

# Participles, auxiliaries and the insertion approaches to verbal periphrasis

Pavel Rudnev  
HSE University

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## 1 Background

Recent literature on verbal periphrasis has identified two main patterns of auxiliary distribution across languages and language families. The first pattern, which I follow [Bjorkman \(2011\)](#) in calling the *additive pattern*, involves the obligatory cooccurrence of certain inflectional categories with auxiliaries. This is the pattern familiar from English: according to [Bjorkman \(2011\)](#), the English progressive, for example, obligatorily involves the cooccurrence of the *-ing* participle with the auxiliary *be*, as illustrated in (1).

- (1) a. He is sing-ing.  
b. He will be sing-ing.  
c. He was sing-ing.

The second pattern is the one [Bjorkman \(2011\)](#) calls the *overflow pattern*, which is familiar from languages as genetically and geographically diverse as Kinande (Bantu), Latin (Indo-European) and Arabic (Semitic). This pattern allows certain combinations of inflectional features to be expressed synthetically whilst other combinations must be expressed periphrastically. In the Bantu language Swahili, for instance, the progressive aspect must be expressed synthetically in the present tense, as in (2c) but periphrastically in the past and future tenses, as shown in (2a–b) below.<sup>1</sup>

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<sup>1</sup> The linguistic examples broadly follow the Leipzig glossing conventions, the abbreviations are as follows: 1 = First person, 2 = Second person, ABS = absolutive, AUX = auxiliary, ERG = ergative, F = feminine, FUT = future, IPF = imperfective, LOC = locative, M = masculine, N = neuter, NEG = negative, NMLZ = nominalizer, OBL = oblique, PL = plural, PROG = progressive, PRS = present, PST = past, PTCP = participle, SG = singular.

- (2) a. ni- li- kuwa ni- **na**-soma  
 1SG-PST-AUX 1SG-IPF-read  
 ‘I was reading.’
- b. ni- ta- kuwa ni- **na**-soma  
 1SG-FUT-AUX 1SG-IPF-read  
 ‘I will be reading.’
- c. ni- Ø- **na**-soma  
 1SG-PRS-IPF-read  
 ‘I am reading.’

[Swahili, adapted from [Pietraszko 2023](#)]

The overflow pattern illustrated above has been argued to present a challenge for those analyses of verbal periphrasis that treat auxiliaries as a full-fledged part of syntax, that is elements that can select and be selected (i.e. most of the traditional approaches to auxiliation, going back at least to [Ross 1967, 1969](#)). Auxiliary insertion approaches to verbal periphrasis ([Bjorkman 2011](#)) name increased inflectional complexity as the main motivation for the appearance of an additional verb – the auxiliary – in particular clauses. To exemplify, it is the inability of the English *-ing* participle in the progressive to spell out tense which such approaches argue to trigger the insertion of a dummy inflection-carrying verb, *be*. Depending on the approach, the insertion can happen in the syntax, as in [Cowper 2010](#), or postsyntactically, as in [Bjorkman \(2011\)](#). Because the present tense, but crucially not the past or future tense, receives zero exponence in (2c), no last-resort insertion of a dummy verb to carry it is triggered. In the future and past tenses, on the other hand, the corresponding tense morphology requires additional morphological support and receives it in the form of the auxiliary inserted into an already assembled syntactic structure. The insertion approaches, then, claim to derive the overflow pattern with relative ease.

As regards the successes and limitations of various theoretical approaches, the current consensus in the literature is that the additive pattern of the English type is compatible with both the selection approaches and the insertion approaches. Whilst [Bjorkman \(2011\)](#) argues that the overflow pattern cannot be derived via selection, [Pietraszko \(2023\)](#) and [Bruening \(2021\)](#) are two recent selection-based analyses of the overflow pattern. Furthermore, [Pietraszko \(2023\)](#) argues that the overflow pattern observed in Swahili is in fact incompatible with the insertion approaches. As things stand, then, neither the selection approach nor the insertion approach has the upper hand over the other.

Attempting to break this theoretical tie, the present paper examines the additive pattern attested in the periphrastic progressive in the East Caucasian language Avar and shows that it is in fact incompatible with the insertion approaches, thus tilting the balance in favour of the selection approaches. In Section 2, I introduce the Avar periphrastic progressive and show that the lexical verb in the periphrastic progressive – the participle – carries the morphology normally associated with the presence of high func-

tional heads T and C, since the very same morphological form heads relative clauses and matrix and embedded interrogatives. This rules out an analysis in terms of [INFL] features on T and Asp. I then formulate three explananda faced by any analysis of the Avar periphrastic progressive. Section 3 develops an analysis based on selection that successfully accounts for the facts.

## 2 The Avar progressive is different from English and Bantu

This section serves to situate the Avar participles – both in their independent and periphrastic uses – in the broader theoretical and empirical context. It shows, in particular, that, firstly, Avar participles expone tense when heading relative clauses but do not express aspect, and, secondly, the converse is true of the periphrastic progressive. The Avar progressive thus instantiates the additive pattern of verbal periphrasis rather than the overflow pattern.

Like its English counterpart in (1), the Avar progressive is a periphrastic construction consisting of a lexical verb in the form of a participle and an auxiliary verb, BE, as in (3). Avar being a morphologically ergative language, both the lexical verb *c'aluleb* 'reading' and the auxiliary *bugo* 'is' agree with the closest absolutive argument, *t'ex* 'book'.

- (3) *jasal t'ex c'al- ul- e- b b-ugo*  
 girl.ERG(F) book.ABS(N) read-PRS-PTCP-N N-AUX.PRS  
 'The girl is reading a book.'

The progressive aspect in Avar is expressed cumulatively by the cooccurrence of the present participle and an auxiliary; neither of these elements on its own displays any hallmarks of progressivity. Therefore, the Avar periphrastic progressive is a prime example of the additive pattern of periphrasis, to use the terminology of Bjorkman (2011). Even though Bjorkman (2011) groups English and Basque together as instantiating the additive pattern, there are significant differences between the 'flavours' of the additive pattern in English, Basque and Avar. Firstly, English *-ing* participles do appear equipped with something like a [PROG] feature that enables the various *-ing* forms to express what Ramchand (2018) dubs the *Identifying State*. According to Ramchand (2018), this identifying state 'as an ingredient of the progressive can then be seen as the same input to attributive participle formation, provided that we allow it to be embedded under an abstraction operator, which I will call  $A^*$  (to evoke the idea of adjectivization)' (Ramchand 2018: 65). The English pattern is thus different from both Basque and Avar, both of which *require* the cooccurrence of a participle with an auxiliary. Basque, in turn, is different from Avar in that its nonfinite forms constituting a part of a periphrastic construction cannot be used without an auxiliary (Nerea Madariaga Pisano, p.c.), whereas the Avar ones can be used independently. The additive pattern, then, seems to be subdivided in at least three distinct subpatterns. For the purposes of this paper, I choose to ignore both English and Basque, and concentrate on Avar.

Unlike the English *-ing* participle that does not express tense, the participle in (3) does realise tense morphologically, since *-ul-* is the marker of simple present tense that is carried by verbs in finite clauses without periphrasis – compare the synthetic simple present counterpart of (3) in (4) below.

- (4) *jasal t'ex c'al- ula*  
 girl.ERG(F) book.ABS(N) read-PRS  
 'The girl reads a book.'

The lexical verb *c'al-* 'read' in (3) and (4) carries a morpheme, *-ul(a)*, whose final vowel is deleted in the context of the following *e*-vowel, in accordance with the rules of Avar morphophonology, since *ae* is an impossible vowel sequence in Avar.

That the *-ul-* morphology carried by the Avar participle is indeed that of tense is evidenced by the morphosyntax of Avar relative clauses, which are headed by the same verbal form.

## 2.1 Avar participial relatives are CPs

Rudnev (2015a) argues that participial relative clauses in Avar are full CPs so that *-ul-* in (5) spells out T and *-e-/ra-* spells out C, *-b* being an agreement/concord marker obligatory for attributive modifiers. The relative clause in (5) appears in square brackets and the underscore shows the position of the gap left by relativisation.

- (5) [*jasal*           *c'al-ul-e-b*        / *c'al-il-e-b*        / *c'al-a-ra-b*        ] *t'ex*  
 girl.ERG    read-PRS-PTCP-N    read-FUT-PTCP-N    read-PST-PTCP-N    book  
 'a/the book that the girl reads/will read/(has) read'

The tense markers in (5) above (*-ul-* for the present, *-il-* for the future and *-a-* for the past) convey tense rather than aspect since they affect the reference time, rather than event time, as shown by Rudnev (2015a: fn. 16). Even though the present participle of the verb *c'aluleb* 'read(ing)' in (5) is morphologically identical to the present participle *c'aluleb* in the periphrastic progressive in (3), the relative clause is not interpreted as expressing the progressive aspect. This makes the Avar participles heading relative clauses different from the superficially similar Swahili forms illustrated in (2): the Swahili imperfective/progressive participle *ninasoma* in (2) can occur both with an auxiliary and without one, but it is invariably interpreted as expressing the progressive aspect. To express the progressive aspect in Avar, on the other hand, an auxiliary is required. Because relativisation triggers obligatory participialisation, the auxiliary also takes the form of a participle, as shown in (6).

- (6) [jasał \_\_\_ c'al-ul-e-b b-ug-e-b / b-uk'-in-e-b /  
 girl.ERG read-PRS-PTCP-N N-AUX.PRS-PTCP-N N-AUX-FUT-PTCP-N  
 b-uk'-a-ra-b ] t'ex  
 N-AUX-PST-PTCP-N book  
 'a/the book that the girl is/will be/was reading'

The lexical verb and the *be*-auxiliary in (6) both surface as participles: the invariant present-tense participle *c'aluleb* 'reading' in the case of the lexical verb and the present/future/past-tense participle *bugeb/buk'ineb/buk'arab* in the case of the *be*-auxiliary. The provenance of these two participial forms, however, is different.

Another reason for treating Avar participial clauses as CPs is the fact that participles head embedded questions, as in (7), where the embedded question is bracketed.

- (7) jac- al- da ła- la- ro [š:iw w-ač'- a- ra- w /  
 sister-OBL-LOC know-PRS-NEG who.ABS M-arrive-PST-PTCP-M  
 \*w-ač'- ana ]  
 M-arrive-PST  
 'Sister does not know who arrived.' (Rudnev 2015a: 49)

The verb heading the bracketed embedded question in (7) appears in its past-participle form *wač'araw* and may not appear in its regular finite past-tense form *wač'ana*.

Another prototypical context for Avar participles is instantiated by matrix wh-questions, in contrast with regular matrix declaratives, as shown in (8) below.

- (8) a. wac w-ač'- ana /\*w-ač'- a- ra- w  
 brother.ABS(M) M-arrive-PST M-arrive-PST-PTCP-M  
 'Brother has arrived.'
- b. š:i- w w-ač'- a- ra- w /\*w-ač'- ana  
 who.ABS-M M-come-PST-PTCP-M M-arrive-PST  
 'Who has arrived?'

Example (8a) is a declarative clause featuring a finite past-tense verb, *wač'ana* 'arrived'; the past-participle form of the same verb, *wač'araw*, is unacceptable. The opposite is true of the matrix wh-question in (8b), where the finite past-tense form *wač'ana* 'arrived' is unacceptable and the participial form *wač'araw* is obligatory.

In these 'independent' uses, the present-, future- or past-tense participle can express sentential negation, as shown in (9) for a negated embedded wh-question and (10) for a matrix wh-question. In non-past tenses, the marker of sentential negation is *-r(o)* attaching to the tensed verb stem. I discuss negation in more detail in Section 3.3.

- (9) jac-al-da      ła-la      [š:iw      w-ač'-ila-r-e-w      ]  
 sister-OBL-LOC know-PRS    who.ABS M-arrive-FUT-NEG-PTCP-M  
 ‘Sister knows who will not arrive.’
- (10) š:i-w      w-ač'-ila-r-e-w  
 who.ABS-M M-come-FUT-NEG-PTCP-M  
 ‘Who will not arrive?’

The same observations with respect to obligatory participialisation extend to questions and relative clauses formed from clauses involving a periphrastic form, as illustrated below for the periphrastic progressive. In this instance, as before, both the lexical and the auxiliary verbs appear as participles but, as discussed above, for different reasons:

- (11) sunda      t'ad nuž      r-eł'-ul-e-l      r-ug-e-l  
 what.LOC at 2PL.ABS PL-laugh-PRS-PTCP-PL PL-AUX.PRS-PTCP-PL  
 ‘What are you laughing at?’ (Alekseev et al. 2012: 275)

Example (11) above features a wh-question involving a periphrastic progressive: in it, the lexical verb *reł'* ‘laugh’ and the auxiliary *rug-* ‘be’ carry identical inflectional morphology, as they both witness a present-tense morpheme and the participial marker *-e-*. As both verbs have slots for the agreement prefix, they agree with the second-person plural absolutive subject *nuž* ‘you’. Both participles also carry a plural agreement suffix, *-l*, crossreferencing the same absolutive argument as the agreement prefix. Even though the plural participle in (10) is in principle capable of hosting the negation affix *-r-*, that affix can only appear on the auxiliary.

When used outside of a periphrastic-progressive construction, the morphology on the Avar participle associated with the T and C heads is *interpreted* as T and C. Furthermore, T has three values to choose from, [PRS], [FUT] and [PST]. In the periphrastic construction, however, the present-tense morpheme does not seem to express tense, since tense is expressed by the tense morphology on the auxiliary, just like in English. Nor does the participle morpheme seem to be interpreted semantically.

## 2.2 Avar participles: Summary

Summarising the foregoing discussion, there is compelling evidence to conclude that the *-ul-* morpheme inside the Avar participle forming part of the periphrastic progressive is contingent on the presence of a high functional head—T—in the syntactic structure. Similarly, the *-e-* morpheme is associated with the presence of an even higher functional head, C.

Avar participles in periphrastic constructions like (3) and ‘independent’ uses like (5) present the following paradox: in the periphrastic progressive construction, one and the same form expresses aspect (jointly with the auxiliary) but does not express tense, whereas in the ‘independent CP’ use, it expresses tense and clause type but crucially

does not express aspect. Moreover, the periphrastic construction uses tense morphology to express something other than tense and clause-type morphology to express something other than clause type, which resists explanation in terms of the interaction of Asp and T heads equipped with [INFL] features as required by the insertion approaches of Cowper (2010), Bjorkman (2011). An additional empirical challenge for late-insertion approaches to morphology lies in the difficulty to state vocabulary insertion rules, since the features spelling out the verb in relative clauses make no reference to progressive aspect and the features spelling out the progressive aspect make no reference to either T or C.

### 2.3 Explananda

There are a number of systematic differences between participles in periphrastic constructions and relative clauses that a successful account of verbal periphrasis ought to capture. The first difference concerns the *value* of the tense feature on the participle and other independent uses, which can be [PRS], [FUT] or [PST] in relative clauses but must be [PRS] in the periphrastic progressive. The question is this: if participial morphology allows the expression of tense in principle and the progressive aspect results from combining the participle with the auxiliary, why is it that there are no progressive structures formed on the basis of the past and future participles?

The second difference regards the availability of independent temporal reference in relative clauses and its unavailability in the periphrastic progressive despite the presence of overt present-tense morphology. Again, since the marker of tense on the participle really is the marker of tense, as evidenced by the ‘independent’ uses, why is the present participle in the periphrastic progressive in possession of independent temporal reference?

The third difference concerns interactions with clausal negation: while participles in relative clauses can carry sentential negation (suffix *-r-* in 12a), they are incompatible with negation when they appear in the periphrastic progressive, as in (12b). Instead, negation attaches to the finite auxiliary, as in (12c), where *heč’o* is the suppletive negative form of the auxiliary in the present tense.

- (12) a. jasał \_\_\_ c’al-ula-r-e-b t’ex  
 girl.ERG read-PRS-NEG-PTCP-N book  
 ‘a/the book that the girl does not read’
- b. \*jasał t’ex c’al-ula-r-e-b b-ugo  
 girl.ERG book.ABS read-PRS-NEG-PTCP-N N-AUX.PRS  
 (‘The girl is not reading the book.’)
- c. jasał t’ex c’al-ul-e-b heč’o  
 girl.ERG book.ABS read-PRS-PTCP-N AUX:PRS:NEG  
 ‘The girl is not reading the book.’

The next section sketches a tentative analysis of the Avar periphrastic progressive construction that attempts to answer the questions above and does not appeal to a postsyntactic mechanism inserting the auxiliary into the syntactic structure.

### 3 Analysis

I briefly present the analysis first, and then proceed to show how it derives the Avar facts, including the three explananda stated in the previous section. Because my aim in this paper is to explore how the Avar periphrastic progressive can contribute to the debate between the selection and the insertion approaches to verbal periphrasis, I confine myself to the periphrastic progressive and do not attempt to extend the analysis to other periphrastic aspectual forms in that language, assuming that such an extension can ultimately be attained. I start with an outline of the assumptions I adopt.

My first assumption is that all complex expressions, including morphological words, are built in the syntax; the model of grammar neither contains an additional morphological component nor possesses combinatory operations in the lexicon.

I further assume that category selection (c-selection) is an indispensable component responsible for syntactic structure building and that it cannot be reduced to interface constraints (see [Pollard & Sag 1987](#), [Alrenga 2005](#)). While this is technically not an assumption, since there are many arguments to support it, I choose for my present purposes to simply assume that that is the case. This selection can be notated by endowing syntactic heads with dedicated selectional features [Sel:\_]. A head like C thus carries a selectional feature, [Sel:T], that is satisfied once C merges with a TP.

My next assumption concerns the workings of head movement, which I take to be a syntactic, rather than postsyntactic, mechanism. On its traditional understanding, head movement takes the head of a constituent and adjoins it to a c-commanding higher head resulting in the formation of a complex head (see [Dékány 2018](#) for an extensive overview of approaches to head movement). Simplifying somewhat, in order to form a matrix yes/no-question such as (13b) in English, the T head must adjoin to the null interrogative complementiser, the result being a complex head, T+C, that for all intents and purposes behaves like C.

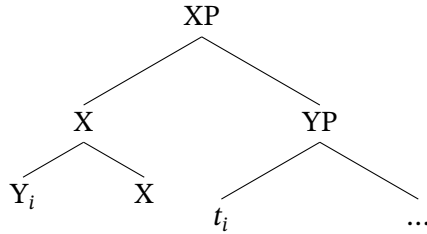
- (13) a. John should<sub>T</sub> leave.  
b. Should<sub>T</sub>+∅<sub>C</sub> John *t* leave?

The traditional rule of head movement relies on the ability of heads to adjoin to other heads *and* on the ability of heads to undergo displacement, which results, or may result, in surface linear order of the heads in question. I assume that, just as heads can first project a phrase and then move to a higher head and create a complex head with it, they can first combine with other heads via External Merge and subsequently undergo displacement, projecting a phrase of their own. The formation of complex heads via

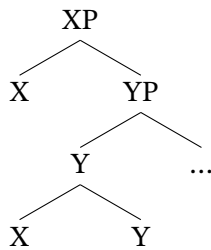


External Merge has precedents in the literature (Babko-Malaya 2003, Shimada 2007, Piggott & Travis 2013, 2017, Bruening 2017, 2019, Blümel 2024), as does head-to-phrase movement followed by projection (Epstein et al. 2016, Donati 2006, Gallego 2014).

(14) a. **Traditional Head-to-Head Movement**



b. **Head-to-Phrase Movement**



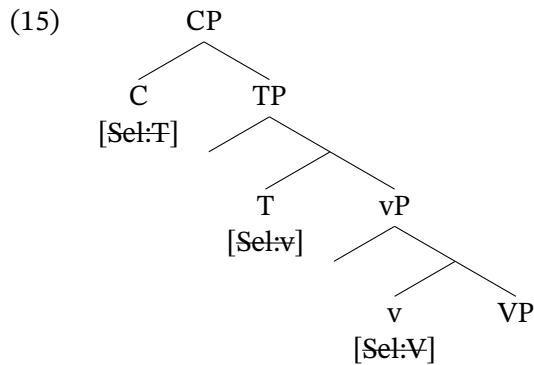
The key difference between the traditional conception of head movement and the alternative derivation of head-movement effects sketched above lies in the timing of the three processes involved: projection, displacement and complex-head formation. While under the traditional view, projection precedes displacement, which precedes head adjunction, the alternative view effectively reverses the sequence: a complex head is created first, followed by displacement, followed by projection. To be able to draw this distinction with respect to the timing of operations, the system must be able to distinguish between minimal and maximal projections. I argue below that we can use this to model the Avar periphrastic progressive.

Having outlined the key assumptions, we are now in a position to consider how they can be used to model the syntax of the Avar clause.

### 3.1 The Avar clause

Adopting the broadly selectional approach to verbal periphrasis (Ross 1967) and taking incompatibility with negation as a hallmark of restructuring (Wurmbrand 2001), I propose that the Avar progressive consists of a participial vP that is c-selected by the auxiliary. For my purposes here, a restricted set of the syntactic categories V, v, Neg, T and C will suffice, but the system can definitely be extended to include more categories; I do not pursue this goal here. I follow Bruening (2021) in taking that the relative hierarchical structure C > T > v > V follows from c-selection: C c-selects T, T c-selects v, and v selects V. As mentioned at the beginning of this section, this selection is formalised

in terms of feature checking: C carries the selectional feature [Sel:T], T the selectional feature [Sel:v]; *ditto* for the other head-complement sequences. Once the head carrying a selectional feature is merged with the maximal projection of the head it selects, the selectional feature is deleted, as schematically represented in (15).



We have seen in Section 2 that Avar relative clauses have all the hallmarks of full CPs; I therefore follow Rudnev (2015a) in analysing them as such. Given the head-final syntax of Avar and in the absence of evidence to the contrary, I take the Avar verb to be pronounced low, inside the verb phrase, which can be either V or v. This amounts to saying that all the verb-phrase external verbal morphology must somehow appear inside the VP/vP. I argue that it is in fact generated there as a complex head formed by External Merge. The component parts of that complex head can then be merged, one by one, and on the basis of their selectional requirements, into the corresponding positions higher in the clause, projecting phrasal constituents of their own, along the lines of Shimada (2007), Zwart (2009), Bruening (2017), Mitrović (2016, 2020), Mitrović & Panagiotidis (2020), Piggott & Travis (2017), Taguchi (2015).<sup>2</sup>

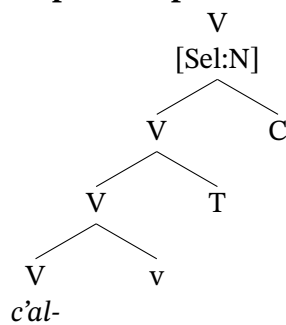
The derivation of a basic transitive sentence such as (4) above, repeated here as (16), will proceed in the following steps. In addition to the minimal inventory of functional heads comprising v[Sel:V], T[Sel:v], C[Sel:T], the attested selectional patterns dictate that *c'al-* ‘read’, by virtue of being an optionally transitive verb, must optionally carry a [Sel:N] selectional feature, allowing for the selection of the internal argument, *t'ex* ‘book’, in this particular instance. Similarly, the head introducing the ergative external argument must be specified with a [Sel:N] selectional feature in addition to its [Sel:V] selectional feature.

<sup>2</sup> The formation of a complex V-v-T-C head by external merge also bears a certain resemblance to Arregi & Pietraszko’s 2021 notion of M-value, which results from the bundling of morphological features. While Arregi & Pietraszko (2021: fn. 2) explicitly define the value of M as a *set* of features, their arboreal representations reflect a hierarchy imposed on this bundling. No details are given as to the nature of the operation creating these hierarchically complex heads but presumably it cannot be the core structure-building operation Merge.

- (16) *jaszał t'ex c'al- ula*  
 girl.ERG(F) book.ABS(N) read-PRS  
 'The girl reads a book.'

The first step is the formation of a complex verbal head by External Merge; here, I prefer to remain agnostic as to whether Merge forms sets (Chomsky 1995), ordered pairs (Zwart 2009), mereological objects (Adger 2024) or entirely different mathematical objects altogether). In this complex head, the lexical head V is the head hosting all the other adjunct heads: *v* adjoins directly to V, the T adjoins to the V+*v* complex, whereupon C adjoins to the V+*v*+T complex. The whole complex head has the distributional properties of V, just as it would do under the traditional conception of head movement or Affix Hopping. At this point, no selectional features can be checked.

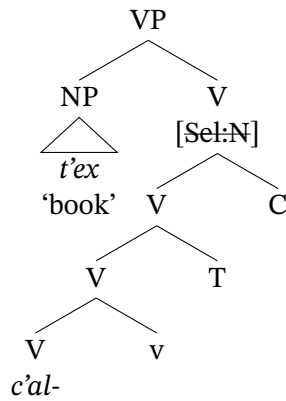
(17) **Step 1: Complex Head Formation**



At this point, it would be legitimate to wonder what mechanism ensures that the heads adjoin in the correct temporal and hierarchical order. In other words, what constraints are responsible for only generating the attested V+*v*+T+C combinations but no unattested \*T+*v*+C+V combinations? My preliminary answer would be that this information is extracted from the primary linguistic data to which the child is exposed during language acquisition. I view this question as effectively being identical to the question why the seemingly identical elements in different languages may surface as free or bound morphemes, such as the aspectual prefixes in Russian verbal paradigms and the postverbal free-standing particles in English particle verbs.

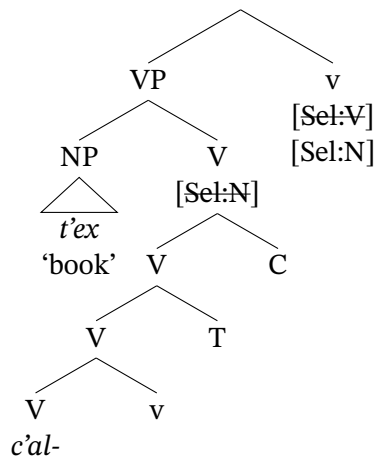
The second step would be to combine the newly formed complex head from (17) with the internal-argument NP *t'ex* 'book', as shown in (18), checking V's [Sel:N] feature under sisterhood against the internal-object NP and projecting VP.

(18) **Step 2: Merger of Complex Head with Internal Argument**



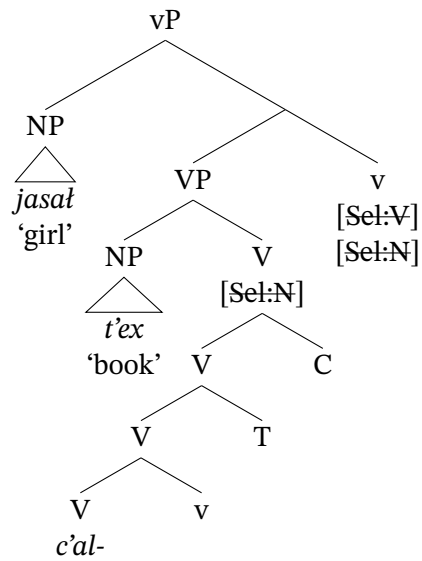
We can now attend to *v*'s [Sel:V] selectional feature by copying *v* and merging it with the VP formed in the previous derivational step. This is our third step, schematised in (19) below.

(19) **Step 3: Head-to-Phrase Movement of *v***



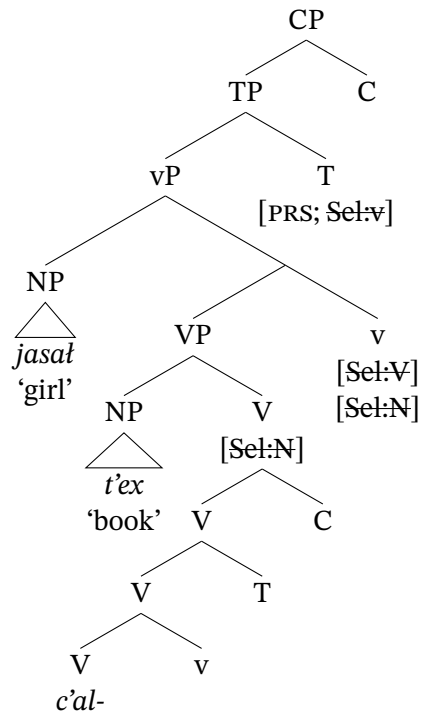
Because *v* still has an unchecked selectional feature responsible for introducing the ergative external argument, the fourth step is to merge the ergative NP *jasat* 'girl' as the specifier of *v*P, as shown in (20).

(20) **Step 4: Merger of External Argument**



The same procedure is followed for copying T and merging it with vP, and then for C, copying it and merging it with TP. The simplified schematic representation in (21) ignores EPP-driven movement of the ergative external argument to Spec,TP.

(21) **Steps 5 and 6: Head-to-Phrase Movement of T, then C**



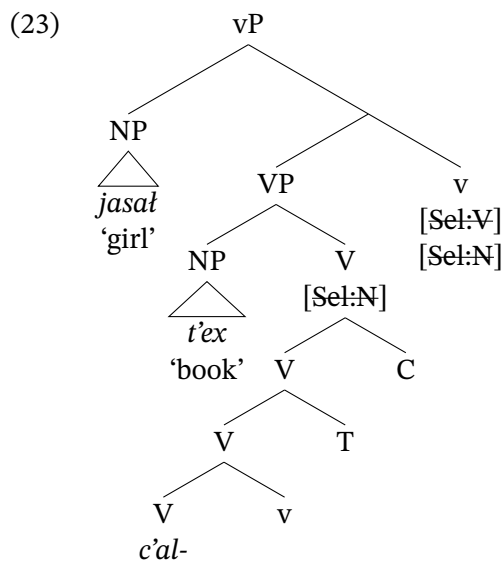
Because *v* has merged with VP, T has merged with *v*P, and C has merged with TP, the selectional requirements of these heads have all been satisfied. I assume that, while functional heads enter the derivation carrying their feature values from the get-go, those values can only be spelled out once they have projected their own maximal projection.

### 3.2 The periphrastic progressive

The periphrastic progressive in Avar, as stated in Section 2, consists of the present participle of the lexical verb and an auxiliary. If the clause is finite, finiteness is carried by the auxiliary; if the clause is nonfinite, it is again the auxiliary that carries the corresponding morphological marking. The Avar auxiliary, ‘be’, is a full-fledged V, boasting a complete verbal inflectional paradigm identical to any other verb. For the purposes of this paper, I analyse it as belonging to the category *v*. To take a familiar example, let us examine the derivation of (3), repeated below as (22).

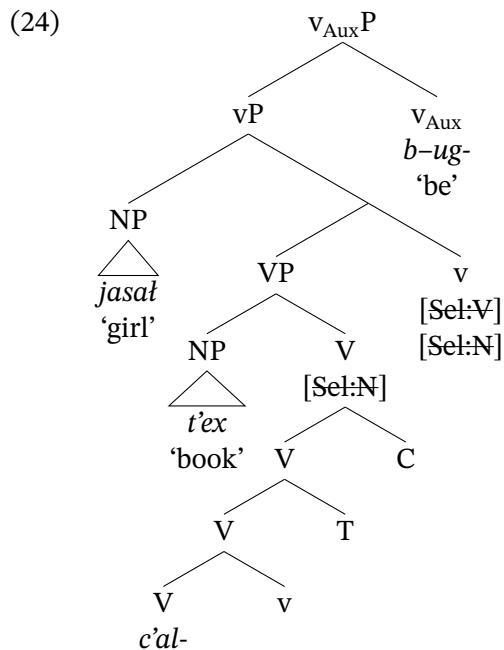
- (22) *jasat*            *t'ex*            *c'al-* *ul-* *e-*    *b b-ugo*  
 girl.ERG(F) book.ABS(N) read-PRS-PTCP-N N-AUX.PRS  
 ‘The girl is reading a book.’

The initial stages in the derivation of (22) are the same ones as we have seen for its synthetic counterpart in the previous subsection up until the merger of the external argument, as shown in (23).



The new *v* head, *viz.* the auxiliary, now combines with the lexical *v*P containing the complex V+*v*+T+C head and the internal and external arguments. I propose that this additional verbal head intervenes and prevents T and C from being copied into the clause,

trapping them inside the lexical vP. Because the T head from the V+v+T+C complex head has not been copied into the clause and has not projected a TP of its own, its real tense value cannot be spelled out. This is another way of looking at the Head-Movement Constraint (Travis 1984): a head undergoing head movement may not ignore the nearest higher head and move past it. As regards the auxiliary, since it is also a verb, it too will form a complex head with its own T and C adjunct heads. The representations below omit this for ease of exposition.

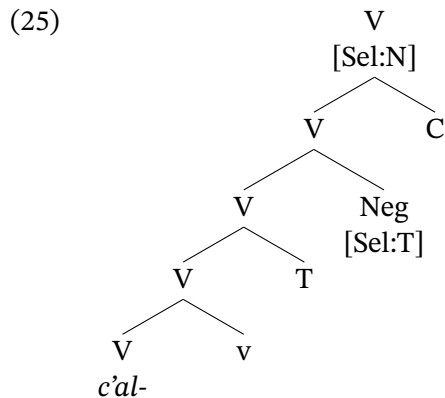


Even though the subparts of the complex V+v+T+C head have not projected their own constituents, the complex head still ought to receive a morphological interpretation. I propose, following Preminger (2014), that this morphological interpretation results in the insertion of morphological defaults for the T and C heads, which in the temporal domain is equivalent to present-tense morphology (see also Bjorkman 2011). This is what accounts for the first explanandum from Section 2.3.

Most of the contemporary literature ties the availability of independent temporal reference to the projection of TP (cf. Wurmbrand 2001). The nonprojection of TP and the concomitant absence of a value on T in the Avar periphrastic progressive construction (as well as other instances of nonfinite complementation) also entail the absence of independent temporal reference. The second explanandum from Section 2.3 is thus also captured.

### 3.3 The negation restriction

What remains is the incompatibility of the participle in the periphrastic progressive with negation. I propose that Neg also forms a complex head with v, T and C, adjoining above T but below C, since that is its position in the morphology – to the right of T and to the left of C. I also propose that Neg c-selects a TP and so must be copied into the clause to satisfy this selectional requirement, which is what happens in nonperiphrastic declarative, interrogative and relative clauses in the absence of an intervening verbal head such as the auxiliary.



In the progressive, however, the auxiliary intervenes and prevents Neg along with the other functional heads adjoined to V from being copied into the clause. Once the auxiliary has blocked the copying of T, Neg and C into the clause, we expect each of these heads inside vP to receive default morphological values. In order to understand why morphological defaults are not available here, a brief excursion into the morphosyntax of Avar negation is required.

#### Tense-conditioned allomorphy in negation

Sentential negation in Avar displays a tense-conditioned nonpast-past split as far as its morphological exponence is concerned. In nonpast tenses, which in Avar are the present and the future, shown in (26) below, sentential negation is realised as a suffix, *-ro*, that attaches immediately to the tensed form of the verb, as illustrated in (27).

- (26) a. murad c'al- ula  
Murad.ABS read-PRS  
'Murad reads.'
- b. murad c'al- ila  
Murad.ABS read-FUT  
'Murad will read.'



In the present tense, for example, negation causes the present-tense form *c'alula* 'reads' from (26a) to be realised as *c'alularo* 'does not read', as in (27a). In a similar vein, the future affirmative *c'alila* 'will read' in (26b) becomes *c'alilaro* 'will not read' when negated, as in (27b).

- (27) a. murad c'al- ula- ro  
Murad.ABS read-PRS-NEG  
'Murad does not read.'
- b. murad c'al- ila- ro  
Murad.ABS read-FUT-NEG  
'Murad will not read.'

The pattern is different in the past tense, however. The past-tense form *c'alana* 'read' in (28a) is incapable of combining with the *-ro* suffix from above, nor with the morpheme *-č'o* actually expressing past-tense negation as witnessed by the unacceptability of (28b). Neither *\*c'alanaro* nor *\*c'alanač'o* is a possible verbal form in Avar. Instead, the past-tense negation marker *-č'o* must attach to the stem corresponding to that of an eventive nominalisation, as illustrated in (28c) below (see Rudnev 2015b for a possible explanation of this past-nonpast split).

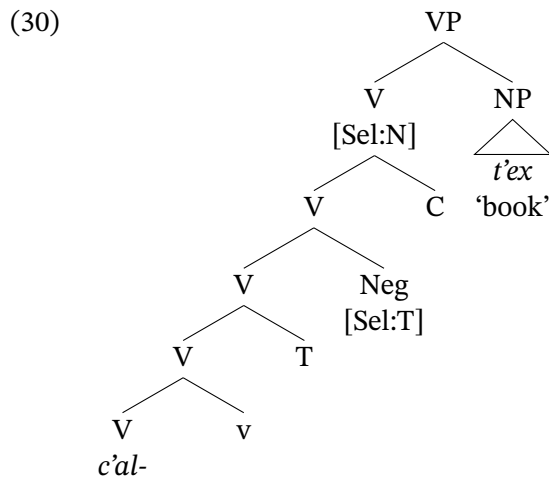
- (28) a. murad c'al- ana  
Murad.ABS read-PST  
'Murad read/has read.'
- b. \*murad c'al- ana-ro / c'al-ana-č'o  
Murad.ABS read-PST-NEG
- c. murad c'al- i- č'o  
Murad read-NMLZ-NEG  
'Murad did not read.'

A further complication is that the past-tense negation marker *-č'o*, despite conveying past tense, is, morphologically speaking, a member of the present-tense paradigm, since, when participialised, it is only compatible with the nonpast participle *-e*-marker. Pre-theoretically, then, for the correct marker of negation to be inserted in the syntactic structure undergoing spellout, the grammatical system must have access to the tense value of the negated verb. Without this information, the grammatical system will be unable to choose between the two existing markers, *-ro* and *-č'o*. I now show how this simple restriction derives the correct pattern for negation in Avar participles, both in relative clauses and in the periphrastic progressive.

Let us begin with relative clauses like (29), repeated from above.

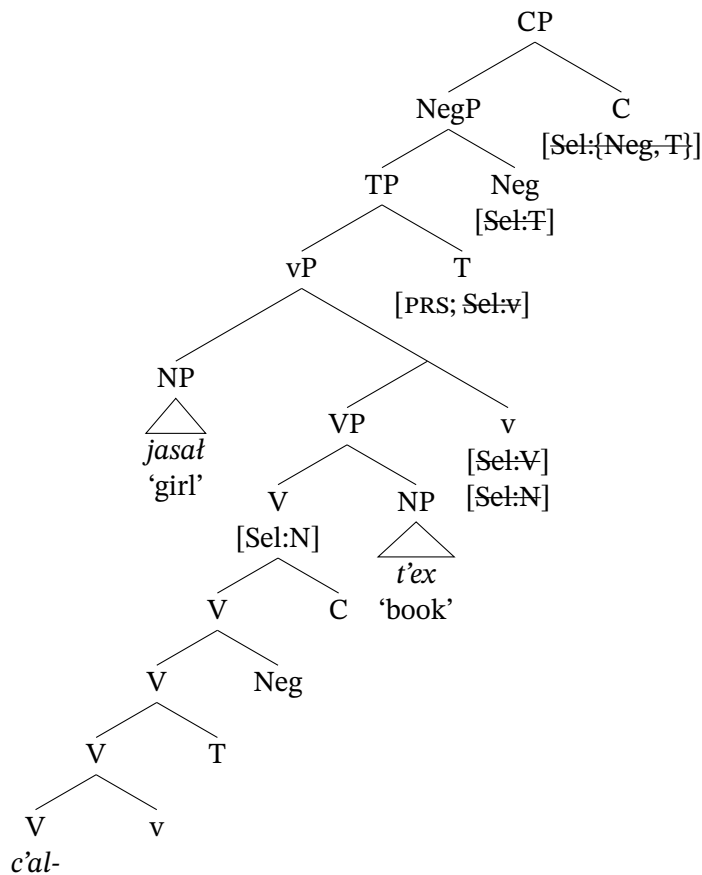
- (29) *jaszał* — *c'al-ula-r-e-b* *t'ex*  
 girl.ERG read-PRS-NEG-PTCP-N book  
 'a/the book that the girl does not read'

As before, the first step is to construct the complex verbal head by External Merge; the result is the head in (25) and subsequently combine it as V with the internal argument. I represent the internal argument in the structures below as *t'ex* 'book' without making a theoretical commitment regarding the correct analysis of the syntax of relativisation, as it is immaterial for my purposes whether the element undergoing  $\bar{A}$ -movement is an empty operator, as on the operator-movement analysis (Chomsky 1977, Browning 1987) and the matching analysis (Salzmann 2006 and references there), or the head NP itself, as on the head-raising analysis of relativisation (de Vries 2002 and references there). The diagram depicts the VP before any  $\bar{A}$ -movement taking place, so there is no gap left by relativisation.



Once the complex head has combined with the internal argument and projected the VP, each of *v*, T, Neg and C are copied into the clausal structure, satisfying their selectional requirements and projecting their own phrases (*v*P, TP, NegP and CP). In this particular instance, the selectional requirement of C must be stated disjunctively: it requires either a TP sister or a NegP sister. Because disjunctive selection is independently necessary to account for verbs such as *say* that allow an NP or a CP complement, I do not view this disjunctive requirement as a challenge for the present analysis. This is interspersed with the External and Internal Merge of the argument NPs (the movement of the external argument to Spec,TP and the movement creating the object gap for the purposes of relativisation). Again, as above, I ignore these additional movements in the representations below.

(31)



Because Neg's sister is a present-tense TP and this information is locally available during vocabulary insertion, the correct morphological exponent, *-r(o)*, will be inserted, ensuring a morphologically well-formed expression, *c'alulare-b* 'reading-N'.

Turning now to the periphrastic progressive, let us suppose that, just like above, a complex V+v+T+Neg+C head is created and merged into the clause as V. The auxiliary is then merged as a higher v head and prevents the T, Neg and C heads from the lexical verb from being merged into the clause, exactly as we have seen in (24) above. As a result, the v, T, Neg and C adjuncts to the lexical V will be trapped and incapable of projecting their own phrases.

Because the pronunciation of negation is subject to tense-based contextual allomorphy outlined above, there being an exponent for nonpast tenses and a different one for the past tense, and Neg has failed to combine with a TP specified with a tense value, neither exponent can be pronounced and no morphological default can be inserted.

### 3.4 The three explananda: summary

We have seen in this section that the formation of complex heads by adjunction, followed by head-to-phrase movement and projection, together with a mechanism inserting morphological defaults when such movement and projection are blocked by additional material, provides a handle on the three key differences between the participles inside the Avar periphrastic progressive forms and their ‘independent’ uses as full CPs.

The first difference, *viz.* the obligatory present tense on the participle inside the periphrastic progressive despite the ability of participles to express the future and past tenses in ‘independent’ uses, is the result of the insertion of morphological defaults during the spellout of the complex verbal head. It is for this reason that the participle in the Avar periphrastic progressive does not inflect for tense: even though, in principle, the participle itself does inflect for tense, the present tense on the participle in the periphrastic progressive is only apparent and instantiates a morphological default.

The second difference between the progressive-internal and ‘independent’ uses of the participle also follows. Because the proposed revision of the head-movement effects in terms of complex head formation followed by head-to-phrase movement permits the creation of complex verbal objects prior to projection, it also accounts for the appearance of tense morphology in the absence of independent temporal reference: because the participle inside the periphrastic progressive does not project a TP, it possesses no independent temporal reference of its own.

Finally, the third difference between the two uses of the participle, *viz.* the negation restriction, is captured by the necessity of temporal information in order for the correct negation marker to be inserted. When a TP is projected, this requirement is trivially satisfied; when an auxiliary blocks the copying of the subparts of the complex head into the clause, no TP is projected and the grammatical system fails to choose between the two negation markers.

## 4 Conclusions and outlook

My aim in this paper has been to explore the theoretical debate between the two groups of approaches to verbal periphrasis, one based on selection and the other based on the insertion of auxiliaries into the preassembled syntactic structure, in an extremely narrow empirical domain, the periphrastic progressive in Avar. I have proposed that complex heads, rather than always being assembled in the course of head movement, can be put together directly by External Merge, adjoining a head to another head, and subsequently projecting those adjoined heads into the clause to satisfy their selectional requirements by checking their selectional features. The resulting analysis derives the three systematic differences between participles in relative clauses and the periphrastic progressive by using little more than syntactic selection and is conceptually close to approaches seeking to explain head-movement effects in terms of a version of the copy theory of

movement in which either the high or the low copies can be pronounced (see Arregi & Pietraszko 2021 for a recent implementation). It remains to be seen whether this analysis can be extended to the remaining periphrastic forms in Avar (the perfect and the prospective), and whether it can eventually be unified with other selection-based approaches to periphrasis that have been proposed in the literature (Pietraszko 2023, Bruening 2021, 2024).

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