

Non-finites

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48.1 Introduction

In principle, most verb forms in all Uralic languages can be quite clearly divided into finite and non-finite forms, the latter subtype consisting of forms that generally do not function as sole predicates of independent clauses. Ideally, such forms can be further subcategorized into infinitives, participles, converbs, and action nominals on both formal and functional grounds. However, the reality is much more complex, so that the traditional distinction between finite and non-finite forms can be questioned. On the other hand, the realities of Uralic verb morphology fit the Eurocentric grammatical tradition better than most other languages across the globe, as witnessed by the individual grammar sketches in this volume. Therefore, the following sections make use of traditional prototypical notions of non-finiteness and its subtypes, yet without ignoring the many mismatches between prototypes and reality.

The structure of the chapter is as follows: after brief preliminary remarks about the terminological and conceptual pitfalls concerning non-finites (48.2), 48.3 presents an overview of the non-finite inventories in Uralic. More detailed discussion focuses on four main subtypes of non-finites: participles (48.4), action nominals (48.5), as well as converbs and infinitives (48.6). In addition to addressing the “non-finite” functions of non-finites, 48.7 pays special attention to the use of non-finites in periphrastic verb forms.

Although most Uralic non-finites can be described on a common basis, the frequency and complexity of non-finite constructions as well as their periphrastic uses vary considerably within the language family. Many of the distinguishing features characteristic of individual branches of the Uralic family can be regarded as areal phenomena, as they often show significant similarities to those of neighbouring language families. For a complementary description of the functions of non-finite predicates and their relation to those of finite verb forms, the reader is referred to chapter 53 on clause combining.

48.2 Terminological and conceptual preliminaries

The terminology concerning non-finiteness and non-finite verb forms notoriously suffers from mismatches caused by a number of different traditions within and outside Uralic linguistics. As synthetic languages with dozens of verb forms, all Uralic languages have verb forms that fulfil all common criteria for being characterized as “finite”, as well as forms that can be indisputably labelled as “non-finite”, or more precisely as “participles”, for example. However, many verb forms fall between the most prototypical representatives of finites and non-finites.

The label “non-finite” is commonly used to refer to productive inflectional verb forms that do not have the characteristic properties of “finite” verb forms: non-finites do not function as the only predicates of independent main clauses and they are less sensitive to categories such as tense, mood, or aspect (for these, see chapter 46). Nor are non-finites prototypically marked for person and number—at least not using the same morphemes as those forms that are considered “finite”. On the other hand, possessive suffixes are actually a quite common reference-tracking device among Uralic non-finites, and clausal negation in most Uralic languages is expressed using periphrastic constructions consisting of a negative auxiliary with the lexical verb in a special form that is often labelled “connegative”. As described in more detail by Matti Miestamo in chapter 47, Uralic languages differ greatly from one another as regards the distribution of TAM categories, person, and number in negative predicates, but in languages such as Nganasan, the sole connegative form meets all of the above criteria of non-finite verb forms, the negative auxiliary being inflected quite like ordinary verbs also in all non-finite forms except—quite naturally—the connegative (Gusev 2015; chapter 37). However, as connegative forms are virtually always inseparable parts of periphrastic negative predicates and the inventories of non-finites are otherwise usually seen as functional subsystems of the conjugation, connegatives fall outside the scope of this chapter (but see 48.7 on periphrastic verb forms).

As regards the main subcategories of non-finites to be discussed in the following sections, some remarks are in order. Unlike categories like case and number for nouns, or person and number for finite verbs, there is no traditional consensus on the nature of categories such as participles, action nominals, infinitives, and converbs in Uralic linguistics. The functional-typological background of the present chapter is based on, e.g., Haspelmath (1989, 1994, 1995), Koptjevskaja-Tamm (1993, 2005), and Ylikoski (2003), and the mutual relations of the main types of non-finites are condensed in Table 48.1.

As can be seen in Table 48.1, the four main types of non-finites do not form a symmetrical pattern. Some categories are better defined with reference to their syntactic functions, whereas others, and especially action nominals, are best defined on the basis of their “new” word class. The bottom line of the table is diachronic in nature and thus in principle not needed in synchronic studies, but it is presented here in order to dispel some common misunderstandings about the synchronic reality of language. To illustrate the main types of non-finites, the Hungarian examples (1a–d) (from Csepregi 2013: 92) include an action nominal (1a), a participle (1b), an infinitive (1c), and a converb (1d) in their prototypical functions:

(1) Hungarian

- a. A lány sír-ás-a zavar engem.
DEF girl cry-AN-POSS.3SG disturb.3SG.SBC 1SG.ACC
‘The girl’s crying disturbs me.’
- b. A sír-ó lány be-lép-ett
DEF cry-PTCP.PRS girl in-step-PST.3SG.SBC
a szobá-ba.
DEF room-ILL
‘The crying girl entered the room.’
- c. A lány sír-ni kezd-ett.
DEF girl cry-INF begin-PST.3SG
‘The girl began to cry.’
- d. A lány sír-va lép-ett a szobá-ba.
DEF girl cry-CVB step-PST.3SG.SBC DEF room-ILL
‘Crying, the girl entered the room.’

To begin with, action nominals (or action nouns or nominalizations, or often simply verbal nouns¹), are not always considered non-finite verb forms, but instances of deverbal derivations instead. This is understandable in languages in which the internal morphosyntax of action nominals clearly differs not only from that of finite verb forms but also from that of other non-finites. Moreover, prototypical action nominals are verbal nouns indeed, in the sense of being inflected and used just like any underived nouns—for example, in all cases and as complements of adpositions (cf. 48.5).

Apart from action nominals, the three remaining types of non-finites pattern more symmetrically: participles, often conceived as verbal adjectives, function mainly as adnominal modifiers, whereas infinitives function as more or less obligatory arguments or complements, and converbs are used as free adverbial modifiers. This tripartite division largely corresponds to the common practice of classifying finite subordinate clauses into relative, complement, and adverbial clauses. As such, all these three types of non-finites quite clearly differ from finite verb forms used as a main predicate of a sentence. Although many Uralic languages inflect their adjectives in comparative and superlative degrees, participles usually do not behave in the same manner, which can be regarded as an argument against their being verbal adjectives. It is also important that in spite of occasional characterizations of infinitives and converbs as verbal nouns and verbal adverbs, respectively, infinitives such as *sír-ni* in (1c) do not inflect in case and even number like the action nominal (verbal noun) *sír-ás* (1a), and converbs such as *sír-va* in (1d) are not verbal adverbs any more than adverbial case forms such as *szobá-ba* [room-ILL] ‘to the room’ in (1b) and (1d) are “nominal adverbs” (see Ylikoski 2003). However, both adverbial verb forms and “adverbial noun forms” may be lexicalized as

¹ The term *verbal noun* can also be understood as a parent category that also covers other, clearly deverbal nouns like the Finnish agent nouns in *-ja/-jä* or instrument nouns in *-in* such as *keittä-jä* [cook-DER_{AGT}] ‘cook’, *soittaja* [play-DER_{AGT}] ‘player (person)’, and *keit-in* [cook-DER_{INS}] ‘cooker’, *soit-in* [play-DER_{INS}] ‘player (device)’; cf. the action nominals in *-minen*: *keittä-minen* [cook-AN] ‘(act of) cooking’, *soitta-minen* [play-AN] ‘(act of) playing’.

Table 48.1 The four main types of non-finite verb forms, their syntactic functions, and “new word classes”

Non-finite verb form:	Infinitive	Converb	Participle	Action nominal
Syntactic function:	argument (= subject, object, obligatory adverbial)	(free) adverbial modifier (= adjunct)	adnominal modifier (+ adjectival predicate)	— (those of nouns)
“New word class”:	—	—	(adjective)	noun
Direction of lexicalization (in the broad sense that comprises the development of grammatical words):	noun, adverb	adverb, adposi- tion, conjunction	adjective (→ noun)	noun

adverbs, adpositions, and conjunctions (cf. the bottom line in Table 48.1).

Before continuing with the following sections, it may be remarked that individual research traditions of certain branches of Uralic languages suffer from idiosyncratic terminology that is mostly ignored in this chapter. Perhaps the most misleading tradition is the use of the label “infinitive” for more than ten different non-finites in Finnish and its nearest Finnic sister languages, although at least half of them must be regarded as converbs. The term “converb” itself has only recently come to replace terms like “gerund” as the translational equivalent of Russian “деепричастие” in Uralistics, but is to be preferred to “gerund”, which refers to action nominals in the influential Latin and English grammatical traditions. As for many “participles” (Russian “причастия”) in the Uralic languages spoken in the Russian Federation, they are often used both as participles (48.4) and action nominals (as well as converbs) (48.5).

48.3 Non-finite inventories in Uralic languages

As just mentioned, in spite of the Western European origins and questionable universality of the concepts discussed so far, most of the Uralic non-finites fit this framework (Table 48.1) quite well. In fact, the most fundamental differences within Uralic non-finite morphosyntax are questions of the relative frequency and complexity of non-finite constructions. The most notable structural differences are related to the use of non-finites in periphrastic predicates, which can often be regarded as conceptually secondary functions of the verb forms in question (48.7). Other distinguishing features characteristic of individual branches of the Uralic family can be regarded as areal phenomena that often show significant similarities to those of neighbouring language families.

All Uralic languages have non-finites that can be fairly easily classified as participles, action nominals, infinitives, and converbs, although it is not unusual for a non-finite to have multiple functions (e.g. as both participles and action nominals, or as both converbs and infinitives). The inventories of non-finites have not gained the same attention as finite conjugation or nominal declension, for example, and at the present stage of research there are no uniform practices of inventorying or naming even the most obvious cognates and functional equivalents in closely related languages such as Estonian and Finnish. Compare the forms and functions of two infinitives and two converbs in the two major languages of the Finnic branch—the Estonian “*vat*-infinitive” and “*mata*-form”, as well as the “bundled non-finite in

–*vAn*” and the “abessive of the MA-infinitive”, as the latter have recently been branded by Finnish grammarians (for details and background, see chapters 15 and 20):²

- (2) a. Estonian
 Anna näi-b ela-vat söö-mata.
 A. seem-3SG live-INF eat-CVB.NEG
- b. Finnish
 Anna näyttä-ä elä-vän syö-mättä.
 A. seem-3SG live-INF eat-CVB.NEG
 ‘Anna seems to live without eating.’

In order to be understood outside their respective traditions, the former non-finites (*elavat* and *elävän*) are best characterized as one kind of infinitive (from a synchronic perspective, opaque non-finites in a complement function), whereas the latter (*söömata* and *syömättä*) are negative converbs (free adverbial modifiers) with functional equivalents in many other branches of Uralic.

As regards the numbers of non-finites in individual Uralic languages, it can be roughly stated that the size of the non-finite inventory usually correlates with the richness of other inflectional categories in a language. Regardless of the varying methods of calculation, one of the simplest systems of non-finites can be found in North Khanty (see chapter 31), whereas the Komi system is one of the richest (see chapter 26). These two different systems are typical of Uralic non-finite systems in more than one respect. While the numbers of participles and converbs may vary, it is usual that languages other than the closely related Saami, Finnic, and Mordvin possess only one infinitive. Action nominals may be regarded as derivations rather than verb forms, but Uralic languages usually have only one or at most two formatives that stand out as fully productive markers of action nominals, whose importance for the language in question is dependent on the role of infinitives and converbs, as well as the extent of finite means of clause combining. The most common distinction between participles is that of relative tense, most notably past and non-past or present; in Uralic, affirmative participles often have at least one (common) negative counterpart.

The number and nature of infinitives and converbs, in turn, bear resemblance to case inflection: not only is Komi rich in adverbial verb forms (converbs), but it also has about twenty cases, the majority of which are adverbial cases—in other words, not unlike the proportion of converbs in the language. North Khanty nouns are inflected for only two cases beside the nominative, and there is only one

² Examples for which no source is indicated have been created by the author (and for Hill Mari, South Saami, and Udmurt, confirmed by native speakers).

converb in the language. On the other hand, Hungarian lies at the opposite extreme, with more than dozen adverbial cases but only one productive converb (-*va/-ve*). What is more important, however, is that the infinitives can be seen on a par with grammatical cases: unlike converbs and adverbial cases (e.g. the Komi posterior converb in -*təḏz̄* ‘until V-ing’ or the terminative case in -*əḏz̄* ‘until N’), infinitives and grammatical cases such as nominatives and accusatives are often perceived as being quite void of concrete semantic content and are used only to mark grammatical functions such as subject and object (cf. Haspelmath 1989: 287–8).

It is often difficult to present a definitive and indisputable list of non-finite verb forms in a language. Ongoing diachronic processes aside, the following examples present some challenges in defining non-finites in Uralic:

(3) South Saami

Manne veerbehaamoe-j bijre tjaale-me
1SG verb.form-PL.GEN about write-PTCP.PST

jih datne jis daelie dej bijre lohke-minie.
and 2SG DIP now it.PL.GEN about read-PROG
‘I have written about verb forms and you are now reading about them.’

The South Saami verb forms *tjaaleme* and *lohkeminie* have traditionally been considered non-finites: the former is known as the “perfect” (Norwegian *perfektum*) or the past participle, whereas the latter has been labelled the “gerund” (*gerundium*) or “state form” (*tilstandsform*), which can be rephrased as “progressive”. As such, they do not express categories such as person or tense, which can optionally be coded in the auxiliary copula (e.g. *leam* [be.PRS.1SG] *tjaaleme*, *leah* [be.PRS.2SG] *lohkeminie*). They are also occasionally used in modifying functions typical of participles and converbs, but most prototypically, they are used as sole predicate verbs in sentences with a perfective or progressive meaning. Likewise, the Estonian “*vat*-infinitive” seen in (2a) is in fact formally identical to what is regarded as the so-called quotative mood in the language. While *elavat* in (2a) is considered a non-finite verb form in Estonian grammar, *elavat* in (4) is considered a finite predicate verb, despite the lack of person marking (cf. chapter 20):

(2) a. Estonian

Anna nāi-b ela-vat söö-mata.
A. seem-3SG live-INF eat-CVB.NEG
‘Anna seems to live without eating.’

(4) Estonian

Anna ela-vat söö-mata.
A. live-QUOT eat-CVB.NEG
‘Anna is said to live without eating.’

The Mordvin languages such as Erzya, in turn, pose different kinds of problems:

(5) Erzya (adapted from the Erzya journal *Sjatko* 20/1933: 15)

Нетнень эряви муемс ды кучкордомс колхозсто.
nʲetnʲenʲ erʲavi muje-ms di kutʲkordo-ms
it.PL.GEN.DEF must.3SG find-INF and kick-INF
kolxoz-sto
kolkhoz-ELA
‘Those must be found and kicked out of the kolkhoz.’

(6) Erzya (Koljaděnkov 1959: 190; Bartens 1999: 148)

Кучкордомсат.
kutʲkordo-ms-at.
kick-INF-2SG
‘You should be kicked.’

(7) Erzya (MW s.v. *glušavoms*)

Мон ранкстындерян, тынь ведь глушавтадо.
mon rankst-indʲerʲ-an, tinʲ vedʲ glufav-tado
1SG scream-COND-1SG 2PL DIP deafen-2PL
‘If I scream, you will be deafened.’

In (6), *kutʲkordoms* is the default infinitive in *-ms*, but like many nominal and locational predicates, it can be inflected for person, number, and tense by using predicative suffixes that are the same as the person markers of finite verbs (see chapter 23). As a result, the full sentence *kutʲkordomsat* (6) consists of a single word form that is morphologically an infinitive followed by person marking, resulting in an independent predicate that is syntactically equivalent to indisputably finite verb forms. On the other hand, *rankstindʲerʲan* in (7) is unanimously regarded a finite verb form, with the verb stem *rankst-* followed by the conditional mood marker (*-indʲerʲ-*) and finite person marker (*-an*). In addition to being a mood with person marking of finite verbs, the conditional also makes a tense distinction between present and past (Bartens 1999: 136–7) and thus formally counts as a finite verb form. However, from a purely functional perspective, the Erzya conditional occurs only as a subordinate predicate. The conditional meaning ‘if’ is expressed by the verb form only, without need for a subordinate conjunction. Erzya *rankstindʲerʲan* does not thus fundamentally differ from the indisputably non-finite converb form *xarwa-b°-ta*³ [want-CVB.COND-POSS.3SG] ‘if he wants’ seen in the Tundra Nenets example (28) in 48.6. (Most Uralic conditional moods, such as those in Saami, Finnic, Udmurt, and Hungarian, are thus conceptually very different from those of their Mordvin namesakes; see the individual chapters on these languages.)

³ The Tundra Nenets examples in this chapter have been adapted to the IPA-based spelling used in chapter 35.

In other words, independent predicates like *kutəkordo-ms-at* [kick-INF-2SG] in (6) ultimately fall outside the scope of the formal-cum-functional notion of non-finites, whereas the relatively few Uralic subordinate moods like the Erzya conditional are, from a functional perspective, “non-finite” or at least fulfil the criteria of “finite converbs” as such moods have been occasionally called (cf. van der Auwera 1998, Coupe 2007: 410–12).

48.4 Participles: adjectival verb forms

From a morphosyntactic point of view, participles are often understood as adjectival verb forms that largely correspond to not only adnominal adjective modifiers but also finite relative clauses that modify nouns. Such verb forms are also commonly used in predicative functions, but as such they are not always easily distinguished as adjective-like non-finites. Instead, they can often be interpreted as primary predicates, either on their own or as part of periphrastic TAM constructions headed by copular or other auxiliary verbs (see (3) and 48.7). In practice, many Uralic verb forms labelled as participles in various grammatical traditions may also function as action nominals, converbs, and infinitives, but this section discusses their adjectival, adnominal functions first.

More than any other subtypes of non-finites, Uralic participles often make up subsystems that may appear quite symmetrical as in Finnish and Udmurt (Tables 48.2 and 48.3).

On the other hand, North Khanty has only three seemingly asymmetrical participles: two (past and non-past) affirmative participles and one negative participle (Nikolaeva 1999a: 33–4). Although participles are often characterized with labels such as past, present, and future, or active and passive, these labels do not directly correspond to similar labels for the absolute tenses and voice distinctions for finite verb forms. Instead, Uralic participles in particular usually indicate relative tense, and the “active” or “passive” nature of a participle usually refers to its relation to the noun it modifies. For example, the Finnish active past participle *syönyt* in the phrase *syö-nyt eläin* [eat-PTCP.PST.ACT animal] ‘an animal that has eaten’ and the passive present participle in *syö-tävä eläin* [eat-PTCP.PRS.PASS] ‘an animal to be eaten’ usually get their absolute temporal interpretation only in relation to a wider context in which the phrases are uttered.⁴ Active participles are agent-oriented—being headed by the agent of eating, for example—whereas the so-called passive participles are oriented towards the patient.

⁴ In fact, it would be more logical to speak of perfective, imperfective, and futuritive participles instead of past, present, and future participles, but the latter more common terminology is employed here.

Table 48.2 The subsystem of (affirmative) participles in Finnish

	Active	Passive
Past	<i>syö-nyt (eläin)</i> ‘(an animal) that has eaten’	<i>syö-ty (eläin)</i> ‘(an animal) that has been eaten’
Present	<i>syö-vä (eläin)</i> ‘(an animal) that is (or will be) eating’	<i>syö-tävä (eläin)</i> ‘(an animal) that is/will be/can be eaten’

Table 48.3 The subsystem of past, present, and future participles in Udmurt

	Affirmative	Negative
Past	сием (пӧйшур) ɕij-em (pɕjʃur) ‘(an animal) that has been eaten’	сиымтэ (пӧйшур) ɕii-mte (pɕjʃur) ‘uneaten (animal); that has not been eaten’
Present	сиись (пӧйшур) ɕi-ic (pɕjʃur) ‘(an animal) that is eating’	сиисьтэм (пӧйшур) ɕi-ictem (pɕjʃur) ‘(an animal) that is not eating’
Future	сиёно (пӧйшур) ɕij-ono (pɕjʃur) ‘(an animal) that will be eaten’	сиёнтэм (пӧйшур) ɕij-ontem (pɕjʃur) ‘inedible (animal); that cannot be eaten’

On the other hand, it appears that in many languages, especially past participles tend to be “absolutive” in orientation (Shagal 2016), in other words oriented towards the agents of intransitive verbs but towards the patients of transitive verbs. The Moksha past participle in *-f* is a case in point: in both *sizə-f alqfa* [tire-PTCP.PST horse] ‘a tired horse’ and *nolda-f alqfa* [free-PTCP.PST horse] ‘a freed horse’ (Bartens 1999: 152), the horse is the most affected participant of both tiring and freeing.

Although most Uralic participles are either inherently or contextually oriented (for terminology, see Haspelmath 1994) towards core arguments such as agents and patients, it is not uncommon that especially non-agentive participles may also be used in “adverbial-oriented” functions. The Estonian passive participles can also be oriented towards temporal (8) and locative (9) participants:

(8) Estonian

Iga terve-na ela-tud aasta on
every healthy-ESS live-PTCP.PASS.PST year be.3SG
väga väärtuslik.
very valuable
‘Every year lived in good health is very valuable.’

(9) Estonian

Müü-a hoole ja armastuse-ga ehita-tud,
sell-INF care.GEN and love-COM build-PTCP.PASS.PST
aastaringelt ela-tav suvila.
year.round live-PTCP.PASS.PRS summerhouse
‘For sale: a summerhouse built with care and love, habitable year-round.’

It appears that inherently oriented “active” and “passive” participles are most common in Finnic, and the emergence of the Finnic participial systems is evidently partly due to contacts with the Baltic languages with similar systems (de Smit 2015). Similar distinctions are largely absent in the easternmost languages, in which it is often difficult or at least uncommon to draw an exact borderline between participles and homonymous action nominals. Compare the many functions of the Meadow Mari non-finite, labelled as the passive participle:

(10) Meadow Mari (Alhoniemi 1985: 137)

Шопкеште шиштын чўнтымō рожшо уло.
ʃopke-ʃte ʃiʃtə-n tɕyŋgə-mø
aspen-INE woodpecker-GEN peck-PTCP.PASS
roz-ʃo ulo.
hole-POSS.3SG EX
‘There is a hole pecked by a woodpecker in the aspen.’
(patient-oriented past participle)

(11) Meadow Mari (Alhoniemi 1985: 137)

Марий шогымо пушентгылан тура мланде ўлык
волен огыл.
marij ʃogə-mo puʃeŋgə-lan tura mlande
man stand-PTCP.PASS tree-DAT steep land
ylək ʃol-en og-əl.
downwards descend-CVB NEG.PRS.3SG-be
‘The ground did not sink at the tree where the man had been standing.’ (location-oriented past participle)

(12) Meadow Mari (Alhoniemi 1985: 138)

Чеве́р шошо толмылан пўтынь тўня куана.
ʧeβer ʃoʃo tol-mə-lan pytəŋ
beautiful spring arrive-PTCP.PASS-DAT whole
tyŋa kuan-a.
world rejoice-PRS.3SG
‘The whole world is rejoicing over the arrival of the beautiful spring.’ (action nominal governed by the verb *kuanə* ‘rejoice’)

Although the relative tenses of participles must be kept apart from the absolute tenses typical of inflectional, non-periphrastic finite verb forms, it must be noted that while absolute future tenses are quite uncommon in Uralic (chapter 46), there are more languages that possess non-finites that have been labelled as future participles. For example, Mari and Hungarian distinguish between non-future and future in participles only:

(13) Hill Mari

- a. *Хынавля Цикмашкы толыт.*
xəna-βlə tsikmæ-ʃkə tol-ət
guest-PL Kozmodemyansk-ILL arrive-PRS.3PL
‘The guests are coming/will come to Kozmodemyansk.’
- b. *Цикмашкы толшы хынавля*
tsikmæ-ʃkə tol-ʃə xəna-βlə
Kozmodemyansk-ILL arrive-PTCP.ACT guest-PL
‘guests who are coming/have come to Kozmodemyansk’
- c. *Цикмашкы толшашлык хынавля*
tsikmæ-ʃkə tol-ʃaʃlək xəna-βlə
Kozmodemyansk-ILL arrive-PTCP.FUT guest-PL
‘guests who will (must, should) come to Kozmodemyansk’

However, as seen in the translation of (13c), the Mari future participle often carries a necessitative connotation. In the same vein, many (passive) present participles such as Finnish *syötävä* ‘to be eaten’ have not only an inherently

necessitative meaning like ‘animal that must be eaten’, but may also be interpreted as expressing possibility (‘animal that can be eaten’). The past participles, in turn, often have a resultative interpretation and commonly give rise to perfect and pluperfect tenses (see 48.7). Even though modal and aspectual functions are often regarded as secondary with respect to their temporal meanings, some languages also have specialized participles whose primary function is to express certain modal or aspectual meanings. The Udmurt possibilitative participle in *-mon* is a case in point: гондырэз кутымон пöйшурась *gondir-ez kuti-mon pöjšuraś* [bear-ACC catch-PTCP.POSSIB hunter] ‘a hunter who is capable of catching a bear’, турнамон турын *turna-mon turin* [reap-PTCP.POSSIB hay] ‘hay that can be reaped’, скулэмэ пычамон кылъёс *śufem-e pitʃa-mon kił-jos* [heart-ILL be.absorbed-PTCP.POSSIB word-PL] ‘heartfelt words’, literally “words absorbable in the heart”, “words that are capable of being absorbed in the heart” (Timerxanova (ed.) 2011: 269), and in line with the six temporal participles for *śi-* ‘eat’ in Table 48.3, быдэс семьялы сиымон чорыг *bides śemja-ti śii-mon tśorig* [entire family-DAT eat-PTCP.POSSIB fish] ‘(enough) fish to be eaten by the entire family’.

Perhaps the most characteristic single feature of Uralic participles is that nearly all languages of the family—unlike most of their neighbours—have specialized negative participles or analogous deverbal adjectives (that could alternatively be regarded as participles). In most languages, one negative participle is enough to serve as the negative counterpart of all or most affirmative participles (see grammar sketches in this volume), but Udmurt possesses as many as three negative participles: the negative participles correspond quite systematically to the affirmative past, present, and future participles as seen in Table 48.3. The negative present and future participles (*-icem*, *-ontem*) consist materially of the affirmative participles (*-ic*, *-ono*) followed by the element *-tem*, otherwise a denominal adjectival derivational suffix with an analogous meaning (e.g. анайтэм *anaj-tem* [mother-DER_{CAR}] ‘motherless’, уксетэм *ukśo-tem* [money-DER_{CAR}] ‘penniless’). Analogous homonymy of denominal negative adjectives and negative participles (or deverbal adjectives) is found also in many other Uralic languages.

As for the concept of participle and the working definition of participle as a kind of verbal adjective, one of the most interesting languages is Tundra Nenets, which is generally viewed as lacking a uniform and consistent category of adjectives (cf. Jalava 2013). Instead, the language usually expresses properties of noun referents with property nouns like *ser*, *serako* ‘white(ness)’ and property verbs like *pərjide-* ‘be black’. However, despite the lack of the category of adjectives, it is possible to create “verbal adjectives” that not only function like participles in languages with distinct adjective classes, but also in a way compensate

for the lack of adjectives proper: while the noun *ser* ‘white(ness)’ may function as a modifier of a noun (14a)—one of the main functions of prototypical adjectives—a corresponding modifier expressing the property of ‘blackness’ is created by means of the present participle in *-na/-nʲa* (14b). In other words, while participles of most Uralic languages may be defined as something secondary with respect to ordinary adjectives, many of the Tundra Nenets “verbal adjectives” are rather a subgroup of ordinary participles (15):

(14) Tundra Nenets (Jalava 2013: 53–4)

- a. *ser ti*
white reindeer
‘a white reindeer’
- b. *pərjide-nʲa ti*
be.black-PTCP.PRS reindeer
‘a black reindeer’

(15) Tundra Nenets (Jalava 2013: 54)

- tʲukuxana mantsʲra-na nʲe*
here work-PTCP.PRS woman
‘the woman who works here’

Languages like Tundra Nenets thus challenge the traditional view of defining participles as verbal adjectives, as in this specific language it would be awkward to view the concept of a participle as subordinate to that of an adjective. The multifaceted relations of participles, other inflectional verb forms, and deverbal derivations will be discussed in all of the remaining sections.

48.5 Action nominals: nominal verb forms

Although most grammatical descriptions of Uralic languages pay more attention to infinitives and converbs (see 48.6) than to action nominals, action nominals are often an equally integral part of the non-finite system in a language. Uralic action nominals are also often a synchronic–diachronic key to a better understanding of most of the other non-finites of the language family.

To continue with examples from Udmurt, two action nominals are illustrated in (16):

- (16) Udmurt (*Vikipedija* s.v. Пукроков, Фёдор Пукрокович)
Школазэ йылпумъям бере, дышетсконзэ азинтыны
ʃkoła-ze jilpumja-m bere,
school-ACC.POSS.3SG finish-AN after
difetsk-on-ze azint-ini
study-AN-ACC.POSS.3SG develop-INF

мынйз Ижысь механической институтэ.
 min-i-z iž-ič meħaɲitʃeskoj
 go-PST-3SG Izhevsk-DER_{ADJ} mechanical
 insitut-e
 institute-ILL
 'After finishing school, he went to the Izhevsk
 Mechanical Institute to further his education.'

From a morphological perspective, the action nominal *jiṭpumja-m* 'finishing; conclusion' is the same inflectional form as *ɕij-em* in Table 48.3, there labelled as the past participle. Indeed, *jiṭpumjam* could also function as a past participle in a noun phrase like *школазэ йылпумъям пиосмурт* [ʃkoɫa-ze jiṭpumja-m piosmurt [school-ACC.POSS.3SG finish-PTCP.PST man] 'a man who has finished school', and *ɕij-em* could also occur in the postpositional phrase *сием бере* [ɕij-em bere [eat-AN after] 'after eating', as a noun complement of the postposition *бере* 'after'. However, the homonymy of the action nominal and participle is more or less coincidental (though not uncommon). The Udmurt future participle in *-ono* (Table 48.3) does not generally occur as an action nominal. On the other hand, the present-participle marker *-ɕ* does also frequently occur as a noun-forming suffix, but forms like *ɕi-ič* [eat-PTCP.PRS] 'eater; eating one' differ from action nominals like *ɕij-em* [eat-AN] 'eating' in that they function as agent nouns, as is the case for many Uralic present participles.

Udmurt is a somewhat atypical Uralic language in that it has not only one but two different, fairly productive and verb-like action nominals. In addition to the action nominal in *-(e)m*, the language also includes the action nominal in *-(o)n*, in (16) manifested as *дышетскон* *difetsk-on* 'education' followed by the accusative singular possessive suffix *-ze* [SG.ACC.POSS.3SG]. Not unlike *-(e)m*, *-(o)n* also often occurs in more complex action-nominal constructions. In (17), the action nominal *уён* *ucon* 'defending, defence' takes the accusative objects referring to 'Hanko Peninsula' and 'city of Leningrad', and the complex noun phrase as a whole is a complement to the postposition *понна* *ponna* 'for; because of'. In Haspelmath's (1996) terms, such action nominals can be characterized as instances of word-class-changing inflection.

- (17) Udmurt (*Vikipedija* s.v. Фёдоровых, Михаил Петрович)
 Ожмаськиз Ханко полуостровез но Ленинград
 городэз уён понна.
 ožmašk-i-z xanko poɫuostrov-ez no ɕeningrad
 fight-PST-3SG Hanko peninsula-ACC and Leningrad
 gorod-ez uc-on ponna
 city-ACC defend-AN for
 'He fought to defend the Hanko Peninsula and the city
 of Leningrad.'

In languages such as Udmurt, action-nominal constructions like the ones seen in (16) and (17) represent the most common means of combining clauses and indicating temporal anteriority (16) and purpose (17) of the state of affairs denoted by the governing clause. Most Uralic languages have only one fully productive action nominal, but in Udmurt, the one in *-(e)m* (synonymous with the past participle) is largely used to refer to perfective actions and events whereas the one in *-(o)n* is used for imperfective actions. Comparable distinctions are also found in Mari, and in the Samoyed languages in particular. The Udmurt action nominals can be regarded as non-finite verb forms instead of **deverbal** nouns for a number of reasons: they are virtually fully productive and regular in meaning, they play a central role in Udmurt clause combining and the verb retains most of the verbal morphosyntax, as seen, for example, in the accusative-marked objects *школазэ* *ʃkoɫaze* 'the school' in (16), as well as *полуостровэз* *poɫuostrovez* 'the peninsula' and *городэз* *gorodez* 'the city' in (17). Such features of action nominals are widespread in the central and easternmost Uralic languages, but in the westernmost languages such as Finnish the internal syntax of action nominals clearly differs from the argument marking of finite and less controversial non-finite verb forms:

(18) Finnish

- a. *Hän taistel-i Hankonieme-n ja*
 3SG fight-PST.3SG Hanko.Peninsula-GEN and
Leningradi-n kaupungi-n puolusta-mise-ksi.
 Leningrad-GEN city-GEN defend-AN-TRSL
 'He fought to defend the Hanko Peninsula and the
 city of Leningrad.'
- b. *Hän taistel-i Hankonieme-ä ja*
 3SG fight-PST.3SG Hanko.Peninsula-PART and
Leningradi-n kaupunki-a puolusta-akse-en.
 Leningrad-GEN city-PART defend-CVB.PURP-POSS.3SG
 'He fought to defend the Hanko Peninsula and the
 city of Leningrad.'

In sentences like (18a), the patients of the action denoted by the action nominal are in the genitive and thus on a par with ordinary possessive genitive modifiers; ordinary object-marking such as the partitive for the verb *puolusta* 'defend' is not possible, although the participles, infinitives, and converbs, such as the purposive converb in the largely synonymous (18b), take partitive objects too. Therefore, the traditional Finnish grammar regards action nominals as fundamentally different from (finite and non-finite) inflectional verb forms and sees them rather as deverbal nouns. On the other hand, in languages such as Mansi that lack the

genitive case, argument marking of action nominals tends to follow the “Sentential” type (Koptjevskaja-Tamm 1993, 2005), and there is thus little room for separating the action nominals from verb forms.

Before turning to infinitives and converbs, it must be emphasized that all Uralic action nominals function—by definition—in all syntactic functions typical of ordinary underived nouns. To this end, they are inflected for all cases and may also be used as complements to adpositions. As a consequence, action-nominal constructions may serve as objects such as дышетсконзэ *difetsk-on-ze* [study-AN-ACC.POSS.3SG] ‘(his) education’ in (16), as various adverbial modifiers (16),(17), and also as subjects, as seen already in (1a). Infinitives and converbs by and large share this functional domain, the main difference from action-nominal constructions being that the former are opaque verb forms with specialized syntactic and semantic functions and not transparent combinations of an action nominal (verbal noun) and grammatical morphemes like case suffixes (16) and adpositions (16),(17), (18a).

48.6 Converbs and infinitives: adverbial and complemental verb forms

In addition to action nominals (verbal nouns) and participles (“verbal adjectives”), all Uralic languages also have non-finite verb forms that cannot be defined on the basis of their “new” word class but rather by their specialized syntactic functions. Roughly, it can be stated that there are converbs that function as free adverbial modifiers and infinitives that are used in complement positions. As such, they can often be conceived of as verbal counterparts of semantic (adverbial) and grammatical cases in nouns, and they also often go back to action nominals followed by a case suffix (cf. chapter 15 on a more historical approach to the Finnish converbs seen in (19a–f)). Further, just as the many large case inventories of Uralic languages consist predominantly of a number of semantic rather than many syntactic cases, the number of converbs may vary from one to nearly a dozen in Komi (see chapter 26), whereas the number of infinitives proper hardly exceeds three anywhere in Uralic (cf. 48.2 for terminological issues).

Converbs as adverbial verb forms function as heads of subordinate, non-finite adverbial clauses. Typically, their semantic function is to express specific interpropositional relations between the states of affairs denoted by the main clause and subordinate clause. (The superordinate clause may certainly also be a non-finite clause that is subordinate to yet another clause.) Ideally, adverbial clause combining

involves two logically independent propositions, and their mutual relations include various temporal and logical relations (Kortmann 1997). This is illustrated by (19a–f) (from Nikanne 1997: 338), in which two seemingly independent states of affairs—‘committing a crime’ and ‘drinking beer’—are connected with each other by means of six semantically specialized converb forms:

(19) Finnish

Pekka tek-i rikokse-n ...
 Pekka make-PST.3SG crime-GEN
 ‘Pekka committed a crime ...’

Simultaneity:

a. *juo-nessa-an olut-ta.*
 drink-CVB.SIMULT-POSS.3SG beer-PART
 ‘(Pekka committed a crime) while drinking beer.’

Anteriority:

b. *juo-tua-an olut-ta.*
 drink-CVB.ANTE-POSS.3SG beer-PART
 ‘(Pekka committed a crime) after drinking beer.’

Purpose:

c. *juo-dakse-en olut-ta.*
 drink-CVB.PURP-POSS.3SG beer-PART
 ‘(Pekka committed a crime) in order to drink beer.’

Means:

d. *juo-malla olut-ta.*
 drink-CVB.INS beer-PART
 ‘(Pekka committed a crime) by drinking beer.’

Concomitance:

e. *juo-den olut-ta.*
 drink-CVB.CONCOM beer-PART
 ‘(Pekka committed a crime) drinking beer.’

Negative concomitance

f. *juo-matta olut-ta.*
 drink-CVB.NEG beer-PART
 ‘(Pekka committed a crime) without drinking beer.’

The most common types of converbs in Uralic include converbs of means (cf. (19d)), manner, and concomitance, as well as temporal converbs expressing simultaneity, anteriority, and posteriority. Virtually all Uralic languages have non-finite means to say that a girl entered a room *running* or *crying* (1d), for example. While some converbs may have rather specialized meanings, they may also have multiple interpretations according to their contexts. The Mari converb in *-n* may express manner (e.g. ‘come running’), anteriority (e.g. ‘after coming, entering’), or mere concomitance that is largely equivalent to coordination with ‘and’ (20),(21):

- (20) Meadow Mari (Alhoniemi 1985: 143)
 Тудо куржын толын пурен лектын кайыш.
 tudo kurʒ-ən tol-ən pur-en lekt-ən
 3SG run-CVB come-CVB enter-CVB depart-CVB
 kajə-ʃ.
 go-1PST.3SG
 ‘S/he came running, stopped by (= entered and came out) and went away.’

- (21) Meadow Mari (Alhoniemi 1985: 143)
 Таче тушко шонгыжо, изиже олымбал темын погыненыт.
 tatʃe tu-ʃko ʃoŋgə-ʒo, izi-ʒe
 today there-ILL old-POSS.3SG small-POSS.3SG
 oləmbal tem-ən pogən-en-ət.
 bench fill-CVB assemble-2PST-3PL
 ‘Today, the old and young assembled there so that the bench was filled.’

To give an example of another multifaceted converb expressing allegedly “cognitively complex” interpropositional relations (Kortmann 1997), it is possible to differentiate between at least four functions of the Mari converb in *-mejke*:

Meadow Mari (Alhoniemi 1985: 147)

Posteriority (‘before p, q’)

- (22) Новак мийымешкына колен огыл.
 noʃak mijə-mejke-na kol-en og-əl.
 N. come-CVB.POST-POSS.1PL die-CVB NEG.PRS.3SG-be
 ‘Novak had not died before we arrived.’

Terminus ad quem (‘until p, q’)

- (23) Колхоз почылтмешкак, имне деч посна илаш логале.
 kolxoz poʃəlt-mejke=ak, imne deʃ_posna
 kolkhoz open-CVB.POST=DIP horse without
 il-aʃ logaʃ-e.
 live-INF must-1PST.3SG
 ‘S/he had to live without a horse until the kolkhoz was founded.’

Result (‘q, so that p’)

- (24) Тудын имныже, лумыш логалмеш, вуйым сака.
 tudə-n imnə-ʒe, lum-aʃ logal-meʃ,
 3SG-GEN horse-POSS.3SG snow-ILL touch-CVB.POST
 βuj-əm sak-a.
 head-ACC hang.up-PRS.3SG
 ‘His/her horse stretches its head so that it touches the snow.’

Preference (‘rather than p, q’)

- (25) Тыге тулык икшыве лийын илиймешке, мўкшиге лийшаш ыле.
 təge tulək ikʃəʃe lij-ən ilə-mejke,
 so orphan child be-CVB live-CVB.POST
 mykʃige lij-ʃaʃ əʃ-e.
 swarm.of.bees be-PTCP.FUT be-1PST.3SG
 ‘I ought to have been born as a swarm of bees rather than have ended up living as an orphan like this.’

Yet another example of various interpropositional relations expressed by converbs is the Tundra Nenets “evasive” converb that can be used to express substitution as well as negative purpose:

- (26) Tundra Nenets (Nikolaeva 2014: 376)
 toxolko-woŋkad°-nta armʲija-n°ʔ₂ xaja
 study-EVAS-POSS.3SG army-DAT go.3SG
 ‘Instead of studying, he went to the army.’
 (27) Tundra Nenets (Nikolaeva 2014: 377)
 (nʲi-wa) mants°ra-woŋkad°-nta xaja
 NEG-IPFV.AN work-EVAS-POSS.3SG go.3SG
 ‘He left so he would not have to work.’

It is not uncommon that a non-finite functions as both a participle and a converb. One of the most notable intersections is that of past participles that tend to function as anterior converbs, although they are primarily described and named as participles. Examples of such non-finites include the past participles in *-nud* (ACT.PRS.PTCP) and *-tud* (PASS.PRS.PTCP) in Estonian, the Erzya past participle in *-zʲ*, and the Lule Saami past participle in *-m*. One of the most multifunctional non-finites in Uralic is the Surgut (East) Khanty verb form in *-m* that—in combination with possessive suffixes—functions not only as a past participle (adnominal modifier) and a corresponding converb (adverbial modifier), but also as an action nominal (verbal noun) and as an independent evidential predicate as well (Csepregi 2013).

On a general level, converb markers resemble other adverbial grams such as case markers and adpositions, in that their meanings may sometimes be quite specific, whereas other languages may convey the same meaning with an expression that has multiple functions. For example, the Estonian cognate (*-des*) of the Finnish converb of simultaneity (19a) also largely corresponds to the use of the Finnish converbs of means (19d) and concomitance (and manner) (19e). The conceptual similarity of adverbial verb forms and adverbial cases is most visible in the fact that in Permic (Komi, Udmurt), Hill Mari, and to some extent in North Saami, the negative converb markers (‘without

V-ing') are identical to the abessive case-suffix markers ('without N') (cf. chapter 47). Also in North Khanty, the non-finite labelled as the negative participle is formally identical to the abessive case (-łəy), and functionally resembles the above-mentioned negative converbs (see chapter 31).

It appears that the interrelations of various converbs in Uralic largely correspond to the typological semantic maps outlined for adverbial subordination in general (e.g. Kortmann 1997, Hetterle 2015). However, certain typological and areal observations deserve special attention. The number of distinct adverbial verb forms (converbs) often corresponds to the number of adverbial (semantic) cases in the given language: both types of adverbial inflectional forms are most numerous in Finnic and Permic, somewhat lower in number in Saami, Mordvin, Mari, and Samoyed, and even less so in Khanty and Mansi. In this context, it is remarkable that Hungarian has only one converb form (see (1d)) despite more than a dozen adverbial cases in noun declension. When there are only one or two converbs, they most often express manner/means and simultaneity, whereas other interpropositional relations are expressed by action nominals (inflected for case or complementing postpositions; see 48.5) or adverbial subordinators for finite clauses (cf. chapter 53). The use of converbs as the major means of adverbial subordination is most overwhelming in Mari and Udmurt, a fact obviously related to their long-standing contacts with the Turkic languages of the Volga-Kama area (Bartens 1979).

As for the morphology and syntax of Uralic converbs, almost all of them carry traces of earlier action nominals; converb markers often resemble case suffixes or postpositions that have attached to action nominals but later lost their transparency to varying degrees. For the same reason, converbs may often have possessive suffixes that almost always refer to their subject referents (see (18b), (19a–c), and (22)). Subject marking is most common when the subject of a converb clause is different from that of the superordinate clause, and an explicit subject may also be expressed either in the genitive or the nominative form (see (21), (22), and (28)). Other arguments and modifiers of converbs do not usually differ from those of finite clauses, and therefore it can be concluded that the Erzya (finite) conditional mood seen in (7) is, after all, quite similar to the Tundra Nenets (non-finite) conditional converb in (28)—the only major difference being that the Erzya mood has person endings identical to undisputably finite verb forms, whereas the Tundra Nenets converb resorts to possessive suffixes and thus differs from finite forms:

- (28) Tundra Nenets (Nikolaeva 2014: 100)
- | | | |
|--|-------------------|-----------|
| xarwa-b°-ta | tamna | ŋo-poj° |
| want-CVB.COND-POSS.3SG | still | one-MODER |
| me-wa-ʔ ₂ | tu:-t°-naked°m | |
| be-IPFV.AN-GEN | come-FUT-PROB.1SG | |
| 'Perhaps I will come again if he wants.' | | |

Infinitives can, in principle, be distinguished from converbs by virtue of obligatoriness in a sentence. Not unlike grammatical cases such as nominatives and accusatives, infinitives are quite void of meaning, as their use is usually governed by various desiderative, manipulative, and other modal predicates (e.g. 'order', 'want', 'can', 'must'), or verbs of thinking, feeling, and utterance ('like', 'remember', 'seem', 'promise', etc.). Perhaps due to this inherent grammatical nature of infinitives, all Uralic languages have at least one non-finite that is used predominantly for this function. Most languages manage without more than just one infinitive to complement a variety of verbs and adjectives too (e.g. 'easy to read', 'good to write'). Such infinitives include South Saami *jovke-dh*, Meadow Mari *jy-qš*, Komi *ju-ni*, and Hungarian *in-ni*, all for '(to) drink'. All the above-mentioned forms have been explained as going back to action nominals or mere verb stems followed by directional case suffixes, but from a synchronic point of view they cannot be regarded as directional case forms. Nevertheless, these and most other Uralic infinitives do have functional dimensions that relate them to directional expressions.

Many grammars of individual languages state that in addition to their various complemental functions, infinitives may also express purpose. However, it is remarkable that such purposive infinitives seldom function as true purposive verb forms—converbs—describing purposes of any states of affairs denoted by the main predicate, as seen in (19c), (26), (27). Instead, the purposive functions of infinitives are largely confined to contexts in which they are headed by motion verbs that to some extent require either a nominal or verbal complement expressing the purpose or direction of the motion described—in other words, motion-cum-purpose (Schmidtke-Bode 2009, 2014). As shown by the Udmurt infinitive азинтыны *azint-ini* [develop-INF] in (16), Uralic infinitives are typologically quite ordinary in this respect (cf. Ylikoski 2003: 206–16, Schmidtke-Bode 2014: 66–8, and the individual grammar sketches in this volume).

It is not always easy to make a clear distinction between Uralic converbs and infinitives: purposive converbs such as that in Finnish (seen in (18b), (19c)) may occur with motion verbs, and some Saami languages, most notably Lule Saami,

have a non-finite labelled as “supine” that is used mainly as a motion-cum-purpose modifier of motion verbs and also in some minor infinitival roles, as well as purposive converbs that function also outside motion events (Ylikoski 2016a). On the other hand, most of the north-westernmost languages (Saami, Finnic, and Mordvin) have two or three non-finites that are best characterized as infinitives. Besides the infinitives described in the individual chapters for these branches, see also the dual morphological nature of the Finnic non-finites in *-vat* (Estonian) and *-van* (Finnish) discussed in 48.3. In addition to the infinitives occurring with most modal verbs and the like, other infinitive-like forms are confined to contexts related to motion events and still others are confined to complement minor subgroups of verbs that often carry negative attitudes (e.g. ‘fear’, ‘prohibit’) (cf. Bartens 1979: 51–3, Ylikoski 2003: 212–14). Cf. the three infinitives in Moksha, described in more detail in chapter 23:

- (29) Moksha (chapter 23)
 Эряви модемс.
 erʲævi moʎe-ms
 must.3SG go-INF1
 ‘S/he must go.’
- (30) Moksha (chapter 23)
 Карман сѣрмадома.
 karma-n sʲormada-ma
 start-1SG write-INF2
 ‘I’m starting to write/I will write.’
- (31) Moksha (chapter 23)
 Сон лоткась морамда.
 son lotka-sʲ mora-mda
 3SG stop-PST.3SG sing-INF3
 ‘S/he stopped singing.’

A further point to be mentioned is that the outlier position of Hungarian on the map of the Uralic family is—in line with what was said about its converb—reflected in the fact that while the language does have an infinitive, the range of its functions is more limited than that of infinitives elsewhere in Uralic. Instead, Hungarian often makes use of its special subjunctive mood, a situation that can be compared with the far more widespread use of subjunctives and loss of infinitives in the Balkan Sprachbund located just south of Hungarian (Joseph 1983).

Some other non-finites, such as the Mari converb in *-n* (see (20), (21)) and especially the so-called modal and purposive converbs in Tundra Nenets, are also used as complements to various verbs (Alhoniemi 1985: 142, Nikolaeva 2014: 348–51). Such verb forms could therefore be alternatively labelled as converb-infinitives, but at least for Mari one must take into account that the converb in *-n* is also

used in many periphrastic verb forms that will be addressed in the next section.

48.7 Non-finites in periphrastic verb forms

Apart from the characteristically Uralic periphrastic negative predicates in which negative auxiliaries are accompanied by lexical verbs in so-called connegative forms that could be characterized as non-finites from a morphological perspective (cf. chapter 47), it appears that all Uralic languages make use of various other non-finites—participles, action nominals, converbs, and infinitives—in many kinds of periphrastic TAM constructions, and often also as evidential predicates. As seen in 48.3, verb forms traditionally classified as non-finite may sometimes occur as the sole predicates of a (finite) clause, but in periphrastic verb forms, the lexical verb is formally a non-finite form headed by a copular or other auxiliary verb in a finite form (unless the entire construction is non-finite and further subordinated to a superordinate predicate).

The most common subtype of non-finites occurring in periphrastic verb forms are participles. As described in the individual chapters on most of the Saami and Finnic languages (this volume), for example, past participles are commonly used to form periphrastic perfects and pluperfects that are functionally quite similar to their namesakes in Germanic, for example. However, it is premature to regard the development of periphrastic verb forms in Saami and Finnic simply as due to Germanic influence. For example, a functionally equivalent perfective construction is also found in Udmurt, but the structure of the construction in (33b) is analogous with possessive clauses, as in (33a), in the language; the lexical verb in what looks like the past-participle form is followed by a possessive suffix, and the coreferential NP occurs in the genitive:

- (32) Aanaar Saami
 Mun lam luuhâ-m kirje.
 1SG be.1SG read-PTCP.PST book.ACC
 ‘I have read the book.’
- (33) a. Udmurt
 (Мынам) книгае вань.
 (minam) kniga-je van
 1SG.GEN book-POSS.1SG EX
 ‘I have a book.’
- b. Udmurt
 (Мынам) книгаез лыддѣме вань.
 (minam) kniga-jez liddž-em-e van
 1SG.GEN book-ACC read-AN-POSS.1SG EX
 ‘I have read the book.’

Here it must be recalled that the Udmurt past participle also functions as an action nominal, and it is more appropriate to analyse *ḥid:zeme* (33b) as such; in that case, (33b) would literally read “I have my reading of the book”. The same can be said about the construction in which the same form is headed by the semi-copula *ḥu-* ‘be; become’; this combination carries the modal meaning of ability ‘can; be able’ (34). Further, a corresponding construction headed by *pot-* ‘exit; appear’ expresses desire (35); analogous expressions exist also in Mari. For more examples of periphrastic TAM constructions involving auxiliary copulas and non-finite lexical heads, see the chapters on individual languages in this volume.

- (34) Udmurt
(Мынам) книгаез лыдземе лу-э.
(minam) kniga-jez ḥid:z-em-e ḥu-e
1SG.GEN book-ACC read-AN-POSS.1SG become-3SG
‘I am able to read the book.’ (Literally: “My reading of the book is becoming.”)
- (35) Udmurt
(Мынам) книгаез лыдземе потэ.
(minam) kniga-jez ḥid:z-em-e pot-e
1SG.GEN book-ACC read-AN-POSS.1SG appear-3SG
‘I want to read the book.’ (Literally: “My reading of the book is coming.”)

It may also be noted that the so-called second past tenses in Permic, having functions that could be characterized as evidential, originate in past participles to which person endings have been attached (Leinonen and Vilkuna 2000, Siegl 2004). On the other hand, analogous synthetic past tenses in Mari have emerged from the multipurpose converb in *-n*, as well as from the Hill Mari negative converb in *-de*. Verb forms such as the evidential-like second past tense *tolənat* [come.PST.2.SG] ‘you have come’ are nowadays regarded as opaque, synthetic finite forms, but some dialects have preserved the original periphrastic nature in constructions like *tol-ən ulat* [come-CVB be.2.SG] *id.*, and the periphrastic nature of the category is even more obvious in the negative second past-tense forms like *tol-ən otəl* [come-CVB be.NEG.PRS.2.SG] ‘you have not come’ (Alhoniemi 1985: 111–16, Bradley 2015: 148; see also (11) and (22)).

The Mari languages also use their converbs in a variety of other periphrastic constructions that have been labelled as “aspectual converb constructions” also in traditions that otherwise call converbs “gerunds”. In such constructions, the lexical verb—the one preserving its literal meaning—is in the converb form, whereas its syntactic head is one of the dozens of verbs that have a dual nature: verbs like *kija-*,

kolta-, and *nala-* do have the lexical meanings ‘lie; recline’, ‘send’, and ‘take’, respectively, but when occurring with a converb in *-n*, they usually lose their lexical meanings and rather function as aspectual auxiliaries with durative, inchoative, and momentaneous semantics, respectively. For more examples, see Table 48.4 (adapted from Bradley 2015: 153).

Table 48.4 A sample of aspectual converb constructions in Meadow Mari

Construction	Literal translation	Meaning
<i>kredal(ən) kijə-</i>	fighting lie	fight (durative)
<i>muralt(ən) koltə-</i>	singing send	start singing
<i>ḥortən nal-</i>	crying take	shed a few tears
<i>ṭəijen ontṭə-</i>	putting on look	try on (a piece of clothing)
<i>kojken pətə-</i>	drying out end	dry out completely
<i>malen sitarə-</i>	sleeping gather	have a good sleep
<i>peled(ən) jogalə-</i>	blossoming stand up	break into blossom

Aspectual converb constructions are one of the clearest examples of areal-typological phenomena that are due to long-standing contacts with Turkic languages with highly similar aspectual constructions. Such constructions are most central and most frequent in Mari, the most Turkicized branch of the family, but they are also widespread in the neighbouring Udmurt of the Volga-Kama Sprachbund (Perevoščikov 1959, Čxaidze 1960, Bartens 1979). Moreover, intense contacts with the Turkic languages of Siberia have resulted in very similar phenomena in Kamas (Klumpp 2002a). In an even wider perspective, such aspectual converb constructions may be seen as what Masica (1976, ch. 5) has characterized as “explicator compound verbs” of the gigantic “Indo-Altaic area” that stretches over many language groups from Dravidian and Indo-Aryan via Turkic and Mongolic up to Korean and Japanese.

Concerning the uses of an infinitive form in periphrastic TAM constructions, it may be mentioned that an infinitival equivalent of the Udmurt construction seen in (34) functions as a generic expression of ability (i.e. the infinitive in *-ini + lu-e* [become-3SG] equals ‘it is possible to V’). On the other hand, the Lule Saami periphrastic predicate consisting of the copula and the infinitive-like supine expresses futurity with accompanying shades of necessity and intention (Ylikoski 2016a), for example.

48.8 Conclusion

All Uralic languages have verb forms that may be set apart from prototypical finite verb forms. As within the realm of noun inflection (with categories like case, number, possessive suffixes), for example, Uralic languages differ considerably from one another when it comes to the number and functions of non-finite verb forms: the inventories of non-finites vary from a handful to more than a dozen more or less opaque and independent non-finites in the languages. While almost all of the Uralic non-finites may be assigned a general category membership as either a participle, action nominal, converb, or infinitive within the framework presented in Table 48.1 (48.2), their use in various periphrastic constructions appears to depend on areal tendencies as well as seemingly unrelated quirks of individual languages; this little-studied topic calls for

further research at the level both of individual languages and of general Uralic linguistics. Otherwise, the role and importance of non-finite clauses in individual languages is, after all, mostly a matter of relative frequency rather than due to any fundamental differences within the Uralic family. Not surprisingly, the relative frequency and complexity of non-finite clauses is closely connected to the availability of finite clause-linking strategies, for which see chapter 53.

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