Anna A. Volkova

SYNTACTIC STRUCTURE OF PARTICIPIAL CLAUSES IN MEADOW MARI

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It is generally assumed that the syntactic structure of participial relative clauses is impoverished, “reduced” in comparison to that of regular RCs (see a. o. Burzio 1981; Chomsky 1981; Hazout 2001; Siloni 1995; Stowell 1981). Participial RCs are often analysed as VP-like structures (for some, embedded under a nominalizing node, Doron & Reintges 2005; Hazout 2001; Siloni 1995, a. o., but see Kayne 1994 who argues that participial clauses have a C, but crucially not a T). The participial RCs typically (i) don’t license usual CP-material (wh-phrases, complementizers); (ii) don’t have an independent temporal reference; (iii) don’t have subjects. Based on the data of Meadow Mari (Uralic) I contend the two latter statements and show that Meadow Mari pRCs can have independent temporal reference and subjects. I further contrast the behaviour of reflexives in embedded infinitival and participial clauses and argue that even if there is a C level in pRC, it is quite different from that of infinitivals.

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1 National Research University Higher School of Economics, School of Linguistics, avolkova@hse.ru
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1. Introduction

Participial relative clauses (RCs) are usually taken to have a less articulate structure than regular relative clauses. It is generally assumed that their structure is “reduced” – impoverished in comparison to that of regular relative clauses (Burzio 1981, Chomsky 1981, Hazout 2001, Siloni 1995, Stowell 1981, a. o.). They are often analysed as VP-like structures (for some, embedded under a nominalizing node, Doron and Reintges 2005, Hazout 2001, Siloni 1995, a. o., but see Kayne 1993, 1994 who argues that participial clauses have a C, but crucially not a T). The typical characteristics of the participial clauses are the following:

- they do not license the usual CP-material (wh-phrases, complementizers);
- they do not have an independent temporal reference;
- they do not have subjects

On the other hand, participial clauses vary with respect to the positions they can relativize on the Accessibility Hierarchy (Keenan & Comrie 1977):

(1) \[ SU > DO > IO > OBL > GEN > OCOMP \]

The Accessibility Hierarchy (AH) “expresses the relative accessibility to relativization of NP positions in simplex main clauses” (Keenan & Comrie 1977: 66). The rightmost position on the hierarchy is the least accessible for relativisation. It follows that any language must be able to relativize subjects. Keenan & Comrie (1977) further propose that (i) any RC-forming strategy must apply to a continuous segment of the AH, and (ii) strategies that apply at one point of the AH may in principle cease to apply at any lower point.

In the present paper, I will analyse participle forms of Meadow Mari (Uralic) which do not accord with our expectations with respect to the reduced syntactic structure. I will show that Meadow Mari pRCs can have independent temporal reference and subjects. The structure of the paper is as follows: in Section 2 I will provide an overview of the participle inventory of Meadow Mari. Section 3 introduces novel facts that shed light on the syntactic structure of participial RCs in Meadow Mari. Section 4 offers an account of the present data and section 5 concludes.

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3 SU = subject, DO = direct object, IO = indirect object, OBL = oblique case arguments, GEN = (genitive) possessor, OCOMP = object of comparison.
2. Participles in Meadow Mari

Meadow Mari employs four participial forms (for detailed accounts see Brykina & Aralova 2012, B&A 2012 henceforth). An active participle derived with the suffix -še can relativize only the subject of a clause — cf. the sole argument of an intransitive verb (2) and the subject of a transitive verb (3).

(2) [Č’üč’kədən č’erlan-ǝše] rveze šuko urok-ǝm kod-a.
often fall.ill-PTCP.ACT boy many class-ACC miss-PRS.3SG

‘The boy who is often sick misses many classes.’ (B&A 2012: (6))

(3) Me [korn-ǝm sajǝn pal-ǝše] šofǝr de-ne mutlan-ena.
we road-ACC good know-PTCP.ACT driver near-INESS talk-PRS.1PL

‘We talk with the driver who knows the road well.’ (B&A 2012: (8))

A participle derived with –me is traditionally referred to as a passive participle (Pengitov 1951), even though it can be derived from intransitive verbs as well. It relativizes all the positions on the AH from direct object (4) to possessor (5) (Matsumura 1981).

(4) [Tə-lat pu-mo] kniga məłam kül-eš.
you-DAT give-NZR book I.DAT need-PRS.3SG

‘I need the book that I gave you.’ (B&A 2012: (9))

(5) [Oza-ž-ǝm saj-ǝn pal-ǝme] pört vokte-č’ tudo
owner-P.3SG-ACC good-ADV know-NZR house near-EL he

č’üč’kədən ert-a.
often pass-PRS.3SG

‘He often passes the house the owner of which he knows.’ (B&A 2012: (26))

A participle derived with -šaš encodes actions in the future or debitivative modality. It relativizes both subject (6) and non-subject positions. For instance, example (7) illustrates relativisation of an oblique postpositional phrase:
‘The girl who will sing in the evening is very beautiful.’ (B&A 2012: (30))

‘I need to find a road along which at least one car drives at night.’ (B&A 2012: (32))

A negative participle derived with the suffix -dame relativizes all the positions on the hierarchy from subject (8) to possessor. In (9), the locative argument is relativised.

‘Give at least a piece to the dog who hasn’t eaten for two days.’ (B&A 2012: (36))

In that case, the participle agrees with its head in number and case (B&A 2012: 487):

‘In our forest situated further away, there is a lot of mushrooms.’ (B&A 2012: (43))
In what follows, I will focus on the –me and -dome participles: both of them can have subjects in Nom and thus can project a Spec,vP and potentially a T layer.

3. The syntactic structure of participial RCs

3.1. Subject encoding

The subject of the –me and -dome participial RCs can be encoded in three different ways, and occasionally by a combination of options (Kangasmaa-Minn 1970):

- with a possessive marker (only for personal pronouns),
- with Genitive, or
- with Nominative.

The choice between Genitive and Nominative encoding of the subject of a participial RC depends on the position of the nominal on the animacy hierarchy (B&A 2012).

(11) 1&2 person > other pronoun > proper name > human > non-human > inanimate

Genitive encoding is possible for all types of nominals in (11) – cf. (12)-(14), but is primarily used with the nominals positioned higher in the hierarchy (from 1&2 person pronouns to humans). Nominative encoding is allowed only for nominals lower on the hierarchy (from humans to inanimates). In (12), Nominative marking on the subject of the participial RC expressed with a personal pronoun or with a proper name is illicit. In example (13), the subject of the participial clause is a +animate –human noun paras ‘cat’, by default it gets Nominative marking. However, when prompted, native speakers acknowledge that it can also be marked with Genitive.

(12) Мæj [tæj-*ð(øn)/Vasja-*ð(n) purl-mo] melna-m
    I you-GEN Vasja-GEN bite-NZR pancake-ACC
    kočkaš om tšːnal.

    eat NEG.PRS.1SG will

    ‘I will not eat the pancake nibbled by you / Vasja.’

(13) Мæj [pars-ð(øn) purl-mo] melna-m kočkaš om tšːnal.
    I cat-(GEN) bite-NZR pancake-ACC eat NEG.PRS.1SG will

    ‘I will not eat the pancake nibbled by the cat.’
Example (14) illustrates the use of a +human noun in the position of the subject of a participial RC: in this case both Genitive and Nominative marking are possible and they alternate in spontaneous speech.

(14) Jəvan [buxgalter(-ən) {pu-əmo / pu-ədə-mo}] pašadar nergen šon-a.

Ivan bookkeeper(-GEN) give-NZR / give-NEG.CONV-NZR wages about think-PRS.3SG

‘Ivan is thinking about the wages that the bookkeeper {gave / did not give} to him.’

To sum up, the subject of a participial RC can be encoded with a possessive marker (only for personal pronouns), with a Genitive marker (all types of nominals), or with a Nominative marker (for nominals in the lower part of the animacy hierarchy).

3.2. Position of the time adverb

All participles in Meadow Mari can be combined with time adverbs. As it turns out, the possible positions of the time adverb differ depending on the encoding of the subject of the participial RC. If the subject of the participial RC is marked with Genitive, a time adverb such as tengeč’e ‘yesterday’ can both precede and follow it (15). If the subject is marked with Nominative, a time adverb can precede it, but not follow (16).

(15) Jəvan [(tengeč’e) buxgalter-ən (tengeč’e) pu-əmo]

Ivan (yesterday) bookkeeper-GEN (yesterday) give-NZR

pašadar-ž-əm šotl-a.

wages-P.3SG-ACC count-PRS.3SG

‘Ivan is counting the wages that the bookkeeper gave (to him) yesterday.’

(16) Jəvan [(tengeč’e) buxgaler (?teŋgeč’e) pu-əmo]

Ivan (yesterday) bookkeeper (yesterday) give-NZR

pašadar-ž-əm šotl-a.

wages-P.3SG-ACC count-PRS.3SG

‘Ivan is counting the wages that the bookkeeper gave (to him) yesterday.’
Given the evidence from adverb placement, we can conclude that i) Genitive subject is assigned Case within the embedded clause\(^4\), and ii) Nominative subject is assigned Case lower in the structure than Genitive.

Further, I propose that Meadow Mari participial RCs have a more complex syntactic structure than is generally assumed which involves a T-layer. One argument in favour of this is that the participle form -dome is historically derived from a negative converb -de and the participle form -me and serves as sentential negation form for -še and -me participles (see Zanuttini 1996 who argues that sentential negation is a head that selects the tense phrase as its complement).

To sum up, Meadow Mari participial RCs have a more structure than is generally assumed involving a T-layer. Based on the data from time adverb placement, Nominative subject is assigned Case lower in the structure than Genitive.

3.3. Evidence from binding

I use reflexivization as a test for subject properties, as well as the structure of the left periphery. Meadow Mari employs two nominal reflexive strategies, one of which – a simpler reflexive škenže – is subject-oriented and must be bound within the first finite clause (Volkova 2014). In (17), škenže is an argument of an embedded finite clause, it can be bound only by the subject of the embedded clause, but not by the subject of the matrix clause.

(17) \[Jəvanᵊ \ šken-ž-əmi/rₘ \ jörat-aᵊ] \ Mašəᵊ \ şona.

Ivan self-P.3SG-ACC like-PRS.3SG Masha think-PRS.3SG

‘Masha thinks that Ivan likes himself / *her.’

Škenže can be long-distance bound as an argument of an embedded infinitival clause (18), but, crucially for our discussion, not as an argument of a participial RC – cf. (19) and (21).


girl boy from PRO self-DAT-P.3SG house-ACC make-INF ask-PRT

\[^4\] The form derived with –me can also function in Meadow Mari as a nominalization, however in this case, its properties are very different. Serdobolskaya (2008) argues convincingly on the basis of particle placement and binding facts that in case of nominalizations with Genitive subjects, the subject undergoes raising to the matrix clause. This can be further supported by the fact that the Genitive subject occupies a position to the left of a wh-word introducing the embedded nominalization:


I father-P.1SG-GEN how fox catch-NZR-P.3SG-ACC see-NARR.1SG

‘I saw how my father caught the fox.’ (Volkova 2012: (80))
'The girl asked the boy to build her / himself a house.'


Ivan self-P.3SG-ACC respect-PTCP.ACT man about talk-PRT

‘Ivan talked about a man who respects himself.’

In Volkova (2017), I argue that long-distance binding of škenže in the infinitival clauses is a result of chain formation mediated by the C-system. The fact that participial RCs in Meadow Mari are non-transparent for binding I take to be evidence for an impoverished left periphery, missing a C layer (see the next section for discussion).

The contrast between examples (20) and (21) shows that only genitive-marked subjects can bind the reflexive škenže, while the nominative-marked cannot. In (20), both the Genitive and the Nominative form of the subject of the participial RC is licit. In (21), where the dative form of škenže is added to the embedded clause, only the Genitive form is possible; using the Nominative subject results in the ungrammaticality of the sentence.


Ivan bookkeeper-GEN give-NZR wages-P.3SG-ACC count-PRS.3SG

‘Ivan is counting the wages that the bookkeeper gave (to him).’


Ivan bookkeeper-GEN self-DAT-P.3SG give-NZR wages-P.3SG-ACC count-PRS.3SG

‘Ivan is counting the wages that the bookkeeper gave to himself.’

To sum up, we have the following facts at our disposal. The participial forms –me and –dəme can have overtly expressed subjects marked either with Nominative or with Genitive case. Based on the positions a time adverb can occupy inside a participial RC, I concluded that Genitive is assigned higher in the structure than Nominative, but still inside the embedded clause. Genitive-marked subjects of participial RCs can bind reflexives while the Nominative-marked subjects cannot. The form -dəme serves as a sentential negation for the form –me, which can be evidence for the presence of a T-layer in the structure of the participial RC. However, participial RCs in Meadow Mari are not transparent for binding unlike infinitival clauses, which can indicate the absence of the C-layer. All in all, Meadow Mari participial RCs have more structure than is generally assumed. In the next section, I will discuss some of these claims in more detail.
4. Discussion

4.1. The left periphery of participial RCs

Meadow Mari škenže has the structure of a possessive NP: it consists of a nominal stem šken- and a possessive suffix, a bound morpheme agreeing in number and person with the antecedent. In Volkova (2017), I discuss what could be the source of syntactic constraints on the behaviour of škenže. The possessive marker -že does not impose locality, nor the subject orientation, hence both of these constraints ideally should come from šken-.

Šken is relational by assumption taking two arguments. The possessive affix saturates one of its argument positions, this leaves one argument open. Šken is grammaticalized, consequently it cannot by itself close this argument, as lexical relational nouns such as spirit, soul or father do – cf. (22), which shows that škenže cannot project a full PossP.

(22) *Jəvan Maša-n (poro) šken-ž-əm jərət-a.

Ivan Masha-GEN kind self-P.3SG-ACC love-PRS.3SG

Int.: ‘Ivan loves Masha’s (kind) self.’ (Volkova 2017: (31))

Although šken- categorically behaves as a noun in a PossP, it lacks the interpretation of an independent argument. Hence, škenže contains an open argument and has the structure ‘x soul-his’. That means that as a whole škenže is deficient, and the value of the other argument must be supplied (Volkova 2017).

The treatment of long-distance binding of škenže in the infinitival clauses in (Volkova 2017) relies on the idea that anaphoric dependencies in narrow syntax can be established via Agree-based chains (Reuland 2011, in particular cf. the treatment of Norwegian seg). The particular implementation is based on Pesetsky and Torrego (2007). In this approach for an element to be visible for syntactic computation it should have unvalued formal features (such as unvalued uninterpretable Tense). Unvalued features are valued by the Agree operation (subject to the standard conditions on chain formation of c-command and locality) with an element that is valued for these features. Škenže is deficient\(^5\) and, hence, visible for the computation. The element that could provide the value for the second argument of škenže is a SpecTP.

\(^5\) For precision’s sake: deficiency itself is not enough, rather a structural case feature is required for visibility, i. e. V assigning structural Accusative. However, it is crucial that the tail of the chain should be deficient, otherwise chain formation will lead to a violation of the principle of recoverability of deletion (Chomsky 1995, cf. also the discussion of Agree-based chains in Volkova and Reuland 2014).
The C-system has an internal structure providing the links between the lower and the higher clause (see among others Rizzi 1997, Bianchi 2000). It contains at least one element, $C_{\text{Fin}}$ representing the feature +/-finite and, I assume, also an equidistant element $C_T$ representing the feature +/-Tense. The chain formation goes as follows: škenže is linked to V through case assignment. V and T are linked through the verb-tense dependency. The T-node in infinitival clauses is deficient and cannot provide a value for the argument of škenže. Further, the $T_1$-$V_1$-škenže chain is linked to C. The interplay between $C_{\text{Fin}}$ and $C_T$ serves as a switch providing the optionality in interpretation of škenže. Both $C_{\text{Fin}}$ and $C_T$ are deficient, therefore there is no economy preference as to whether the $T_1$-škenže chain is linked to $C_{\text{Fin}}$ or to $C_T$. If a $C_{\text{Fin}}$-$T_1$-škenže chain is formed, škenže is subsequently valued by the object controller when it is merged (black dashed line on Fig. 1). If the $T_1$-škenže chain is linked to $C_T$ (blue line on Fig. 1), škenže will end up being valued by the matrix subject (blue line on Fig. 1). The structure of a sentence with an embedded infinitival clause can be schematically represented as shown on Fig. 1:

Fig. 1. Establishing a dependency via chain formation in a sentence with an embedded infinitival clause.

The valuation of the second argument of šken happens as a result of chain formation between the SpecTP of a finite T and šken through a sequence of feature-sharing dependencies. This straightforwardly accounts for the subject orientation of škenže and the constraints on its binding domain. Given that participial RCs are not transparent for binding, I conclude that this contrast between participial and infinitival embedded clauses in Meadow Mari stems from the absence of C-layer in participial RCs (against Kayne 1993, 1994 and in line with Doron & Reintges 2005).

4.2. The case assignment

As I discussed in section 3, there are two positions for subject in Meadow Mari participial RCs – a Nominative subject is situated lower in the syntactic structure, a Genitive one is higher. Given that a Genitive subject can bind škenže, I assume that Genitive serves as a structural case in pRCs in Meadow Mari. The non-finite T node assigns Genitive case to its SpecTP (see for a similar treatment of Finnish non-finite clauses Vainikka 2016). What appears to be Nominative is actually a default Case form of an NP inside a vP (see for a similar account Kornfilt 2003).
Let us consider two sentences: a simple clause in (23a) with the structure in Fig 1, and a sentence with an embedded participial RC—example (13) repeated here as (23b), with the structure in Fig 2.

(23) a. Pərəs melna-m purl-ən

\[
\text{cat pancake-ACC nibble-PRT}
\]

‘The cat nibbled a pancake.’

b. Məj [pərəs-(ən) purl-mo] melna-m kočkaš om tüñal.

\[
\text{I cat-(gen) bite-nzr pancake-acc eat neg.prs.1sg will}
\]

‘I will not eat the pancake nibbled by the cat.’

Fig. 2. Syntactic structure of a simple clause in Meadow Mari.

Meadow Mari has a SOV word order with dependents usually preceding heads. As shown in Fig. 2, the verb purl-‘nibble’ undergoes successive cyclic head movement (as indicated by the arrows marked 2) to v and to T to form the finite verbal form purl-ən ‘nibble-PRT’. The subject of the clause pərəs ‘cat’ is base-generated in SpecVP and moves to SpecTP to get Nominative case (arrow 1).

In the case of a participial RC, as shown in Fig. 3, the verb undergoes successive cyclic head movement to v to T to PTCP to form the participle purl-mo ‘nibble-NZR’. The subject of the clause is

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6 For current purposes I will abstract away from the question or whether/how SOV word orders are derived.
base-generated in Spec\n, where it gets the default case\(^7\). It can then move to SpecTP to get Genitive. I leave for the future research the question as to why in some cases this movement is not obligatory. Since the case on the Nominative subject is not licensed by T, T cannot mediate in the binding of škenže, hence binding is not available.

Fig. 3. Syntactic structure of a participial relative clause in Meadow Mari (based on Doron & Reintges 2005).

5. Conclusion

I argue on the basis of Meadow Mari data that the syntactic structure of participial RCs is more complex that usually assumed. As Meadow Mari pRCs can have subjects and allow sentential negation, it follows that they have a T-layer. Based on the evidence from time adverb placement and binding I conclude that non-finite T in Meadow Mari assigns structural Genitive case. The fact that participial RCs are non-transparent for anaphoric binding unlike infinitival clauses indicates that participials have an impoverished left periphery, most importantly missing a C layer (contra Kayne 1994). By taking into account differences in functional structure as realized in Meadow Mari we arrive at a more finely grained typology of participial RCs than previously assumed.

\(^7\) The notion of default case rests on the idea that an unmarked case like nominative should be treated as the form given to a noun phrase that has not received case in some other fashion (Marantz 1991, see also Kornfilt & Preminger 2015 for discussion).
References:


Anna A. Volkova
Assistant Professor, School of Linguistics
National Research University Higher School of Economics (Moscow, Russia)
E-mail: avolkova@hse.ru

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