Jussi Ylikoski

Defining Non-finites: Action Nominals, Converbs and Infinitives

Abstract

In the recent typological literature on non-finite verb forms—converbs, infinitives, action nominals and participles—these forms have been defined both in terms of (i) their word-classes and (ii) their syntactic functions, often without differentiating between the two points of view. On the basis of data from Uralic and Indo-European languages of Europe, this paper is intended to clarify and refine the definitions of action nominals, converbs and infinitives. It appears that action nominals can be defined quite simply as verbal nouns (and participles as verbal adjectives), whereas infinitives and converbs are better defined with reference to their complementary functions, the difference between the two categories lying in their relative obligatoriness vs. optionality in a sentence. Furthermore, it is argued that the mutual relations of various non-finites are best understood by examining them from both synchronic and diachronic perspectives simultaneously, as converbs and infinitives often have their origins in case-marked action nominals.

1. Introduction

In this paper, I aim to examine and develop definitions of certain types of verb forms that in traditional terminology are characterized as *non-finite*. Apparently, the most common subcategories of non-finites include forms that have been labeled infinitives, participles, converbs and action nominals (verbal nouns or *masdars*). The view that these subcategories make up a more or less organized system of non-finites seems not to have gained much theoretical interest until the typological studies of non-finites—especially converbs—in the 1990's. Consequently, much of what will be said in this paper about different kinds of non-finites and their mutual relations will be centered on recent typological studies of converbs and the relatively scanty overall views of non-finites there.

SKY Journal of Linguistics 16 (2003), 185–237

Even though this paper aims to contribute to the general typology of non-finites, it must be admitted that the typological perspective adopted here is in fact very narrow, not extending far from the confines of what has been understood as Standard Average European (see e.g. van der Auwera 1998a: 814ff.; Haspelmath 2001). The focus is almost entirely on synthetic, suffixal languages spoken in Europe, and for the present purposes—but by no means universally—the notion of **non-finite** is largely taken for granted and understood in its traditional sense; i.e., in contrast to finite forms, non-finites are not usually marked for such categories as tense, mood, aspect, person or number, and they do not function as only predicates of independent sentences (cf. Koptjevskaja-Tamm 1999: 146). Another working hypothesis that makes non-finites look much simpler than they actually are is the assumption that most non-finites can easily be analyzed as belonging to one of the four subcategories discussed here. However, it seems unquestionable that the categories infinitive, participle, converb and action nominal are, to quote Haspelmath (1995a: 1) on converbs, "*universally applicable* or *cross-linguistically valid* in the sense that they are found in various languages irrespective of their genetic and areal connections, and must be seen as belonging in some way or other to universal grammar." The main focus of this paper is on defining converbs, infinitives and action nominals and their mutual relations; participles will be discussed to a lesser extent. These forms are not examined from a synchronic point of view only, but from a diachronic perspective as well.

The structure of the paper is as follows: Section 2 summarizes two main approaches to defining and classifying most typical non-finites, i.e. the attempts to define non-finites by their word-classes ("the word-class approach") or by their syntactic functions ("the functional approach"). In Section 3, I discuss the problematic asymmetry between the two approaches and try to point out some terminological and conceptual inaccuracies that seem to lead to such asymmetry. In Section 4, I reconsider the definitions and interrelations of the main subcategories of non-finites with reference to certain Uralic and Indo-European languages of Europe; the functional approach to non-finites is favored as it can also take into account diachronic facts and less common types of non-finites. The usefulness of the word-class approach is re-examined in Section 5, where it is shown that lexicalization and grammaticalization of non-finite verb forms appear to support the word-class-based definitions of only some non-finites, whereas others are still better defined in terms of their syntactic functions. Section 6 presents a summary of

different (synchronic and diachronic, function-based and word-class-based) views on non-finites, their definitions and mutual relations.

2. Main types of non-finites and their definitions

The subtypes of non-finite verb forms that are here called the *main types* of non-finites include the infinitive, the participle, the converb and the action nominal. This is not to say that these forms are prototypical ("non-combined," "canonical" or "strict"; see e.g. V.P. Nedjalkov and I.V. Nedjalkov 1987: 75; V.P. Nedjalkov 1995: 97; I.V. Nedjalkov 1998: 422, 425) in the sense of exact one-to-one correspondence between non-finite forms and their functions, as it may well be the case that non-finites are most typically used in more than one syntactic function (cf. van der Auwera 1998b: 275). Rather, the abstract concepts behind the terms infinitive, participle, converb and action nominal are idealizations in many ways; in other words, one might call these forms *ideal* non-finites. Moreover, it seems that much of the recent typological discussion on converbs and other non-finites rests on tacit assumptions about what these forms ideally are.

It is remarkable that it is not easy to find many languages where the inventory of non-finites really matches the ideal system of non-finites that may be inferred from the recent typology of non-finites. However, Hungarian may tentatively be considered a good representative; for the time being, (1a–d) serve to illustrate the main types of non-finites, i.e. the infinitive (1a), the participle (1b), the converb (1c) and the action nominal (1d):

Hungarian

(1) a. *A lány sír-ni akar-t ~ kezd-ett.*
the girl cry-INF want-PAST.3SG begin-PAST.3SG
'The girl wanted ~ began to cry.'

b. *Egy sír-ó lány be-jö-tt a szobá-ba.*
a cry-PTCP.PRES girl in-come-PAST.3SG the room-ILL
'A crying girl entered the room.'

c. *A lány sír-va jö-tt be a szobá-ba.*
the girl cry-CONV come-PAST.3SG in the room-ILL
'The girl entered the room crying.'

d. *A lány sír-ás-a ingerel engem.*
the girl cry-AN-3SG irritate.3SG I.ACC
'The girl's crying irritates me.'

2.1 Non-finites as non-verbs

It is important to note that of the four non-finites that illustrate the main types of non-finites, the last one, the action nominal in *-ás/-és* (1d), is not considered an inflectional verb form in traditional Hungarian grammar, but a derived deverbal noun instead. The same holds true for many action nominals in western European languages: even though they can often be formed from all verbs in an entirely regular and productive manner, and the semantic relation between verb stems and action nominals always remains the same, they are still considered derived nouns as they function as heads of NPs whose functions are similar to NPs headed by underived nouns. In the descriptions of many Turkic and Caucasian languages, however, action nominals are often treated as paradigmatic verb forms to the extent that they are even used as citation forms of verbs in dictionaries (e.g. in Lezgian, [Haspelmath 1996: 47]). Cross-linguistically, action nominals form a long continuum between fully productive forms with many verb-like syntactic properties and less productive derived nouns with various morphological, syntactic and semantic idiosyncrasies (Comrie and Thompson 1985: 358–391; Koptjevskaja-Tamm 1993). However, it is good to bear in mind that action nominals are granted a status of a verb form (*gerund*) in traditional descriptions of Latin and English as well. There are also many other types of **(de)verbal nouns** (denoting agents, results, instruments etc.; see e.g. Comrie and Thompson 1985: 349–358; Koptjevskaja-Tamm 1993: 18–21; Muysken 1999: 248–250), but it seems that only action nominals have been considered non-finite verb forms every now and then.

Participles, in turn, have been defined as **verbal adjectives**. At the beginning of European linguistic tradition, grammarians such as Dionysius Thrax and Marcus Terentius Varro viewed Greek and Latin participles as word-classes of their own (Itkonen 1991: 193, 199). Greek *metochē* 'sharing, partaking' and its Latin calque *participium* were used to refer to the view that participles have morphosyntactic properties of both verbs and nouns. Since the rise of the notion of adjective in the Middle Ages, participles have traditionally been defined as verbal adjectives, and this tradition appears to continue unquestioned: "Participles are defined as adjectival verb forms" (Koptjevskaja-Tamm 1993: 42), "Participles are best defined as verbal adjectives," "The definition of participle ('verb-derived adjective within a verbal paradigm') . . ." (Haspelmath 1994: 152).

The view that non-finites are not only verbs but also verb-derived members of some other word-classes has been emphasized along with the

advent of the notion of converb in linguistic typology. The term *converb* has been adopted to typological studies from the Altaicist tradition in order to avoid such obscure and complex terms as *adverbial participle*, *conjunctive participle*, *gerund* or *gerundive* (French *gérondif*) when speaking of non-finites that are said to resemble adverbs to the extent that they can be defined as **verbal adverbs** (especially Haspelmath 1994: 153; 1995a: 3–4; 1996: 50; van der Auwera 1998b: 276). At least in the descriptions of Uralic languages, such non-finites have been labeled as verbal adverbs (German *Verbaladverb*) already in the 19th century (e.g. Wiedemann 1884: 176–179).

It appears that consistent attempts to define non-finites by their word-classes have not taken place before the 1990's and Martin Haspelmath in particular. After having published papers on participles (1994) and converbs (1995a, 1995b), Haspelmath has continued defining them uniformly within a more theoretical framework. In his 1996 paper, he presents the notion of **word-class-changing inflection** as a partial answer to the problematic dichotomy between the traditional ideas of inflection and derivation. In contrast to the present consensus, he argues that inflection, too, can be word-class-changing (or *transpositional*), a view already present in the writings of Charles Bally and Lucien Tesnière in the first half of the 20th century (Haspelmath 1996: 50).

In short, action nominals, participles and converbs are seen as inflectional verb forms that simultaneously belong to the word-classes of nouns, adjectives and adverbs, respectively. They are considered inflectional on the basis that their formation is (nearly) completely regular, general and productive (Haspelmath 1996: 47); however, they have morphological and syntactic properties of word-classes other than verbs, and in this sense they can be analyzed as having acquired a new word-class membership. The reason to regard them as verb forms at the same time is that they preserve the "lexeme word-class" which determines the **internal syntax** of the phrase (or clause) headed by a non-finite; at the same time, however, the **external syntax**—the syntactic status of the non-finite outside its phrase—depends on its new "word-form word-class" (p. 52). In example (2) from Lezgian, the action nominal has the internal syntax of a verb (i.e., it governs the subject *wun* and the adverbial modifier *fad*), but it is a noun by its external syntax, which can be seen from the ergative case suffix required by the main predicate:

Lezgian (Haspelmath 1996: 44)

(2) *wun* *fad* *q̃araǧ*$_{V}$*-un*$_{N}$*-i* *čun* *tažub* *iji-zwa*
[you.ABS early get.up-AN-ERG] we.ABS surprise do-IMPF
'That you are getting up surprises us.'

In Haspelmath's view, the phenomenon of word-class-changing inflection is not limited to the formation of action nominals, participles and converbs, but nouns can be inflected into adjectives, adjectives into adverbs and so on. In other words, if converbs are seen as verbal adverbs, suffixes such as English *-ly* may be seen as devices to form adjectival adverbs (*beautiful*$_A$-*ly*$_{ADV}$), and Upper Sorbian possessive adjectives, for instance, are examples of nominal adjectives that preserve an internal syntax typical of nouns, e.g. attributive modifiers (Haspelmath 1996: 52). At the end of his article, Haspelmath (1996: 58–62) acknowledges that the boundaries between inflection and derivation and those between preservation and non-preservation of internal syntax are vague; furthermore, he demonstrates that the degree of inflectionality (regularity, productivity and generality) as opposed to derivationality correlates with the degree of preservation of internal syntax (for exceptions from this plausible tendency, see Koptjevskaja-Tamm 1993: 263–266). It should be noted that while action nominals are traditionally considered **de**verbal derivations, participles are still seen as part of the verbal paradigm; one important reason for this is apparently that in European languages at least, participles preserve the internal syntax of verbs (e.g. accusative objects) better than action nominals.

It might already be said at this point that it appears doubtful whether Haspelmath's ideas about word-class-changing inflection are equally applicable for defining action nominals, participles and converbs. Furthermore, it is remarkable that when defining these types of non-finites as verbal nouns, adjectives and adverbs, he does not attempt to define infinitives or their relation to the other main types in any way.

2.2 Non-finites by their syntactic functions

It was mentioned in the introduction that the traditional definition of (non-) finiteness includes the observation that unlike finite forms, non-finites do not usually function as only predicates of independent sentences. Conversely, this means that non-finites usually have other syntactic functions that might be characterized as untypical of (finite) verbs. Therefore, it is quite understandable that such non-predicative verb forms have been further subdivided with reference to the various non-predicative functions they have.

One of the surprisingly few authors who define more than one subcategory of non-finites solely in terms of their syntactic functions is Igor' V. Nedjalkov (1998). He distinguishes only three main types of non-finites: (i)

the participle, a non-finite used in the attributive function, (ii) the converb, used in the adverbial function and (iii) the infinitive, used in the object function in complement clauses (I.V. Nedjalkov 1998: 421–422; see also V.P. Nedjalkov 1995: 97). It is noteworthy that this division is much in line with the common practice of subdividing finite subordinate clauses into relative clauses, adverbial clauses and complement clauses (e.g. in Shopen 1985b and the Croom Helm and Routledge descriptive grammars). Neither is it uncommon to regard participial, converbal and infinitival constructions as corresponding non-finite clauses. Table 1 provisionally describes functional interrelations between these three types of non-finites and their finite counterparts. It is not supposed to provide new information but only to explicate what seem to be some of the common but often implicit assumptions about their functions:

Non-finite verb form:	participle	converb	infinitive
(Finite) subordinate clause:	relative clause	adverbial clause	complement clause
Syntactic function:	attribute	adverbial	object

Table 1. The main functions of participles, converbs and infinitives (according to Nedjalkov 1998: 421–422) and their finite counterparts (to be revised in Tables 3 and 4)

At first sight, there does not appear to be much difference whether participles are defined as verbal adjectives or as attributes, i.e. as non-finites used in similar noun-modifying functions as underived adjectives. In the same vein, it might seem obvious that a *verbal adverb* means more or less the same as a verb form that adverbially modifies a verb or a whole clause. However, in comparison to the word-class approach to non-finites, in the functional approach it is not infinitives but action nominals that are left outside the otherwise neat division in Table 1.

In the sections that follow, I will attempt to find solutions to the partial incompatibility between these two approaches. In other words, I am trying to find a point of view from which all four main types—and some less typical non-finites in addition—can be seen as forming a more or less coherent system of non-finites. As will become clear in the next section, a great deal of confusion has resulted from mixing word-class-based definitions with functional (syntactic) approaches to non-finites, although it is clear that these two approaches are interconnected in many respects.

3. Problems and inaccuracies resulting from mixing the two approaches to non-finites

In the preceding section, two different approaches to define non-finites were shortly described, and it was seen that both the word-class approach and the functional approach leave out one of the four main types, i.e. infinitives and action nominals, respectively. The asymmetry between these two approaches appears to have remained unnoticed in earlier literature. However, there have been attempts to apply both approaches simultaneously; in fact, it seems that in quite a few definitions of non-finites found in recent typological studies, these approaches are to some extent mixed. In my view, this has led to inaccuracies that hinder us from seeing some quite systematic interrelations between these main types of non-finites. It will be argued below that there is too strong a tendency to think that the word-class of a given non-finite can be deduced solely from its syntactic functions; or vice versa, conclusions about the functions of particular non-finites are sometimes drawn from their having already been defined in terms of their new "word-form word-class."

It was mentioned in the previous section that Haspelmath (1994, 1995a, 1996) defines action nominals as verbal nouns, participles as verbal adjectives, and converbs as verbal adverbs. To be precise, it must be added that he actually defines these categories by their syntactic functions as well. According to Haspelmath (1995a: 3), "Table [2] shows the parallels between the three types of derived verb forms that are used when the verb is used in a non-prototypical syntactic function":

Word class:	Noun	Adjective	Adverb
Derived verb form:	masdar (= verbal noun)	participle (= verbal adjective)	converb (= verbal adverb)
Syntactic function:	argument	adnominal modifier	adverbial modifier

Table 2. Derived verb forms with different word class status (Haspelmath 1995a: 4; to be revised in Tables 3 and 4)

In the following, I do not intend to go into details of various problems of identifying and defining word-classes either language-internally or universally. Word-classes may be defined by various (phonological, morphological, syntactic, semantic, pragmatic or ontological) criteria, often by combining two or more of them to characterize prototypical representatives of different word-

classes. In the functional-typological framework, it is customary to highlight the importance of morphosyntactic and semantic criteria (e.g. Sasse 1993: 647–651; Pajunen 1998: 60–61). As I will confine my remarks to predominantly synthetic, suffixal Uralic and Indo-European languages spoken in Europe, I presuppose—in accordance with the traditional view—that these languages have separate word-classes of at least verbs, nouns, adjectives and adverbs, which is a prerequisite to assuming that there might be **verbal** nouns, adjectives and adverbs in a language (cf. Haspelmath 1994: 152).

As was noted earlier, I will concentrate on examining the definitions and interrelations of action nominals, converbs and infinitives. Participles will be discussed less extensively in Sections 4.5, 5 and 6. For now, it is enough to say that I agree with Haspelmath (1994, 1995a and 1996), Koptjevskaja-Tamm (1993: 42) and many others that participles are used mainly in a noun-modifying, attributive function and that they have additional features that make it plausible to characterize them as verbal adjectives (e.g. word order position and case/number/gender agreement with the head noun). It is, however, doubtful whether an attributive use of a non-finite alone is a sufficient reason to label it a verbal adjective; I will return to this in Section 6.

3.1 Action nominals

Action nominals (action nominalizations, *masdars*, *nomina actionis*; *gerunds* in the Latin and English sense) are, by definition, verbal nouns, i.e. nominalized verbs that denote actions or processes. To continue speaking of idealized main types of non-finites, I mean by action nominals such (nearly) fully productive and regular forms that have basically all the morphological and syntactic properties of prototypical nouns. Admittedly, there are different kinds of deviations from this ideal, such as the Latin gerund in *-nd-*, which does not have a nominative form, or the Korean and Mongolian action nominals, which lack genitive forms. The non-existence of some case forms (e.g. genitive) or number marking of action nominals may sometimes result from the fact that they are semantically impossible or inapplicable (Koptjevskaja-Tamm 1993: 37–38). Furthermore, I wish to emphasize that in contrast to authors like Koptjevskaja-Tamm (1993), I do not use the term *action nominal* to refer to such more or less idiosyncratically derived deverbal nouns as the English *destruction*, *collapse* or *discovery* (cf. Koptjevskaja-Tamm 1993: 3–6); in this paper, the term refers to forms such as the English gerund in *-ing* and its equivalents in other languages.

One could imagine that it is not difficult to describe the syntactic functions of prototypical or ideal (and often actual) action nominals. However, it seems to be a widespread practice that verbal nouns are described as functioning as arguments only. One of the most explicit statements of this view is made by Haspelmath when explaining why his definition of converb includes the notion of *adverbial* (cf. Table 2):

> The definitional criterion 'adverbial (subordination)' is primarily intended to exclude **masdars/verbal nouns (nonfinite verb forms specialized for argument subordination, or complementation)** and participles (nonfinite verb forms specialized for adnominal subordination). (Haspelmath 1995a: 7; emphasis mine.)

Similarly, when defining converbs, van der Auwera (1998b: 278) refers to the feature [±argumental] that separates action nominals from non-argumental converbs. V.P. Nedjalkov (1995: 97), in turn, asserts that an action nominal ("gerund," "a deverbal noun that is part of the system of verb forms") occupies the positions "of a nominal actant," i.e. subject and object positions. Similar ideas can be inferred also from Noonan (1985: 60–62, 65), as he describes the use of action nominals as complements only.

It should naturally be obvious that nouns function not only as arguments but in other positions as well. Perhaps the most important "additional" function of action nominals is that they can be used as free adverbial modifiers, because they usually inflect for all cases and function as complements of all adpositions. The action nominals in (1d) and (2) occur in argument (subject) positions. The action nominal constructions in (3–4) serve to demonstrate the less emphasized functions of action nominals:

Lezgian (Haspelmath 1993: 389, 391–392; 1995a: 39–40)

(3) *Wiči-n wezifa-jar haq̃isağwile-ldi tamamar-uni-z kiligna*
[self-GEN duty-PL conscientiousness-SRDIR fulfill-AN-DAT because]
kawxadi-z xürü-n žemätdi-n arada jeke hürmet
chairman-DAT village-GEN people-GEN among big respect
awa-j.
be.in-PAST
'Since he fulfilled his duties conscientiously, the chairman enjoyed great respect among the villagers.'

(4) *Ada-z Ali amuq'-un patal wuč iji-da-t'a či-zwa-č-ir.*
he-DAT [[Ali stay-AN for] what do-FUT-COND] know-IMPF-NEG-PAST
'He didn't know what to do in order for Ali to stay.'

What makes the above definitions even more curious is that it is well known that adverbial action nominal constructions such as in (3–4) exist and that it is widely recognized that converb forms—adverbial by definition—tend to develop from adverbially used action nominals (Koptjevskaja-Tamm 1993: 44; Haspelmath 1995a: 49; 1999: 114; Tikkanen 2001: 1121). In the light of (3–4), it ought to be clear that the bottom line in Table 2 should be revised so that action nominals are indicated to have syntactic functions of not only arguments but of adverbial modifiers as well. This, of course, renders the parallels (between action nominals, participles and converbs) that Table 2 is intended to demonstrate somewhat dubious. Moreover, the practice of describing action nominals as "argumental" non-finites has had problematic effects on attempts to understand the interrelations between infinitives and other non-finites.

3.2 Converbs

The definitions of converbs abound with terms such as *verbal adverb*, *adverbial participle*, *adverbial verb form*, *adverbial modifier*, *adverbial subordination* and *adverbial functions*, and there are some quite straightforward statements that the word-class status of a non-finite can be inferred from its syntactic functions:

> Care should be taken to distinguish participles (= inflectional verbal adjectives) . . . from verb forms used for adverbial subordination, **i.e.** verbal adverbs (Haspelmath 1994: 153; emphasis mine.)

> A converb is defined here as *a nonfinite verb form whose main function is to mark adverbial subordination*. **Another way of putting it** is that converbs are verbal adverbs, just like participles are verbal adjectives. (Haspelmath 1995a: 3; emphasis in bold mine.)

It should be clear that an adverbial modifying function alone does not result in a word-class status of an adverb, although definitions of adverbs are usually based on their syntactic functions to a much greater degree than definitions of verbs, nouns or adjectives (Sasse 1993: 664). The so-called adverbial positions in a sentence may be occupied by nouns in adverbial case forms, adpositional phrases and finite adverbial clauses as well, and their semantic functions (as modifiers of time, manner and place etc.) are approximately the same as those of true, normally inflexible adverbs (*here*, *now*, *yesterday*, *well* etc.), which in turn are often labeled adverbs only for lack of reasons to regard them as members of any other word-class (cf. Sasse 1993: 664; van der Auwera 1999:

8). It is regrettable that many of the misstatements concerning the notion of *adverbial* seem to result from its multiple meanings, referring to a syntactic function (comparable to e.g. *subject* or *attribute*) on the one hand, and to similarity or identity with the word-class of adverbs (cf. *nominal* or *adjectival*) on the other.

Even though action nominals and participles can be considered verb forms that have an external syntax typical of nouns and adjectives, respectively, it appears more difficult to defend the view that converbs possess properties allowing them to be characterized as verbal adverbs. After all, it is not clear whether adverbs as a word-class have any specific morphological or syntactic properties (besides the lack or scarcity of inflection) that distinguish them from other constituents in adverbial positions. The most important reason to view converbs as verbal adverbs appears to be the desire to see them as analogues to verbal nouns and verbal adjectives, which are much better established (see Section 6). Furthermore, the definitions of adverbs (or adverbials, for that matter) represent a paradigm example of a definition whose circularity is widely acknowledged and still accepted: adverbs are repeatedly said to modify "non-nouns," i.e. verbs, entire clauses, adjectives **and adverbs** (e.g. Schachter 1985: 20; Sasse 1993: 663; Ramat and Ricca 1994: 290, 307; van der Auwera 1999: 9). Thus, the term *verbal adverb* does not suffice to specify that the non-finites in question are practically modifiers of verbs, VPs or entire clauses, but not of adjectives or adverbs. (In the following, *adverbial* is used to denote "ad-verbial" and "ad-sentential" syntactic functions only.)

3.3 Infinitives

In spite of the traditional idea of infinitives as part of the so-called non-finite or **nominal** verb forms, they have not been labeled verbal nouns in recent typological literature. This appears to be a correct decision as the "verbal noun slot" (as in Table 2) is, in a sense, better reserved for action nominals, which have essentially all morphological and syntactic properties of nouns, whereas infinitives generally lack such properties (e.g. case inflection; see also Koptjevskaja-Tamm 1993: 36–37). It is, however, somewhat dissatisfying to think that the infinitive is the only main type of non-finites that does not have a new word-form word-class and that, accordingly, one should be led to conclude that only infinitives must be classified as verbs and verbs only (besides Haspelmath 1995a, 1996, see Noonan 1985: 65). When it comes to more functional approaches to non-finites, the definitions of infinitives and

action nominals look very much alike, to a degree that rather obscure statements have arisen about the mutual relations of action nominals, converbs and infinitives. — These problems will be discussed more thoroughly in the following section.

It was mentioned above that I.V. Nedjalkov (1998: 421–422) considers the infinitive one of the three main types of non-finites, and according to his functional definition infinitives are used as objects, i.e. in complement clauses. Other authors hold very similar views: In his cross-linguistic study of infinitives, Haspelmath (1989) does not present an exact definition of the infinitive, but in his view infinitives tend to originate from purposive (adverbial) verb forms that are gradually used in different kinds of complement clauses, as complements of manipulative verbs ('order', 'cause'), desiderative verbs ('want', 'prefer'), modal predicates ('be able', 'have to'), evaluative predicates ('interesting', 'funny'), and later in the grammaticalization process as complements of verbs of thinking ('seem', 'believe'), utterance ('say', 'claim') and cognition ('know', 'realize') (Haspelmath 1989: 298–299). In the same vein, Koptjevskaja-Tamm (1993: 44) states that cross-linguistically infinitives occur as complements of manipulative and desiderative verbs, and according to V.P. Nedjalkov (1995: 97) infinitives typically function as "clausal actants" of such verbs as *begin*, *order*, etc. Thus, the Hungarian infinitive, occurring as a complement of the verbs *akar* 'want' and *kezd* 'begin' in (1a), can be considered a typical infinitive.

Complement clauses—both finite and non-finite—are often understood as objects, but it is also common to acknowledge that there are other argumental positions where very similar clauses occur. When discussing sentential complementation, Noonan (1985: 42) states that complementation is

> the syntactic situation that arises when a notional sentence or predication is an argument of a predicate. For our purposes, a predication can be viewed as an argument of a predicate if it functions as the subject or object of that predicate.

However, it should be noted that many adverbials, too, can be regarded as arguments in the sense that they are **obligatory** dependents without which sentences may be considered ungrammatical or at least elliptical, e.g. *?John went* vs. *John went* ***home ~ to sleep*** (cf. Itkonen 2001: 320–322). It will be demonstrated in Section 4.3 that infinitives are best defined as non-finites that are used in various argumental functions, including obligatory adverbials. It is also notable that when converbs are defined as *adverbial*, the term is constantly —though implicitly—used to refer to **free** adverbial modifiers, i.e. **adjuncts**.

Although the boundaries between arguments and adjuncts are by no means clear-cut, it appears that it is *obligatoriness* (or van der Auwera's [1998b: 278] feature [±argumental]) that best characterizes the difference between the traditional notion of infinitive and the more recent notion of converb. Adopting this view, I wish to discard the completely unrelated view that the difference between infinitives and converbs could be described in terms of word-class membership (i.e. verbs vs. verbal adverbs).[1] Furthermore, it appears that the functional approach is much more applicable than the word-class approach also when the mutual relations of infinitives, converbs and other non-finites are examined from a more diachronic perspective.

To conclude this section, I present a preliminary revision and combination of Tables 1 and 2. Table 3 takes into account all four main types of non-finites. According to what has been argued above, it is the infinitives and not the action nominals that are presented as "argumental" non-finites. It would be superfluous to specify functions of action nominals as they are completely deducible from the fact that action nominals are verbal nouns and, accordingly, have essentially **all** the functions of underived nouns. On the other hand, both the infinitive and the converb are defined only in terms of their complementary syntactic functions, and they are left without designation of new, non-verbal word-classes:

Non-finite verb form:	infinitive	converb	participle	action nominal
Syntactic function:	argument (= subject, object, obligatory adverbial)	(free) adverbial (= adjunct)	attribute	—
"New word-class":	—	—	adjective	noun

Table 3. The four main types of non-finite verb forms, their syntactic functions and "new word-classes" (revision of Tables 1 and 2, to be further revised in Table 4)

The contents of Table 3 will be scrutinized in more detail in the sections that follow. Diachronic development of various non-finites in Uralic and Indo-

[1] Although it appears that no one has expressed such a view explicitly, see e.g. Noonan (1985: 65) and Koptjevskaja-Tamm (1993: 25).

European languages of Europe will be used to demonstrate that there is a cross-linguistic tendency for case-marked verbal nouns to develop into various new non-finites that usually fit the more or less established concepts of infinitives and converbs. Deviations from these main types are easily defined with reference to their syntactic functions.

4. On definitions and interrelations of action nominals, converbs and infinitives with reference to Uralic and Indo-European languages of Europe

4.1 The functions of action nominals distribute over infinitives and converbs

In this section, I continue to comment, clarify and refine some of the recent statements concerning the mutual relations of action nominals, infinitives and converbs. The following quotations will help to understand my argumentation:

> . . . the verb forms called *infinitive* in most European and many other languages do have a specific form and a specific meaning (Haspelmath 1989). Infinitives are generally used (a) in complement clauses with (roughly) irrealis meaning and (b) in purpose clauses. . . . One important function of infinitives is to mark (purposive) adverbial subordination. . . . Thus, should we say that an infinitive is a kind of converb? Probably not. The best-known infinitives, those of European languages, lack one crucial converb property: these **infinitives are not used primarily for adverbial subordination, but their primary use is in complement clauses**. Evidently, we are dealing here with a continuum of grammaticalization: erstwhile purposive forms are increasingly used in a nonadverbial complement function. The more a purposive form moves away from its original adverbial function, the less it can be regarded as a converb. (Haspelmath 1995a: 28; emphasis mine.)

> V.P. Nedjalkov and I.V. Nedjalkov [1987[2]] say explicitly that a converb is not an infinitive. Haspelmath (1995: 28) would agree, but his claim that the category of infinitive is not on a par with *masdar*, participle and converb is convincing: **the functions of infinitives distribute over *masdars* and converbs**. (van der Auwera 1998b: 275; emphasis mine.)

[2] Nedjalkov and Nedjalkov (1987: 75) argue that a prototypical converb, among other things, "does not occur in the position . . . of the predicate actant," which is the canonical position of a prototypical infinitive (cf. V.P. Nedjalkov 1995: 97; van der Auwera 1998b: 274).

In other words, Haspelmath (1995a: 28) states that (i) converbs function as adverbials and (ii) infinitives function mainly as complements and, to a lesser extent, as adverbials expressing purpose. Furthermore, it is this latter function of a purposive verb form (or a purposive converb) where true, complemental infinitives often originate. Haspelmath does not really discuss action nominals in this connection, but van der Auwera (1998b: 275) seems to interpret him as if he defined converbs as adverbials, action nominals as complements, and infinitives as both complements and adverbials. — Recall that van der Auwera (p. 278) defines action nominals as having the feature [+argumental], thus accepting Haspelmath's (1995a: 7) view that they are non-finites "specialized for argument subordination, or complementation" (see Section 3.1). One could suspect whether Haspelmath (1995a) is really claiming that infinitives are "not on a par" with other non-finites as van der Auwera sees it. However, in a later paper on converbs he indeed appears to hold this opinion:

> The *converb* is best defined here as 'a non-finite verb form whose main function is to mark adverbial subordination' . . . In being an adverbial verb form, it contrasts with three other main kinds of non-finite verb forms: participles (i.e. adjectival verb forms used in relative clauses), verbal nouns (nominal verb forms used in complement clauses or noun clauses[3]), and **infinitives** (which **are typically intermediate between verbal nouns and converbs in that they occur both in complement clauses and adverbial clauses of purpose**, cf. Haspelmath 1989). (Haspelmath 1999: 111; emphasis mine.)

In the following, I aim to argue for a nearly opposite view on the interrelations of these forms. More specifically, I wish to demonstrate that, contrary to van der Auwera's (1998b: 275) claim that "the functions of infinitives distribute over *masdars* [= action nominals] and converbs," it is more reasonable to say that **the functions of action nominals distribute over infinitives and converbs**, and furthermore, at least from a panchronic perspective to non-finites, it is the category of action nominals that appears not to be on a par with infinitives and converbs.

Although nominal functions of action nominals have already been presented in examples (1d) and (2–4) from Hungarian and Lezgian, sentences

[3] The mention of *noun clauses* here might be taken as referring to the use of NP-like action nominal constructions in non-argument (= adverbial) functions, too. However, Haspelmath does not in any way spell out this possibility, and it would clearly contradict his earlier statements about the functions of action nominals (cf. Section 3).

(5–6) exemplify the use of the Komi action nominal in *-öm*, a descendant of the supposedly Proto-Uralic action nominal in **-mA*:

Komi (KomiLuke 7:45)

(5) *sijö menam lokt-öm-s'an'-öj ez na dugdyv*
s/he [I.GEN come-AN-EGR-1SG] NEG.PAST.3SG yet cease.CONNEG
kok-ös okal-öm-ys'.
[feet-ACC.1SG kiss-AN-ELA]
'She, since I came in, has not ceased to kiss my feet.'

Komi (KomiJohn 11:31)

(6) *Mar'ja-lys' termas'-ömön mödödts'-öm-sö addz-öm böryn*
[[Mary-ABL hurry-CONV leave-AN-ACC.3SG] see-AN after]
jevr'ej-jas tšötš pet-i-sny börs'a-ys.
jew-PL immediately go-PAST-3PL after-3SG
'After seeing Mary leave hurriedly, the Jews followed her immediately.'
lit. "After seeing Mary's leaving hurrying, ..."

In Komi, as in many Uralic and Turkic languages of easternmost Europe, the action nominal constructions constitute an important part of clausal subordination. The action nominal in *-öm* is a fully productive verbal noun that preserves the internal syntax of verbs to the extent that it takes accusative objects (*kok**ös*** [5], *mödödts'öm**sö*** [6]) and adverbial modifiers (*termas'ömön* [6]), even though the "subject" is usually marked with the genitive or ablative case or a possessive suffix on the action nominal itself (***menam*** *loktöms'an'**öj*** [5], *Mar'ja**lys'*** . . . *mödödts'öm**sö*** [6]).[4] The most important thing to note about these examples is that action nominal constructions function as objects (accusative *mödödts'öm**sö***), as obligatory adverbials (elative *okalöm**ys'***) and as optional, free adverbials (egressive *loktöms'**an'**öj*, adpositional *addzöm **böryn***). As can be inferred from the English translation of (5), *kokös okalömys'* may be equated with infinitives, i.e. non-finites that are used primarily for complementation. If the governing clauses *sijö . . . ez na dugdyv* or *She has*

[4] Nominative "subjects" of the *-öm* form are also possible, e.g. *ves'kydlun verm-öm-ödz* [righteousness win-AN-TERM] 'until the victory of righteousness' = 'until righteousness wins' and *petuk-ys kytsas'-öm-ödz* [rooster-NOM.3SG crow-AN-TERM] 'until the rooster crows' (7a; Ylikoski 2001: 211, 221–222 n. 11). The ablative case (*Mar'ja**lys'*** in [6]) is used when the head noun (accusative-marked *mödödts'öm**sö***) is the object of the main predicate; this kind of complementarity resembles ordinary NPs in object positions, where the ablative case replaces the otherwise genitive-marked possessor (e.g. Bartens 2000: 93–94).

not ceased were left without their non-finite complements, they would remain more or less elliptical.

4.2 Converbs

The optional action nominal constructions *menam loktöms'an'öj* in (5) and *Mar'jalys' termas'ömön mödödts'ömsö addzöm böryn* in (6) functionally resemble converbal constructions where non-finite heads are more or less opaque forms committed to particular adverbial subordinating functions. It is, in principle, possible to replace *addzöm böryn* with an obsolete and dialectal converb in *-mys't*; *addzöm böryn* and the converbal *addzymys't* have identical meanings of anteriority (‘after seeing’). The egressive action nominal form *loktöms'an'öj* expresses the interpropositional relation labeled as ‘since’-Anteriority (I.V. Nedjalkov 1998) or *Terminus a quo* (Kortmann 1997; 1998). Its semantic counterparts, *Terminus ad quem* (‘until’) and Posteriority (‘before’), can be expressed either by transparently case-marked action nominals (7a) or by opaque converbs (7b):[5]

Komi Permyak (IO p. 55, KomiPMatthew 26:75)

(7) a. *petuk-ys* *kytsas'-öm-ödz* *te* *kuim-is'* *ötkažitts'-an*
[rooster-NOM.3SG crow-AN-TERM] you 3-ELA renounce-FUT.2SG
me *dynis'*.
I from

b. *petuk* *kytsas'-tödz* *kuim-is'* *te* *me* *dynis'* *sus'kis'-an.*
[rooster crow-CONV] 3-ELA you I from renounce-FUT.2SG
‘Before the rooster crows, you will deny me three times.’

Furthermore, *termas'ömön* in (6) could in principle be analyzed as an action nominal (*-öm*) in the instrumental case (*-ön*), although the formation in *-ömön* has otherwise acquired additional semantic functions that exceed the meaning of plain nouns in the instrumental case, and consequently, forms like *termas'ömön* can be considered converbs as well (Fokos-Fuchs 1958: 284–287; Ylikoski 2001: 206–207).

[5] Here, as elsewhere in this paper, the term *opaque* refers to the opacity of a non-finite marker in itself, even though its relation to the verb stem may be quite straightforward. Likewise, a non-finite construction is said to be *transparent* when the combination of an action nominal marker and a case suffix attached to it is morphologically and semantically transparent.

The following Bible verse is a particularly illustrative example of the fact that the syntactic functions of converbs are exact equivalents of adverbially used verbal nouns **and** underived nouns (such as proper names) alike:

Komi (KomiMatthew 1:17; also Ylikoski 2001: 212)

(8) *tadzi Övram-s'an' David-ödz dzon'nas das n'ol' ts'užanvuž.*
so Abraham-EGR David-TERM totally 14 generation
Vavilon mu-ö vötly-tödz David-s'an' das n'ol' ts'užanvuž.
[Babylon land-ILL exile-CONV] David-EGR 14 generation
Vavilon mu-ö vötl-öm-s'an' Kristos-ödz bara das n'ol'
[Babylon land-ILL exile-AN-EGR] Christ-TERM again 14
ts'užanvuž.
generation
'So from Abraham to David there are fourteen generations; and from David until the carrying away into Babylon there are fourteen generations; and from the carrying away into Babylon to Christ there are fourteen generations.'

Again, the converb in *-tödz* (*vötlytödz*) is interchangeable with an action nominal with the terminative case suffix (cf. 7a–b; see Ylikoski 2001: 212, 222 n. 13). In fact, the formation in *-tödz* itself consists of an earlier verbal noun in **-t* followed by the terminative suffix *-ödz* (see e.g. Fokos-Fuchs 1958: 295–299). However, as **-t* is not a productive suffix any longer, *-tödz* must be analyzed as an opaque, indivisible converb marker.

Morphological, syntactic and semantic similarities between case-suffixed nouns, action nominals and converbs abound in many Uralic languages as new converbal forms seem to be constantly developing from nominally inflected action nominals. As a result, many of the converbs retain traces of their origin so that the boundaries between action nominal constructions and converbs remain vague. The most common types of Finnish converbal forms can be seen in the following "minimal sextet":

Finnish (Nikanne 1997: 338)

(9) *Pekka tek-i rikokse-n ...*
Pekka make-PAST.3SG crime-GEN
'Pekka committed a crime ... '

a. ***juo-malla*** *olut-ta.*
[drink-conv(“3INF.ADE”) beer-PART]
‘Pekka committed a crime **by drinking** beer.’

b. ***juo-matta*** *olut-ta.*
[drink-conv(“3INF.ABE”) beer-PART]
‘Pekka committed a crime **without drinking** beer.’

c. ***juo-dessa-an*** *olut-ta.*
[drink-CONV(“2INF.INE”)-3SG beer-PART]
‘Pekka committed a crime **while drinking** beer.’

d. ***juo-den*** *olut-ta.*
[drink-CONV(“2INF.INS”) beer-PART]
‘Pekka committed a crime **drinking** beer.’

e. ***juo-dakse-en*** *olut-ta.*
[drink-CONV(“1INF.TRA”)-3SG beer-PART]
‘Pekka committed a crime **in order to drink** beer.’

f. ***juo-tua-an*** *olut-ta.*
[drink-CONV(“PTCP.PASS.PAST&PART”)-3SG beer-PART]
‘Pekka committed a crime **after drinking** beer.’

To begin with, it should be noted that the term *infinitive* in traditional Finnish grammar refers to certain historical-morphological groupings of various non-finites, not merely to the complemental non-finites, i.e. infinitives in the generally accepted sense of the word. The so-called adessive and abessive forms of the third infinitive (9a–b) are not perceived as instances of action nominals, although it is evident that morphologically they consist of the component *-mA-* followed by nominal case endings. Unlike the true action nominal in *-minen*, the third infinitive “inflects” only for five or six of more than a dozen cases in Finnish.[6] The so-called second infinitive forms (9c–d) are

[6] In addition to the adessive (*-mAllA*, 9a) and abessive (*-mAttA*, 9b) forms of the third infinitive, the illative (*-mAAn*), elative (*-mAstA*) and inessive (*-mAssA*) forms will be discussed in Sections 4.3 and 4.4. The so-called instructive form of the third infinitive occurs only as a complement for the verb *pitää* ‘must, have to’ in the obsolete/dialectal construction type exemplified by (i):

(i) *Sinu-n* *ei* *pidä* *juo-man* *olut-ta.*
you-GEN NEG.3SG must.CONNEG drink-“3INF.INS” beer-PART
‘Thou shalt not drink beer.’

The instructive case in Finnish is a productive category in plural only; the non-finite in *-mAn*, however, is historically an instructive singular form. The existence of the *-mAn* form

a bit more opaque, as there are only two case endings which are attached to a morphophonologically less salient element *-te- (~ -de- ~ -e- ~ -re- ~ -le- ~ -ne-)*, and roughly the same applies to the purposive converb or "the first infinitive translative" in (9e). Moreover, linguistically untrained speakers scarcely analyze the *-n* in (9d) as the instructive singular case suffix, an otherwise unproductive inflectional category in the language. The anterior converb in (9f) can be considered a completely opaque converb. Even though it can be said to consist of the passive past participle (*-tU*) followed by the partitive case suffix (*-A*), its meaning is hardly related to those of passive participles or the partitive case (Nikanne 1997: 345–346). Like *kytsas'tödz* and *kytsas'ömödz* in (7) or *vötlytödz* and *vötlöms'an'* in (8), the Finnish converbs in (9a–f) modify the main clause in a way that resembles both ordinary NPs and finite adverbial clauses; they, too, can express time (9c, f), means or manner (9a, d), purpose (9e) or lack of certain circumstances (9b).

To return to the claim that converbs are verbal adverbs, it must be admitted that in languages like Komi and Finnish, there are plenty of true adverbs that could be used in place of the converbal constructions in (7–9). Nevertheless, compared to verbs, nouns or adjectives, adverbs are a heterogeneous and less open word-class in both languages and they do not appear to have special morphological, syntactic or semantic properties that would give reason to say that converbs are verbal adverbs. In fact, if converbs should be labeled as verbal adverbs only because they can be said to function as adverbial modifiers, there would not be many reasons for not labeling ordinary case-inflected nouns like *Övrams'an'* 'since Abraham' or *Davidödz* 'until David' in (8) as "nominal adverbs," a solution that would not make much sense (cf. Ramat and Ricca 1994: 301–303). Similarly, the converb form *sahaamalla* 'by sawing' in (10) is hardly more of an adverb than *sahalla* 'with a saw', the adessive form of the noun *saha* 'saw':

(10) *Pekka pieni halo-t sahaa-malla ~ saha-lla.*
Pekka make.small.PAST.3SG firewood-PL saw[V]-CONV saw[N]-ADE
'Pekka cut the firewood by sawing them ~ with a saw.'

—and its passive variant *-tA-mAn*—is a further reason to consider the forms in *-mA* separate from verbal nouns.

4.3 Infinitives

In Section 3.3, especially in Table 3, infinitives were defined as non-finites used as arguments, whereas converbs were said to be **optional** adverbial modifiers. It was emphasized that many so-called adverbials, too, are obligatory arguments without which a sentence would remain ungrammatical, and *kokös okalömys'* [feet.ACC.1SG kiss.AN.ELA] 'from kissing my feet' in (5) was seen as an instance of the obligatory action nominal constructions that correspond to opaque infinitives in other languages. It ought to be evident that in actual language use, obligatory and optional adverbials cannot be distinguished in absolute terms; various contextual and pragmatic factors together with world knowledge make it possible to produce, understand and accept highly elliptical utterances. Nevertheless, it appears intuitively obvious that sentences like *?Pekka began*, *?Pekka wanted*, *?Pekka ceased*, and *?Pekka went* are less complete than *Pekka committed a crime* or *Pekka cut the firewood*.

It has already been mentioned that Haspelmath (1995a: 28; 1999: 111) defines infinitives as having typically two separate functions: in addition to their primary use as complements, they are often used as adverbial modifiers to express purpose. Van der Auwera (1998b: 275) seems to approve of this view, and due to their purposive functions, Haspelmath and van der Auwera regard infinitives as "distributing over" or "intermediate between" action nominals and converbs. Haspelmath (1995a: 28; 1999: 111) refers to his 1989 paper where he shows that cross-linguistically, primarily complemental infinitives tend to develop from purposive non-finites. According to Haspelmath (1989: 289), the first step in the grammaticalization process is that the "local allative meaning" of a non-finite construction is extended so that the non-finite can be analyzed as having a purposive meaning as well:

(Haspelmath 1989: 289)

(11) a. *Mary went to Sabina's apartment.*
b. *Mary went to take photos of Sabina.*
c. *Mary bought a camera to take photos of Sabina.*

Haspelmath acknowledges that *to take photos of Sabina* in (11b) is partly locative in meaning, expressing the direction of motion (comparable to the *to*-phrase in 11a) whereas in (11c), the non-finite construction cannot be thought of as a directional, but merely as a purposive modifier. Having presented these examples, however, Haspelmath does not refer to the differences between

directional-purposive and purely purposive non-finites at all. More specifically, he does not pay any attention to the fact that even though both instances of *to take photos of Sabina* in (11b, c) may be labeled adverbial or purposive, there is an obvious difference in the well-formedness of these sentences if the infinitival clauses are omitted:

(11') b. *?Mary went.*
c. *Mary bought a camera.*

Without going into the details of the corresponding clauses in individual languages, I would like to point out that cross-linguistically, infinitives—i.e. opaque non-finites used primarily as complements of manipulative, desiderative and other "modal" verbs—are more likely to occur as somewhat obligatory directional-purposive adverbials (11b) than as clearly optional, non-directional purposives (11c). Haspelmath (1989: 302–303; 1995a: 28) does note that while acquiring more and more complemental functions, the infinitives-to-be tend to need reinforcement in order to express purpose, i.e. to be used in their original functions. This is what has happened to the *zu*-infinitive in German, for instance, which has been reinforced by *um*. Haspelmath does not, however, remark that purposive *um zu*-constructions are used almost exclusively in sentences like (11c), not as (partly directional) obligatory arguments for verbs of motion where it is more natural to use unreinforced infinitives (with or without *zu*). Likewise, in English it is much more natural to add the words *in order* to reinforce the purpose clause in (11c) than in (11b). Note, however, that it is not uncommon to have a reinforced *in order to*-clause in sentences like (11"a) where the PP *to Sabina's apartment*, in a sense, already fills the place of the directional argument of a motion verb:

(11") a. *Mary went to Sabina's apartment (in order to take photos of her).*
b. *?Mary went in order to take photos of Sabina.*
c. *Mary bought a camera in order to take photos of Sabina.*

It appears that it is precisely the optional non-directional purposive use of infinitives (as in 11c) that tends to be reinforced across languages. In addition to ***in order*** *to* and ***um*** *zu* (~ Dutch ***om*** *te*), Swedish ***för*** *att*, French *pour*, Spanish *para* and Russian *čtoby*, for instance, are used in nearly identical syntactic-semantic environments. In Uralic languages, similar reinforcements can be found in e.g. Estonian (*et* + infinitive in *-da*), Mari (*manyn* + infinitive in *-aš*), Komi (*med(ym)* + infinitive in *-ny*) and Udmurt (*šuysa* + infinitive in

-ny). It must be admitted that the actual boundary between reinforced and unreinforced infinitives or their obligatoriness/optionality remains vague. Nevertheless, it is important to note that the differentiation between directional-purposives and (non-directional) purposives has significance in other languages, too. In Finnish, a special converb form in *-tAkse-* (9e) is used in the purposive function, whereas another form, the infinitive in *-mAAn*, is used with verbs of motion as well as with many other types of verbs that typically take infinitives as their complements (see 14a, c below). In Hungarian, the infinitive in *-ni* (cf. 1a) is also used in sentences like (11b), but in sentences corresponding to (11c), it is much more appropriate to use a finite adverbial clause with the conjunction *hogy* '(in order) that' instead.

Interestingly, an analogous phenomenon can be observed in Modern Greek, a language with no infinitives. Haspelmath (1989: 305–308) presents Greek as an example of a language where the reinforcement of complement-like purposive **finite** clauses resembles the reinforcement of purposive infinitives described above. Modern Greek uses subjunctive *ná*-clauses in functions that correspond to infinitival clauses in other European languages. *ná* is a grammaticalized and reduced remnant of the earlier purposive marker *hína*, and according to Haspelmath, in order to express the original purposive meaning of *ná*-clauses, *ná* must be reinforced by the preposition *yá* (*já*) 'for'. In this context, it is intriguing to note that when describing purposive *já na*-clauses, Joseph and Philippaki-Warburton (1987: 31) add that the "particle *na*, by itself, can express purpose, **especially after verbs of motion**" (emphasis mine):

Modern Greek (Joseph and Philippaki-Warburton 1987: 31)

(12) *já na nikís-i o jánis, prép-i na min pés-i*
[for PRT win-3SG the.M John] must-3SG [PRT NEG fall-3SG]
'In order that John win, he must not fall.'

(13) *írθ-a na se voiθís-o*
come.AOR-1SG [PRT you.ACC help-1SG]
'I came (in order) to help you.'

Examples (12–13) nicely support the view that the "purposive" clauses—finite and non-finite alike—occurring with verbs of motion formally align with expressions that are regarded as complements to verbs of various modal meanings (e.g. 'must' + *na*-clause in 12, 'come' + *na*-clause in 13). The

purposive expressions that may need reinforcement are more likely to be non-directional modifiers of non-motion verbs (***já*** *na nikísi o jánis* in 12).

Similar ideas can be found in Joseph's (1983) study of the loss of infinitives in the Balkan languages; in defining the object of his study, he points out that cross-linguistically the forms called *infinitives* are often used (i) as complements of verbs (to volitional verbs in particular), (ii) as complements of adjectives (e.g. French *jolie à regarder*, English *pretty to look at*), and (iii) in expressions of purpose (Joseph 1983: 31–32). This view comes fairly close to that of Haspelmath's since according to him, typical functions of infinitives include being used as complements to modal and evaluative predicates; such predicates include both verbs and adjectives (e.g. *have to, [be] possible/able/necessary/interesting/funny*) (Haspelmath 1989: 298–299). Therefore, one can agree with both Joseph and Haspelmath and regard infinitives as non-finites that occur (i) as complements (to verbs and adjectives alike) and (ii) as purposive verb forms. I wish to define infinitives in even more abstract terms, i.e. as non-finites that function as complements, in the sense that *complement* covers obligatory or argumental adverbials as well.

After having explicated the functions that infinitives typically have, Joseph (1983: 31–32) argues that the Latin supine "may best be regarded simply as a variant form of the infinitive," the accusative supine (*-[t]um*) being used to express purpose and the ablative (*-[t]ū*) being used as complements to adjectives. Again, it is fascinating to note that the accusative supine is used with motion verbs only, i.e. in a more or less locative meaning determined by the main verb. Purely purposive clauses without restrictions concerning their main clauses must be expressed by other means, e.g. finite *ut*-clauses. Old Church Slavonic presents a related situation where, according to Joseph (1983: 103), the supine in *-tъ* may be regarded as an "allo-form" of the infinitive in *-ti*, a view already held by Meillet (1934: 242): "(le supin) n'est plus déjà qu'un doublet de l'infinitif employé après les verbes de mouvement." What Meillet and Joseph seem to have in mind is that various verb forms together can constitute a single category of infinitive. Interestingly, this suggests that there underlies a cross-linguistically valid, albeit quite abstract, syntactic-semantic concept of infinitive, which in turn is realized in individual languages either as a single form or several alloforms. This view might be useful in the analyses of various sets of non-finites in Uralic languages, too; I will return to this below.

It has happened both in Latin and Slavic that infinitives and supines have merged together by way of loss of the supines, and the infinitives taking over their functions. This appears quite natural. In addition to most Romance and

Slavic languages, there are plenty of languages that possess only one opaque non-finite that is specialized to all complemental functions in question, including the directional-purposive complements of verbs of motion. (My purpose here is not to give an exact account of how common it is for a non-finite to cover the functions of, say, the Latin non-finites in *-re*, *-tum* and *-tū*.) Although Haspelmath (1989: 288) opposes the traditional view that the infinitive is in itself quite a meaningless verb form, the semantic content of infinitives still remains vague. As complements, infinitives can be said to express various "modalities," but actually the semantic functions of infinitives are largely determined by their main verbs. Considering this, it is understandable that there is no real need for separate infinitive forms to express modalities like irrealis-directive (e.g. *want* ***to drink***), irrealis-potential (e.g. *[be] able* ***to drink***) or realis-non-factive (e.g. *seem* ***to drink***) mentioned by Haspelmath (1989: 298). Furthermore, the same appears to apply to the so-called purposive infinitives that function as complements of verbs of motion; the relation between the main verb and the infinitive (e.g. *go* ***to drink***) does not really need to be explicated (cf. German *Ich gehe (zu) trinken* where the "directional" marker *zu* is often omitted).

This brings us back to the major difference between (obligatory, complemental or argumental) infinitives and (optional, adverbial or adjunctival) converbs. Even though converbs, too, may have quite vague meanings (see e.g. König 1995; V.P. Nedjalkov 1995: 106–109; I.V. Nedjalkov 1998: 424, 432–439), it is clear that as they are supposed to express diverse interpropositional relations, one and the same form can hardly be used in too many functions. The Finnish purposive converb in (9e) is a case in point:

(9) e. *Pekka* *tek-i* *rikokse-n* *juo-dakse-en* *olut-ta.*
Pekka make-PAST.3SG crime-GEN [drink-CONV-3SG beer-PART]
'Pekka committed a crime in order to drink beer.'

The converb form *juodakseen* is needed in order to explicate that the relation between the two propositions is that of purpose and not of means, simultaneity or anteriority, for instance. It is also understandable that a special form in *-tAkse-* —and none of the non-finites specialized for complemental functions—is used to spell out the purposive relation between the two propositions conjoined. Put concretely, it may be redundant to underline the exact relation between *going* and *drinking beer* (not to speak of *wanting* and *drinking beer*) but much less so between *committing a crime* and *drinking beer*

where the purposive relation is unforeseeable (cf. 9a–f). This also explains why the only infinitive of a language often welcomes reinforcement in the purely purposive expressions (cf. ***in order*** *to* in the English translation of 9e), but not necessarily in the directional-purposive expressions.

Why, then, are there situations like those in Latin and Old Church Slavonic where the (macro-)category of the infinitive includes "alloforms" like the supines *-tum*, *-tū* (Latin) and *-tъ* (OCS)? In a way reminiscent of Haspelmath (1989: 288), I believe that the nature of these forms and their mutual relations "can best be understood if the infinitive is approached from a diachronic perspective." All these forms are considered to originate in case forms of ancient verbal nouns: like the Latin *-tum*, the OCS supine in *-tъ* probably represents the former accusative form of a verbal noun; the Latin *-tū* derives from the ablative case and the infinitive endings seem to stem from the locative (Latin *-re*) and from the dative (OCS *-ti*) forms of earlier verbal nouns (Vineis 1998: 307, 312; Lunt 2001: 247). It appears that the functions of these forms have been similar to the corresponding case forms of ordinary nouns in the beginning, but after they have been analyzed as independent verb forms, there have presumably been few reasons to have two or three opaque complementary alloforms of semantically somewhat blank infinitives.[7]

In many Uralic languages, there is a richness of non-finites that are diachronically intermediate between transparent case forms of action nominals and fully opaque infinitives or converbs. It was shown in (5–8) that the Komi action nominal in *-öm* resembles ordinary nouns in that it can be inflected for all cases, and the case forms of action nominals function as nouns usually do (cf. the egressive in 5 and 8, the elative in 5, the accusative in 6 and the terminative in 7a). The Komi action nominal has formal and functional equivalents in many related languages, but in Finnish and the other Finnic languages, the Proto-Uralic action nominals in **-mA* have survived only as some completely lexicalized deverbal nouns such as *synty-mä* 'birth' (< 'be born'), *elä-mä* 'life' (< 'live') and *juo-ma* 'drink' (< 'drink' [verb]). However, in addition to lexicalized items, the same *-mA* can be seen in at least five non-finites that have been labeled *the third infinitive* in traditional Finnish grammar. It was mentioned in Section 4.2 that "the adessive and abessive forms of the third infinitive" (*juomalla* [9a], *sahaamalla* [10] and *juomatta*

[7] Joseph (1983: 261 n. 33) adds that the Latin infinitive is, in fact, sometimes used to express purpose; again, it can be specified that the infinitive is used in directional-purposive functions only (see e.g. Palmer 1954: 319–320; Woodcock 1959: 18–19).

[9b]) are better seen as converbs rather than action nominals, let alone infinitives. Two other forms of the third infinitive—the illative (14a) and the elative (14b)—are better labeled as infinitives, however:

(14) a. *Pekka rupes-i ~ pysty-i ~ tul-i*
Pekka begin-PAST.3SG manage-PAST.3SG come-PAST.3SG
juo-maan olut-ta.
[drink-"3INF.ILL" beer-PART]
'Pekka began ~ managed ~ came to drink beer.'

b. *Pekka lakkas-i ~ kieltäyty-i*
Pekka cease-PAST.3SG refuse-PAST.3SG
juo-masta olut-ta.
[drink-"3INF.ELA" beer-PART]
'Pekka ceased ~ refused to drink beer.'

The origin of the suffix *-mAAn* is quite compatible with Haspelmath's (1989) view that infinitive forms tend to arise from purposive action nominal constructions, although there seem to be no signs of a **non-directional** purposive use of this form (cf. 9e). The infinitive in *-mAstA*, however, has developed from a nearly opposite construction ("from the act of V-ing"). In addition to Finnic languages, very similar non-finites exist in Sámi and Mordvin languages. In many Uralic languages, certain verbs implying **not** to do something (e.g. 'cease', 'refuse', 'forbid') require their complements in a case with an ablative (separative) meaning 'from'; remember example (5), where the Komi verb *dugdyny* 'cease' takes its complements in the elative case in a way that closely resembles English *cease* + *from* (i.e. *ez na dugdyv kokös **okalömys'*** translates literally as '[she] has not yet ceased **from kissing** my feet').

Komi *okalömys'* is still a fully transparent action nominal in the elative case but the corresponding forms in e.g. Finnish (*suutele-masta* < action nominal + elative), North Sámi (*cummástalla-mis* < action nominal + locative-elative) and Erzya Mordvin (*pals'e-med'e* < action nominal + ablative) have lost their noun-like transparency and/or acquired verb-like syntactic properties to the extent that it is feasible to consider them more or less independent non-

finites (see e.g. Bartens 1979: 51–54; 1999: 150–151; Ylikoski 2002: 77–82).[8] It is important to note that these new types of verb forms have been called infinitives in descriptions of Sámi and Mordvin as well: in addition to the historicizing label "*action locative,*" the Sámi non-finite in *-mis ~ -mes* has at times been called the second infinitive (example 15 below; see Ylikoski 2002: 77 and references therein), and in the descriptions of Mordvin, it is customary to speak of the third infinitive, the infinitive in *-mado ~ -modo ~ -med'e ~ -mda*, or the ablative infinitive (e.g. GMJa 1980: 270–271, 275–276; Bartens 1999: 150–151).

In other words, in descriptions of languages like Finnish, North Sámi and Erzya Mordvin, there is more than one non-finite that has been considered an infinitive. Reasons for this are often left implicit, but there appear to be indices that make it understandable and approvable to think that there are indeed several distinct infinitives in these languages, or—bearing in mind the views of Meillet (1934: 242) and Joseph (1983: 103)—"alloforms" or "doublets" of a single category of infinitive. It was noted above that in Finnish grammatical tradition, the term *infinitive* is used to refer to various non-finites, some of which could be better called converbs (see 9–10). The *infinitives* in descriptions of the Sámi and Mordvin languages, however, can be thought of as instances of infinitives in the more typological sense advocated here, i.e. as more or less opaque non-finites that are specialized for complement functions. On this account, there are two infinitives (*-t* and *-mis ~ -mes*) in North Sámi and three infinitives (*-ms*, *-mo ~ -me* and *-mado* etc.) in Erzya. In the same vein, one could say that there are possibly three true infinitives in Finnish, namely those in *-mAAn* (14a, c), *-mAstA* (14b) and *-tA* (14c below), the latter originating from a lative form of an ancient verbal noun and now an opaque infinitive form ("the shorter form of the first infinitive," held as the "basic form" of the verb). What is common to all of these non-finites is that they are used almost exclusively as obligatory complements of various verbs whose semantic equivalents tend to take "infinitives" as their complements worldwide, i.e. those listed by Haspelmath (1989: 298–299) among others (cf. above). As was discussed in connection with Latin and OCS supines, it appears that it is somewhat superfluous to have more than one infinitive in a language. Since the infinitives are quite abstract in meaning, minimal pairs with distinct

[8] There have, however, been attempts to analyze Komi forms like *okalömys'* in (5) as instances of the so-called *m*-infinitives in accordance with the third infinitive in Finnish grammatical tradition (see Ludykova 1984; Cypanov 1997: 33–34).

semantic contents are not easy to find; instead, it is not uncommon that two infinitives can occur in free variation (for similar examples in Mordvin, see Bartens 1979: 53; 1999: 150):

(14) c. *Pekka alko-i ~ ehti*
Pekka begin-PAST.3SG have.time.PAST.3SG
juo-maan ~ juo-da olut-ta.
[drink-"3INF.ILL" drink-"1INF(.LAT)" beer-PART]
'Pekka began ~ had time to drink beer.'

North Sámi
(15) *Máret vajáldahti-i lohka-t ~ lohka-mis dan girjji.*
Máret forget-PAST.3SG [read-1INF read-2INF that.GA book.GA]
'Máret forgot to read that book.'

The major difference between infinitives and converbs is clearly visible in grammatical descriptions: since infinitives are obligatory arguments required by certain verbs but not by others, it is customary—and indeed relevant—to present lists of verbs that take infinitives as their complements. This can be seen even in Finnish grammars where different usages of the infinitives in *-tA*, *-mAAn* and *-mAstA* are characterized by presenting their respective main verbs but—despite the label *infinitive*—converbs such as those in (9a–e) are most rationally described by referring to their meanings, with no attempt to enumerate the infinite number of possible main verbs (see e.g. Karlsson 1999: 183–192).[9]

In discussing common grammaticalization paths of infinitives, Haspelmath (1989: 301) refers to parallel developments in the area of nominal case markers where it is not unusual that grammatical cases stem from cases with less grammatical functions. An often-mentioned example of such

[9] The differences between ways to describe the use of obligatory infinitives and the use of optional converbs are reminiscent of standard descriptions of the infinitival constructions in Romance languages such as French: The plain (prepositionless) infinitives are simply said to occur as complements to verbs such as *laisser* 'let', *pouvoir* 'can, be able', *vouloir* 'want' and *aller* 'go' (!); *de* + infinitive is used with *cesser* 'cease', *refuser* 'refuse', *tâcher* 'try' etc., and *à* + infinitive with *chercher* 'attempt', *apprendre* 'learn', *commencer* 'begin' etc. Adverbial constructions such as *après* + infinitive ('after V-ing'), *avant de* + infinitive ('before V-ing'), *pour* + infinitive ('in order to V') and *sans* + infinitive ('without V-ing'), in turn, are efficiently described by referring to their adverbial meanings only. (For more about the untypical nature of the French infinitive, see Note 11.)

development is Spanish *a*, which has developed from a directional preposition (Latin *ad*) to mark both indirect and (specific, animate) direct objects; in the latter function, *a* is nowadays considered an accusative marker (see e.g. Haspelmath 1989: 301; Blake 1994: 173; Lehmann 1995: 110). To continue with parallels between case markers and non-finite verb forms, it is good to note that grammatical (or syntactic) cases such as nominatives, accusatives, genitives and datives do not carry their own meanings to the same extent as the so-called semantic (or concrete) cases. Moreover, just as there is little need for multiple infinitives in a language, there is, in principle, no need for a great number of "alloforms of accusatives," i.e. cases that function as second arguments of verbs. Semantic cases, on the other hand, resemble converbs in that they usually occur as adverbial modifiers and there may be a number of them, with quite specific meanings. In languages with extensive case systems, there is always a multitude of local cases (Blake 1994: 153–155). It is also noteworthy that while both infinitives and accusatives are generally described as evolving from directional expressions (Haspelmath 1989: 301; Blake 1994: 173; Lehmann 1995: 110–112), some object markers—and in this sense "accusatives"—in Finnic, Sámi and Mordvin have developed from the Uralic **ablative** in *-*tA* (see e.g. Itkonen 1972; Harris and Campbell 1995: 362–363). This, of course, closely resembles the development of elative- and ablative-marked infinitives in the same languages (14b and 15).

A further parallel to interrelations between infinitives and converbs is probably worth mentioning: Infinitives are often described as non-finite counterparts of finite complement clauses and converbs as equivalents to finite adverbial clauses (cf. Table 1 in Section 2.2). Without pursuing this matter any further, I wish to point out that it is not uncommon to refer to finite complement clauses as *that*-clauses. By comparison, none of the terms such as *while*-clause, *after*-clause, *if*-clause or *in order that*-clause is used in the general sense of "adverbial clause." Needless to say, there is a need to maintain a distinction between various adverbial conjunctions separate from each other, whereas the majority of complement clauses may be introduced by a semantically void all-purpose complementizer.

Finally, one must remember that in a natural language everything is in flux. The dichotomies between infinitives and converbs, between obligatory and optional, between arguments and adjuncts, between grammatical cases and semantic cases, and between *that*-clauses and adverbial clauses are far from clear-cut. What I have been proposing is only that the mutual relations—both synchronic and diachronic—between infinitives and converbs resemble those

of different case markers on one hand and those of different types of finite dependent clauses on the other, and that these relations might be best described in terms of relative obligatoriness vs. optionality. It still remains a fact that in many languages, expressions of purpose do formally coincide with complements (cf. 11c); possible reasons for this may be that both the adverbial purposives and the irrealis complements of manipulative and desiderative verbs such as 'order' and 'want' refer to goals to be achieved in the future. Haspelmath (1989: 299) points out that the difference between the two types is that in the latter cases the purpose element is expressed in the lexical meanings of the main verbs instead of their complements (cf. Bybee et al. 1994: 228–230). Again, it might be thought that complex clauses of the type "verb of motion + infinitive" represent an intermediate type where the directional-purposive relation between 'come' and 'drink beer', for instance, can be inferred from the meaning of the main verb as well as from the appearance of its complement.

4.4 Less prototypical non-finites developed from action nominals

An attempt to present a uniform view of action nominals, infinitives, and converbs and their interrelations should also be able to take into account certain "less prototypical" non-finite constructions that also have their origins in case-suffixed action nominals. Even though it was demonstrated by examples (14c) and (15) that different infinitives—or alloforms of a single infinitive—can occur in free variation, the Finnish infinitives in *-mAAn* (illative) and *-mAstA* (elative) are not interchangeable. Instead, they can even form a minimal pair when used in connection with verbs of motion: the sentence *Pekka tuli juomaan olutta* (14a) 'Pekka came to drink beer' clearly contrasts with *Pekka tuli juomasta olutta* 'Pekka came from drinking beer'. (Apparently, the origins of the third infinitive forms are most transparent when the main verb is a verb of motion.)

Another less typical non-finite that etymologically parallels the infinitives in *-mAAn* and *-mAstA* is the form in *-mAssA* or "the inessive form of the third infinitive," which is mainly used to form a periphrastic progressive with the verb *olla* 'be' as well as to express actions that are concomitant with the states or actions expressed by governing posture or motion verbs, e.g. *Pekka on/istuu juomassa olutta* [P. be/sit.3SG drink."3INF.INE" beer.PART] 'Pekka is/sits drinking beer'. These functions are a quite understandable outcome of an earlier action nominal in a locative case (i.e. "Pekka is/sits **in the act of**

drinking beer"), and it appears that the relative obligatoriness/optionality of these forms often depends on the presence of locative modifiers in a manner reminiscent of directional-purposive PPs and infinitives in (11a–b, 11'a and 11"a) (see Hyvärinen 1982: 74–75). If infinitives and converbs are defined only in terms of their syntactic functions (and not in terms of word-classes), it is relatively simple to define and describe forms like *-mAssA* in comparable terms.

The functional approach to non-finites also enables a more comprehensive description of forms like *-mAttA*, which can be used not only as a negative converb (a free modifier of, in principle, any well-formed sentence; see 9b), but also as a complement of verbs like *jäädä* 'stay, remain' and *jättää* 'leave' (e.g. *Pekka jätti oluen juomatta* [P. leave.PAST.3SG beer.GEN drink."3INF.ABE"]'Pekka left the beer undrunk', "Pekka left the beer without drinking") as well as with the verb *olla* 'be' to form a kind of periphrastic negation (*Pekka on tänään juomatta olutta* [P. be.3SG today drink."3INF.ABE" beer.PART] 'Pekka does not drink beer today', "Pekka is without drinking beer today").

It is fascinating to see that most of the relatively transparent forms of the Finnish third infinitive have quite opaque equivalents in North Sámi. Even though the two infinitives in *-t* and *-mis* occur in free variation with verbs such as *vajáldahttit* 'forget' (15), they can form minimal pairs when governed by verbs of motion (16a–b; cf. Finnish *-mAAn* and *-mAstA* above). There is also an opaque non-finite in *-min ~ -me(n)* whose use closely corresponds to that of Finnish *-mAssA*; it can, however, also replace the second infinitive in certain dialects and in the literary language as well (for the origins of the suffixes *-mis* and *-min*, and their relation to the action nominal in *-n ~ -(p)mi*, see e.g. Korhonen 1974 and Ylikoski 2002: 75–82):

North Sámi (16b from Sammallahti 2001)

(16) a. *Máhtte bođi-i murje-t.*
Máhtte come-PAST.3SG pick.berries-1INF
'Máhtte came to pick berries.'

b. *Máhtte bođi-i murje-mis ~ murje-me.*
Máhtte come-PAST.3SG pick.berries-2INF pick.berries-MIN
'Máhtte came back from picking berries.'

As the non-finite in *-min ~ -me(n)* can also appear as a complement of the verb *vajáldahttit* 'forget', there are, in principle, as many as three different non-

finites that might be considered alloforms of the ideal of a single infinitive in a language:

(15') *Máret vajáldahtii lohka-t ~ lohka-mis ~ lohka-me dan girjji.*
'Máret forgot to read that book.'

All these forms may reasonably be analyzed as instances of infinitives in the sense of "opaque non-finites used for argument functions"; all of them function as objects, i.e. non-finite complements of *vajáldahttit* that can be replaced by (genitive-)accusative marked nouns or pronouns as well as by finite complement clauses introduced by the general complementizer *ahte* 'that'. As I have already proposed in connection with (14c) and (15), an important reason for such a high degree of "infinitival allomorphy" may be that the semantic relations between verbs like 'forget' and their complements (e.g. 'reading that book') are quite unambiguous, irrespective of the exact form of the non-finite in question.

4.5 From action nominals to converbs and infinitives: verbalization, adverbalization or denominalization?

Once again, I take a look at the problems of defining non-finites by their word-classes. It has been shown that case forms of action nominals often tend to develop into new non-finites that may be called infinitives and converbs. Converbs are sometimes understood as verbal adverbs, which appears to some extent analogous to adverbial case forms of underived nouns being lexicalized into indeclinable adverbs. However, it is not easy to fit infinitives into this framework; they do not behave like nouns, nor do they correspond to adverbs or members of any other word-class either.

A solution to the problem of determining the "word-form word-class" of infinitives might be found in Comrie and Thompson's (1985: 369–370) expression *the verbalization of nominal forms*. They acknowledge that there are many stages in the **verbalization** of action nominals into non-finites like the Slavic infinitive or some of the Finnish converbs discussed above. According to Comrie and Thompson, modern Slavic infinitives have become members of the verbal paradigms as they no longer have nominal categories such as cases, but rather possess "virtually all of the typically verbal categories (apart from person and number, like most non-finite forms)," which presumably refers to categories such as aspect and reflexivity.

The verbalization of action nominals seems to lead not only to new infinitives but to new converbs and other, less typical non-finites as well. Previously (in Ylikoski 2002: 101–116), I have attempted to demonstrate that in North Sámi a new converb in *-miin* has developed from the action nominal in the comitative case. However, it seems that the only morphosyntactic feature that clearly differentiates the *miin*-form from the action nominal is the possibility of the VO word order: In accordance with a possibly universal feature of word order in action nominal constructions (Koptjevskaja-Tamm 1993: 59, 185–187, 255), the patient marking of the Sámi action nominals resembles that of possessors in ordinary NPs, and it seems that the VO order has emerged after the reanalysis of genitival attributes of verbal nouns (GN) as objects of converbs (OV); the case-marking of the attribute/object—the genitive-accusative case—has not been subject to change. These kinds of explanations are possible only if action nominals are viewed as nouns and not verbs.

Keeping in mind that action nominals are, by definition, verbal nouns with respect to their external syntax while their internal syntax can in some languages be highly verb-like (the "sentential type" of action nominal constructions in Koptjevskaja-Tamm's [1993] typology), it is plausible to think of action nominals—rather than indeclinable infinitives and converbs—as prima facie instances of the word-class-changing inflection in the sense of Haspelmath (1996). When an action nominal category as a whole gradually loses its noun-like inflection (cf. the Finnish "third infinitive") or only some of its case forms branch off the otherwise noun-like action nominal (e.g. the North Sámi converb in *-miin*), one might say that the action nominal is being **verbalized**, or rather that the action nominal is simply losing its noun-like external syntax, i.e., the nominalization of a verb is being **denominalized**. In any case, it seems untenable to claim that grammaticalization chains of the type action nominal → infinitive fundamentally differ from the development action nominal → converb.

In this context, it is worth noting that another major source of new converb forms is participles losing their adjectival inflection when used in non-attributive adverbial or *copredicative* functions (Haspelmath 1995a: 17–20). Correspondingly, this process could probably be described as **deadjectivalization** of verbal adjectives. — It should go without saying that a clear dividing line between participles and converbs cannot be drawn either.

5. Lexicalized and grammaticalized non-finites as evidence for and against alleged new word-classes

So far, I have been defining and describing non-finites with regard to their synchronic functions on the one hand, and to their origins on the other. In addition to their past and present, it is enlightening to take a look at the future of these forms in order to evaluate claims about their word-class status. In the following, I will briefly outline the paths of lexicalization and grammaticalization that turn individual non-finite forms into new lexemes.

It is almost banal to point out that individual, productively and regularly formed action nominals (i.e. forms that normally denote actions) may be lexicalized into nouns with quite specific meanings, e.g. English *painting* and *wedding*; Finnish *sanominen* ‘quarrel’ (< ‘say’); Komi *ts'užöm* ‘face’ (< ‘be born’). (Cf. also the relics of the action nominal in **-mA* in Finnish, mentioned in Section 4.3.) Likewise, it is well known that participles tend to develop into fully lexical adjectives, e.g. English *following*, Finnish *seuraa-va* [follow-PTCP.ACT.PRES] and Russian *sledu-jušč-ij* [follow-PTCP.ACT.PRES-M] ‘id.’; Finnish *tunne-ttu* [know-PTCP.PASS.PAST] ‘well-known’, *tu-ttu* (< archaic [know-PTCP.PASS.PAST]) ‘familiar’ or—in a way similar to underived adjectives—into nouns, e.g. Finnish *tuttu* and *tuttava* (< archaic [know-PTCP.PASS.PRES]) ‘acquaintance’; *juopu-nut* [get.drunk-PTCP.ACT.PAST] ‘drunk person’, English *drunk* both ‘one who is drunk’ and ‘drunkard’ etc. These developments are probably best regarded as instances of zero derivation (cf. Scalise 1988: 565–566).

5.1 Converbs

As might be expected, converbs or “verbal adverbs” are often lexicalized into adverbs: examples of this tendency include Finnish *tieten-kin* (< archaic [know.CONV-also]) ‘of course’, *verra-ten* [compare-CONV] ‘relatively, comparatively’, *lakkaa-matta* [stop-CONV] ‘incessantly’, *odotta-matta* [expect-CONV] ‘unexpectedly’; Finnish *elä-issä-än* [live-CONV-3SG], Estonian *ela-des* [live-CONV] ‘ever’; Russian *molč-a* [be.silent-CONV] ‘silently’ and Hungarian *fordít-va* [turn-CONV] ‘vice versa’.

However, individual converb forms develop not only into adverbs but also into adpositions and conjunctions. In other words, converb forms may be **lexicalized** into new members of an open or lexical word-class (i.e. adverbs) or they may be **grammaticalized** and become members of closed or grammatical

word-classes (i.e. adpositions and conjunctions). Developments of the latter type are also widespread: in addition to numerous examples from English (e.g. *concerning*, *considering*, *during*, *excepting*, *excluding*, *regarding*), Haspelmath (1995a: 38) mentions among others German *entsprechend* 'according to' (< 'correspond') and Russian *spustj-a* [let.down-CONV] 'after'. Haspelmath notes (p. 37) that when a converb form is grammaticalized, the (often implicit) subject argument disappears and the object of the converb becomes the complement of the new adposition. However, its seems that converb forms of even certain intransitive verbs may become adpositions, and the complements of such adpositions may originate from the subjects of those converbs, e.g. Finnish *viiko-n kuluessa* [week-GEN within] 'within a week' < [week-GEN pass.CONV] 'a week passing'. Also adverbials may become complements: e.g. *huomiseen mennessä* [tomorrow.ILL by] 'by tomorrow', < [tomorrow.ILL go.CONV] "when going to tomorrow" and *huomise-sta lähtien* [tomorrow-ELA since] 'since tomorrow, from tomorrow on' < [tomorrow-ELA go.away.CONV] or Hungarian *holnap-tól fogva* [tomorrow-ABL since] 'id.' < [tomorrow-ABL hold.CONV]. — Note that many of the deverbal prepositions in Germanic and Romance languages have developed from the adverbial (i.e. converbal) functions of participles (cf. the English and German examples above); for in-depth studies focused on this topic, see Kortmann (1992); Kortmann and König (1992).

The grammaticalization of a converb into an adverbial conjunction is closely related to the development of de-converbal adpositions. It is not unusual for a de-converbal conjunction actually to be a conjunctional expression composed of an adposition-like converb and a general complementizer; e.g. English *considering that*; Russian *nesmotrja na to, čto* 'although', "not looking at the fact that"; Finnish *huolimatta siitä, että* 'although', "without worrying about the fact that." In addition to the development of adverbial conjunctions, there is a cross-linguistically common path of development by which a converb form meaning 'saying' is first used as a quotative marker and later as a more general complementizer that marks many if not all complement clauses (see Haspelmath 1995a: 40–41 and references therein). (In discussing the grammaticalization of converbal constructions, Haspelmath [1995a: 41–45] also describes how converb forms may—not unlike other non-finites—become main verbs of periphrastic aspecto-temporal categories as well as applicative markers; for the present purposes, however, I will pay attention only to those instances of grammaticalization that lead to the development of grammatical words.)

In the light of the examples above, it appears that if defined with reference to their lexicalization and grammaticalization (or simply lexicalization in a broad sense that also includes the development of grammatical lexemes; cf. Kortmann 1992: 431), converbs are not only "verbal adverbs" but also—at least latently—"verbal adpositions" and even "verbal conjunctions." Furthermore, it is interesting to note that there are some adverbs that have been lexicalized from entire converb constructions, i.e. from converb forms together with their own subjects, objects or adverbial modifiers; e.g. Finnish *silmin nähden* (sometimes spelled as one word, *silminnähden*) 'visibly, clearly' (< *silm-i-n näh-den* [eye-PL-INS see-CONV] 'seeing with one's eyes') and *totta puhuen* (*tottapuhuen*) 'in fact, to tell the truth' (< *tot-ta puhu-en* [truth-PART speak-CONV] 'telling the truth'), and Hungarian *rangrejtve* 'incognito' (< *rang-rejt-ve* [social.class-conceal-CONV] "concealing one's social class").

It is intriguing to note that the common denominator for converbs, adverbs, adpositions and adverbial conjunctions alike is their adverbial nature: Adpositions and adverbial conjunctions differ from adverbs in that they do not function as adverbial modifiers by themselves, but rather as heads of (adpositional) phrases and (adverbial) clauses that are adverbial modifiers as a whole exactly like converbal constructions and adverb phrases. In other words, the adverbial modifying functions of converbal constructions remain basically the same in the course of lexicalization or grammaticalization, irrespective of the resulting syntactic reanalyses. For instance, the Finnish converb in *-(t)essA* preserves its function as a temporal modifier (see 9c) both after being analyzed as a temporal adverb *eläissään* 'ever' and as temporal postpositions *kuluessa* 'within' and *mennessä* 'by'. It appears that even the "word-class approach" to the diachrony of converbs further supports the claim that instead of being labeled as verbal adverbs, converbs are best defined as adverbial non-finites, i.e. as non-finites that function as adverbial modifiers of verbs and clauses.

5.2 Infinitives

Finally, it is essential to try to find out what becomes of individual infinitive forms once they are detached from verbal paradigms. Interestingly enough, it appears that lexicalization and grammaticalization of infinitives is relatively different from the other non-finites. As I already partly suggested in Section 3, it seems that one of the reasons not to define infinitives as instances of word-class-changing inflection is that the "verbal noun slot," for instance, is better

reserved for action nominals. Furthermore, it seems that one could even argue that the slots for "verbal adverbs," "verbal adpositions" and "verbal conjunctions" are filled by adverbial converbs.

Compared to the development of action nominals, participles and converbs, it is strikingly difficult to find examples of words that originate in infinitives. Also, the lexicalization or grammaticalization of infinitives has received hardly any attention in previous studies. Even in Joseph's (1983) thorough study of the Balkan infinitive loss, there are only a couple of mentions of lexical remnants of the lost infinitives. Similar expressions are in fact familiar from other languages. In the Tosk dialect of Albanian, the infinitive is preserved only in idioms like *do me thënë* 'that is to say', literally "it wants to say" (Joseph 1983: 95–96), i.e. the exact equivalent of the French *ça veut dire*. Another example of a lone survivor of the infinitive loss are the Macedonian *može bi* 'maybe' and Greek (Otranto dialect of Italic Greek) *telèste* (or *selèste*, << *théleiést(h)ai*) 'id.' (Joseph 1983: 73, 110). The development of these forms closely corresponds to the more or less lexicalized expressions *maybe*, French *peut-être* and Russian *možet byt'*. Otherwise, the Balkan infinitives have developed—with verbs meaning 'want' as their main verbs—into future tenses, not unlike the *will*-future in English (Joseph 1983: 41, 108, 163 *et passim*).

The lexical remnants of Balkan infinitives do not essentially differ from the few crystallized infinitival expressions in other European languages. What is of particular interest is that even though words and idioms like French *peut-être*, *ça veut dire* and their equivalents in other languages may be characterized as adverbs, they differ from converb-derived adverbs in that they consist of non-finites **along with their main verbs**, as if to further underline the mutual interdependence of infinitives and their main predicates. I am aware of only one quite clear instance of a word that was originally a plain infinitive form, namely the Finnish *maata* (or *maate*) and its cognates in some closely related languages. Having developed from the **adverbial** functions of the so-called first infinitive of the verb meaning 'lie, sleep', it is now an adverb whose meaning and use sometimes correspond to the English *to bed*, e.g. *Pekka meni maata* 'Pekka went to bed' (cf. Saukkonen 1965: 19–21, 61–62). The Erzya Mordvin postposition *sams* 'until' is homonymous with the *-ms* infinitive form of the verb 'come', but its origin is better understood in the light of the situation in Moksha Mordvin, where the form in *-ms* also occurs as a converb of posteriority (Bartens 1979: 44–47; 1999: 155; cf. Komi converb in *-tödz* in 7b and 8). Thus, even the Erzyan postposition may originate from a possible

earlier stage where the non-finite in *-ms* has had converbal functions; e.g. *t'ečin' sams* [this.day-GEN until] 'until today' < [this.day-GEN come.CONV] 'until this day came'.[10]

There is one common feature of infinitives that deserves special attention. The category of infinitive as a whole has a relatively strong tendency to be homonymous with the action nominal. To quote Disterheft (1980: 198), "the oblique case marking [of former action nominals] has generally become so disassociated from any paradigm that these former oblique abstracts are capable, paradoxically enough, of reentering the nominal system." As a result, in Ancient Greek, the action nominal consisted of the infinitive plus the neuter definite article, not unlike the situation in Modern German (e.g. Greek *einai : to einai*, German *sein : das Sein*; cf. Koptjevskaja-Tamm 1993: 42, 301 n. 7). Disterheft regards Latin infinitival subjects (e.g. *errāre hūmānum est*) as early signs of a similar development, which later led to case-inflected infinitives (e.g. accusative *licere**m*** 'be permitted'). In modern Romance languages such as Spanish, the forms in *-r* function as infinitives and action nominals alike. In "Balkanized" Romanian, the Latin infinitive ending *-re* has completely turned into an action nominal formative (Joseph 1983: 167), "thus completing a full cycle of noun-to-infinitive-to-noun" (Disterheft 1980: 198).[11] Homonymy between infinitives (i.e. indeclinable and thus opaque forms in complement positions) and action nominals (i.e. declinable verbal nouns) can be found in many languages outside Europe (e.g. Hindi and Swahili) as well.

In Finno-Ugric languages, there are no clear examples of similar development, but the history of infinitival markers shows that even the outward

[10] Similarly, the Mari postposition *šumeš(ke)* 'until' is transparently the posterior converb form of the verb *šuaš* 'come'. The dual nature of the Mokshan non-finite in *-ms* is a good example of two rather different non-finites that can still be regarded as natural outcomes of an action nominal in a directional (illative) case. Note that the infinitival and converbal functions of the *-ms* are clearly separate from each other (Bartens 1979: 31–51), i.e., there appears to be no gray area comparable to the obligatory~optional directional-purposive non-finites discussed in Section 4.3.

[11] In French, the infinitives in *-r(e)* do not function as verbal nouns (excepting some fully lexicalized nouns, e.g. *devoir* 'duty', *dîner* 'dinner' and *pouvoir* 'power'). It was already seen in Note 9 that certain verbs require their infinitival complements to be preceded by prepositions such as *de* or *à*. Interestingly, as some prepositional infinitival constructions are used in adverbial functions, the infinitive forms become reminiscent of action nominals in adverbial adpositional phrases; compare the English translations of *après* + infinitive ('after **V-ing**') or *sans* + infinitive ('without **V-ing**') mentioned in Note 9.

appearance of an infinitive may begin to resemble the original action nominal. Even though most Finno-Ugric infinitives are generally assumed to originate from various combinations of verbal nouns and directional case suffixes, the original case suffixes have often been lost, and as a result, present-day infinitive markers look more or less the same as the supposed action nominal suffixes on which the infinitives were originally based; e.g. the Finnic infinitive in *-tA* ~ *-dA* (and Sámi *-t*) << verbal noun in ***-tA*** + lative *-*k*, and the Estonian infinitive in *-ma* (and Livonian *-m(õ)*) << verbal noun in ***-mA*** + illative *-hAn* (> Finnish *-mAAn* in 14a, c); approximately the same has happened to the Komi and Udmurt infinitive in *-ny* and to the Hungarian infinitive in *-ni*. It is important to note that it is usually infinitives and not converbs that have completely lost their former case endings and even turned into action nominals. A partial explanation may be found in the fact that infinitives (as obligatory complements) do not carry very specific meanings in themselves, and as a result their appearance is easily subject to phonological reduction.—Consequently, in order to continue to express the relation of purpose, these forms tend to be reinforced (cf. Section 4.3).

Once again, it is instructive to compare infinitives to accusatives. Cross-linguistically, the accusative case appears to be a sort of cul-de-sac in the grammaticalization chain where accusative cases commonly develop from datives, which in their turn have developed from directional and benefactive cases. According to Lehmann (1995: 110), the only theoretically possible function to which accusatives could be further generalized is that of an absolutive case, but this type of grammaticalization has not been attested because absolutives are generally unmarked. The development of adverbial (directional-purposive) action nominal constructions or converb forms into accusative-like infinitives and finally into (nominative forms of) new action nominals might possibly be considered as a loose analogue of the hypothetical directional >>> absolutive chain.

In sum, it can be concluded that even though the view that action nominals are verbal nouns and participles are verbal adjectives is supported by a multitude of lexicalized **de**verbal nouns and adjectives, developments of individual converb and infinitive forms hardly evidence specific new word-classes, but rather once again highlight the centrality of their syntactic functions, as well as the importance of the obligatory/optional distinction in differentiating between infinitives and converbs.

6. Discussion

In this section, I summarize the main points of the preceding argumentation. To get a more comprehensive picture of the system of non-finite verb forms, it seems necessary briefly to discuss the definitions of participle and the position of participles in relation to other (idealizations of) non-finites. Against the background of what has been said about action nominals, converbs and infinitives in the preceding sections, participles—though not the main topic of this paper—may tentatively be described as follows: It was already mentioned that participles are usually defined as verbal adjectives and/or as non-finites functioning as attributes, i.e. modifiers of nouns. In Section 3, I agreed that the non-finites called participles generally have morphosyntactic features of adjectives that may be seen as indices of verb-class-changing inflection. Morphologically, participles usually agree with their head nouns as underived adjectives do, and their positions with respect to their heads resemble those of adjectives (Haspelmath 1996: 44, 49). Functionally, they are similar to adjectives in that their primary function is to modify nouns. Furthermore, they also have secondary functions identical to those of adjectives; they are used as (adjectival) predicates, which appears to have resulted in the development of a multitude of periphrastic aspecto-temporal categories in various languages. In addition to this, it was mentioned above that participles, when lexicalized, usually turn into adjectives and—in a manner identical to adjectives—into nouns. Yet again, it was briefly mentioned at the end of Section 4.5 that participles may be "deadjectivalized" and become converbs; such copredicative functions of participles directly correspond to similar use of true adjectives, too (see Haspelmath 1995a: 17–20).

It is important to note that just as adverbial functions do not equal the word-class of adverbs, not all non-finites that are used attributively are to be labeled as verbal adjectives; compare such fairly common uses of infinitives like *will to learn* or its Finnish equivalent *halu oppi-a* [will learn-1INF]. These infinitives are attributes in the strictest sense of the term ('modifiers of nouns'), but they do not appear to have any explicitly adjectival properties, and they cannot be replaced with adjectives as easily as participles can. Furthermore, it is only expectable that action nominals—as verbal **nouns**—are also used as (genitival) attributes, e.g. Latin *ars amandi* and its English and Finnish translations *the art of loving* and *rakasta-mise-n taito* [love-AN-GEN art] (see Itkonen 2001: 331, 350).—Apparently, as these latter types of attributival non-finites appear never to have been called participles, the term *participle* is best reserved for its traditional use as a designation for the most adjective-like non-finites. However, it appears that the epithet *verbal adjective* does not refer to as thorough a process of word-class-changing inflection as *verbal noun*; participles still lack such adjective-like properties as comparative and superlative degrees.[12]

---

[12] According to Haspelmath (1996: 63 n. 6), the lack of comparative and superlative degrees of (German) participles is "due to purely semantic factors." However, it seems to me that the semantic functions of comparative and superlative degrees do not differ remarkably from the adverbial modifiers 'more' and 'most', cf. *the most interesting book* and *the book that interests (people) most*. It appears that in relation to comparation, a "verbal adjective" is **either** a true verb form—whereupon it may have an object and adverbial modifiers (including 'most'; see ii.a)—**or** it is a lexicalized adjective, able to take the superlative form but hardly an object (ii.b) (see also Zucchi [1993: 219ff.] for analogous examples of the dual nature of the Italian *infinito sostantivato*):

Finnish

(ii) a. *(itse-ä-ni)* *(eniten)* *kiinnosta-va* *kirja*
self-PART-1SG most interest-PTCP.ACT.PRES book
'the book that interests (me) (most)'

b. *(??/*itse-ä-ni)* *kiinnosta-v-in* *kirja*
self-PART-1SG interest-PTCP.ACT.PRES-SUP book
'the most interesting (*me) book'

Note also that (adjectivalized) participles can sometimes be turned into adjectival adverbs like English *interest-ing-**ly**, surpris-ing-**ly*** or Finnish *kiinnosta-va-**sti**, yllättä-vä-**sti*** 'id.'. The internal syntax of such "verbal adverbs" is more that of adjectives than of verbs:

Drawing the threads together, I present Table 4, intended to capture my central arguments about the main functions of the four main types of non-finites as well as my views on the relevance of defining these categories as instances of word-class-changing inflection (or word-class-changing word formation in general). Converbs, for instance, are considered "verbal adverbs" only in a diachronic perspective where it could probably be equally plausible to label them as "verbal adpositions," or better still, as individual instances of **de**verbal adverbs and adpositions:

Non-finite verb form:	infinitive	converb	participle	action nominal
Syntactic function:	**argument** (= subject, object, obligatory adverbial)	**(free) adverbial** (= adjunct)	**attribute** (+ 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, adposition, conjunction	adjective (→ noun)	noun

Table 4. The four main types of non-finite verb forms, their syntactic functions and "new word-classes" (revision of Table 3)

It is evident from Table 4 that the asymmetry between the two approaches still remains: infinitives and converbs are best defined in terms of their syntactic functions, whereas it would be superfluous to define action nominals as non-finites with argumental, adverbial and attributive functions. Participles, by comparison, seem definable both by their (predominantly) attributive functions

kiinnostava-mmin [interesting-COMP.ADV] 'more interestingly', *yllättävä-mmin* [surprising-COMP.ADV] 'more surprisingly' instead of *??/*enemmän kiinnostavasti* 'interestingly *more', *??/*enemmän yllättävästi* 'surprisingly *more'.

and by their (not completely) adjectival morphosyntax. It must, however, be remembered that action nominals are often left outside the class of non-finite verb forms; reasons for this may include the fact that the internal syntax of action nominals is often less verb-like than that of participles. Furthermore, the formation processes of action nominals appear to be more idiosyncratic than those of other non-finites; on the continuum between inflection and derivation, action nominals are probably more derivational than participles.

To return to the claims that infinitives are not "on a par" with other non-finites, but rather "distribute over" or "are typically intermediate between" action nominals and converbs (see Section 4.1), I hope that I have been able to demonstrate that it is more reasonable to say that (idealized) infinitives and converbs are in complementary distribution (barring the problematic boundary between purposive and directional-purposive non-finites). In addition, it can be seen from Table 4 that participles are, in a sense, also on a par with infinitives and converbs, whereas the use of action nominals covers—although in quite an abstract manner—the functions of all these other forms. If action nominals (as the clearest example of word-class-changing inflection) were categorically left outside non-finite **verb** forms, the rest of the non-finites discussed here could be defined fairly uniformly by reference to their syntactic functions only. — In fact, this appears to be approximately the way I.V. Nedjalkov (1998: 421–422) defines infinitives, converbs and participles (see Section 2.2). However, it must be admitted that the adjective-like nature of participles clearly separates them from infinitives and converbs.

Once again, I feel compelled to defend my view that there are few reasons to label converbs as verbal adverbs. When evaluating Haspelmath's (1995a: 3–4) definition of converb, Bickel (1998: 383) states that due to the (morphological) property *non-finite*, it

> has the advantage [over V.P. Nedjalkov's (1995) conception of converbs[13]] that the definition of converb ("nonfinite adverbial verb form") is conceptually parallel . . . to the traditional definition of participles ("nonfinite adjectival verb form") and masdars or verbal nouns ("nonfinite nominal verb form").

Ricca (1997: 188), in turn, interprets Haspelmath as putting

[13] Nedjalkov (1995: 97) defines a converb as "a verb form which depends syntactically on another verb form, but is not its syntactic actant," with no reference to finiteness nor to the word-class of adverbs.

> more stress on the functional role of converbs, which beautifully completes the paradigm with 'verbal adverbs' alongside 'verbal adjectives' (i.e. participles) and verbal nouns.

I do not intend to deny that the notion of *verbal adverb* would indeed "beautifully complete" the picture of non-finites, but apparently, that could happen only by ignoring infinitives not only as prima facie non-finites, but also as daughters of action nominal constructions and as sisters of many converbs (see Section 4.3). The alternative I am proposing makes converbs conceptually parallel to infinitives and participles, and at least in a diachronic perspective, to action nominals as well.

Again, if converbs are simply defined as free adverbial verb forms (i.e. verbal adjuncts) in the **syntactic** sense (parallel to argumental infinitives and attributive participles), the definition could possibly be considered to include the so-called narrative converbs as well. Such "cosubordinate," "copulative," "non-modifying" or "propositionally nonrestrictive" non-finites, found in many Indo-Aryan, Dravidian, and "Altaic" languages of Asia as well as in the Turkic and some Uralic languages of eastern Europe are generally viewed as non-finite counterparts to the coordination of finite clauses; the same forms are often used in modifying ("adverbial") functions, too. Although the problems of differentiating between the modifying and (non-modifying) conjoining functions remain, they might be best seen as belonging to the domain of semantics rather than syntax (see e.g. Johanson 1995: 321–322, 327–330). (Ultimately, this would lead to labeling even the most exotic types of medial verbs and clause chaining as converbal constructions; cf. Haspelmath 1995a: 20–27; van der Auwera 1998b; Tikkanen 2001: 1115–1116.)

Finally, it must be admitted that the reality behind the generalizations presented in Table 4 is much more complex. As in earlier typological attempts to define one or more types of non-finites, the discussion in the previous sections has centered on idealizations of non-finites. It was noted at the beginning of this paper (in Section 2) that good examples of "ideal" systems of non-finites are actually rather difficult to find, and Hungarian was presented as a plausible candidate to represent such an ideal, as each of the non-finites in (1a–d) is used in quite specific functions; compare the use of the English *-ing* form in the translations of the Hungarian participles, converbs and action nominals. In practice, non-finites often have functions of more than one of the four main subcategories discussed here. Many so-called participles of Germanic and Romance languages are used both as attributes (participles) and as adverbial modifiers (converbs). Common homonymy between infinitives

and action nominals was mentioned in the preceding section. In many Turkic and Uralic languages, a non-finite may share the functions of participles and action nominals, and the Moksha Mordvin form in *-ms* functions both as a typical infinitive and as a converb of posteriority (Section 5.2). (See also V.P. Nedjalkov 1995: 104–106.) The non-finites in Hungarian represent the ideal system also in the sense that there is only one infinitive and no "less typical" non-finites (cf. Section 4.4).[14]

All that has been said in the preceding sections has centered on the functions that non-finites have by themselves; in other words, on the non-finites that function as relatively independent constituents within a sentence. Koptjevskaja-Tamm (1999: 148) sees all these functions as belonging to one of the two main groups of functions that non-finites can have. She notes that in addition to such *dependent predicates*, non-finites can also be used to form 'analytical' or periphrastic verb forms. Such uses have briefly been mentioned in connection with the Finnish non-finites in *-mAssA* and *-mAttA* (Section 4.4), the development of future tenses from 'want' + infinitive (e.g. in the Balkan languages and in English; see Section 5.2) as well as the grammaticalization of converbs (Section 5.1) and participles (cf. above). Even though it may sometimes be difficult to distinguish between periphrastic verb forms and the "dependent predicate" use of non-finites (see e.g. Ylikoski 2002: 127–129), it appears understandable that these functions should be kept distinct from each other whenever possible. However, the existence of periphrastic forms once again suggests that non-finites are usually best defined in terms of their functions.

7. Conclusion

In conclusion, I admit that this paper does not offer definitive answers to the problems of defining non-finites, but rather recognizes various continua between the idealizations of the four main types of non-finites and different kinds of deviations from them; the continua become even more evident when non-finites are examined from a diachronic perspective. In the preceding sections, I have centered on commenting and refining the definitions of action nominals, converbs and infinitives (and, to a lesser extent, participles), and it

[14] In addition to the present participle in *-ó/-ő* (1b), Hungarian possesses a past participle in *-(Vt)t* and a future participle in *-andó/-endő*.

appears that these main types of non-finites and the systematic nature of their mutual relations are best understood by combining our knowledge of both the past and present—and even the future—of these forms.

Although the ideas presented in this article are intended to have cross-linguistic applicability, I do not claim that the function-based approach to non-finites is equally useful for describing languages other than the familiar synthetic languages of Europe, where the morphological non-finiteness of the verb forms in question can often be taken for granted. Problems arise when a purely functional approach to "non-finites" is applied to morphologically finite dependent verb forms such as those of Bantu languages, not to speak of isolating languages where the finite/non-finite distinction is altogether dubious (e.g. Koptjevskaja-Tamm 1999: 149; Hu, Pan and Xu 2001). Nevertheless, I hope to have demonstrated that in the European languages, on which many of the typological statements (and typologists' underlying assumptions) about non-finites are still based, the syntactic functions of action nominals generally distribute over infinitives and converbs, the latter two categories being in complementary distribution in terms of relative obligatoriness vs. optionality.

Abbreviations

A	adjective
ABE	abessive
ABL	ablative
ABS	absolutive
ACC	accusative
ACT	active
ADE	adessive
ADV	adverb
AN	action nominal
AOR	aorist
COMP	comparative
COND	conditional
CONNEG	connegative
CONV	converb
DAT	dative
EGR	egressive
ELA	elative
ERG	ergative
FUT	future tense
G	genitive
GA	genitive-accusative
GEN	genitive
ILL	illative
IMPF	imperfective aspect
INE	inessive
INF	infinitive
INS	instructive
LAT	lative
M	masculine
MIN	the non-finite in *-min ~ -me(n)* ("the second gerund", "action essive")
N	noun
NEG	negation
NOM	nominative
PART	partitive
PASS	passive
PAST	past tense
PL	plural
PRES	present tense
PRT	particle
PTCP	participle

SG	singular	TERM	terminative
SRDIR	superdirective	TRA	transitive
SUP	superlative	V	verb

References

Bartens, Raija (1979) *Mordvan, tšeremissin ja votjakin konjugaation infiniittisten muotojen syntaksi.* Mémoires de la Société Finno-Ougrienne 170. Helsinki: Suomalais-Ugrilainen Seura.

—— (1999) *Mordvalaiskielten rakenne ja kehitys.* Mémoires de la Société Finno-Ougrienne 232. Helsinki: Suomalais-Ugrilainen Seura.

—— (2000) *Permiläisten kielten rakenne ja kehitys.* Mémoires de la Société Finno-Ougrienne 238. Helsinki: Suomalais-Ugrilainen Seura.

Bickel, Balthasar (1998) Converbs in cross-linguistic perspective. [Review article on Haspelmath & König (eds.) 1995.] *Linguistic Typology* 2: 381–397.

Blake, Barry J. (1994) *Case.* Cambridge: Cambridge University Press.

Brown, Keith & Miller, Jim (eds.) (1999) *Concise Encyclopedia of Grammatical Categories.* Amsterdam: Elsevier Science.

Bybee, Joan L. & Perkins, Revere D. & Pagliuca, William (1994) *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World.* Chicago: University of Chicago Press.

Comrie, Bernard & Thompson, Sandra A. (1985) Lexical nominalization. In Shopen (ed.) 1985c, pp. 349–398.

Cypanov, Evgenij (1997) *Pričastie v komi jazyke: istorija, semantika, distribucija.* Ekaterinburg: Rossijskaja Akademija Nauk, Ural'skoe otdelenie.

Disterheft, Dorothy (1980) *The Syntactic Development of the Infinitive in Indo-European.* Columbus, Ohio: Slavica Publishers.

Fokos-Fuchs, D. R. (1958) Die Verbaladverbien der permischen Sprachen. *Acta linguistica Academiae scientiarum Hungaricae* VIII: 273–342. Budapest: Akadémiai Kiadó.

GMJa (1980) = D. V. Cygankin (ed.) (1980) *Grammatika mordovskih jazykov: fonetika, grafika, orfografija, morfologija. Učebnik dlja nacional'nyh otdelenij vuzov.* Saransk: Mordovskij gosudarstvennyj universitet imenii N. P. Ogareva.

Harris, Alice C. & Campbell, Lyle (1995) *Historical Syntax in Cross-Linguistic Perspective.* Cambridge studies in linguistics 74. Cambridge: Cambridge University Press.

Haspelmath, Martin (1989) From purposive to infinitive – a universal path of grammaticization. *Folia Linguistica Historica* 10: 287–310.

—— (1993) *A Grammar of Lezgian.* Mouton grammar library 9. Berlin: Mouton de Gruyter.

—— (1994) Passive participles across languages. In Barbara Fox & Paul Hopper (eds.), *Voice: Form and Function,* pp. 151–177. Amsterdam: John Benjamins Publishing Company.

—— (1995a) The converb as a cross-linguistically valid category. In Haspelmath & König (eds.), pp. 1–56.
—— (1995b) Contextual and specialized converbs in Lezgian. In Haspelmath & König (eds.), pp. 415–440.
—— (1996) Word-class-changing inflection and morphological theory. In Geert Booij & Jaap van Marle (eds.), *Yearbook of Morphology 1995*, pp. 43–66. Dordrecht: Kluwer Academic Publishers.
—— (1999) Converb. In Brown & Miller (eds.), pp. 110–115.
—— (2001) The European linguistic area: Standard Average European. In Haspelmath et al. (eds.), pp. 1492–1510.
Haspelmath, Martin & König, Ekkehard (eds.) (1995) *Converbs in Cross-Linguistic Perspective: Structure and Meaning of Adverbial Verb Forms – Adverbial Participles, Gerunds.* Empirical approaches to language typology 13. Berlin: Mouton de Gruyter.
Haspelmath, Martin & König, Ekkehard & Oesterreicher, Wulf & Raible, Wolfgang (eds.) (2001), *Language Typology and Language Universals: An International Handbook. Volume 2.* Handbücher zur Sprach- und Kommunikationswissenschaft 20.2. Berlin: Walter de Gruyter.
Hu, Jianhua & Pan, Haihua & Xu, Liejiong (2001) Is there a finite vs. nonfinite distinction in Chinese? *Linguistics* 39: 1117–1148.
Hyvärinen, Irma (1982) Suomen kolmannen infinitiivin verbisidonnaisten inessiivin, elatiivin ja illatiivin lauseenjäsenfunktioista ja niiden saksalaisista vastineista valenssiteorian näkökulmasta. In *Lauseenjäsennyksen perusteet. Seminaari Seilissä 9–10.9.1982*, pp. 59–89. Publications of The Linguistic Association of Finland 9. Turku: Suomen kielitieteellinen yhdistys.
IO = *Isuslön olan.* Stockholm and Helsinki: Biblija vudžötan institut [Institute for Bible Translation] 1993.
Itkonen, Erkki (1972) Über das Objekt in den finnisch-wolgaischen Sprachen. *Finnisch-Ugrische Forschungen* 39: 153–213.
Itkonen, Esa (1991) *Universal History of Linguistics: India, China, Arabia, Europe.* Amsterdam: John Benjamins Publishing Company.
—— (2001) *Maailman kielten erilaisuus ja samuus.* 2., uudistettu ja laajennettu painos. Publications in General Linguistics 4. Turku: University of Turku.
Johanson, Lars (1995) On Turkic converb clauses. In Haspelmath & König (eds.), pp. 313–347.
Joseph, Brian D. (1983) *The Synchrony and Diachrony of the Balkan Infinitive: A Study in Areal, General, and Historical Linguistics.* Cambridge Studies in Linguistics, Supplementary Series 1. Cambridge: Cambridge University Press.
Joseph, Brian D. & Philippaki-Warburton, Irene (1987) *Modern Greek.* London: Croom Helm.
Karlsson, Fred (1999) *Finnish: An Essential Grammar*. London: Routledge.
KomiJohn = *Ivan serti bur juör.* Vidlana jözödöm. Stockholm & Helsinki: Institute for Bible Translation 1998.

KomiLuke = *Luka serti bur juör*. Vidlana jözödöm. Stockholm & Helsinki: Institute for Bible Translation 1996.

KomiMatthew = *Mat'vej serti bur juör*. Vidlana jözödöm. Helsinki & Stockholm: Institute for Bible Translation 1999.

KomiPMatthew = *Mat'vej s'örti bur juör*. Korö odzlan's'a vidzötöm. Helsinki & Stockholm: Institute for Bible Translation 2001.

König, Ekkehard (1995) The meaning of converb constructions. In Haspelmath & König (eds.), pp. 57–96.

Koptjevskaja-Tamm, Maria (1993) *Nominalizations.* London: Routledge.

—— (1999) Finiteness. In Brown & Miller (eds.), pp. 146–149.

Korhonen, Mikko (1974) *Die Konjugation im Lappischen. Morphologisch-historische Untersuchung, II: Die nominalen Formkategorien.* Mémoires de la Société Finno-Ougrienne 155. Helsinki: Suomalais-Ugrilainen Seura.

Kortmann, Bernd (1992) Reanalysis completed and in progress: participles as source of prepositions and conjunctions. In Günter Kellermann & Michael D. Morrissey (eds.), *Diachrony within Synchrony: Language History and Cognition*, pp. 429–453. Frankfurt am Main: Peter Lang.

—— (1997) *Adverbial Subordination: A Typology and History of Adverbial Subordinators Based on European Languages.* Empirical approaches to language typology 18. Berlin: Mouton de Gruyter.

—— (1998) Adverbial subordinators in the languages of Europe. In van der Auwera & Ó Baoill (eds.), pp. 457–561.

Kortmann, Bernd & König, Ekkehard (1992) Categorial reanalysis: the case of deverbal prepositions. *Linguistics* 30: 671–697.

Lehmann, Christian (1995) *Thoughts on Grammaticalization.* Revised and expanded version. LINCOM Studies in Theoretical Linguistics 01. München: Lincom Europa.

Ludykova, V. M. (1984) Skazuemoe s *m*-ovym infinitivom v komi jazyke. *Sovetskoe finno-ugrovedenie* 20: 173–177.

Lunt, Horace C. (2001) *Old Church Slavonic Grammar.* Seventh revised edition. Berlin: Mouton de Gruyter.

Meillet, Antoine (1934) *Le slave commun.* Seconde édition revue et augmentée avec le concours de A. Vaillant. Collection de manuels publiée par l'Institut d'études slaves 2. Paris: Librairie Honoré Champion.

Muysken, Pieter (1999) Nominalizations. In Brown & Miller (eds.), pp. 248–252.

Nedjalkov, Igor' V. (1998) Converbs in the languages of Europe. In van der Auwera & Ó Baoill (eds.), pp. 421–455.

Nedjalkov, Vladimir P. (1995) Some typological parameters of converbs. In Haspelmath & König (eds.), pp. 97–136.

Nedjalkov, Vladimir P. & Nedjalkov, Igor' V. (1987) On the typological characteristics of converbs. In Toomas Help & Sirje Murumets (eds.), *Symposium on Language Universals*, pp. 75–79. Tallinn: Academy of Sciences of the Estonian SSR.

Nikanne, Urpo (1997) Suomen infiniittisten adjunktien temporaalinen tulkinta. *Virittäjä* 101: 338–357.

Noonan, Michael (1985) Complementation. In Shopen (ed.) 1985b, pp. 42–140.

Pajunen, Anneli (1998) Pääsanaluokkien eriytymättömyydestä uralilaiskielissä. In Anneli Pajunen (ed.), *Kieliopillistumisesta, analogiasta ja typologiasta*, pp. 59–109. Suomi 185. Helsinki: Suomalaisen Kirjallisuuden Seura.

Palmer, L. R. (1954) *The Latin Language.* London: Faber and Faber Limited.

Ramat, Paolo & Ricca, Davide (1994) Prototypical adverbs: on the scalarity/radiality of the notion of ADVERB. *Rivista di Linguistica* 6: 289–326.

Ricca, Davide (1997) [Review on Haspelmath & König (eds.) 1995.] *Journal of Linguistics* 33: 187–192.

Sammallahti, Pekka (2001) *Strict Morpheme Dependency: An Outline of North Saami Structure.* (Manuscript.)

Sasse, Hans-Jürgen (1993) Syntactic categories and subcategories. In Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld & Theo Vennemann (eds.), *Syntax: An International Handbook of Contemporary Research*, pp. 646–686. Handbücher zur Sprach- und Kommunikations-wissenschaft 9.1. Berlin: Walter de Gruyter.

Saukkonen, Pauli (1965) *Itämerensuomalaisten kielten tulosijainfinitiivirakenteiden historiaa, I. Johdanto. Adverbaali infinitiivi.* Mémoires de la Société Finno-Ougrienne 137. Helsinki: Suomalais-Ugrilainen Seura.

Scalise, Sergio (1988) Inflection and derivation. *Linguistics* 26: 561–581.

Schachter, Paul (1985) Parts-of-speech systems. In Shopen (ed.) 1985a, pp. 3–61.

Shopen, Timothy (ed.) (1985a) *Language Typology and Syntactic Description, Volume I: Clause Structure.* Cambridge: Cambridge University Press.

—— (ed.) (1985b) *Language Typology and Syntactic Description, Volume II: Complex Constructions.* Cambridge: Cambridge University Press.

—— (ed.) (1985c) *Language Typology and Syntactic Description, Volume III: Grammatical Categories and the Lexicon.* Cambridge: Cambridge University Press.

Tikkanen, Bertil (2001) Converbs. In Haspelmath et al. (eds.), pp. 1112–1123.

van der Auwera, Johan (1998a) Conclusion. In van der Auwera & Ó Baoill (eds.), pp. 813–836.

—— (1998b) Defining converbs. In Leonid Kulikov & Heinz Vater (eds.), *Typology of Verbal Categories: Papers Presented to Vladimir Nedjalkov on the Occasion of his 70th Birthday*, pp. 273–282. Linguistische Arbeiten 382. Tübingen: Max Niemeyer Verlag.

—— (1999) *Adverbs and adverbials.* In Brown & Miller (eds.), pp. 8–12.

van der Auwera, Johan & Ó Baoill, Dónall P., (eds.) (1998) *Adverbial Constructions in the Languages of Europe*. Empirical approaches to language typology 20-3. Berlin: Mouton de Gruyter.

Vineis, Edoardo (1998) Latin. In Anna Giacalone Ramat & Paolo Ramat (eds.), *The Indo-European Languages*, pp. 261–321. London: Routledge.

Wiedemann, Ferdinand Johann (1884) *Grammatik der syrjänischen Sprache: mit Berücksichtigung ihrer Dialekte und des Wotjakischen.* St. Petersburg: Eggers & Co, u. J. Glasunow.

Woodcock, E. C. (1959) *A New Latin Syntax.* Bristol: Bristol Classical Press.

Ylikoski, Jussi (2001) Havaintoja komin konverbeistä. *Journal de la Société Finno-Ougrienne* 89: 199–226.

—— (2002) Zu den abverbialen Nominalkonstruktionen im Nordlappischen. *Finnisch-Ugrische Forschungen* 57: 68–166.
Zucchi, Alessandro (1993) *The Language of Propositions and Events*. Dordrecht: Kluwer Academic Publishers.

Contact information:

Jussi Ylikoski
Finno-Ugric languages
Fennicum
FIN-20014 University of Turku
Finland
jussi.ylikoski@utu.fi