investigate the feeding and bleeding interactions of this lowering operation with other processes. The first pattern comes from constituent negation in Mari. Here, the same exponent as with clausal negation occurs attached to the negated constituent. (3) involves PP coordination with a negated first conjunct. Crucially, we observe that negation is accompanied by a dummy copula, which bears default features for agreement and tense.

(3) Tăj šaSharesmat dene o-g-ăł, a šaške dene mod-ăč.
   2SG chess with NEG-PRES.(3SG)-BE, but checkers with play-PST.2SG
   ‘You played not (with) chess but (with) checkers.’  *Mari*

Note that the copula is syntactically invisible in that it does not affect the category of the first conjunct and because it fails to agree with the subject. Further, we will show that this is not a cleft structure because (i) the subject of the clause precedes the negated constituent, (ii) the tense and agreement features must have default values. In (3), the copula shows 3SG present tense, even though the verb is in the past tense and the subject is 2SG. (iii) There are no syntactic signs of relativization that would suggest a cleft structure. Note that Udmurt uses an ellipsis construction in this context, see (5).
The interesting point is that be
(7) ment. Be
is still available, T+Neg undergoes lowering down to v/V, which satisfies their morphosyntactic require-
ellipsis licensor are marked for non-insertion in syntax already. Second, since at PF the syntacticstructure
application of vocabulary insertion (Aelbrecht 2010). Concretely, all terminals in the complement of the
out a verb. This follows under the following assumptions: First, ellipsis is an instruction for the non-
• Lipták 2016 Movement and deletion after syntax. StuLing
& Noyer 2001 Movement Operations after Syntax

Conclusion: Based on the interaction of postsyntactic lowering with (a) constituent negation and (b) el-
ipsis, we argue that ellipsis does not bleed lowering. We saw that in cases of constituent negation, the
impossibility of lowering is repaired by insertion of a dummy copula. No such thing happens under ellip-
sis. If ellipsis is conceived of as a syntactic instruction for phonological non-realization, then the facts are
straightforwardly explained. We believe that this interaction of operations fits more nicely with the gener-
ally assumed architecture of the postsyntactic module (Embick & Noyer 2001, Arregi & Nevins 2012). While
lowering applies to hierarchical structures, ellipsis has access to phonological properties of the terminals
and thus should apply at a later stage. Therefore, we do not expect ellipsis to bleed lowering.


\[ (4) \]

\[ \]

We therefore assume that the dummy copula is a postsyntactic re-
pair carried out if lowering is not possible. Negation has the mor-
phosyntactic requirement to be in the same complex head with v,
but since negation is adjoined to a PP, this requirement cannot be
satisfied by means of lowering: There is no verb to lower onto. We
thus propose that the dummy copula is inserted as a Last Resort
at PF to repair Neg's requirement. We model this as postsyntactic
node sprouting (cf. Harley & Choi 2018) as illustrated in (4).

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Ellipsis: As for the interaction of lowering and ellipsis of the verb, we would possibly expect that we also
find insertion of the dummy copula given recent claims in the literature that ellipsis bleeds lowering (see
Saab & Liptak 2016, Murphy 2018). Crucially, this is not what we find. Ellipsis of the verb does not affect
negation. Relevant examples come from contrastive coordination in Udmurt in (5) (Edygarova 2015) as
well as fragment answers to polar questions in both languages (see (6)):

\[ (5) \]

\[ \]

The interesting point is that be-support is blocked, even though on the surface the negation appears with-
out a verb. This follows under the following assumptions: First, ellipsis is an instruction for the non-
application of vocabulary insertion (Aelbrecht 2010). Concretely, all terminals in the complement of the
ellipsis licensor are marked for non-insertion in syntax already. Second, since at PF the syntacticstructure
is still available, T+Neg undergoes lowering down to v/V, which satisfies their morphosyntactic require-
ment. Be-support is thus blocked as it is a last resort. Third, since V (and the other terminals within NegP)
are marked for non-pronunciation, while Neg and T are not, only Neg+T survive. This also derives the fact that negation covaries
with the subject and tense features of the clause in these contexts, while with Mari constituent negation above, it does not. An alternative analysis based on Neg-to-C movement and TP-deletion as proposed in Holmberg (2016) for Finnish strikes us as unattractive for Mari/Udmurt since – unlike in Finnish – there is no independent evidence for upward movement of Neg.

Reanalysis of Saab & Liptak (2016), Murphy (2018): In their analysis of NP-ellipsis, the authors argue that
lowering of a φ-head above NP onto N (inside the ellipsis site) is bled by ellipsis; instead, the exponent that
normally occurs on N is attached to the preceding adjective via local dislocation. We will show that their
data can be readily reanalyzed under our assumptions: we assume instead that lowering onto N always
takes place. However, since there is no vocabulary insertion into N under ellipsis, the affixes inserted into
the φ-head don’t have a host. As a last resort, they undergo local dislocation to the preceding adjective.
Since negation in Mari/Udmurt is not an affix, it can remain independent. A similar solution can be en-
visioned for do-support in English resulting from VP-ellipsis: Lowering of T to v plus subsequent ellipsis
leaves the bound affix in T stranded, which then triggers last resort insertion.

Conclusion: Based on the interaction of postsyntactic lowering with (a) constituent negation and (b) el-
ipsis, we argue that ellipsis does not bleed lowering. We saw that in cases of constituent negation, the
impossibility of lowering is repaired by insertion of a dummy copula. No such thing happens under ellip-
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