Ekaterina Georgieva
HUN-REN Hungarian Research Centre for Linguistics

On adverbial clauses in Udmurt: postpositional phrases and the case of the adverbial case

This paper presents three types of non-finite adverbial clauses in Udmurt: the ones encoded with the suffixes *-(e)mja*, *-(o)nja*, and *-(o)ńńa*. I propose that these suffixes should be decomposed morphologically and that these non-finite adverbial clauses are to be analyzed as postpositional phrases. In this way, the paper contributes to the analysis of non-finite adverbial subordination in Udmurt. Moreover, the description of *-(o)ńńa*-clauses in the Middle Cheptsa dialect, which have not been previously described in the literature, also deepens our knowledge of Udmurt dialectal syntax. Additionally, this study has implications for our understanding of the Udmurt case system, as it makes a novel proposal regarding the adverbial case in Udmurt.

1. Introduction

In this paper I discuss the Udmurt non-finite adverbial clauses formed with the suffixes *-(e)mja*, *-(o)nja*, and *-(o)ńńa*. These clause types are illustrated in (1)–(3). (For the time being, a morphological decomposition of these suffixes is not provided, as this will be one of the main questions addressed in this paper.)

(1)   Udmurt Corpus (*Udmurt duńńe*, 2010.04.21)

No [*mon tod-emja*], *soļi siźem koncert-jos vań.*
but 1SG know-*emja* 3SG.DAT dedicated concert-PL COP
'But as far as I know, there are concerts dedicated to him/her.'

(2)   (Winkler 2011: 53)

[*Oźi mịn-onja-z*] *metro-je vu-i-z.*
this.way go-*onja*-POSS.3SG metro-ILL arrive-PST-3SG
'As he went like this, he arrived at the metro (station).'

(3)   fieldwork recording, 2014_08_11, TS, Balezino district, Udmurtia

Muš-jos-mị pegǯị-ľľam=ńi=no
bee-PL-POSS.1PL escape-EVID.3PL=already=ADD

[*baba-jeni-mị vịr-ońńa-mị*].
grandmother-INS-POSS.1PL be.busy-*ońńa*-POSS.1PL
'Our bees had (long) flown away while we/me and our grandmother were busy (taking care of the chicks).'

1.1. Previous research

The clauses in (1)–(3) have not received much attention in descriptive studies of Udmurt, but some observations are made in Fokos-Fuchs (1958), Edygarova (2010), and Winkler (2011). All three examples feature a non-finite clause, one that is encoded with the suffixes *-(e)m* or *-(o)n*, which are independently attested in the language, plus the adverbial case *-ja*. The combination of the non-finite suffix and the case suffix is generally not treated as a converb suffix. The adverbial case occupies a special place in the Udmurt case system, as it is the only case that can either precede or follow the possessive suffixes. This property of the adverbial case is also observed with the clauses under consideration: for instance, in (2), the

possessive morphology comes after the case suffix. The morpheme order in -*(e)mja*- and -*(o)nja*-clauses has been discussed by Edygarova (2010), who argues that it depends on the function of the adverbial clause.

The suffix -*(o)ńńa* is used in the Middle Cheptsa dialect and is considered to differ only morphophonologically from -*(o)nja*. Together with the Upper Cheptsa and the Lower Cheptsa dialects, the Middle Cheptsa dialect constitutes the group of Northern Udmurt dialects (see Kel'makov 1998 on the dialectal division of Udmurt and Karpova 2005 for a general description of the Middle Cheptsa dialect). The Middle Cheptsa dialect is spoken in five municipalities of Udmurtia: Glazov, Yukamensk, Yarsk, Balezino, and Krasnogorsk. To the best of my knowledge, -*(o)ńńa*-clauses have not been studied in detail in the previous literature. Beserman Udmurt, which is also spoken in the northern part of Udmurtia, utilizes a similar clause type, formed with the suffix -*(o)ńńiga* (see Usacheva & Serdobolskaya 2015; forthcoming).

1.2. Preview of the proposed analysis

The paper makes a contribution from both empirical and theoretical perspectives. On the empirical level, I show that there are two types of -*(e)mja*- and -*(o)nja*-clauses. The first type has a temporal meaning ('while') and can only feature an event nominalization. Here possessive morphology follows the adverbial case suffix. The second type has an oblique meaning ('according to' or 'based on') and must contain a non-event nominalization. In this second type, possessive morphology precedes the adverbial case. As for -*(o)ńńa*-clauses, I show that they are not simply temporal adjuncts but have a locative meaning as well. I also draw a comparison with Beserman Udmurt -*(o)ńńiga*-clauses.

The theoretical analysis of these empirical findings relies on the understanding of postpositional phrases in generative syntactic terms. Under the proposed analysis, the clauses in question are postpositional phrases (PPs). PPs can be headed by adpositions or semantic cases.[1] The Udmurt adverbial case, being a semantic case, is also a P head. I will argue that we

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1. In the literature a distinction is made between *abstract cases*, i.e. those expressing grammatical relations like subject or object, and *semantic cases*, i.e. those encoding semantic roles, such as spatial relations (Blake 1994; on the terminology used for the two classes of cases see Haspelmath 2009).

need to distinguish between two different types of PPs with the adverbial case, and thus we can account for the two types of *-(e)mja-* and *-(o)nja-*clauses. In other words, the proposal is that there are in fact two adverbial cases in present-day Udmurt. Moreover, I will argue that these two adverbial cases are diachronically related.

I argue that the locative meaning of *-(o)ńńa-*clauses comes from the so-called DOMUS suffix *-ń*, a spatial suffix independently attested in the Middle Cheptsa dialect, combined with the exponent *-a* that marks the inessive or illative case in the possessive declension. In light of the PP-analysis proposed, this means that we are dealing with a complex PP, and the meaning of these clauses is compositionally derived from the subparts of this complex PP. This proposal also implies that *-(o)ńńa* is not a morphophonological variant of *-(o)nja* because it does not feature the adverbial case (*pace* the standard analysis).

The PP-analysis that I put forward for *-(e)mja-*, *-(o)nja-*, and *-(o)ńńa-*clauses agrees with the existing descriptive studies that the three suffixes should be decomposed morphologically. Thus, we are not dealing with converb suffixes. However, it supersedes the previous analyses because it does not only derive the meaning of these clauses in a compositional way but also explains their morphosyntax. Specifically, it accounts for the morpheme order of the adverbial case and the possessive suffixes.

1.3. Data

The data used in this paper come from various sources. I provide examples from my own fieldwork conducted between 2013 and 2016. These examples are listed as follows: *fieldwork recording*, *date of recording*, *(filename)*, *speaker's initials*, *collection point*. I also use examples obtained from elicitation tasks (listed as *elicited*); those provide crucial negative evidence. The Middle Cheptsa data presented in Sections 3.2 and 4.3 were collected in Spring 2023 from two Udmurt dominant speakers of the Middle Cheptsa dialect, who were born and raised in the village of Isak (Russian: Исаково), Balezino district (this village marks the eastern border of the Middle Cheptsa dialect according to Karpova 2005: 16). The data were obtained through elicitation sessions, which targeted the meaning of the *-(o)ńńa-*clauses, including their temporal interpretation, as well as the possibility of having locative adverbials in them and how this affects the intended meaning of the clause. Furthermore, I also use corpus data from

the Udmurt Corpus, the Udmurt Social Media Corpus, and the Turku–Izhevsk Corpus, as well as from other descriptive studies.[2]

1.4. Structure of the paper

This paper is organized as follows: In Section 2, I provide the relevant background information on how non-finite adverbial subordination is expressed in Udmurt. I also summarize the main functions of the Udmurt adverbial case. This will be relevant in order to compare the three clause types in question to the functions of the adverbial case in general. In Section 3, I present the new empirical findings regarding the *-(e)mja-*, *-(o)nja-*, and *-(o)ńńa-*clauses. In Section 4, I provide a theoretical account in a generative syntactic framework (the relevant theoretical assumptions are summarized in the beginning of this section). In Section 5, I offer conclusions.

2. Background

This section first gives a general background on non-finite adverbial subordination in Udmurt. It then provides an overview of how the adverbial case is used in Udmurt.

2.1. Non-finite adverbial clauses in Udmurt

Descriptively, non-finite adverbial clauses in Udmurt can be encoded in two ways (Winkler 2011: 110–121, 173–175; Georgieva 2018: Ch. 3). One option is to use a non-finite clause selected by a postposition or a semantic

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2. The Udmurt Corpus, which is available online at http://udmurt.web-corpora. net, currently contains 9.57 million words of mostly newspaper texts published between 2007 and 2018; these texts represent standard Udmurt. The Udmurt Social Media Corpus is available online at http://udmurt.web-corpora.net and it contains 2.66 million words; it features texts coming from open posts and comments by Udmurt-speaking vKontakte users (up to February 2018). The Turku–Izhevsk Corpus, which is available at http://volga.utu.fi/portal/cgi-bin/ login.cgi, contains approx. 11,000 texts from newspapers published between 1997 and 2002. The searches were carried out in May–June 2018 and February–July 2023. In some, but not all cases, the results were manually disambiguated. The source of each example is listed next to it. The English translations are mine throughout the paper. The glossing and/or transcription of examples from other sources was slightly modified for consistency.

case. The other possibility is by using a converb.[3] The former strategy is illustrated with *ber-e* [back-ILL] 'after (temporal, causal)' in (4) and with *aź-in* [front-INE] 'before' in (5). Other postpositions that select for a non-finite clause are *vil̦-iś* [top-ELA] 'because', *dir-ja* [time-ADV] 'during', *inti-je* [place-ILL] 'instead', etc.

(4)   Turku–Izhevsk Corpus (Vordskem kyl/I/4.txt:110)

žitaźe,   [*sobrani-len*   *ortć-em-ez*]
in.the.evening   convention-GEN   be.over-NMLZ-POSS.3SG

bere, kino lu-o-z.
back-ILL movie be-FUT-3SG

'In the evening, after the convention is over, there will be a movie.'

(5)   Udmurt Corpus (*Udmurt duńńe*, 2013.06.14)

[*Vil̦ už bordi kutsk-on*] *aź-in* *niriś*
new work to start-VN front-INE first

vań-ze   *radjale,*   *ćotale,*
everything-POSS.3SG.ACC   organize.IMP.2PL   count.IMP.2PL

mertale.
measure.IMP.2PL

'Before starting a new project, first consider every detail
(lit. organize, count, and measure everything).'

The non-finite clauses selected by these postpositions are formed with the suffixes *-(e)m* and *-(o)n*. These nominalizations have a very wide distribution: they occur as non-finite relative and argument clauses.[4] In addition, they can be selected by postpositions or semantic cases, and as a result, can be used as adverbial clauses. In what follows the suffixes *-(e)m* and *-(o)n* used in non-finite adverbial clauses will be glossed as NMLZ and VN, respectively. The different glosses, which are adopted from earlier studies,

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3. The terms *gerund*, *verbal adverb*, and the Russian *деепричастие* are used for *converb* in the descriptive literature (see Fokos-Fuchs 1958; Perevoshchikov 1962: 255–283; Kel'makov & Hännikäinen 1999: 206–209, 213–216, 218–219, 224–233; Bartens 2000: 228–265; Winkler 2001: 56–61; 2011: 110–121). For a detailed description of converb clauses see Perevoshchikov (1959), Perevoshchikov (1962: 269–293), and Georgieva (2018: Ch. 3).

4. The question of whether non-finite relative and argument clauses can or should be unified has sparked debate in the literature on Udmurt (see Georgieva 2018: 46–68 for an overview and Dékány & Georgieva 2020 for a theoretical analysis). In this paper I focus on the adverbial clauses with *-(e)m* and *-(o)n*.

are meant to indicate that -*(o)n*-nominalizations have more nominal properties than -*(e)m*-nominalizations (see Serdobolskaya et al. 2012; Georgieva 2018), although these differences will not play a role in the description of the adverbial clauses under consideration. What will be important is the distinction between event and non-event nominalizations for both -*(e)m* and -*(o)n* (see Section 3.1).

The literature agrees that the same nominalizations, -*(e)m* and -*(o)n*, are found in the suffixes -*(e)mja*, -*(o)nja*, and -*(o)ńńa*, which were illustrated in (1)–(3). In these clauses, the nominalization is said to combine with the adverbial case -*ja* (Fokos-Fuchs 1958; Edygarova 2010; Winkler 2011). The two nominalizations can also be selected by other semantic cases, e.g. by the instrumental and the elative, the former being illustrated in (6). This adverbial clause functions as a cause/reason clause.

(6)   Turku–Izhevsk Corpus (Kenesh/D/5:783)

Tolon   [*kuaź*   *zor-em-en*]   *busi-je*   *ęz*
yesterday   weather   rain-NMLZ-INS   field-ILL   NEG.PST.3

vetle=no […]
go.CNG.PL=ADD

'Yesterday they did not go to the field because it was raining
(lit. with the weather raining).'

The non-finite form -*(e)men* is listed as a converb, i.e. a non-finite form used to express adverbial subordination, in some grammars of Udmurt (Kel'makov & Hännikäinen 1999; Winkler 2001; 2011). This means that instead of decomposing it morphologically and treating it as a case-marked form of the -*(e)m*-nominalization, a separate converb suffix -*(e)men* is postulated. The criteria for distinguishing converbs in Udmurt are discussed by Fokos-Fuchs (1958).[5] He argues that converb suffixes are not simply a combination of a nominalization and a case suffix, because the converb suffix is no longer segmentable and/or is semantically opaque. Thus, his main criteria are related to the morphological segmentability and semantic transparency. In his view, the non-finites -*(e)men* in (6) are a borderline case: they are segmentable, but their meaning is not transparent. He argues that -*(e)men*-clauses are translated into German with *als* '(causal)

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5. For typological definitions of the notion of converbs, see the contributions in Haspelmath & König (1995). Converbs in Uralic have been extensively discussed within a typological framework in Ylikoski (2003).

since' rather than with *mit* 'with', which he takes to be indicative of the grammaticalization of this suffix into a converb (Fokos-Fuchs 1958: 287; Winkler 2011: 115–116 shares this opinion, but without discussing these clauses in detail). In contrast, in my previous work, I have argued that all segmentable "converbs" are in fact case-marked nominalizations and that the semantic transparency can be derived from morphological transparency: morphologically segmentable suffixes are semantically transparent, and vice versa; this applies to -*(e)men*-clauses, too (see Georgieva 2018: Ch. 3 for extensive discussion).

The parallel with -*(e)men*-clauses is relevant, as the -*(e)mja*-, -*(o)nja*-, and -*(o)ńńa*-clauses are also built on the two nominalizations in combination with a semantic case. Importantly, as already stated, the three suffixes under investigation are not analyzed as converbs in the descriptive literature (Fokos-Fuchs 1958; Edygarova 2010; Winkler 2011; Georgieva 2018). One piece of support in favor of this comes from the fact that these suffixes are morphologically segmentable. Fokos-Fuchs (1958) mentions an additional argument that concerns morpheme order. The -*(e)mja*-, -*(o)nja*-, and -*(o)ńńa*-clauses can show possessive morphology, as shown in (2). In this example, the possessive morphology comes after the nominalization suffix and the case suffix. The possessive morphology can also precede the adverbial case, as in (7). In Fokos-Fuchs's view, the fact that both morpheme orders are attested indicates that the combination of the nominalization and the adverbial case should not be treated as a single, fully grammaticalized converb suffix.

(7) Udmurt Corpus (*Udmurt duńńe*, 2008.05.28)

Mi	*um*	*ľukiśke*	*aďami-jez*
1PL.EXCL	NEG.1PL	separate.PRS.CNG.PL	person-ACC

viǯi-jez-ja,	*osk-on-ez-ja* […]
root-POSS.3SG-ADV	believe-VN-POSS.3SG-ADV

'We don't separate people based on their origin and/or religion.'

Furthermore, Winkler (2011: 116) mentions these clauses *passim* and suggests that their meaning can be compositionally derived from the non-finite suffixes: -*(e)m* or -*(o)n* plus the adverbial case. The example (2) is listed in the section dealing with the adverbial case; this also suggests that Winkler considers the non-finite verb form to be morphologically decomposable.

These empirical findings discussed in the earlier studies already highlight the main issues that will be addressed in the present paper: the order

of the adverbial case and the possessive suffix in these adverbial clauses, i.e. the difference between (2) and (7), as well as the semantics of these clauses, i.e. how their meaning relates to that of the adverbial case. New empirical findings regarding these issues will be presented in Section 3. However, in order to investigate these clause types in greater detail, we first need to get acquainted with the main properties of the adverbial case. This will serve as a baseline for the discussion in Section 3.

2.2. The Udmurt adverbial case

The descriptive studies distinguish between two functions of the adverbial case in Udmurt: (i) it derives adnominal modifiers, as in (8); (ii) it encodes adverbial modifiers: with the meaning 'according to' or 'based on', as in (9a, b), but a purely spatial meaning 'along' is also possible, albeit rarely mentioned in the literature (9c) (Perevoshchikov 1962: 100–101; Kel'makov & Hännikäinen 1999: 188; Bartens 2000: 89, 103; Winkler 2001: 24; 2011: 53; Edygarova 2017).

(8)   (Winkler 2001: 24)

  udmurt kịl-ja   dịšetiś
  Udmurt language-ADV teacher
  'teacher of Udmurt'

(9) a. *Plan-ja uža-j.*
  plan-ADV work-PST.1SG
  'I worked according to the plan.' (Georgieva 2018: 81)

 b. *Diśkut-ez-ja   todma-j.*
  clothes-POSS.3SG-ADV recognize-PST.1SG
  'I recognized [him/her] based on his/her clothes.' (Georgieva 2018: 81)

 c. *Kuar tẹl-ja košk-i-z.*
  leaf wind-ADV leave-PST.3SG
  'The leaf flew away along/with the wind.' (Edygarova 2017: 78)

The use exemplified in (8) is discussed in detail in Edygarova (2017), who argues that forming adnominal modifiers with the adverbial case is particularly productive in the literary variety of modern Udmurt. The use illustrated in (9) is of interest in this paper, as it shows up in the adverbial clauses with *-(e)mja*, *-(o)nja* and, according to the standard analysis, with

-(o)ńńa as well. In the descriptive studies, these clauses are subsumed under the use illustrated in (9) (see Winkler 2001: 24; 2011: 53; Edygarova 2010).

The peculiar property of the adverbial case in Udmurt is that it can either precede or follow the possessive suffixes. Case suffixes in Udmurt generally have a fixed position: some (e.g. inessive, illative, elative) precede the possessive markers, while others (e.g. genitive, ablative, abessive) follow them; in the tradition of Finno-Ugric linguistics, the two morpheme orders are referred to as *Cx-Px* and *Px-Cx*, respectively (*Px* stands for possessive suffix, *Cx* for case suffix). Crucially, the adverbial is the only one in modern Udmurt that displays both orders (Edygarova 2010: 109–111). Edygarova (2010: 110) notes that Px-Cx is the general pattern for the adverbial, as in (9b); the Cx-Px order is rare, but she reports a few examples from dialectal texts: *ʒek śurel-len jugit-ja-z* [rye pollen-GEN light-ADV-POSS.3SG] '(we walked) by the light of the rye pollen'. Emelyanov (1927: 135) argues that the Px-Cx order is a new development and that the Cx-Px order is found in spoken language and folklore texts, e.g. *sojos-len mị̣non-ja-zị̣* [they-GEN going-ADV-POSS.3PL] 'as they were going'.

In my view there are at least two factors that complicate the analysis of the adverbial case in Udmurt. As far as its functions are concerned, we see that this case has several seemingly unrelated functions.[6] As for its morphology, the varying order of the possessive suffixes and the adverbial case calls for an explanation, and this will be addressed in Section 3.1 and 4.2. Another issue regarding its morphology is that it is formally similar to the possessive declension of the inessive and illative cases. Generally, the inessive is expressed with the suffix *-ịn* (e.g. *gurt-ịn* [village-INE] 'in the village') and the illative is expressed by *-(j)e* (e.g. *gurt-e* [village-ILL] 'to the village'). In the presence of possessive suffixes, these two cases are marked in the same way: instead of *-ịn* or *-(j)e*, we find *-a*, which precedes the Px, e.g., *gurt-a-mị̣* [village-INE-POSS.1PL] or [village-ILL-POSS.1PL] 'in or to our village' (Perevoshchikov 1962: 88; Winkler

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6. Note also that the term *adverbial case* is rather unfortunate from a comparative perspective. In other languages that employ a marker labeled as *adverbial case*, e.g. Georgian and Adyghe, this suffix has various functions: it is used to derive adverbs as well as to mark secondary predicates and certain non-finite clauses (see Hewitt 1995: 534–535; Serdobolskaya 2016). These functions may seem similar to the one illustrated in (9), but the nominal modifier function shown in (8) clearly does not fit the label *adverbial*.

2001: 29; 2011: 62–64; Edygarova 2010).[7] When the stem ends in a vowel, we find *-ja*, e.g. *busị-ja-mị* [field-INE-POSS.1PL] or [field-ILL-POSS.1PL] 'in or to our field'. This means that when the stem ends in a vowel, the adverbial case is identical in form to the suffix encoding the inessive or illative cases before possessive suffixes. The presence of the glide in the exponent marking the inessive or illative cases is due to epenthesis (Edygarova 2010: 107). Epenthetic *-j* occurs in various contexts in Udmurt, although differences between the standard language and the dialects are observed, cf. standard *kniga-jez* [book-POSS.3SG] vs. dialectal *kniga-ez* [book-POSS.3SG] and standard *karta-os* [map-PL] vs. dialectal *karta-jos* [map-PL] (Perevoshchikov 1962: 45–46). I will argue below that the key to understanding the adverbial case is the spatial meaning illustrated in (9c) and, more generally, the morphological similarity of the exponent of the adverbial case (*-ja*) to the one that marks the inessive or illative before possessive suffixes (*-(j)a*). Moreover, in my view, the *-(e)mja-* and *-(o)nja-*clauses present the crucial piece of evidence here (see Section 3.1). More generally, the proposal regarding the adverbial case will be fed into the general analysis of postpositional phrases in Udmurt (see Section 4.2).

With this in mind, let us turn to the detailed description of *-(e)mja-*, *-(o)nja-*, and *-(o)ńńa*-clauses.

3. New empirical findings

In this section, I present new empirical findings regarding the adverbial clauses expressed with the suffixes *-(e)mja*, *-(o)nja* and *-(o)ńńa*. As stated in the Introduction, according to the standard analysis of these clauses, a nominalization combines with the adverbial case; moreover, the suffix *-(o)ńńa* is considered to be a dialectal variant of *-(o)nja*. In this section, I will present empirical arguments that refine or even challenge these assumptions and then in Section 4, I will propose an alternative analysis

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7. This segmentation follows Winkler (2001: 29; 2011: 63–64) and Usacheva (2012), that is, synchronically, *-(j)a* can be considered to be the exponent of the inessive or illative cases used before possessive morphemes. The historical development of these forms has been debated, however (see Serebrennikov 1963: 112–115; Csúcs 2005: 205; see also Edygarova 2010: 108). Nevertheless, there does not seem to be a consensus on how to gloss *-(j)a*; Winkler (2001) uses either INE or ILL, depending on the meaning of the datum, and I will follow this convention.

that successfully captures the semantic and morphosyntactic properties of these clauses.

I first carefully examine -*(e)mja*- and -*(o)nja*-clauses. In accordance with the existing literature, I propose that they indeed feature the adverbial case (and are glossed accordingly). However, I will present new data based on which I will claim that there are two types of -*(e)mja*- and -*(o)nja*-clauses, both semantically and morphosyntactically.

Secondly, I shall investigate the adverbial clauses formed with the suffix -*(o)ńńa* used in the Middle Cheptsa dialect. What I will show is that these clauses are not simply temporal ones; rather, they also have a locative component in their meaning. I will also draw a parallel with Beserman Udmurt, which utilizes a similar clause type. In order to account for the locative semantics, I will later argue in Section 4 that the suffix -*(o)ńńa* is not to be decomposed morphologically the same way as -*(o)nja* (*pace* the standard analysis). The alternative morphological decomposition requires some theoretical background, which will only be introduced in Section 4; for this reason in this section I do not segment the suffix -*(o)ńńa* in the glosses.[8]

3.1. Two types of adverbial clauses with the adverbial case

This section deals with the adverbial clauses formed with suffixes -*(e)mja* and -*(o)nja*. I capitalize on an observation made by Edygarova (2010) regarding the morpheme order in these clauses, by linking morpheme order to the meaning of the adverbial clause. Furthermore, I present new findings regarding the distribution of the Cx-Px and Px-Cx orders with the adverbial case based on corpus data. In addition, I present new data regarding the type of the non-finite clause involved (event or non-event

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8. A remark is in order regarding these clauses. Based on corpus data from the Udmurt Social Media Corpus (which contains spoken/dialectal texts), it can be shown that several suffixes are in use, and alongside the standard Udmurt -*(o)nja*, we also find -*(o)ńńa* and -*(o)nna*. The examples presented in Fokos-Fuchs (1958) also contain different forms. This might suggest that there is dialectal variation with respect to the form of the suffix. It has been reported that -*(o)nja*-clauses are far less frequent than other types of temporal clauses, e.g. the 'when'-clauses encoded with the converb -*ku* (see Georgieva 2018). Section 3.1 focuses on Standard Udmurt -*(o)nja*-clauses, while Section 3.2 zooms in on -*(o)ńńa*-clauses in the Middle Cheptsa dialect; all further questions regarding -*(o)nja*-clauses in Standard Udmurt and across the Udmurt dialects will be left for future research.

nominalization, see below). Thus, based on their semantic and morpho-syntactic properties, I will argue that two types of *-(e)mja-* and *-(o)nja-* clauses are to be distinguished.

Edygarova (2010: 109–111) observes the following regarding the Cx-Px and Px-Cx order when the adverbial case is used with *-(e)m-* and *-(o)n-*nominalizations. The Cx-Px order occurs when the nominalization is used as an adverbial clause; here the possessive suffixes mark agreement with the subject of the non-finite clause. The Px-Cx order, on the other hand, is preferred when the nominalization is used as a manner or circumstantial adverbial. This is shown for *-(e)mja-*clauses in (10) and (11), respectively. Edygarova does not provide a minimal pair for *-(o)nja-*clauses, but we find one in (2) and (7), repeated below in (12) and (13) for the reader's convenience.

(10)   (Edygarova 2010: 110)

[*Uža-nŝ   bŝgat-em-ja-s*]   *śud-em,*
work-INF   be.able-NMLZ-ADV-POSS.3SG   feed-EVID.3SG

pe,   soostŝ   so.
QUOT   3PL.ACC   3SG
'While he was able to work, he was feeding them, they say.'

(11)   (Edygarova 2010: 111)

[*Bŝgat-em-e-ja=no*
be.able-NMLZ-POSS.1SG-ADV=ADD

vala-m-e-ja]   *uža-śko.*
understand-NMLZ-POSS.1SG-ADV   work-PRS.1SG
'I work according to my (own) abilities and understanding.'

(12) =(2) (Winkler 2011: 53)

[*Oźi   min-on-ja-z*]   *metro-je   vu-i-z.*
this.way   go-VN-ADV-POSS.3SG   metro-ILL   arrive-PST-3SG
'As he went like this, he arrived at the metro (station).'

(13) =(7) Udmurt Corpus (*Udmurt duńńe*, 2008.05.28)

Mi   um   ľukiśke   aďami-jez
1PL.EXCL   NEG.1PL   separate.PRS.CNG.PL   person-ACC

viži-jez-ja,   osk-on-ez-ja […]
root-POSS.3SG-ADV   believe-VN-POSS.3SG-ADV
'We don't separate people based on their origin and/or religion.'

Although Edygarova's generalization seems to be on the right track, it can be further qualified. What I would like to point out is that the morpheme order correlates with the meaning of the adverbial clause. In (11) and (13), the non-finite clause means 'according to' or 'based on', as expected with the adverbial case. In (10) and (12), however, the meaning of the adverbial clause is not 'according to' or 'based on' but rather 'while'.[9] This holds for all examples with the Cx-Px order presented by Edygarova (2010). The same pattern is found in the examples presented by Fokos-Fuchs (1958) as well as in the data from the Udmurt Corpus. Recall that Winkler (2011: 116) has noted *passim* that the meaning of these clauses is compositional, i.e. derivable from the meaning of the adverbial case. However, this does not predict the correlation between morpheme order and semantics, nor does it explain why the adverbial clauses in (11) and (13) have temporal semantics – which is not the typical use of the adverbial case in general, cf. its functions as summarized in Section 2.2.

The second empirical observation concerns the distribution of the two morpheme orders with the adverbial case. Recall from Section 2.2 that according to Edygarova (2010: 110), Px-Cx is the general pattern for the adverbial case and the Cx-Px order is rare. This is indeed confirmed by corpus data. In the Udmurt Corpus (9.57 million words), the Px-Cx pattern has 16,129 hits, whereas the Cx-Px order has only 675 hits. But the corpus data allow to make new observations about the type of nouns the adverbial case combines with. Specifically, it can be observed that the corpus hits for the Cx-Px order with the adverbial case feature *only -(e)m* and *-(o)n* forms. The Px-Cx order, on the other hand, is attested with non-derived nouns (cf. *diśkut-ez-ja* [clothes-POSS.3SG-ADV] 'based on his clothes' in (9b)) and nominalizations, as in (11) and (13).

Thus, the puzzle is why nominalizations show "dual" behavior, unlike non-derived nouns. I argue that this is because nominalizations in Udmurt fall into two types and one of them patterns with non-derived nouns. In my previous work, I have argued that *-(e)m-* and *-(o)n-*nonfinites come in two guises: *event* and *non-event nominalizations* (Georgieva 2018: 48–57, see also Serdobolskaya et al. 2012 and Dékány & Georgieva 2020). The latter may denote result nouns, manner nominalizations (in the sense of Comrie & Thompson 2007) or object nominalizations (e.g.

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9. The English translation of (10) follows Edygarova's translations in which she uses *poka* 'while'.

instrument). Consider *žećira-n* [swing-VN], which can be (i) an event nom-inalization ('swinging'), (ii) a manner nominalization ('the way of swing-ing') or (iii) an instrument nominalization '(a) swing'. In (14), *žećira-m* [swing-NMLZ] can have either a manner or an event reading.

(14) (Georgieva 2018: 53)

    Ivan-len   *žećira-m-ez*
    Ivan-GEN   swing-NMLZ-POSS.3SG

    anaj-ataj-os-se   *pajmit-i-z.*
    mother-father-PL-POSS.3SG.ACC   amaze-PST-3SG

    'The way in which Ivan was swinging amazed his parents.'
    (manner nominalization)
    'Ivan's swinging amazed his parents.' (event nominalization)

The two types of nominalizations differ not only in their semantics but also in their grammatical properties. For example, only non-event nomi-nalizations can be pluralized, as shown in (15) for *-(e)m*-nominalizations (pluralization of *-(o)n*-nominalizations patterns alike, see Georgieva 2018). This supports the idea that non-event nominalizations behave like garden-variety noun phrases.

(15) (Georgieva 2018: 53)

    Ivan-len   *žećira-m-jos-iz*
    Ivan-GEN   swing-NMLZ-PL-POSS.3SG

    anaj-ataj-os-se   *pajmit-i-z.*
    mother-father-PL-POSS.3SG.ACC   amaze-PST-3SG

    'The ways in which Ivan was swinging amazed his parents.'
    (manner nominalization)
    *'Ivan's swingings amazed his parents.' (event nominalization)

The distinction between event and non-event nominalizations is rele-vant for the morpheme order with the adverbial case in the following way. Above, I argued based on corpus data that the Cx-Px order with the adverbial occurs only with nominalizations. I also argued that the Px-Cx order is attested with both non-derived nouns and nominalizations. Here, I would like to further specify these claims: the Cx-Px order occurs when the adverbial case combines with event nominalizations, whereas the Px-Cx order is found with non-derived nouns, including non-event nominalizations.

Support for these claims comes from corpus data. Based on (impressionistic) observations it seems that the *-(o)n*-nominalizations showing the Px-Cx order with the adverbial case have the semantics of non-events. We have already seen an example: the nominalization *osk-on* [believe-vɴ] in (13) does not have an event reading but encodes an abstract noun related to the event: it means 'religion, belief'. Other corpus examples are also non-events: *ivorton* 'notification', *kuron* 'request', *kiržan* 'song', *ulon* 'life', *koson* 'order', etc.

More importantly, the corpus data allow us to check for the compatibility of the two morpheme orders in combination with the plural. The searches in the Udmurt Corpus revealed that when the nominalization is pluralized, the adverbial case is attested *only* in the Px-Cx order (79 hits for *-(e)m*-nominalizations and 511 hits for *-(o)n*-nominalizations), e.g. *kos-em-jos-i̮z-ja* [order-ɴᴍʟᴢ-ᴘʟ-ᴘᴏss.3sɢ-ᴀᴅᴠ] 'according to/based on his/her orders' and *kur-on-jos-si̮-ja* [ask-vɴ-ᴘʟ-ᴘᴏss.3ᴘʟ-ᴀᴅᴠ] 'according to/based on their requests'. This provides strong support for the idea that the Px-Cx order with the adverbial case combines with non-event nominalizations – as was shown above, they are pluralizable, unlike event nominalizations. The clauses attested in the corpus are translatable with 'according to' or 'based on'.

The Cx-Px order, on the other hand, is not attested with pluralized nominalizations in the Udmurt Corpus. In fact, based on native speakers' judgments, this is ungrammatical, as shown in (16). In this example, the pluractionality is both lexically encoded (with the adverbial 'many times') and also pragmatically plausible (mountaineers go on multiple hikes); nevertheless, the plural marking is disallowed, as with event nominalizations in general. These facts support the present proposal according to which the Cx-Px order with the adverbial case is possible only with event nominalizations. The adverbial clause in (16) has temporal semantics.

(16)   elicited

[*Gureź-e*   (*tros*   *pol*)   *tuba-m-ja-z* /
mountain-ɪʟʟ   many   times   climb-ɴᴍʟᴢ-ᴀᴅᴠ-ᴘᴏss.3sɢ

*tuba-m-jos-ja-z]   *aľpińist*   *odig*
climb-ɴᴍʟᴢ-ᴘʟ-ᴀᴅᴠ-ᴘᴏss.3sɢ   mountain.climber   one

pol=no   *usi̮-mte.*
time=ᴀᴅᴅ   fall-ɴᴇɢ.ᴇᴠɪᴅ.3sɢ

'The mountain climber didn't fall a single time while climbing the mountains (many times).'

To recap, the findings in this section allow us to state that there are two types of *-(e)mja-* and *-(o)nja-*clauses, which differ both semantically and morpho-syntactically. Their properties are summarized in Table 1 and will be accounted for in Section 4 by rethinking the status of the adverbial case in Udmurt.

Table 1: The two types of adverbial clauses with the adverbial case

	Meaning	Morpheme order	Nominalization type
Type 1	temporal ('while')	Cx-Px	event
Type 2	oblique ('according to' or 'based on')	Px-Cx	non-event

3.2. Temporal-locative adverbial clauses with *-(o)ńńa*

In this subsection I discuss *-(o)ńńa-*clauses in the Middle Cheptsa dialect. Since they have not been previously described, I start with some general observations regarding their temporal interpretation. Then, I show that these clauses have a locative component in their meaning.

Based on my data, I argue that *-(o)ńńa-*clauses express an adverbial clause that denotes a time interval. The event of the main clause can overlap with or take place within that time interval, see (17) and (18), respectively. My consultants often paraphrase the former with the converb *-ku* 'when' and the latter with the converb *-ććoź* 'while' (standard Udmurt *-toź*, see below in (24)).

(17) elicited (Middle Cheptsa dialect)

[*Isak-ịn   dịšetiś   luị-sa   uža-ńńa-m*]
Isak-INE   teacher   be-CVB   work-*ońńa*-POSS.1SG

umoj   uli-śko   val.
well   live-PRS.1SG   COP.PST

'While I was working as a teacher in Isak, I was living well.'

(18) elicited (Middle Cheptsa dialect)

[*Isak-ịn   dịšetiś   luị-sa   uža-ńńa-m*]   *kuiń   pol*
Isak-INE   teacher   be-CVB   work-*ońńa*-POSS.1SG   three   times

už-me   danjazị.
work-POSS.1SG.ACC   award.PST.3PL

'While I was working as a teacher in Isak, my work was awarded three times (lit. they awarded my work three times).'

As an introduction to the locative semantics of the clause type illustrated in (17) and (18), let us consider -*(o)ńńiga*-clauses in Beserman Udmurt, as described by Usacheva & Serdobolskaya (2015). According to them, the temporal orientation of -*(o)ńńiga*-clauses in Beserman Udmurt is similar to the Middle Cheptsa facts. What they also claim is that the event expressed by the adverbial clause and the event of the main clause should take place in the same location. To support this they provide (19): the example was rejected by their consultants, as using an -*(o)ńńiga*-clause implies that the teacher delivered her babies at work. To express the intended meaning, the speakers used the converb -*idćoź* 'while, until, as long as' (which corresponds to -*toź* in standard Udmurt and -*ććoź* in Middle Cheptsa dialect, see below in (24)). Importantly, this is the only example presented in their study in support of their claim.

(19) (Usacheva & Serdobolskaya 2015: 386) (Beserman Udmurt)

*[*Vorća-jə̂n=no   Šamardan-ə̂n   učiťeľ-ə̂n*
Vortsa-INE=ADD   Shamardan-INE   teacher-INE

uža-ńńiga-m]   *mon   kwiń   pińal   vaj-i.*
work-*ońńiga*-POSS.1SG   1SG   three   child.ACC   bring-PST.1SG
Intended: 'While I was working as a teacher in Vortsa and Shamardan, I gave birth to three children.'

I tested (20), which was modeled after the Beserman Udmurt (19). My consultants found (20) semantically/pragmatically odd (as indicated by the # sign), as it implies delivering the babies at work.

(20) elicited (Middle Cheptsa dialect)

#[*Isak-ị̑n   dị̑šetiś   luị̑-sa   uža-ńńa-m*]
Isak-INE   teacher   be-CVB   work-*ońńa*-POSS.1SG

kuiń   pinal   vaj-i.
three   child.ACC   bring-PST.1SG
'While I was working as a teacher in Isak, I gave birth to three children.'

Thus, at first sight these clauses in Beserman Udmurt and the Middle Cheptsa dialect show a parallel behavior: they are not simply temporal clauses but imply that the two events, the one of the main clause and the one of the adverbial clause, should take place in the same location.

This initial hypothesis should be refined for the Middle Cheptsa data, however.[10] One might ask whether adding two different locative adverbials or having different implicit locations would be grammatical. In (21), the adverbial clause contains a locative that is different from the one in the main clause (the example was modeled after (3)). In (22), the two events are expected to take place in different locations (for pragmatic reasons), although the locations are left implicit.[11] In both cases it is possible to use -*(o)ńńa*-clauses.

(21)   elicited (Middle Cheptsa dialect)

   Muš-jos-mị   *bakča-ịn*   *sịlịś*   *umorto-ịś*
   bee-PL-POSS.1PL   garden-INE   standing   beehive-ELA

   pegǯi-ľľam=ńi=no   [*baba-jenị-mị*
   escape-EVID.3PL=already=ADD   grandmother-INS-POSS.1PL

   azbar-ịn   *vịr-ońńa-mị*].
   yard-INE   be.busy-*ońńa*-POSS.1PL
   'Our bees had (long) flown away from the beehive in the garden while we/me and our grandmother were busy (taking care of the chicks) in the yard.'

(22)   elicited (Middle Cheptsa dialect)

   [*Gubija-nị*   *vetl-ońńa-m*]   *baba-je*
   mushroom.pick-INF   go-*ońńa*-POSS.1SG   grandmother-POSS.1SG

   skal-jos-mes   *kịsk-em.*
   cow-PL-POSS.1PL.ACC   milk-EVID.3SG
   'While I was picking mushrooms, my grandmother milked our cows.'

Thus, it seems that the semantic/pragmatic oddity of (20) cannot be directly explained in terms of the location of the two events. I believe that the correct explanation is related to the two events, the one expressed by

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10. In a more recent study, Usacheva & Serdobolskaya (forthcoming) claim that the requirement for the two locations to be identical is not that strict in Beserman Udmurt. They provide one example for which they argue that the partial overlap between the locations makes the sentence felicitous. Since there are only two examples presented for Beserman Udmurt, it is difficult to make a comparison. It would be interesting to find out whether the restrictions are similar to what I show below for the Middle Cheptsa dialect. Hopefully, this question will be addressed in future studies.

11. I thank an anonymous reviewer for raising the issue of implicit locations.

the main clause and the one expressed by the adverbial clause, being interpreted as describing a *single situation*. That is, they are subparts of one macro-event. This requirement goes hand in hand with a spatiotemporal match between the events – but this is more complex than simply a ban on different locative adverbials. In (17) and (18), the adverbial clause and the main clause are viewed as subparts of a global situation: a description of a teacher's professional life. In contrast, construing working as a teacher and giving birth to three children as one macro-event yields the semantically odd reading of giving birth at school. Example (23) also supports this line of thinking: it is minimally different from (20), and importantly, the main clause allows for a construal according to which the two events form a single situation.

(23)   elicited (Middle Cheptsa dialect)

[*Isak-ịn   dịšetiś   luị-sa   uža-ńńa-m*]   *kuiń   pol*
Isak-INE   teacher   be-CVB   work-*ońńa*-POSS.1SG   three   times

praktika-je   vetl-i   Iževsk-e.
training-ILL   go-PST.1SG   Izhevsk-ILL

'While I was working as a teacher in Isak, I went to three trainings in Izhevsk.'

It seems much more difficult to ensure that the two events cannot be interpreted as a single situation when the main and the adverbial clauses have the same subject. Sentence (20) is the perfect example for such a construal, since under the intended reading, the adverbial clause has a scene-setting function: it sets a general background for the event of the main clause. But as I argue, -*(o)ńńa*-clauses must be interpreted as subparts of a macro-event together with the main clause. As a result of this, (20) is rendered the semantically odd reading of delivering babies at work. Examples (17), (18), and (23) can be interpreted as part of a macro-event together with the main clause. They also allow for a scene-setting reading of the adverbial clause, and under such a scenario, the speakers prefer using an alternative type of non-finite clause (-*ku* 'when' or -*ććoź* 'while'). Example (20) stands out because it allows only for a scene-setting reading.

When the two clauses have different subjects, it is possible to have construals such that the two events are viewed as a single situation. I argue that this is what we observe in (21) and (22): both can be perceived as descriptions of one larger event, and despite the fact that the two clauses contain two locative adverbials, the subevents "revolve" around the same

location (i.e. they are descriptions of what happened at home). This part of the proposal may sound slightly unconvincing, as such semantic contrasts, i.e. what counts as a macro-event, can be quite subtle and hard to capture. Consider the next two examples, however: the two events cannot possibly be construed as a single situation. Rather, they are about contrasting two events that take place at different locations. The context of (24) is different time zones, and the two events are simply contrasted with each other, without being included in a single situation. Example (25) is about the differences between Southern and Northern Udmurtia, and again, the main and the adverbial clause cannot be interpreted as subevents of one macro-event. As a consequence, in both contexts, *-(o)ńńa*-clauses are not acceptable; my consultants suggested using a different non-finite clause: *-ććoź* 'while' in (24) and *-ku* 'when' in (25).

(24)   elicited (Middle Cheptsa dialect)

[*Moskva-ịn   iźị-ććoźa-zị /   *iź-ońńa-zị*],
Moscow-INE   sleep-CVB-POSS.3PL   sleep-*ońńa*-POSS.3PL

Vladivostok-ịn   už-ịś   bertị-nị   poto=ńi.
Vladivostok-INE   work-ELA   go.home-INF   exit.PRS.3PL

'While people in Moscow are (still) sleeping, people in Vladivostok are already going home from work.'

(25)   elicited (Middle Cheptsa dialect)

[*Lịmšor-ịn   kartoška   merttị-ku /   *mertt-ońńa-zị*],
south-INE   potato.ACC   plant-CVB   plant-*ońńa*-POSS.3PL

ujpal-ịn   lịmị   suźalo=na=uk!
north-INE   snow.ACC   clean.PRS.3PL=still=EMPH

'While in the south [Udmurt] people are planting potatoes, in the north people are still shoveling show!'

Based on the presented evidence, I conclude that the *-(o)ńńa*-clauses used in the Middle Cheptsa dialect do not simply encode an event simultaneous with the matrix event (as 'when' and 'while'-clauses do). I showed that using *-(o)ńńa*-clauses is only possible when they can be construed as belonging to one macro-event together with the main clause. In my view, this requires or, rather, results in a spatiotemporal match between the two events. In Section 4, I will present an account of these properties of *-(o)ńńa*-clauses.

4. Analysis

In this section I put forward a theoretical analysis couched in a generative syntactic framework. The proposed analysis of *-(e)mja*, *-(o)nja*, and *-(o)ńńa* is similar to the traditional ones in treating these suffixes as morphologically decomposable, but it differs from them in several important respects. First, the proposed morphological decomposition of *-(o)ńńa* is crucially different from the standard one. Second, a novel analysis is put forward for the adverbial case in *-(e)mja* and *-(o)nja*.

Apart from decomposing the suffixes morphologically, the present proposal also states that these adverbial clauses are postpositional phrases (PPs). In Section 2.1, it was already demonstrated that non-finite adverbial subordination in Udmurt is typically encoded by using a non-finite clause selected by a postposition or a semantic case. Since postpositions and semantic cases are treated as exponents of the same syntactic head (P) in this framework (see below), this means that these non-finite adverbial clauses in Udmurt are PPs. Thus, *-(e)m bere* 'after' in (4), *-(e)men* 'by (doing)' or because' in (6) and *-(e)mja* 'as' in (1) are all PPs (see Georgieva 2018: Ch. 4 for further discussion). In the adopted framework, PPs are argued to have internally complex structure (the relevant theoretical assumptions are summarized in Section 4.1). The internal complexity of PPs will make it possible to account for the differences between the two types of *-(e)mja*- and *-(o)nja*-clauses (Section 4.2) and for the temporal-locative semantics of *-(o)ńńa*-clauses (Section 4.3).

4.1. The internal structure of postpositional phrases with special reference to Udmurt

In this section I first summarize the main assumptions regarding the structure of postpositional phrases made in the generative syntactic tradition. I then provide an overview of the existing studies dealing with PPs in Udmurt in this framework.

It is received wisdom in the literature that the heads of PPs, Ps, can be adpositions or semantic cases. This is supported by their syntactic and semantic similarities (from a typological perspective see Malchukov & Spencer 2009; Moravcsik 2009). Semantically, spatial Ps express how the position of the Figure is related to the Ground; this holds for both adpositions and cases. Syntactically, PPs headed by adpositions have the same distribution as those headed by semantic cases. The cross-linguistic comparison,

e.g. the fact that languages like English employ the preposition *in*, whereas Hungarian uses the inessive case suffix to express the same meaning, also supports the idea that adpositions and semantic cases are exponents of same syntactic head, namely, P. One can provide language-specific arguments in favor of this, too. In several Uralic languages, spatial adpositions and case suffixes show a tripartite division into goal, source, and location (see Kittilä et al. 2022 for general overview; see also below on Udmurt). Consider for instance the triplet of the postpositions *elé* 'to the front', *elől* 'from the front', *előtt* 'in front' and the triplet of the illative, elative, and inessive cases in Hungarian (see Asbury 2008; Dékány 2011; Dékány & Hegedűs 2021, among many others). These studies argue that the difference between postpositions and case suffixes in Hungarian is morphophonological in nature, e.g. suffixes are monosyllabic and most of them show vowel harmony with the word they attach to.

The internal structure of spatial PPs is argued to be complex: it consists of several projections, on top of the nominal complement (a noun phrase) (Jackendoff 1983; van Riemsdijk & Huybregts 2002; Svenonius 2006; the contributions in Asbury et al. 2008 and Cinque & Rizzi 2010, among many others). Firstly, PPs feature projections for place- and path-denoting elements: PlaceP and PathP. Secondly, PPs may also host elements that are at the intermediate stage between relational nouns and adpositions based on their morphosyntactic properties. This can be observed for *front* in *in front of the car*, for example: it can be used as a noun, but in the aforementioned construction, it can be neither pluralized (**in fronts of the car*) nor modified (**in smashed-up front of the car*) (Svenonius 2006). Svenonius (2006) proposes that this kind of elements are hosted in a separate projection, Ax(ial)PartP. Thus, the internal structure of such PPs is internally complex, with both PlaceP and AxPartP being projected: [$_{PlaceP}$ *in* [$_{AxPartP}$ *front* [*of the car*]]].

It has been observed that Ps often grammaticalize from nominal elements. This diachronic change involves filling the AxPart head; later this element may lose its nominal properties completely, which results into the development of a new Place or Path head (see Waters 2009 on English; Hegedűs 2014 on Hungarian; Grünthal 2022 on Uralic in general). Another diachronic change in the PP domain involves morphologization: a syntactically independent adposition may turn into a case suffix (see for example Hegedűs 2014 on the history of spatial cases in Hungarian). But as stated above, both syntactically independent adpositions and morphologically bound cases are treated as Ps in this framework.

This short overview of the generative literature on PPs was meant to provide the underlying assumptions of the proposed analysis, namely, that PPs may have a complex internal structure consisting of several projections. As will be shown below, PPs in Udmurt have also been analyzed as internally complex. The grammaticalization of nouns into AxPart heads and the morphologization of Ps will also be important when discussing the Udmurt data, to which I turn next.

Postpositional phrases in Udmurt have been analyzed in a generative syntactic framework by Simonenko & Leontyev (2012) and Usacheva (2012). Usacheva (2012) shows that most postpositions in Udmurt are in fact nominal: *vi̱l* 'top', *aź* 'front', *ul* 'bottom', etc. Thus, they are similar to the AxPart heads discussed above; Usacheva uses the label N$_{PLACE}$. She argues that these Ps express how the Figure is located with respect to the Ground, e.g. *vi̱l-i̱n* in *korka vi̱l-i̱n* [house top-INE] 'on top of the house' expresses that the Figure is located on top of the Ground (the house). The place semantics, i.e. that the Figure is stationary, comes from the inessive case. These nominal Ps can combine with various semantic cases, thus forming *series*: *vi̱l-i̱n* [top-INE] 'on top', *vi̱l-e* [top-ILL] 'onto the top', *vi̱l-i̱ś* [top-ELA] 'from the top', etc. In Usacheva's work, place- and path-denoting Ps are hosted in a dedicated locative K[ase] projection, K$_{LOC}$P. This gives the structure of [$_{KlocP}$ -*i̱n* [$_{NplaceP}$ *vi̱l* [*korka*]]] for *korka vi̱l-i̱n* [house top-INE] 'on top of the house'. Usacheva (2012) mentions that there are also a few *non-serial postpositions* in Udmurt, e.g. *vamen* 'across', *kuźa* 'along', *ponna* 'for'. These are analyzed as heads of simple PPs (without K$_{LOC}$P and N$_{PLACE}$P), as they do not combine with semantic cases: [$_{PP}$ *ponna* [$_{NP}$]].[12]

Usacheva also discusses what she calls *serial spatial cases* in the Permic languages. An example of this is the spatial suffix *-ń*, the so-called DOMUS suffix, used in Beserman Udmurt and in the Middle Cheptsa dialect (see also Teplyashina 1970; Karpova 2005: 85–89). It locates the Figure with respect to the Ground's place (home). The DOMUS suffix also combines with semantic cases, just like *vi̱l* 'top', as shown for the Middle Cheptsa dialect in (26).[13] This suffix will be important for the discussion of *-(o)ńńa*-clauses (Section 4.3).

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12. A similar distinction is made by Winkler (2011: 133–136): the two groups are referred to as *inflecting* and *non-inflecting* postpositions.
13. The so-called *familial local cases* used in certain dialects of Hungarian are similar (see Kittilä et al. 2022: 888).

(26) elicited (Middle Cheptsa dialect)

    a. *baba-ń-e*
       grandma-DOMUS-ILL

    b. *baba-ń-iņ*
       grandma-DOMUS-INE

    c. *baba-ń-iṣ́*
       grandma-DOMUS-ELA
       'to, at, from grandma's place'

The DOMUS suffix is said to originate from the postposition *diń́e* 'at, around, next to' (Teplyashina 1970: 169) or the noun *iń* 'place' (Emelyanov 1927: 123). Thus, this can be argued to be another instance of the morphologization path mentioned above: the nominal P became suffixal. Importantly, in Usacheva's analysis, both nominal Ps like *viَl* 'top' and serial spatial cases like the DOMUS suffix are analyzed as N_{PLACE} heads, and thus the syntactic structure of *korka viَl-iņ* [house top-INE] 'on top of the house' and *baba-ń-iņ* [grandma-DOMUS-INE] 'at grandma's place' is identical: $[_{KlocP}$ *-iņ* $[_{NplaceP}$ *viَl* / *-ń-*]]. Additionally, possessive agreement may be present in the Udmurt PPs, as in *viَl-a-z* [top-INE-POSS.3SG] 'on top of it'.

Usacheva also discusses how motion with respect to the Ground is expressed. This is done with the help of the semantic cases, hosted in the $K_{LOC}P$ projection. This was already shown for the inessive, but other semantic cases also belong here: the illative, elative, prolative,[14] terminative, egressive, and approximative cases. This means that these cases are also Ps in this syntactic framework. Simonenko & Leontjev (2012) extend this line of analysis to the instrumental case as well. The adverbial case, which lies at the heart of the present study, as it is argued to be found in the suffixes *-(e)mja*, *-(o)nja*, and *-(o)ńńa*, is not discussed by Simonenko & Leontjev (2012) nor by Usacheva (2012), even though it is a semantic case, which can have a spatial meaning (as in (9c)).

In sum, the relevant point from this subsection is that PPs in Udmurt are argued to be of two types: simple and complex PPs. The latter feature a $K_{LOC}P$ and an $N_{PLACE}P$.[15] As for their morphological boundedness, both K_{LOC} and N_{PLACE} heads can be suffixal in Udmurt.

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14. This case is generally termed *prolative* in most of the grammars, with the exception of Winkler (2001) who uses the term *transitive*.

15. In what follows I will continue using $K_{LOC}P$ and $N_{PLACE}P$, following Usacheva. As noted above, the former corresponds to Place or PathP and the latter to AxPartP.

In light of this discussion, the structure of the 'after'- and 'before'-clause in (4) and (5) is identical to the postpositional phrases discussed above: it is internally complex, consisting of a nominal P and a path- or place-denoting P. The difference is that the complement of these Ps is a non-finite clause. The fact that these spatial Ps have a temporal meaning in (4) and (5) is not surprising: it is a cross-linguistic tendency that spatial elements may acquire temporal meanings (see Haspelmath 1997); in Section 4.2 we will also discuss how temporal Ps may develop non-temporal meanings and how this is related to the internal complexity of the postpositional phrase.

4.2. The two types of *-(e)mja-* and *-(o)nja-*clauses

In Section 3.1, I argued that there are two types of *-(e)mja-* and *-(o)nja-*clauses: one of them has a temporal meaning, shows the Cx-Px order, and features an event nominalization, while the other has an oblique meaning, displays the Px-Cx order, and contains a non-event nominalization.

These new empirical findings will lead to a newly proposed analysis of the adverbial case, different from the standard one. Below I will argue that what traditional grammars have labeled as *adverbial case* should be analyzed as two types of postpositional phrases. The temporal one (ADV-1 henceforth) is a complex P, whereas the oblique one (ADV-2 henceforth) is a simple P.[16] This means that it would be more accurate to say that there are two adverbial cases in present-day Udmurt. Furthermore, I will argue that they are diachronically related: ADV-1 gave rise to ADV-2. This will provide an elegant and explanatorily powerful account of the morpheme order. In addition, it will derive the semantics of *-(e)mja-* and *-(o)nja-*clauses.

4.2.1. The spatiotemporal adverbial case: a complex PP

Recall from Section 3.2 that Type 1 clauses with the adverbial case have a temporal meaning (see (10) and (12)). Thus, their meaning resembles the inessive case, i.e. temporal 'in'. Moreover, Type 1 clauses illustrated in (10) and (12) show the Cx-Px order, which is found with the inessive cases. Recall also from Section 2.2 that the suffix of the adverbial case (*-ja*) is formally similar to the possessive declension of the inessive and illative cases (*-(j)a*).

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16. These two labels are used primarily for presentational purposes, i.e. to disambiguate which adverbial case I am talking about in the text.

Two hypotheses can be entertained in order to account for connection between the inessive and the adverbial cases in examples like (10) and (12). The first hypothesis is that examples like (10) and (12) contain the inessive rather than the adverbial case (as I have proposed in Georgieva 2018). This is supported by the semantics of the adverbial clause as well as by the Cx-Px order. In this way, we also account for the varying order of the adverbial case and the possessive suffixes – there is no variation since the Cx-Px order involves the inessive, and not the adverbial case.

There are two complications with this hypothesis. Firstly, if what we find in examples like (10) and (12) is the exponent of the inessive used before possessive morphemes rather than the adverbial case, the question is why there is always a glide, even though the stem does not end in a vowel. In Section 2.2, I pointed out that there is variation with respect to epenthesis across the varieties of Udmurt (standard vs. dialectal), and thus one may speculate that the adverbial was codified in the standard language in a morphophonologically exceptional form. Another issue is that the inessive or illative -*(j)a* is used only with possessive suffixes, whereas the adverbial suffix -*ja* can be used without possessive suffixes, cf. (1), (8), and (9a). In principle, this problem can also receive an explanation: Serebrennikov (1963: 117) points out that the illative -*a* is found in certain postpositions, e.g. *pala* 'towards, in the direction of', which can be used without possessive suffixes. Even though this does not seem to be productive in modern Udmurt, one might speculate that the suffix of the inessive and illative cases -*(j)a* can be used without possessive markers, at least with nominalizations. Because of these complications, a second hypothesis can be put forward.

The second hypothesis is a modified version of the first one: the adverbial case is not *identical to* but *contains* the inessive. This is the line of analysis I will pursue here. This proposal also implies that the glide is not simply epenthetic, and thus gives a more convincing explanation of the formal differences between the adverbial and inessive than the mere reference to epenthesis; the function of -*j* will be discussed below. The main motivation for this proposal comes from the meaning of the adverbial case. Above I pointed out -*(e)mja*-clauses like (10) comparable to 'while', which can be derived from the meaning of the inessive case (temporal 'in'). However, the meaning of *tel-ja* [wind-ADV] 'along/with the wind' in (9c) is a spatial one, but it is not identical to the inessive. I would like to argue that this spatial meaning of the adverbial case is the original one. Although this is not productive in modern Udmurt in comparison with the

adnominal modifier use of the adverbial case (Edygarova 2017), the spatial meaning is attested in other forms, e.g. (*so vetliz*) *kirja* '(s/he walked) along the field(s)' (Aminoff 1896: 26).[17] In Section 2.2, I mentioned the example given by Edygarova (2010: 110) *źek śurel-len jugit-ja-z* [rye pollen-GEN light-ADV-POSS.3SG] '(we walked) by the light of the rye pollen'. The same meaning is also found with *-(e)mja*-clauses and *-(o)nja*-clauses like (10) and in (12): 'as long as' being the temporal equivalent of the spatial 'along/ with/by'. This is also found in the postposition *dir-ja* [time-ADV] 'during'. As was shown in Section 3.1, these non-productive forms aside, the original spatiotemporal meaning of the adverbial is found only with nominalizations in modern Udmurt.

In order to account for the meaning 'along', I propose that the adverbial case in (10) and (12), ADV-1, is a complex postpositional phrase that consists of the *-j* element, a reduced N_{PLACE} head, that brings in the 'along' meaning, and the inessive. In the framework adopted here, this means that the PP of ADV-1 is structurally equivalent to the internally complex PPs discussed in Section 4.1: [$_{KlocP}$ *-a* [$_{NplaceP}$ *-j* [ ]]]. In terms of its morphophonology, the N_{PLACE} *-j* is similar to the ones of the serial spatial cases, e.g. the DOMUS suffix *-ń*, because of its phonological reduction. It differs from those, however, in that it does not participate in a series, i.e. it does not combine with other place or path-denoting Ps.

In my view, it is precisely the phonological reduction of *-j* that has led descriptive grammars to classify *-ja* as a (single, non-decomposable) suffix, namely, the adverbial case. However, diachronic studies provide support for the decomposition analysis of the adverbial case. For example, according to Rédei (1988: 383), the adverbial suffix goes back to a lative/prolative *-j* and lative *-a* (the latter goes back to *-k*). This proposal is not identical to mine, but what is common is that the adverbial case is argued to be composed of two spatial elements. I argue that the internally complex PP is still found synchronically when the adverbial case has spatiotemporal semantics. That is, in examples like (10) and (12), the non-finite clause is embedded under a postpositional phrase consisting of *-j* plus the inessive. Hence, these clauses show agreement morphology that follows the inessive, similarly to postpositional phrases like *vil-a-z* [top-INE-3SG] 'on top of it'.

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17. The original translation to Finnish is *hän kulki aromaita myöten*. Edygarova (2017: 79) translates it with *он(а) ходил(а) по лугам*.

4.2.2. The oblique adverbial case: a simple PP

The next question is how the temporal clauses in (10) and (12) relate to those in (11) and (13), i.e. the ones that have oblique semantics and show the Px-Cx order. I propose that the two pairs are indeed related: the structure of the internally complex postpositional phrase was reanalyzed as a simple PP. Thus, ADV-1 gave rise to ADV-2. The structure of the two PPs is given in (27).

(27) a. ADV-1

$[_{\text{KlocP}} \text{-}a \ [_{\text{NplaceP}} \text{-}j \ [\ ]]]$

b. ADV-2

$[_{\text{PP}} \text{-}ja \ [\ ]]$

On the semantic side, I argue that the original spatial meaning of changed into a more abstract oblique meaning ('according to' or 'based on'). On the formal side, the reanalysis led to the Px-Cx order: the inessive is no longer "visible", thus the Px-Cx order is found when the new P, ADV-2, selects for a possessed noun phrase. Let me elaborate on both aspects of the change.

It is a well-known cross-linguistic observation that diachronically temporal clauses may develop non-temporal meanings, as for example English *since* (temporal > causal), *while* (temporal > concessive), and *rather* (temporal > preference) (Traugott & König 1991; from a typological perspective see Kortmann 1996: 89–94, Ch. 7). I propose that the more abstract oblique meaning 'according to' or 'based on' arose from the temporal 'while'. Consider examples where we potentially face ambiguity: 'in my thinking', which can have a temporal ('in the time of my thinking') or an oblique ('in my opinion') reading. In fact, *-(e)mja*-clauses are very often used with the verb 'think' in the corpora, which might have facilitated the semantic change. Thus, one can hypothesize a semantic change of a temporal relation into a more abstract oblique adverbial relation along the lines of *in (the time of) my thinking > in my opinion* or *I recognized him while he was walking > I recognized him based on the way he was walking*. Hence, it can be proposed that the meaning of the new ADV-2, i.e. 'according to' or 'based on', has developed from the spatiotemporal meaning of ADV-1. Importantly, the semantic change accompanied the structural reanalysis of the postpositional phrase of ADV-2, which became a simple P.

Regarding the morpheme orders possible with the adverbial case, I propose the following. In Section 3.2, I showed that the newly developed P,

ADV-2, takes *noun phrases* (including non-event nominalizations) as its complement. Here, I would like to propose that the restriction on why ADV-2 selects for noun phrases is semantically motivated: only referential nominals such as 'fact' but not event-denoting nominalizations are compatible with the new P because of its meaning, 'according to' or 'based on'. When the noun phrase is possessed, this gives rise to a Px-Cx order. The Cx-Px order is only possible with ADV-1: due to the presence of the inessive in this complex PP (cf. (27a)), the possessive morphology appears on top of the PP. The Cx-Px order is impossible with ADV-2, just like with simple Ps in general (see Arkhangelskiy & Usacheva 2015).

The present proposal also implies that the Cx-Px order is the original order for the adverbial case – as the complex PP in (27a) is the source from which ADV-2 developed. This is similar to what Emelyanov (1927: 135) claimed: he argued that the Px-Cx order is a new development (see Section 2.2). However, Emelyanov does not provide any arguments for this claim.[18] In my analysis, the Px-Cx order became possible as the result of the structural reanalysis of the postpositional phrase into a simple PP.

In sum, the theoretical analysis of the two types of *-(e)mja-* and *-(o)nja-* clauses discussed in Section 3.1 states the following: (i) the temporal ones feature the original adverbial case, which is an internally complex PP that includes the inessive, and thus show a Cx-Px order; (ii) the oblique ones feature the newly-developed adverbial case: a simple P, the complement of which is a noun phrase (which itself might be possessed, yielding a Px-Cx order). I argued that the latter emerged from the former. It should be emphasized that although this reanalysis is explained in light of the structure of postpositional phrases in the chosen framework, similar historical changes have been proposed in more traditional studies as well. For example, Serebrennikov (1963: 12) and Bartens (2000: 84) argue that the instrumental and the inessive cases have arisen as allomorphs of the Proto-Uralic locative case. Thus, such "splits" of the original case are not unheard of in the Permic languages.[19]

In the next subsection, I turn to *-(o)ńńa-*clauses, which also tackle the problem of the adverbial case.

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18. As far as I can tell, the discussion of morpheme order in his work is set in the long-standing debate in Finno-Ugristics regarding the order of possessive suffixes and case. The main question in this debate is which order, i.e. Px-Cx or Cx-Px, is to be reconstructed for Proto-Uralic.
19. I thank Arja Hamari for the discussion of this issue.

4.3. The morphological decomposition of *-(o)ńńa*

In Section 3.2, I showed that *-(o)ńńa*-clauses in the Middle Cheptsa dialect are not simply temporal clauses but have locative semantics: the events expressed by the main and adverbial clauses must be construed as one event, and thus they must match spatiotemporally. These findings are not predicted from the standard morphological decomposition of the suffix, according to which it contains the *-(o)n*-nominalization and the adverbial case, i.e. *-on-ja*; the surface form *-(o)ńńa* being the result of an assimilation rule of the glide with the preceding consonant (similar assimilation is found with other suffixes as well, see Karpova 2005). Although this segmentation is plausible from a morphophonological point of view, the alternative proposed here is to segment the suffix as *-(o)n-ń-a* [VN-DOMUS-INE], with the DOMUS suffix discussed in Section 4.1. Below I will argue that this morphological decomposition correctly derives the semantics of these clauses and the requirement for a spatiotemporal match between the two events.

Before I go into the details of the new analysis, let me briefly discuss the proposal of Usacheva & Serdobolskaya (2015) for Beserman *-(o)ńńiga*-clauses. Recall from Section 3.2 that those authors argued that the event expressed by the *-(o)ńńiga*-clause and the one expressed by the main clause must take place in the same location (cf. (19)). Usacheva & Serdobolskaya (2015) explain these facts in the following way. Beserman Udmurt employs locative nominalizations in the sense of Comrie & Thompson (2007: 340) (glossed as NLOC below); they are formed with the suffix *-(o)ńńig* (cf. locative nominalizations with the suffix *-(o)ńńi* used in standard Udmurt: *dugd-ońńi* [stop:v-(o)ńńi] '(bus/tram) stop'). These locative nominalizations are fully nominal: they can be pluralized, can stand in argument position, etc. They can also be complements of semantic cases: in (28) they are used with the suffix *-(j)a* that expresses the inessive or the illative cases before possessive suffixes. The resulting form is identical to the temporal-locative clauses with the suffix *-(o)ńńiga* in (19). Observe the ambiguity in (28): locative nominalization ('to my cow pasture') vs. clause ('where I herd my cows').[20]

(28)   (Usacheva & Serdobolskaya 2015: 371) (Beserman Udmurt)

    [*Skal   voźma-ń-ńig-a-m*]   *ləkt-em   kijon.*
    cow   herd:V-VN-NLOC-ILL-POSS.1SG   come-EVID.3SG wolf
    'A wolf came to the place where I herd (the) cows / to my cow pasture.'

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20. The English translation follows the original Russian translation.

Usacheva & Serdobolskaya (2015) propose that *-(o)ńńiga* is based on the locative nominalization and that it is currently on its way to grammaticalization into a converb suffix. They also discuss the morphological decomposition of the suffix: it is more complex than what I propose for Middle Cheptsa Udmurt (because of the *-ig* element), but crucially it features the deverbal nominalizer *-(o)n* as well as the DOMUS suffix *-ń*.

My analysis is partly similar to Usacheva & Serdobolskaya's (2015), but I treat the suffix *-(o)ńńa* as morphologically decomposable synchronically. Specifically, I propose that the suffix *-(o)ńńa* is composed of the following parts. First, we find the nominalization *-(o)n*, which brings the event semantics. Its presence is indisputable (cf. also the standard segmentation *-on-ja* [VN-ADV]).

Second, in accordance with Usacheva & Serdobolskaya (2015), I propose that the requirement for a spatiotemporal match between the two events is due to the presence of the the DOMUS suffix *-ń*. The DOMUS suffix today expresses the location of the Figure with respect to the Ground's home (Section 4.1), but recall also that the origin of this suffix was argued to be either the postposition *dińe* 'at, around, next to' (Teplyashina 1970: 169) or the noun * iń* 'place' (Emelyanov 1927: 123). Hence, I propose that in *-(o)ńńa*-clauses we find this more general 'place' meaning of the DOMUS suffix.

Third, unlike the standard segmentation according to which the suffix *-(o)ńńa* contains the adverbial case, I argue that it features the inessive *-(j)a* used before possessive suffixes. This is not only supported by the semantics (the inessive brings in the meaning of a temporal 'in') but also by the fact *-(o)ńńa*-clauses in the Middle Cheptsa dialect never occur without possessive suffixes, just like the inessive *-(j)a*. Furthermore, the Px-Cx order, as with the adverbial case, is impossible. This is shown in (29) (which was modeled after (3)).

(29)   elicited (Middle Cheptsa dialect)

    Muš-jos-mị   *pegʒ́i-ľľam=ńi=no*
    bee-PL-POSS.1PL   escape-EVID.3PL=already=ADD

    [*baba-jenị-mị*   *azbar-ịn*
    grandmother-INS-POSS.1PL   yard-INE

    vịr-oń-ń-a-mị /   **vịr-on-mị-ja* /
    be.busy-VN-DOMUS-INE-POSS.1PL   be.busy-VN-POSS.1PL-ADV

    *vịr-on-ja].
    be.busy-VN-ADV

    'Our bees had (long) flown away while we/me and our grandmother were busy (taking care of the chicks) in the yard.'

The data in (29) provide support against the standard morphological decomposition which postulates the adverbial case. But recall from the previous subsection that I proposed that synchronically we need to distinguish two adverbial cases. Thus, my proposal regarding the morphological decomposition of *-(o)ńńa* should be evaluated not only against the standard understanding of what the Udmurt adverbial case is but also against the predictions of the proposal in Section 4.2. There I argued that ADV-2 is a simple P, which has oblique meaning ('according to' or 'based on') and displays the Px-Cx order. Given that *-(o)ńńa*-clauses have temporal semantics and disallow this morpheme order, we can rule out ADV-2. More interesting, however, is whether ADV-1 is a possibility because, as shown in Section 4.2.1, the PPs headed by it have temporal semantics, similarly to *-(o)ńńa*-clauses. Despite this fact, I argue that the suffix *-(o)ńńa* cannot be decomposed as containing ADV-1. One piece of evidence comes from the obligatoriness of possessive marking: the exponent of the inessive, unlike the adverbial case (both ADV-1 and ADV-2), must appear with possessive markers. The other piece of evidence comes from semantics: both ADV-1-clauses and *-(o)ńńa*-clauses have temporal semantics, but only the latter have an additional locative component in their meaning. I argue that the locative meaning results from the presence of the DOMUS suffix *-ń*, an N_{PLACE} head, which is independently attested in the Middle Cheptsa dialect. Recall that ADV-1 also contains an N_{PLACE} head, *-j*, which I argued to be a spatial one, with the meaning 'along', and its temporal equivalents. In the theoretical framework adopted here, this means that both ADV-1-clauses and *-(o)ńńa*-clauses are analyzed as complex PPs, with the suffixes *-ń* and *-j* filling in the same syntactic position (N_{PLACE}). Given that they are hosted in the same position, they are predicted to be in complementary distribution. This is a theoretical argument against postulating ADV-1 in the morphological decomposition of *-(o)ńńa*.

In sum, the underlying form is *-(o)n-ń-a* [VN-DOMUS-INE]. The structure of this complex PP is $[_{KlocP} -a\ [_{NplaceP} -ń\ [\ ]]]$. Accordingly, the meaning of *-(o)ńńa*-clauses is 'in the time and place of V-ing'. The morphological decomposition allows us to explain the fairly complex meaning of *-(o)ńńa*-clauses (temporal clause with an additional locative meaning) in a natural way: it is derived by the components of the suffix.

5. Conclusion

In this paper I examined three types of non-finite adverbial clauses: the ones formed with the suffixes *-(e)mja*, *-(o)nja*, and *-(o)ńńa*. The analysis proposed for the structure of these clauses aligned them with the syntax of postpositional phrases in the language. I argued that these adverbial clauses are comprised of a non-finite clause and a semantic case. This analysis has two advantages: it accounts for the external distribution of these clauses and it also derives their meaning in a compositional manner.

On the more general level, the present analysis also contributed to our understanding of PP syntax in Udmurt, especially with reference to clausal PPs and the distinction between internally complex and simple PPs. This study had implications for our understanding of the case system of Udmurt, as it made a novel proposal regarding the adverbial case – or rather, the adverbial cases. I argued that what is at stake here are two types of PPs: an internally complex PP with spatiotemporal semantics and a simple PP with oblique semantics. This allowed us not only to explain the most puzzling question regarding the morphosyntax of the adverbial case, namely the varying morpheme order Cx-Px or Px-Cx, but also the question of how the morphosyntax of these clauses correlates with their meaning (temporal vs. oblique). The *-(e)mja-* and *-(o)nja-*clauses presented the crucial piece of evidence here.

Furthermore, I described *-(o)ńńa-*clauses in the Middle Cheptsa dialect of Udmurt, for which I argued that they have a locative meaning in addition to the temporal one. I proposed that this spatiotemporal meaning can be derived from the "building blocks" that compose these clauses; the crucial part was the presence of the DOMUS suffix. The description of this clause type contributes to our knowledge of Udmurt dialectal syntax, which has been severely understudied.

Acknowledgments

Abbreviations

1	first person	ILL	illative
2	second person	IMP	imperative
3	third person	INE	inessive
ACC	accusative	INF	infinitive
ADD	additive particle	INS	instrumental
ADV	adverbial case	NEG	negation
CNG	connegative (verb)	NLOC	locative nominalization
COP	copula	NMLZ	nominalization
CVB	converb	PL	plural
DAT	dative	POSS	possessive
DOMUS	locative case	PRS	present
ELA	elative	PRT	particle
EMPH	emphatic (particle)	PST	past
EVID	evidential past tense	QUOT	quotative (particle)
EXCL	exclusive	SG	singular
FUT	future	V	verb
GEN	genitive	VN	verbal noun

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