

ON THE POSSIBILITIES OF SUBJECT INDEXING IN COMPLEMENT INFINITIVE CLAUSES (BASED ON MATERIAL FROM GERMAN AND OTHER RELATED LANGUAGES)¹

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ZU DEN MÖGLICHKEITEN DER SUBJEKTINDIZIERUNG IN KOMPLEMENTIERTEN INFINITIVSÄTZEN (BASIEREND AUF MATERIAL AUS DEM DEUTSCHEN UND ANDEREN VERWANDTEN SPRACHEN)

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Abstract. The article deals with ways of encoding the subject of infinitive clauses in a number of Indo-Germanic languages. There are claims that infinitive clauses never have their own subject, but that this is implied by a part of the main clause. What infinitive clauses don't actually have is their own syntactic position for the subject. Because with them the verb phrase is formulated in infinite terms and the congruence between subject and verb cannot be established. However, the loss of the infinite verb's ability to exercise direct control over the carrier/recipient of the action expressed by it is not accompanied by a loss of the logical-semantic connection with it. The results of the study make it clear that this relation is always present, i.e. the subject of the infinitive is always referentially clear. The only difference is that in the Germanic languages, but also in the Romance and Slavic languages, which have an infinitive with clearly defined verbal behavior, there are complex sentence structures whose infinitive complement contains an implicit subject and those which contain an explicit subject. In the first case, it is a PRO subject that is lexically suppressed and is signaled by a referentially identical subject or object noun phrase in the superordinate structure (= antecedent). In the second case, however, the subject of the infinitive appears to function on a morphosyntactic level as a constituent (subject or object) of the main clause but is logically and semantically connected only to the subordinate infinitive and is accordingly explicitly signaled. These are the so-called *aci*-, *nci*- and *dci*-constructions.

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Abstract. Der Artikel befasst sich mit den Möglichkeiten zur Kodierung des Subjekts von Infinitivsätzen in einer Reihe indogermanischer Sprachen. Es gibt Behauptungen, dass Infinitivsätze niemals ein eigenes Subjekt haben, sondern dass dieses durch einen Teil des Hauptsatzes impliziert wird. Was Infinitivsätze eigentlich nicht haben, ist eine eigene syntaktische Position für das Subjekt. Denn bei ihnen ist die Verbalphrase infinit formuliert und die Kongruenz zwischen Subjekt und Verb kann nicht hergestellt werden. Der Verlust der Fähigkeit des infiniten Verbs zur Rektionskontrolle über den Träger/Empfänger der von ihm ausgedrückten Handlung geht jedoch nicht mit einem Verlust der logisch-semanticen Verbindung mit ihm einher. Die Ergebnisse der Studie verdeutlichen, dass diese Relation immer vorhanden ist, d.h. das Subjekt des Infinitivs ist immer referentiell klar. Der einzige Unterschied besteht darin, dass es in den germanischen Sprachen, aber auch in den romanischen und slawischen Sprachen, die einen Infinitiv mit klar definiertem verbalem Verhalten kennen, komplexe Satzstrukturen gibt, deren Infinitivkomplement ein implizites Subjekt und solche, die ein explizites Subjekt enthält. Im ersten Fall handelt es sich um ein PRO-Subjekt, das lexikalisch unterdrückt ist und durch eine referentiell identische Subjekt- oder Objektnominalphrase in der übergeordneten Struktur (= Antezedenz) signalisiert wird. Im zweiten Fall hingegen scheint das Subjekt des Infinitivs auf morphosyntaktischer Ebene als Konstituent (Subjekt oder Objekt) des Hauptsatzes zu funktionieren, ist aber logisch-semanticen nur mit dem untergeordneten Infinitiv verbunden und wird entsprechend explizit signalisiert. Das sind die sog. *aci-*, *nci-* und *dci-*Konstruktionen.

Schlüsselwörter: Subjekt des Infinitivs, PRO-Subjekt, implizites Subjekt des Infinitivs, Infinitivkonstruktionen mit explizitem Subjekt, *aci-*, *nci-* und *dci-*Konstruktionen

In the modern morphosyntactically-oriented practical grammars of the German language, in principle, the part “Complex sentence” includes a chapter dedicated to infinitive clauses /constructions, in which instructions are given for the use of these clauses in comparison with clauses containing a finite verb form. Infinitive clauses are usually said to “never” have a subject, instead it is implied by a part of the main clause². For sentences as the ones exemplified in (1)-(3) this is true, compare:

(1) German *Ich hoffe, dich bald wiederzusehen.*

‘I hope to see you soon.’

(2) Greek *Ἐθέλω δέ τοι ἥπιος εἶναι.* (quoted after Schwyzer/Debrunner 1975, 374)

‘But I want to be (a) good (person).’

(3) German *Er bat seinen Freund, ihm zu helfen.*

‘He asked his friend to help him.’

(4) German *Der General befahl den Soldaten, eine Brücke zu bauen.*

‘The general ordered the soldiers to build a bridge.’

The subject of infinitive verbs or nominal-copulative phrases *wiedersehen*, *ἥπιος εἶναι*, *helfen* and *bauen* is not expressed lexically. However, information about its reference parameters is not absent. It is implicitly present and can be specified because the sentence governing the

² See Dreyer/Schmitt 2000, 83, Götze/Hess-Lüttich 1999, 412.

infinitive complement contains a noun phrase that bears the same characteristics. This referentially equivalent or co-referential noun phrase (NP) encodes a valence-bound constituent (actant) of the governing verb and performs in the superordinate structure the syntactic function of subject as in (1) and (2) or of complement, either directly as in (2) or indirectly as in (3).

However, there are other cases of complex structures with complement infinitive clauses, for which it cannot be argued that verbs in the infinitive have no subject and that it is implied by a constituent of the main clause, cf. e.g. (5), (6) and (7):

(5) German *Der Roman ist schwer zu lesen.*

‘The book reads (can be read) with difficulty.’

(6) German *Er lässt den Direktor (von mir) anrufen.*

‘He made me call the director.’

(7) Old Bulgarian *uvěděšę někojemu otъšъlъcu byti na městě tomъ* (quoted after Miklosich 1869, 491)

‘they understood that some hermit was there in that place’

In the example from German in (5), the noun *der Roman* cannot receive an external argument (logical subject) interpretation of the copulative-nominal predicate *schwer sein* (cf. *Der Roman ist schwer.* ≠ *Der Roman ist schwer zu lesen.*), although it bears the case of the subject (nominative) and agrees in person and number with the predicate of the sentence. The infinitive verb *lesen* is in the passive reading, so logically the nominal *der Roman* corresponds to a subject with the semantic characteristics of ‘patient’ to *lesen*, cf. *Es ist schwer, dass der Roman gelesen wird*, and when used in the active – of its direct complement, cf. *Es ist schwer, dass man den Roman liest*.

If we compare the example in (6) with the sentence *Er lässt mich den Direktor anrufen*, it becomes obvious that the noun phrase *den Direktor* in the accusative in (6) is only an imitation of the direct complement of the verbal governing element *lassen*. The name is logically related to the infinitive *anrufen*, which in (6) is in a passive reading (despite the lack of passive morphology) and the noun phrase *den Direktor* encodes an object argument embedded in its predicate-argument frame, which in passive diathesis occupies the syntactic position of the subject in the sentence, cf. *Der Direktor wird (von mir) angerufen*.

It is also obvious that the noun phrase in the dative *někojemu otъšъlъcu* in (7) cannot be placed in a logical dependence to the leading predicate *uvěděti* ‘understand, learn’, because in the argument structure of verbs with cognitive semantics no indirect complement is provided. The noun phrase marked for the dative in (7) denotes only the subject of the infinitive *byti* ‘I am, I reside, I am located’.

Therefore, unlike in the examples presented under (1)-(4), we cannot claim that in the complex structures given in (5)-(7), consisting of a sentence matrix and a subordinate infinitive

complement, the subject of the infinitive is implicitly present. Here it is clearly overtly expressed, although morphosyntactically it simulates a constituent (subject in (5), direct object in (6), and indirect object in (7)) of the governing infinitive structure.

In what follows under sections 1. and 2. I will dwell in more detail on the two main ways of subject indication of the subject of complement infinitive clauses – implicit or hidden (cf. (1)-(4)) and explicit or overt (cf. (5)-(7)).

1. Complement infinitive sentences with an implicit subject

In Chomsky's (1983) generative-grammatical model, it is believed that, due to identity with a noun in the governor clause, the subject NP of infinitives in sentences like those in (1)-(4) has undergone “deletion” in a process in which the predicate in the deep base structure (S') loses its finite characteristics and becomes a non-finite form in the generated structure (S). The procedure is known as Equi-NP-Deletion.

The derivation of sentences like (1) and (2) can be represented in the following formal notation:

$$NP_i - VP (S' NP_i - VP) \Rightarrow NP_i - VP (S PRO_i - VP).$$

For the sentences cited under (3) and (4), the same process can be expressed as follows:

$$NP_i - VP - NP_j (S' NP_j - VP) \Rightarrow NP_i - VP - NP_j (S PRO_j - VP).$$

In the co-indexing record of the generated infinitive structure (S), the phonetically suppressed subject of the infinitive complement is marked as PRO. The idea is to represent the empty (phonetically unrealized) subject NP as a pronominal anaphora, since it needs an antecedent to specify its referentiality. This antecedent acts as a control element in the matrix sentence.

Depending on the syntactic function of the nominal coreferential with the subject of the infinitive, the control is subject (see 1.1.) or object (see 1.2.).

1.1. Subject control

(1) and (2) exemplify subject control, cf. for (1) the co-indexing in (8), and for (2) the co-indexing in (9):

(8) Ich_i hoffe [PRO_i dich bald wiederzusehen].

(9) Ἐθέλω_i δέ τοι [PRO_i ἥπιος εἶναι].

The referential identity of the subject of the infinitive can be guaranteed by subject nominal phrases for verbs from semantically clearly defined groups. These are verbs that denote *effort*,

experience, intention, desire, request, hope, possibility, or to generalize – verbs of *volition*³. All these verbs establish thematic relations with the noun phrase marked for the nominative in their subject position, thus they are semantically “subject-able”⁴. The syntactic subject of the sentence constituted by these predicates is also their logical subject argument. For the denotation of this argument, referential nominals are suitable, which denote sentient, living beings (people) capable of action, willingly motivated for action, since the performance of the action described by the infinitive depends more or less on the subject in the sentence matrix. The semantic role assigned to the nominal in the subject position should be that of the agent. Only for agentivity can readiness or ability to act be assumed. We can call this type of subject control *agentive subject*.

In a particular case of subject control, however, it will turn out that the matrix controlling NP may not be thematically marked as ‘agent’, cf. (12) and (13):

(12) German. *Er wurde (von mir) gebeten, heute das Schlusswort zu halten.*

‘He was asked to give the closing speech today.’

(13) Greek. *Λέγομαι ἀγαδὸς εἶναι.*

‘They say I’m good/brave/noble.’

The German verb *bitten* in (12) is in the passive form and cannot have a semantic subject in its syntactic subject position. The pronoun *er* is morphologically marked for the nominative case and syntactically imitates the subject of the main clause. Semantically, however, this NP does not have the characteristics of ‘agent’, but of ‘patient’. In the active diathesis of the *verbum regens*, this NP is realized in its accusative-object position and from there performs the determinative function of a controlling element in relation to the lexically suppressed subject of the verb in the infinitive, cf. *Ich bat ihn, heute das Schlusswort zu halten*.

The syntactic displacement of the object phrase into the subject phrase position of the passive matrix as in (12) is not related to a change in its thematic characteristics (it is again a ‘patient’) and it does not affect the control properties of the object phrase, cf. the example in (14):

(14) *Er_i wurde (von mir) gebeten [PRO_i heute das Schlusswort zu halten].*

The PRO-subject of the infinitive structure is referentially represented again by the nominal in the syntactic subject position of the main sentence, which now has, however, not agentive, but patient properties, because it represents an entity that is not motivated to act of its own free will. It follows that for the derivation of a sentence with a passive matrix such as the

³ See Dentschewa 1984, 149.

⁴ The term “subject-ability” is defined by Kiss (1995, 5) as follows: “A verb is subject-able when it stands in a thematic relation to its subject.”

one given in (12), we can use a notation that is entirely comparable to that for sentences with an active matrix like (1) and (2) (see ↑), cf.:

$$NP_i - VP ({}_S NP_i - VP - NP_j) \Rightarrow NP_i - VP ({}_S PRO_i - VP - NP_j).$$

The case with the example from Greek given under (13) is analogous. Greek λέγο in an active reading constitutes an object-control structure as in examples (3) and (4) (see ↑), cf. λέγει με ἀγαδὸν εἶναι. The argument realized as an object in some *verba dicendi* and *cogitandi* (cf. e.g., Old High German *quedan*, *uuânen*, Gothic *qidan* with a copulative infinitive complement or German *nennen*, *glauben*, *vermuten*, *meinen* with complement structures in which the copulative infinitive is necessarily subject to reduction) does not represent an element affected by manipulation (as, for example, in the above-mentioned example (13)), which is assigned the responsibility for the performance of the verbal action described in the infinitive phrase. Typically, in such cases, in using infinitive clauses with a nominal-copulative infinitive verbal phrase, something is said about the location, mental and physical status of the object in the matrix, i.e., it represents the ‘topic’ of a particular utterance. Such verbs admit passive morphology, and then their nominal complement takes the position of the subject and receives its case – the nominative. For the coreference relations in (13) cf. the example in (15):

$$(15) \lambda\acute{\epsilon}\gamma\omicron\mu\alpha\iota_i [PRO_i \acute{\alpha}\gamma\alpha\delta\omicron\zeta_i \epsilon\acute{\imath}\nu\alpha\iota].$$

Unlike the subject control in an active sentence matrix, the subject control in a passive sentence matrix can be specified as *patient-subject control*.

Matrix verbs, with which patient-subject control is possible, mainly belong to the class of verbs denoting *impact*, *manipulation*. In their passive reading, the nominal denoting the manipulated object exercises referential control over the eliminated (due to identity) subject NP of the complemented infinitive structure from the position of the syntactic subject in the complementing structure.

1.2. Object control

In (3) and (4) the control exerted is by the object in the matrix clause, i.e. we have object control, as indicated by the indices of the co-referential noun phrases in the superordinate and subordinate clauses, cf. for (3) the entry in (16), and for (4) the one in (17):

$$(16) Er_i \text{ bat seinen Freund}_j [PRO_j \text{ ihm zu helfen}].$$

$$(17) Der General_i \text{ befahl den Soldaten}_j [PRO_j \text{ eine Brücke zu bauen}].$$

The subject of the finite base structure is eliminated and can only be represented as an empty PRO element. The referential characteristics of empty subjects can be specified because they match those of the control object element in the matrix sentence construction. Object control is

possible for verbs that can make semantic contact with a noun phrase in their object position, therefore they must be “object-able”. The syntactic object in the sentence constituted by these predicates decodes their logical object argument. As with subject-controlling verbs, nominals that denote capable living beings (in the standard case, people) are suitable for the denotation of this argument. And in this case, the implementation of the action described by the infinitive depends on them, but it does not happen by their will. They are the object/addressee of the subject in the superordinate sentence. That is, object control is possible with verbs of *volition*, but with a manipulative character (*request, order, advice, etc.*), whose semantics implies an object of the semantic type [+HUM]), with which the claims or expectations of the subject of the governing verb are connected for the realization of the action designated by the infinitive.

Conditions for object-control relations can also arise with perceptual verbs (*verba sentiendi*) when they denote direct perception or “active” perception⁵, cf. e.g., the behavior of the object phrase *ihn* ‘his, him’ in (18):

(18) German *Ich höre ihn schimpfen*.

‘I can hear him arguing.’

Verbs like the German *hören* ‘hear’, *sehen* ‘see’, etc. subcategorize for two internal arguments – one nominal and the second clause-like. The nominal argument denotes the sense-perceived object and functions syntactically as a direct complement to the superordinate predicate. Due to referential identity with the subject of the subordinate clause decoding the propositional argument, the object nominal in the matrix clause takes on the function of determining referentially the lexically suppressed subject of the infinitive, cf. for (18) the coindexation in example (19):

(19) *Ich_i höre ihn_j [PRO_j schimpfen]*.

In addition to manipulative and perceptive verbal predicates with a personal paradigm, object control is also possible with *impersonalia* of an implicit-personal⁶ type. Their object is of the type ‘experiencer’, i.e., it is a person who experiences a certain state, cf. the examples in (20) and (21):

(20) German *Es gelüstete ihn, heftig zu widersprechen*.

‘He wanted to retort sharply.’

(21) Russian *Вам легко это сделать*.

‘You can easily do that.’

⁵ See Vaišnoras 1990, 74.

⁶ These impersonalia are implicitly personal because the object-experiencer is a kind of “ergative subject”, cf. Boyadzhiev/Kutsarov/Penchev 1999, 601 ff.

The reduction of the subject nominal phrases of the infinitives *widersprechen* in (20) and *сделать* in (21) is accomplished because, due to coreference, the object pronouns *ihn* and *вам* in the governing clauses can guarantee their identity, cf. the entries in (22) and (23):

(22) Es gelüstete ihn_i [PRO_i heftig zu widersprechen].

(23) Вам легко [PRO_i это сделать].

2. Complemented infinitive sentences with an explicit subject

Under section 1, it was shown that the subject of complement infinitive clauses is subject to phonetic elimination when it referentially overlaps with a valency-bound constituent (subject or object) in the governing sentence that is valency-bound to the governing verb. For this reason, this constituent in the matrix sentence can be charged with the function of becoming an expressor of the referential characteristics of the subject of the subordinate infinitive structure. In other words, the inclusion of infinitive complements in these cases depends on the fulfilment of conditions (a suitable subject or object nominal) in the superordinate structure for the realization of the lexico-grammatical determination of the subject of the verb in the infinitive, which due to its non-finite form can preserve only its logico-semantic, but not its rection and agreement relations with its external argument (subject).

Logically, in languages where the incorporation of infinitives (initially in consecutive-final or locative function⁷) has led to the emergence of complex structures with infinitive complements, in which the syntactic status of the object nominal in the accusative/dative or the subject nominal in the nominative has become ambivalent, so that this nominal is understood not only as the bearer of the referential characteristics of the object or the subject of the governing verb, but also of the subject of the dependent infinitive⁸, to realize the alternative possibility of complement infinitive syntagms, in which the sentence matrix does not have a suitable NP (subject or object) to take the control-determining functions in relation to the subject of the infinitive. Such cases have already been presented under (5)-(7) (see ↑).

The common property in the examples given under (5)-(7) is that the matrix verbs for one reason or another are not subject- or object-capable (like those in (1)-(4), see ↑) and do not have constituents capable of performing the referential marking of the subject of the infinitive complement. It is noteworthy, however, that the subject phrase of the infinitive appears

⁷ See Haudry 1994, 4 ff.

⁸ This development is related to the understanding of that the infinitive is a verbal addition to another verbal concept and that the action the former expresses has a definite doer.

precisely in those positions of the sentence matrix in which, in the implicit type of subject-marking infinitive, we are used to seeing the controlling PRO-subject NP, namely the subject and object syntactic positions. Moreover, the subject NP of the infinitive is morphologically masked (in nominative or accusative/dative) as a valency-bound constituent to the predicate in the matrix structure. However, the imitation is clearly visible when analyzing the logical and rection relations in the superordinate finite clause and the subordinate infinitive clause. As has been shown, subject case (nominative, see (5)) or object case (accusative/dative, see (6) and (7)) marked nominals are logically and semantically bound not to the governing verbs *schwer sein*, *lassen* and *uvěděti*, but with the infinitives, respectively *lesen*, *anrufen* and *byti*. It is in such and other similar cases that the subject of the infinitive is clearly indicated. The mechanisms responsible for its morphological marking in the nominative or accusative/dative case I will discuss below.

In the following paragraphs, under 2.1., I will consider the cases in which the subject of the infinitive is realized in the syntactic subject position of subjectless governing predicates, and under 2.2. – those cases where the said subject simulates an object to verbal predicates with special idiosyncratic qualities.

2.1. Complement infinitive sentences with explicit subject

An example of complemented infinitive sentences with a subject-explicit subject was already given under (5) (see ↑).

When incorporating infinitive clauses with an explicit indication of the subject of the infinitive in the subject position of the main sentence, the well-known Latin construction *nominativus cum infinitivo* arises, cf. (24):

(24) *Homerus caecus fuisse dicitur.*

‘It is said that Homer was blind’.

The transitive verb *dicere* is in the passive form. The nominal phrase in the nominative case *Homerus* agrees with the predicate in person and number, but nevertheless does not stand in a logical-semantic relationship with it. In the active *dicere* governs the construction *accusativus cum infinitivo* and admits in its syntactic object position only clauses, but not referential nominal phrases, which, when the transformation into the passive takes place, assume the function of a patient-subject. In short, in their passive diathesis, such verbs have a semantically empty syntactic subject position, in which not their own object, but only a foreign subject NP, such as *Homerus* in (24), can be accommodated.

The presence of the construction *nominativus cum infinitivo* is documented in modern Lithuanian. In his study *Die indogermanische Grundlage des Dativus und Nominativus cum infinitivo im Baltischen* (1987, 206 ff.), Ambrazas gives examples of *nci*-combinations in constructions with declined or non-declined adjectives (displaying or not agreement) in the function of the nominal predicate (see (28)), in *būti*(‘am’)-constructions with infinitives of some verbs of perception such as *matyti*, *regėti* ‘I see’, *girdėti* ‘hear’ (see (29)), in *būti*(‘must’)-constructions with infinitives of verbs with different semantics (see (30)), as well as in constructions with impersonal verb regents such as *rastai* ‘remains, must’ (see (31)):

(28) *Pienas (man) skanus/skanu gerti.*

(German *Die Milch ist (mir) schmackhaft zu trinken.*)

‘(My) milk is delicious to drink.’

(29) *Antai baltoji obelis y(r) matyti.*

(German *Da ist der weiße Apfelbaum zu sehen.*)

‘Here the white apple tree can be/is seen.’

(30) *Jau i(r)vėl pietai virti!*

(German *Schon wieder ist das Mittagessen zu kochen.*)

‘Lunch has to be cooked again.’

(31) *(Mums) liko rastai pjauti.*

(German *Die Stämme sind (uns) zu sägen geblieben.*)

‘The logs must be/were left to flog each other on planks.’

What the realizations in (28)-(31) have in common is that the infinitive clauses are in passive diathesis and the nominative phrase of the matrix sentence masks an object phrase of the infinitive.

The examples from Lithuanian are deliberately given in German as well, to make it clear that there are obvious parallels between *nci*-constructions in Modern Lithuanian and in Modern German (cf. also the example in (5), which is analogous to that in (29)).

It is not clear why the construction *nominativus cum infinitivo* has not been identified in representatives of Germanic languages such as e.g. Gothic and German. It is possible that this fact is due to the opinion advocated by Jacob Grimm (1898², 142 ff.) about the *nci*-construction in Gothic and German, in which numerous subsequent studies have been grounded⁹. Grimm defines the construction *nominativus cum infinitivo* as a combination of a predicative noun in the nominative and the infinitive of the verbs *sein*, *werden* and *bleiben*, cf. (32) and (33):

⁹ Compare, for example, Apelt 1874, Köhler 1886, Streitberg 1910.

(32) German. *Er fürchtet König zu werden.*

‘He is afraid of becoming king.’

(33) German. *Er soll der König sein.*

‘He must be the king.’

According to Grimm, the indicative subject of the infinitive element in (32) and (33) is the nominal (*der*) *König*, and the *nci*-syntagm is *König zu werden* and *der König sein*, respectively. In (32), however, we have an eliminated or PRO-subject, cf. (34):

(34) Er_i fürchtet [PRO_i König zu werden],

and in (33) the subject of the infinitive is expressed, but not as a predicative nominal in the nominative case, but as a subject in the main clause – *er*. Schömann (1869, 238) quite rightly thinks that the combination of predicative nominal and copulative infinitive is not *nominativus cum infinitivo* as we know it from Latin (see the example in (24) ↑), but quite wrongly believes that in German this construction is not possible at all.

In my research devoted to the use of infinitive sentences with an overt subject in the Gothic translation of the Bible (see Dentschewa 2007, 315ff.), I showed that the construction *nominativus cum infinitivo* (as a combination of a verb in the infinitive and its logical subject in the nominative) is massively present in the target language. The construction covers, on the one hand, Greek *nci*-constructions in single-place predicates, describing the modality of necessity or possibility as a relation between two propositions *ὀφείλω* ‘I must, I am obliged’ (in Gothic *skulan*), *ἔχω ἀνάγκην* ‘must, it is necessary’ (in Gothic *þaurban*), *εὐκοπώτερόν ἐστιν* ‘it is easier’ (in Gothic *azetizo ist*), *ισχύω* and *δύναμαι* ‘it is possible’ (in Gothic *maht(s) ist*). On the other hand, *nci*-constructions were documented in Gothic which descriptively convey the Greek *aci*-constructions after *δεῖ* ‘should, it is necessary’ (in Gothic *skulan* and *skuld(s) ist*), which means that the *nci*-construction is used in the target language without being prompted by a formal-structural pressure in the Greek original, which is a definitive indication of its independent use.

According to my present observations *nominativus cum infinitivo* in modern German constitutes verbs in impersonal readings such as *scheinen*, *drohen*, *bleiben*, *sich lohnen*; the modal verbs *sollen*, *müssen*, *dürfen*, *können* (the latter in epistemic and circumstantial readings such as ‘it is allowed’; ‘it is possible’), as well as the verb *sein* in *zu*-infinitive constructions.

In generative-transformational analytical studies of German, some of these verbs (*scheinen*, *drohen*, *sollen*, *müssen*, *dürfen* and *können* in the above readings) have been described as predicates that raise the subject of the infinitive in the syntactic subject position of

the superordinate sentence¹⁰, but the connection between these verbs and the *nci*-verbs known to us from the grammar of classical languages has not been made; besides, the listing of so-called “raising” verbs has not yet been exhaustively completed – unanalyzed remains the “raising” of the subject NP of the infinitive, e.g. with *sein* (‘can/must’)-constructions, with *zu*-infinitives of verbs with different semantics (see (5) ↑, as well as (38), (39) ↓) or with verbs such as the impersonal German *bleiben* in meanings such as ‘remains, must’ (see (42), (43) ↓) and *sich lohnen* ‘it’s worth it’ (see (44) ↓).

A main feature of “raising” verbs is that they cannot by nature have a logical subject, i.e. they are single-place predicates of the type $P(x)$, with the internal argument x being of the clausal type. It is with such predicates that there is a semantically empty subject position into which the subject NP of the infinitive can be transported. The latter has an independent logical status as an external argument of the verb in the infinitive, but due to the lack of agreement it cannot receive a case and a relevant syntactic function in the infinitive clausal construction. At the same time, the superordinate structure offers a referentially empty syntactic position due to the inability of the governing to have a logical subject. It is in this position that the subject phrase of the infinitive is “raised”. For the sentence

(35) *Die Rechnung scheint zu stimmen*

we must start from a construction as in (36):

(36) *e scheint [... Rechnung zu stimmen]*,

then the “raising” procedure can be expressed as in (37):

(37) *Die Rechnung scheint [e zu stimmen]*.



For control verbs (see under 1.1. ↑) I have already distinguished cases of ‘agent’- and ‘patient’-subject control according to the semantic role of the subject controlling the reference of the suppressed or PRO-subject of the infinitive. It turns out that for the subject NP raised from the subordinate into the superordinate structure as in the *nominativus cum infinitivo* constructions, two options must be provided in view of whether this NP represents the external argument (the logical subject) of the infinitive or its internal argument (the object).

With an active infinitive complement, the expressed subject is a logical subject (performer of the action, bearer of the quality/state, etc.), cf. (38) and (39):

(38) *Peter soll jetzt gehen.* (cf. *Peter geht.*)

‘Peter must go now.’

(39) *Peter scheint dumm zu sein.* (cf. *Peter ist dumm.*)

‘Peter seems to be stupid.’

¹⁰ Compare, for example, Kiss 1995, Axel 2001, Reis 2001.

With a passive infinitive complement, the subject NP denotes object affected by the action, cf. (40)-(43):

(40) *Die Maschine ist nicht mehr zu reparieren.* (cf. *Man repariert die Maschine.*)

‘The machine is beyond repair.’

(41) *Die Verkehrsregeln sind zu beachten.* (cf. *Man beachtet die Verkehrsregeln.*)

‘Traffic rules must be followed.’

(42) *Das bleibt noch zu tun.* (cf. *Man tut das.*)

‘That remains to be done.’

(43) *Das bleibt festzuhalten.* (cf. *Man hält das fest.*)

‘That should be kept in mind.’

(44) *Das lohnt sich zu tun.* (cf. *Man tut das.*)

‘This is worth doing.’

Therefore, in accordance with the active or passive diathesis of the infinitive complement, its explicitly indicated subject, occupying the subject syntactic position of the matrix sentence, may be the bearer of the action/state described by this verb, but it may also be the object affected by this action. Or in the first case we can say that in the most general sense we have a subject with ‘*agentive*’ characteristics, and in the second – with ‘*patient*’ characteristics.

2.2. Complemented infinitive sentences with an object-explicit subject

Examples of infinitive complements with an object-explicit subject of the infinitive include the sentences given under (6) and (7) (see ↑).

When integrating infinitive clauses with an explicit subject of the infinitive in the object position of the matrix sentence, the so-called *accusativus cum infinitivo* constructions arise, cf. (45):

(45) Latin. *Audio te domum exstruere*

‘I hear/learn that you are building a house’

or *dativus cum infinitivo*, cf. (46):

(46) Old Bulgarian. *povelě sьboru byti* (cited after Vondrák 1908, 366)

‘ordered the assembly to take place’

It is obvious that the reading of Latin *audire* in (45) is not directly perceptual, so the accusative pronoun *te* ‘you’ cannot be interpreted as an object embedded in the valency matrix of the verb. In the meaning ‘hear, learn’, the internal argument selected by this verb is of a propositional nature and can be denoted on the syntactic surface only by a complement (object) clause. In the accusative case the NP *te* is a coded constituent of the subordinate structure – the subject of the infinitive *exstruere*.

Analogously in (46), the verb *povelěti* is not directly manipulative and its action cannot be addressed to an object of the nominal type, but only to an object proposition. And here the dative NP *sъboru* represents the subject of the infinitive in the *byti* case (in this case in the meaning ‘happen, become’).

It is quite a different issue why in examples (45) and (46) the nominal phrases denoting the subjects of the infinitives *exstruere* and *byti* are morphologically marked differently: with the governing verb *audire* it is marked as the direct object in the accusative case, while with the governing verb *povelěti* it is marked as the indirect object in the dative case. To explain the differential case marking of the nominal members of these constructions, one can use the generative concept of case theory in the Chomskyan tradition, more specifically the concept of the so-called *Exceptional-Case-Marking* on the part of the matrix verb. In the generative discourse, the *Exceptional-Case-Marking* procedure on the part of the matrix verb is formulated only for the so-called *aci*-verbs. In Dentschewa 2007 (see p. 193 ff.), it was demonstrated that the same mechanism could serve to explain case marking in the so-called *dci*-constructions, attested in the Old Bulgarian written monuments¹¹.

Matrix verbs in which *Exceptional-Case-Marking* is exercised on the subject of an embedded infinitive structure or case is assigned “exceptionally”, from “outside” must meet certain requirements. They must have a subcategorization frame of the sentence type [S’], must be able to eliminate the subordinate clause boundary, and have the idiosyncratic feature [+transitivity] in *aci*-cases like (45) or [+addressee-ship] in *dci*-cases like (46). Only under these conditions, can they assign case on the syntactic surface of the sentence – accusative or dative, to a nominal phrase that is logically connected to the infinitive verb as the carrier of the action described by it.

The infinitive construction with a clearly indicated accusative subject, the so-called *accusativus cum infinitivo*, in which *Exceptional-Case-Marking* takes place, is widely represented in the two classical languages Greek and Latin in verbal regents from the semantic classes of *verba dicendi*, *cogitandi*, *sentiendi* (indirect perception) or *voluntatis*. It turns out, despite a number of opposing opinions¹², that the construction is present under the same semantic and syntactic conditions in Gothic¹³, in the various developmental stages of German¹⁴, but (quite perceptibly, albeit sporadically) also in modern German, cf. the example in (6) ↑, as well as the sentences below (47) and (48):

¹¹ See Haderka 1964.

¹² Compare, for example, Schwyzler/Debrunner 1975, 374, Paul 1968, 109, Jolly 1873, 260, etc.

¹³ See Dentschewa 2007, 140 ff.

¹⁴ See Dentschewa 2003, 113 ff.

(47) *Ich hörte Karl von allen Leuten loben.* (cited in Reis 1976, 66)

‘I heard/Learned/Understood that everyone praises Carl.’

(48) *Der Chef will den fälligen Brief bis morgen von Ihnen geschrieben haben.* (cited *ibid.*, p. 12)

‘The boss wants you to write the urgent letter by tomorrow.’

The nominals *Karl* and *den Brief* denote object arguments of the infinitives *loben* and *geschrieben haben* (= perfect infinitive). As implied by the passive diathesis (unequivocally marked by the prepositional phrases *von allen Leuten* and *von Ihnen*) in the infinitive complement, these nominals are in the syntactic position of the subject in the passive finite base structure from which the surface infinitive structure of the sentence is generated. It is these subject nominal phrases that are recognized by verbal governors (describing transitive or addressee-oriented actions) in the superordinate clause and they are the ones marked with the cases otherwise assigned and assignable to the nominal actants generated in the own predicate-argument structures of the superordinate clauses.

The infinitive construction with a clearly indicated subject in the dative or the so-called *dativus cum infinitivo*, which is also based on *Exceptional-Case-Marking* on the part of the matrix verb, is documented in the Old Bulgarian written monuments for governing verbs from the semantic classes of *verba voluntatis* and *verba dicendi*¹⁵. Despite the claims of Jacob Grimm (1898², IV, note p. 131) and subsequently of Miklosich (1869, 497) and Streitberg (1910, 212 ff.) that the Gothic *warþ*-structures with dative nominal phrase and an infinitive represent a phenomenon that can be compared with the *aci*-construction in Latin and Greek and with the *dci*-construction in the Slavic languages, analyzing Gothic linguistic material proves (see Dentschewa 2007, 208 ff.) that the nominal phrase in the dative corresponds to the semantic requirements and specifications of the matrix predicate for its own arguments generated in its argument subcategorization frame, or that in combinations with the dative and infinitive there is an object control relation, which means that the subject of the infinitive complement is expressed not explicitly, but implicitly (see under 1.2.).

Attention should also be paid to a special development of the constructions *accusativus cum infinitivo* in Greek and Latin and *dativus cum infinitivo* in Old Bulgarian, as this development accounts for the possibility for the subject of the infinitive to be signaled explicitly, regardless of the semantic and syntactic features of the verbal governors in the matrix sentence. The rule for expressing the subject NP of the infinitive in accusative or dative respectively became a grammatical rule, so that it was not necessary for predicates in the

¹⁵ See Haderka 1964, 509 ff.

superordinate structures to be able to exercise *Exceptional-Case-Marking*. The sufficient condition is that they subcategorize for a propositional internal argument¹⁶. Thus, in Greek and Latin *aci*-constructions, and in Old Bulgarian *dci*-constructions appear after *verba impersonalia*, cf. (49), (50), (51):

(49) Latin. *Oportet te venire.*

‘(You) must come.’

(50) Greek. Mk. 9,11: *ὅτι Ἠλίαν δεῖ ἐλθεῖν πρῶτον*

‘that Elijah must come first’

(51) Old Bulgarian. *Ne dobro jestъ mnogomъ bogomъ byti* (quoted after Vondrak 1908, 367)

‘it is not good that there are many gods’

Greek and Old Bulgarian, respectively, went even further in the use of *aci*- and *dci*-constructions, because in those languages, these constructions also appear in complex structures in which the complement infinitive clauses are completely independent of the predicate in the matrix, i.e. they are used as clichés or as absolute constructions. Together with main clauses, *aci*- and *dci*-combinations participate through (explicit or implicit) subordination and complementation in the construction of complex sentences, cf. (52) and (53):

(52) Greek. Mk. 3,20: *καὶ συνεράτης πάλιν [ὁ] ὄχλος, ὥστε μὴ δύνασθαι αὐτοὺς μηδὲ ἄρτον φαγεῖν.*

‘and again the people gathered, so that they could not even eat bread.’

53) Old Bulgarian. Mk. 15,5: *Iisъ že ktomu ničtože otvěšta, jako divitisę Pilatu.* (quoted after Bonchev 1952, 87)

‘But Jesus answered nothing more, so Pilate was astonished.’

Conclusion

From the presented arguments, the general conclusion can be drawn that with regard to the expression of the subject of an infinitive of the type we know in the Germanic languages, but also in the Romance and Slavic languages, i.e. of an infinitive with clearly defined verbal behavior, there are two options, either it has PRO-characteristics, i.e. the subject is not phonetically present, but is *signaled* only *implicitly* and is implied by a referentially identical subject or object nominal phrase in the superordinate structure (= antecedence), or else it is not bound to a nominal in that structure, but is logically connected only to the subordinate infinitive, in which case it is accordingly signaled *explicitly* or *overtly*. Translated into the generative parlance, in the first case there is phonetic “deletion” (*Equi-NP-Deletion*) of the subject of the

¹⁶ See Dentschewa 2007, 61 ff., 196 ff.

infinitive, and in the second case there is “*Raising*” of the subject of the infinitive into the subject position of the sentence matrix or “assignment” of case (accusative or dative) to the subject of the infinitive is accomplished “exceptionally”, from “outside” (*Exceptional-Case-Marking*). In grammaticalized and absolutely independent *aci*- and *dci*-constructions, we can speak of clichéd structures with a clearly expressed subject and of expanding their use by analogy. In this way, the two possibilities set in the system of these languages are realized – on the one hand, to integrated infinitive complement clauses in the presence in the matrix sentence of constituents referentially identical to the subject of the infinitive (in the syntactic positions of the subject or the object), and on the other hand to include infinitive complements even in the absence of such constituents.

From what has been said so far, it also follows that it is incorrect to claim that infinitive clauses/constructions, unlike sentences containing a finite verb form, “never” have a subject. What infinitive clauses do not really have is their own syntactic position for subject. This is because in them the verb phrase is non-finite, and this necessarily means loss of agreement properties. However, the loss of rection control over the carrier/receiver of the infinitive action is not associated with a loss of the semantic connection with it. This relation is always present regardless of whether the referentiality of the subject is specified by a noun phrase with a syntactically and semantically relevant function in the matrix (see under 1. ↑) or by a noun phrase that morphologically has the appearance of and syntactically mimics the behavior of a constituent (subject or object) in the matrix without being able to establish a semantic-logical connection with the governing verb (see under 2. ↑). In other words, the subject of the infinitive is always referentially clear. The only difference is that in infinitive constructions with an overt subject (the *nci*-, *aci*- and *dci*-constructions) both elements participating in the predicative unity (subject and subject property) are explicitly encoded, as the subject of the infinitive can be placed in a foreign subject position and agree with the governing verb, or else imitate an object phrase (direct/indirect object) in the matrix sentence. In hidden or PRO-subject cases, the subject of the predication (realized as a subject in a finite structure) is implicitly present due to coreference with a nominal phrase (subject or direct/indirect object) which is an organic part of the matrix.

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