

Semantics of complementation in Ossetic

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Introduction

This paper presents an analysis of the system of complement markers in Ossetic (Iranian; Indo-European), a language of the Northern Caucasus. The semantics of non-finite forms and subordinating conjunctions in Ossetic have previously been described in reference grammars and works dedicated to subordination (cf. Abaev 1950; Kulaev 1959; Gagkaev 1956; Bagaev 1982). However, most of the constructions involved have only been dealt with in isolation up to this point. In particular, the factors that influence the presence or absence of the correlative pronoun/adverb and the competition between the various complement subordinators remain underdescribed.

I consider the different types of complementation in Ossetic in the light of semantic parameters which have been elaborated in research on complementation over the last few decades, such as the oppositions of fact vs. event vs. proposition and presupposition vs. assertion. On the basis of these parameters, I try to explain the distribution of the complementation strategies found.

The data presented here were collected by elicitation, from the Ossetic National Corpus (http://www.ossetic-studies.org/iron-corpus/search/?interface_language=en), and from texts recorded during fieldwork. The elicited data were collected in the years 2010-2012 from speakers of Iron Ossetic from Vladikavkaz, Alagir, and Ardon, in the course of work on the “Corpus Linguistics” project of the Presidium of the Russian Academy of Sciences and on RFH projects № 13-04-00342 and 14-04-00580. I would like to thank Madina Darchieva and Fatima Aguzarova, whose help was invaluable for double-checking the collected material. Examples elicited during fieldwork are given without reference, while examples taken from recorded oral texts are labelled TEXT and examples from the Ossetic National Corpus are labelled ONC.

The paper is structured as follows. The first section is dedicated to the semantic parameters relevant for the choice of complement construction. In the second section, I consider the Ossetic data.

1. Semantics of complement constructions in the languages of the world

1.1. Definition of complement constructions

A complement construction can be defined by either semantic or syntactic criteria. An example of a semantic definition can be found in (Noonan 1985: 52), where complementation is viewed as a syntactic construction in which “a notional sentence or predication is an argument of a predicate”. That means that the semantics is used as the main criterion for the identification of complement clauses. In a different vein, Dixon and Aikhenvald (2006: 1) describe complementation in the following way: “certain verbs can take a clause, instead of an NP (noun phrase), as a core argument”. This definition is based on the assumption that the notions of “noun phrase” and “clause” are well-defined and distinguishable in a given language. Both definitions agree in the majority of cases, but give different results for disputable constructions. Consider the following examples:

- (1) *He was angry about getting old and getting sick.*
- (2) *He's already angry that I refused to move back in.*
- (3) *He was angry about a war that had taken a child's mother.*
- (4) *I was still angry because of Jilly.* (COCA: Corpus of Contemporary American English)

In (1)-(4) the bold font marks different syntactic constructions used to encode the stimulus of “angry”. The semantic definition of complementation covers (1) and (2), which is

expected, but also (3) and (4), since both of them refer to situations, and not to entities. In (3) a non-derived noun is used to refer to a situation, while in (4) the NP *Jilly* refers to some situation by association: obviously, it is not the existence of the particular person that has caused the speaker's anger, but some action that she has performed. Classifying (3) and (4) as complementation runs counter to most current work on this issue, both typological and theoretical, and is thus unwelcome.

The syntactic definition gives the predicted results for (1)–(4), rejecting the latter two. However, it excludes many constructions that are in complementary distribution with indisputable “complement constructions”, e.g.:

- (5) *I like it when everyone is smiling.* (COCA)
(6) *I love the way she dances.*

The dependent clause in (5) is introduced by the temporal subordinator *when*, whereas the direct object position of the complement-taking verb is filled by the “dummy object” *it*. Clearly the dependent clause is an argument of the complement-taking verb in semantic terms, but it is less clear whether the sentence has a similar structure at the level of syntax, or whether the dummy pronoun should instead be analyzed as the direct object. (Note that in Ossetic the literal translation of (5) is a complement construction, cf. 2.3.2.)

From the syntactic point of view, the relevant construction in (6) consists of a relative clause adjoined to the NP *the way*. Such contexts are not considered under the heading of “complementation” in most works on clausal complements (cf. Noonan 1985; Dixon, Aikhenvald 2006: 19). However, semantically this is indeed a complement construction, since the situation *she dances* fills the valency slot of stimulus associated with the verb *love*. Thus (6) can be paraphrased by sentences like *I love her dancing* or *I love how she dances*, both unquestionable examples of a complement construction. In a large number of languages (e.g. many Altaic and Uralic languages) the only way to express manner in complement clauses is by means of nominalizations, including specific verbal nouns denoting manner. These are analyzed as complement clauses in grammars and special papers on the languages in question, while their English translation (6) is considered to be a relative clause. However, if we are aiming to present a detailed account of the semantic distribution of clausal constructions expressing stimulus with the verbs *like* and *love* in English, cases like (5) should not be excluded from our analysis.

According to the syntactic definition, complement constructions headed by nouns should not be described as complement clauses. The problem is that this excludes not only English constructions of types (5) and (6), but also the Japanese construction with *koto* “thing, fact” together with similar constructions elsewhere. This is hardly satisfactory, as the *koto*-clause is the main complementation strategy used with some complement-taking predicates, and it is usually included in works on complementation in Japanese (cf. Josephs 1976; Suzuki 2000). Hence, the purely syntactic definition of sentential complementation seems to be too exclusive.

For a number of languages we possess syntactic tests to distinguish between complement and adverbial or relative clauses: e.g. Ross's (1967) island constraints filter out (6) (but not (5)). However, these constraints do not work in the same way in all languages. For example, in Ossetic they distinguish instead between factive and non-factive complement clauses. However, Ossetic has another, highly language-specific diagnostic: the type and the possibility of omission of the correlative pronoun in a subordinate structure indicates whether it is a complement or an adverbial clause (cf. section 2.3.2 and [Belyaev, Serdobolskaya forthc.] for details).

My approach is to combine the two definitions, while making use of language-specific tests. Therefore, I treat as complementation those constructions where one of the semantic arguments of the verb denotes a situation *and* has clausal structure; if language-specific tests exist, they are used as a filter. I do not consider constructions with phasal and modal verbs in detail here, since they show monoclausal properties in Ossetic, as is common typologically

(cf. Aissen 1974; Noonan 1985). I use the term “complementizer” for lexical/morphosyntactic devices whose main function is that of complementation, and “complementation strategy” for the whole construction of the complement clause (e.g. parataxis, combinations of pronouns, complementizers and special mood on the subordinate verb).

In what follows I will use the following terms: “complement-taking predicate”, or CTP – the predicate that can take clausal (and potentially also nominal) arguments; “matrix clause” – the clause with the complement-taking predicate (CTP); “complement clause” – the clausal argument (marked with square brackets); “dependent/embedded clause” – any type of subordinate clause.

The list of matrix verbs analyzed here for Ossetic is given in the Appendix.

1.2. Classes of CTPs and semantics of clausal complements

Many general works on complementation or treatments of this issue in reference grammars present a variety of complementation systems distributed over the CTPs found. The predicates that can take sentential complements are enumerated, and examples illustrating the complementation devices that can be used with each predicate are provided. The description is thus structured as follows: verbs with the meaning “begin”, “end”, “be able to” take infinitival complements, “see” and “hear” take one type of complementizer and the verbs “think” and “say” take another type of complementizer, and so on. Groups of predicates (e.g. mental, perception verbs, etc.) are proposed on the basis of the devices used for marking their complements. For example, T. Givón (1980) proposes a hierarchy of CTPs, arguing that the type of the CTP determines the verb’s choice of complementation device (cf. also the classification of CTPs in typological works [Nedjalkov 1979; Krakovskij 1985]).

Such classifications, however, find it difficult to account for cases where one and the same CTP can take more than one complementation strategy with different semantics, e.g.:

- (7) a. *I like [her singing].*
b. *I like [how she sings].*
c. *I like [that she sings well].*
d. *I like [to wake up early in the morning].*

As can be seen from (7), the verb ‘like’ in English can take at least four different complementation strategies. The complementation strategy chosen depends on the semantics of the complement clause. Determining this verb’s position in a hierarchy or classification is therefore problematic. It can be assumed that with each complementizer in (7) the verb ‘like’ is being used with a different meaning (or nuance of meaning). In this case, our classification would be forced to posit four different verbs: “like 1”, “like 2”, “like 3”, “like 4”. Such a treatment may be more or less suitable for differentiating (7a)–(7c) vs. (7d), since in (7d) *like* shows a semantic shift away from pure emotion towards decision ((7d) can be paraphrased as *I choose to wake up early, I don’t enjoy it*) and in (7a)–(7c) it is close to *enjoy* (cf. the opposition of “direct interaction” vs. “primary consciousness” or “indirect interaction” in [Verspoor 2000]). However, the difference between (7a) and (7b) and even (7a)–(7b) and (7c) seems too subtle to be easily explained.

Predicates with similar semantics can display different polysemy patterns cross-linguistically, with the result that they also take different complementation strategies. For example, in many Nakh-Dagestanian languages the verb “want” also means “love”; in many Finno-Ugric languages and in Ossetic the verb “know” also means “be able to”; in Ossetic there is a verb meaning both “think” and “remember”. Such polysemy makes it possible to use these verbs with a large number of complementation strategies. On the other hand, it has been shown that even with one and the same meaning of the CTP the complement clause can be introduced by many complementation strategies.

The accumulation of data from various language families led to the development of an alternative approach. This approach is based on the assumption that the dependent clause can be described as having its own semantics, separately from the CTP. The choice of

complementation strategy encodes the semantics of the complement clause (Ransom 1986; Podlesskaya 1990; Dixon, Aikhenvald 2006; Serdobolskaya 2009; Serdobolskaya, Motlokhov 2009). The semantics of the dependent clause can be encoded by the complementizer, the mood of the dependent verb, particles, special correlative pronouns etc. The terms “fact”, “event”, “proposition”, “presupposition”, “assertion”, “truth value”, “modality” and “epistemic value” have been drawn on to explain the distribution of the alternative complementizers used with one and the same CTP. For example, (7a) is described as an “event”, “occurrence”, or “instantiation of the situation”; (7b) as a manner complement clause; (7c) as a factive complement clause; (7d) as “action” or “potential action”, etc.

In the next section, I shall briefly discuss the notions that will be used in this paper, their definitions, and the diagnostic tests used for distinguishing between them.

1.3. Definitions of semantic types of complement clauses

Beginning in the 1960s, a number of notions have been elaborated to describe CTPs and the semantics of complement clauses. One is the notion of “implicative verbs” (Karttunen 1971: 349): these are verbs that require that “the illocutionary force of S_1 (i.e. assertion, command, question etc.) is shared by S_2 ”, e.g. *John managed to open the box* implies *John opened the box*, but *John hoped to open the box* does not.

Another useful notion is that of “factivity”. Kiparsky and Kiparsky (1971: 348) define the “fact” as the “proposition the speaker presupposes to be true”. A classic test for the presupposed status of the complement clause is the scope of negation:

- (8) *It is odd [that the door is closed], It is not odd [that the door is closed]* → the proposition “The door is closed” is true (Kiparsky and Kiparsky 1971: 349–351)

In both cases, no matter whether the CTP is affirmative or negative, the truth value of the dependent clause is T (true), since it is presupposed to be true. With non-factive complements there is no such presupposition. For example, in the three sentences in (9) the hearer is not supposed to assume that the complement clause is true, even if s/he acquires some information about Joan’s and the speaker’s opinions on the situation.

- (9) *Joan said [that the door was closed] – Joan did not say [that the door was closed] – I do not believe [that the door was closed]* → the truth of the proposition “The door is closed” is not asserted

Kiparsky and Kiparsky (1971) show that the distinction between facts and non-facts is relevant for the encoding of English complement clauses. Facts can be introduced by the gerund with the genitive, while non-factive complements cannot, cf.:

- (10) a. *I don’t mind [your saying so]* vs.
b. **I maintain [your saying so]*. (Kiparsky and Kiparsky 1971: 347)

The expression *do not mind* introduces facts, and the verb *maintain* takes non-factive complements; hence, the unacceptability of (10b). This verb can, however, take *that*-clauses (11) introducing either facts or non-factive complements.

- (11) *I maintain [that he did this for sheer vanity]*. [COCA]

It is noteworthy that facts can appear with both factive (like *know*) and non-factive predicates (like *say*), which means that the semantics of the complement clause can be defined as factive independently of the CTP.

Many works use a notion of “proposition” as opposed to “fact” in complement clauses. A proposition is defined as a mentally processed situation that has a truth value and is not presupposed to be true (cf. [Peterson 1997; Dik 1997]; cf. propositional contexts with positive factive and factive epistemic verbs in [Asher 1993]; cf. the notions of predetermined vs. non-predetermined truth value in [Ransom 1986]), i.e. it is a complement clause that belongs to the assertion being made, as in (11). The main difference between fact and proposition thus lies in the presupposed vs. asserted status of the complement clause. This difference between fact and proposition is often demonstrated by contrasting complement clauses of verbs of knowing vs. verbs of thinking (cf. *He knows that the Earth is round* vs. #*He thinks that the*

Earth is round – the strangeness of the second sentence is due to the presentation of a well-known truth as part of the assertion; putting this under the scope of a verb of opinion suggests that it could be subject to doubt on the part of the interlocutors).

This definition entails that presupposed information cannot be negated by the same speaker in the subsequent context, e.g. *He thinks/*knows that Joan has left, but that is not true*. This is, however, possible with non-factive complements, introduced (for example) by the verb *think*.

Benveniste claims that, by definition, sentential complements of performative verbs cannot be factive (Benveniste 1966: 272). This applies to certain semantic types of CTPs, such as commissives (*promise* etc.), exercitives (*appoint, dismiss* etc.) and some others: in their performative use, these verbs require that the situation in the sentential complement is not true until the situation in the matrix clause is realized (e.g. *I declare you husband and wife* in its performative use makes the complement true upon pronunciation of this sentence; until this moment the complement must be false). The standard performative context is first person singular in the present tense (Benveniste 1966). I suggest using this as a test to distinguish facts from propositions even in less canonical contexts, including the past tense (*He declared them husband and wife*), on the condition that the complement is made true by the fact that the matrix clause is true (e.g. if the context suggests that the subject of the matrix clause has the authority to make the complement true etc.). I will refer to such contexts as “quasi-performative contexts”.

It has been claimed that certain contexts can be “presupposition-opaque” (Krejdlín 1983; Apresyan 1995). See the following examples from English:

- (12) a. *If I knew [that by cutting off an arm or cutting out my liver I could be rid of you forever], I would seize the knife and relish the pain and loss, all for the sake of freedom* [COCA]

- b. *But if I knew [that it was going to take off as fast as it did], I – I certainly would have been in some kind of aerobics program six months prior to releasing the thing.* [COCA]

In (12a), the truth of the complement clause is not presupposed: it is merely hypothesized by the speaker, and the sentence could continue “but I knew that it would not help, so I didn’t cut off an arm etc.”. There is no presupposition failure, since the presupposition is only present in the imaginative world created by the protasis of the conditional. However, this context is not always presupposition-opaque, since with a different intonation the same complement can be presented as true, cf. (12b), where part of the complement (namely, *it did*) explicitly indicates its truth.

Therefore, the following diagnostics can be used to distinguish between facts and propositions:

- facts cannot be negated by the same speaker in the following context,
- facts cannot occur in the complements of performative CTPs with commissive or exercitive meaning.

I also consider that complements introduced in the protasis of conditional sentences but negated by the subsequent context contrast with genuinely factive complements.

Another important distinction considered in works on the semantics of abstract nouns is the opposition between propositions and events, cf. (Asher 1993; Peterson 1997; Arutjunova 1988; Zaliznjak 1990), cf. “truth” vs. “occurrence” in (Ransom 1986), and facts/possible facts vs. state-of-affairs in (Dik 1997). Facts/propositions have a truth value and thus denote a situation that has been “mentally processed” by the speaker, while events are situations that have not been mentally processed, e.g., complements of the predicates ‘take place’, ‘happen’, immediate perception verbs, etc.:

- (13) **Fighting took place in the neighbourhood.**

I watched her sing/singing.

I like her singing.

A large number of tests for differentiating between facts (or propositions) and events have been suggested by semanticists, cf. (Asher 1993, Peterson 1997, Arutjunova 1988, Zaliznjak 1990):

- facts/propositions can contain negation, while events cannot¹,
- facts/propositions and events have different identity conditions (if an NP is substituted by another coreferring NP the identity of events is preserved, while the identity of facts is not),
- facts/propositions are not located in space and time (^{??}*The fact that... happened yesterday*),
- facts/propositions cannot be perceived directly by the senses,
- facts/propositions do not have duration (^{??}*The fact that... lasted two weeks*).

Another diagnostic is proposed by Bøye (2012): propositions can host epistemic expressions, while events cannot, cf. the unacceptability of ^{??}*I saw him maybe run(ning)*, ^{??}*I'm afraid of maybe going to the forest*.

From here on, when characterizing the semantics of the complement clauses, I use the terms *fact* vs. *event* vs. *proposition* as defined above. I also use the notions “irrealis” and “generic event”. I define “a generic event” as an event with generic reference (14b) (Serdobolskaya 2011):

- (14) a. *I liked your singing (today)* vs. b. *I like your singing (at any point in time)*

I also use the term “irrealis” for propositions with irrealis modality (as in *I don't know if John is here*) or those that bear the truth value ‘false’ (*I don't believe that John is here*). This is in accordance with the definition of potentialis adopted by Palmer (2001:1) from (Mithun 1999:173): “the realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination”. The type of irrealis complements embraces the notions of “indeterminate truth” and “undetermined truth” as defined in (Ransom 1986), cf. the type of “complete uncertainty” in (Bøye 2010a).

The relevance of these notions for complementation has been demonstrated for a number of unrelated languages, cf. (Noonan 1985; Peterson 1997; Podlesskaya 1990; Dixon, Aikhenvald 2006; Serdobolskaya 2009; Serdobolskaya et al. 2012; Serdobolskaya, Motlokhov 2009). These notions will be used in order to explain the distribution of complementation strategies. Such an approach can account for the fact that one and the same CTP can take various strategies (as in (7a)–(d)): a CTP can be used in various meanings, or in a single meaning which is compatible with dependent clauses of different semantic types. Cf. the English verb *see* and the Ossetic verb *žonən*:

- (15) a. *I saw him enter* vs.

b. *You'll soon see that I'm not mistaken.* (COCA)

- (16) a. čəžg žon-a [wʒlibʒ-t-3] k3n-ən].
girl know-PRS.3SG flatcake.with.cheese-PL-NOM.PL do-INF

‘The girl can cook walibaxs (Ossetic national flatcakes with cheese).’

- b. m3 ž3rd3 =j3 žəd-t-a, [ʒvdiw k3j u].
1SG.POSS heart 3SG.ENCL.GEN know-TR-PST.3SG evil_spirit COMP be.PRS.3SG

‘My heart knew that it was an evil spirit.’ (ONC)

The difference in marking between (15a) and (15b) is due to the difference in the semantics of the complement clause: in (15a) it is an event, while in (15b) it is a proposition that (unlike an event) can take negation, cf. the tests above. The fact that the speaker is not mistaken cannot be seen directly by the hearer, since there is no such negative event in the

¹ This test can be used with the following reservation. Complements including negation can in fact be found in the context of immediate perception verbs; however, such examples are very special cases of violation of expectations and require a special pragmatic context. See (Miller 2003) for discussion and semantic analysis.

real world. Hence, these constructions are used with different meanings of the CTP *see*, namely immediate perception in (15a) and “cognitive” perception, i.e. inference on the basis of perception, in (15b). For this peculiarity of verbs of perception see (Noonan 1985: 129; Bøye 2010b).

The examples in (16) illustrate two different meanings of the Ossetic verb *žonən* ‘know, be able to’: in the meaning ‘know’ it takes a finite complement with the subordinator *kʒj*, while in the meaning ‘be able to, know how to’ it takes the infinitive.

In such cases, the semantics of the dependent clauses is directly related to the meaning of the CTP.

It is important to note that constructions with phasal, modal and aspectual predicates will not be considered in detail here, since to a large extent they have monoclausal properties.

2. Complementation in Ossetic

2.1. Ossetic language: typological features

The Ossetic language (with 493,610 speakers according to the Russian census of 2002) belongs to the Indo-Iranian subgroup of the Indo-European language family. The principal dialects are Iron (which forms the basis of Standard Ossetic) and Digor. This study is based on Iron data.

Ossetic shows agglutination in its nominal morphology and fusion in the verbal paradigm. It exhibits case alignment of the accusative type, is predominantly dependent-marking in NPs, and has SOV as its basic word order (cf. Abaev 1950; Bagaev 1965; Axvlediani 1963).

There are nine nominal cases in Iron Ossetic: nominative, genitive, dative, allative, ablative, inessive-illative, superessive-superlative, equative, and comitative. It is important to specify that the genitive case has two main functions, marking not only the possessor in an NP but also the Direct Object of a verb. In this latter function the genitive marker can be dropped (exemplifying the phenomenon described in typology as differential object marking). The distribution of the genitive marker is mostly based on animacy (although information structure and referential properties are also relevant): animate DOs appear with the genitive marker, while non-animate DOs remain unmarked.

The morphology of the verb in Ossetic includes three tenses of the indicative (present, past, and future) and four oblique moods (imperative, subjunctive, optative, and counterfactive) (Vydrin 2011). The main opposition in the aspect system is between imperfective and perfective; the perfective is encoded by prefixes on the verb.

In the domain of subordination, finite clauses with overt subordinators are most often used. One of the important characteristics of subordination in Ossetic is the predominant use of correlates across all subordination types. All three types of subordinate clause – relative, adverbial, and complement clauses – can be formed in the same way, with a subordinator in the dependent clause and a corresponding demonstrative (“correlate”) in the matrix clause:

- relative clause

(17)	<i>[mʒj ražmʒ sə qug ba-lχ3d-t-a]</i> ,	<i>wəj wʒj kʒn-ə.</i>
	month before what cow PV-buy-TR-PST.3SG	DEM.DIST sell do-PRS.3SG

‘He is selling the cow that he bought a month ago.’

- adverbial clause

(18)	<i>[salənmʒ = dən mʒ = sʒst ʒrtiv-a]</i> ,	<i>walənmʒ dʒ = χis-ʒn binont-ə koj ba-kʒn.</i>
	as.long.as 2SG.ENCL.DAT 1SG.POSS eye shine-SBJV.3SG to.that.time 2SG.POSS REFL-DAT	family-GEN care PV-do.[IMP.2SG]

‘As long as I’m alive, take care of your family.’ (Gagkaev 1956: 227)

- complement clause

(19)	<i>3ž žon-ən</i>	[<i>zawər uš kʒj 3r-χašt-a</i>]	<i>wəj.</i>
	I know-PRS.1SG	Zaur wife COMP PV-bring-PST.TR.3SG	DEM.DIST
‘I know that Zaur has married.’			

In relative clauses and in most types of adverbial clauses (apart from purposive and substitutive clauses), the correlate is obligatory. In complement clauses, as well as in purposive and substitutive clauses, the construction without the correlate can be chosen instead (cf. Belyaev, Serdobolskaya forthc. for details).

2.2. Overview of complementation strategies in Ossetic

Ossetic has a large number of devices used in complementation:

- the infinitive in *-ən*, which is used with phasal, modal, emotive, mental, causation, speech and evaluative predicates:

(20)	<i>[gʒda nəχaš = dʒr = zə ba-ftaw-ən] qʒw-ə.</i>
	lie word ADD 3SG.ENCL.IN PV-add-INF must-PRS.3SG
‘Well, lies also must be added (when telling a story).’ (TEXT)	

- nominalizations headed by the participle in *-t/-d* (homonymous with the preterite stem of the verb, cf. Abaev 1950):

(21)	<i>lʒpu [kaš χʒrd] fʒs-i.</i>
	boy porridge eat.PTCP.PST PV-EXST ²
‘The boy ate up the porridge (lit. finished eating).’	

Nominalizations only rarely occur in Ossetic complement clauses; however, they are acceptable with nearly all CTPs.

- participles in *-gʒ* and *-gʒjʒ* (the latter is the ablative form of the participle in *-gʒ*, cf. [Belyaev, Vydrin 2011]):

(22)	<i>3ž fed-t-on de = fʒəmʒr-ə bʒχ-əl sʒw-gʒ-jʒ.</i>
	I see-TR-PST.1SG 2SG.POSS brother-GEN horse-SUPER go-PTCP-ABL
‘I saw your brother riding a horse.’	

The participles are only used with verbs of immediate perception (in their direct sense only; the “cognitive perception” reading of (22) is not possible).

- the subordinators *kʒj*, *kʷəd*, *kʷə*, *sʒmʒj*, *ʒmʒ*, *kʒd*, *səma*, *salənmʒ*:

(23)	<i>ʒmʒ = dam = dʒ fʒnd-ə, [sʒmʒj] = dʒ fe-rvʒ-ən</i>
	and CIT 2SG.ENCL.GEN ³ want-PRS.3SG PURP 2SG.ENCL.GEN PV-be_liberated-INF
	<i>kʒn-on de = ldar-ʒj?</i>
do-SBJV.1SG 2SG.POSS lord-ABL ‘And, you say, you want me to free you from your lord?’ (TEXT)	

The subordinators and the infinitive are the devices used most often to introduce complement clauses in Ossetic, and the next section focuses mostly on their distribution.

Complement constructions with subordinators can have correlative pronouns in the matrix clause, as in (19) which contains the 3rd person pronoun *wəj*.

The subordinators used in complementation can be divided into two groups with regard to their syntactic properties. Subordinators belonging to the first group (*kʒj*, *kʷəd*, *kʷə*, *kʒd*) are only found in preverbal position (before the CTP). The subordinators of the second group (*sʒmʒj*, *səma*, *salənmʒ*) can “float” inside the dependent clause, but most often occur clause-

² In Ossetic, the preverbal existential verb has the meaning “end, finish”.

³ In Ossetic, the experiencer of the CTPs ‘want’, *wərnən* ‘believe’ and *qʒwən* ‘must’ is marked with the genitive.

initially. The conjunction *змз* does not adhere to any of these groups: it can only appear clause-initially.

- citation particles *dam* and *žзbgз* (participle of the verb of speech ‘say’)

(24) *adзm-ə t3rš-ən kod-t-oj, [arvʷəd či n3 wa, wəj, dam,*
 people-GEN fear-INF do-TR-PST.3PL baptism who NEG be.SBJV.3SG DEM.DIST CIT

žəndon-ə qiz̡mar k3n-z3n, žзbgз].
 hell-IN torture do-FUT.3SG say-PTCP

‘They threaten people: “Those who are not baptized will suffer tortures in hell”’.
 (ONC)

Citation particles are most often used with speech verbs, but they may also occur with non-speech CTPs. Cf. (Vydrin forthc.) for details on *žзbgз*.

Citation particles do not take correlative pronouns. Both citation particles can be combined and repeated several times in one and the same clause; they do not necessarily require the presence of a matrix clause. Therefore, they cannot be analyzed as “pure” complementizers.

- parataxis:

(25) *qʷəda k3n-ən, [je= mbal-m3 a-səd-i].*
 thought do-PRS.1SG 3SG.POSS friend-ALL PV-go-PST.INTR.3SG
 ‘{Where is your father?} – I think he went to his friend.’

The paratactic construction consists of two finite clauses without any morphological or lexical complementizer.

- indirect question strategies:

Constituent questions in Ossetic are formed with wh-words, which occur in preverbal position⁴ (their linear position is strictly fixed), cf.:

(26) *asə l3pu či u?*
 DEM.PROX boy who be.PRS.3SG
 ‘Who is this lad?’

The same pattern is preserved in indirect questions, cf.:

(27) *n3= fəd ba-faršt-a, [asə l3pu či u].*
 1PL.POSS father PV-ask-PST.TR.3SG DEM.PROX boy who be.PRS.3SG
 ‘Father asked who that lad was.’

General questions are marked by means of word order and prosody; for the most part, no special question particles are used. For example, with a different prosody the interrogative sentence (28) could be interpreted as affirmative. The same pattern is used in indirect questions (29).

(28) *šiχor s3t3 u?*
 lunch ready be.PRS.3SG
 ‘Is lunch ready?’

(29) *n3= fəd ba-faršt-a, [šiχor s3t3 u].*
 1PL.POSS father PV-ask-PST.TR.3SG lunch ready be.PRS.3SG
 ‘Father asked if lunch was ready.’

In the next section I analyze the semantics of each complementation strategy in Ossetic. First, I consider finite sentential complements, i.e. the paratactic construction and clauses introduced by subordinators or citation particles. Then I describe the morphosyntactic and semantic properties of non-finite strategies such as infinitive, nominalization, and participle.

⁴ By “preverbal position” I mean a strictly fixed position in the preverbal domain, since there are lexical units that can occur between the subordinator and the verb (the negation particle, some adverbs etc.).

2.3. Finite complementation strategies: subordinators and the paratactic construction

The subordinators able to introduce complement clauses are *k3j*, *kʷəd*, *kʷə*, *s3m3j*, *z3m3*, *k3d*, *səma*, and *salənm3*. The distribution of these subordinators is fairly transparent. The subordinators *k3j*, *kʷəd*, *kʷə* denote fact (or proposition), event, and generic event respectively. The subordinator *s3m3j* is used to encode propositions with future temporal reference (with respect to the situation in the matrix clause). The subordinator *k3d* and *salənm3* are used only with the CTP “wait”. The paratactic construction, the conjunction *z3m3* and the subordinator *səma* denote propositions. Examples of all these strategies follow.

2.3.1. The subordinators *k3j* ‘that’ and *kʷəd* ‘how’

The subordinator *k3j* can denote facts or propositions with mental, emotive, perception, speech, and evaluation predicates:

- (30) *qʷəda =j3 k3n-ən, [šara k3j ba-χg3d-t-on]. gom*
thought 3SG.ENCL.GEN do-PRS.1SG shed COMP PV-close-TR-PST.1SG open
s3m3n u?
why be.PRS.3SG
‘I remember that I closed the shed. Why is it open?’

With most of these CTPs it contrasts with the subordinator *kʷəd* used to denote events, cf.:

- (31) *[zrəgon-3j =iw kʷəd kafəd-əšt3m], wəj =ma qʷəda k3n-ən.*
young-ABL =ITER how dance-PST.INTR.1PL DEM.DIST PTCL remembrance do-PRS.1SG
‘I remember how we danced when we were young.’

In (31) the verb *qʷəda k3nən* ‘remember’ takes the eventive complement: the speaker recollects in detail the feelings and emotions felt in the situation, while in (30) what is recollected is purely the fact of the event having occurred. The same distinction is observed in the next pair of sentences: in (32a) the complement clause is mentally processed (cf. the notion of “consciousness” in [Verspoor 2000]) and evaluated as having a positive effect. In (32b) the positive emotion arises as a result of the situation described by the dependent clause without mental processing of that situation.

- (32) a. *m3 ž3rd3-m3 s3w-ə, [də χorž k3j kuš-əš], f3l3 [alə bon*
1SG.POSS heart-ALL go-PRS.3SG you good COMP work-PRS.2SG but every day
ʒr3ž-ə k3j k3n-əš], wəj m3= ž3rd3-m3 n3 s3w-ə.
late-IN COMP do-PRS.2SG DEM.DIST 1SG.POSS heart-ALL NEG go-PRS.3SG
‘{A boss to his subordinate.} I like it that you do good work, but I don’t like it that you are often late.’
- b. *m3= ž3rd3-m3 s3w-ə, [d3 kʷəd žar-əš].*
1SG.POSS heart-ALL go-PRS.3SG you how sing-PRS.2SG
‘I like your singing.’

As in many other languages, different complementation strategies are used with verbs of perception in the meanings of immediate vs. indirect (cognitive) perception:

- (33) a. *[kʷəd zərd-t-at], wəj fe-qʷəšt-on.*
how speak-TR-PST.2PL DEM.DIST PV-hear-PST.TR.1SG
‘I heard you talking.’
- b. *ʒž šəχ3g-t-ʒj fe-qʷəšt-on, [ʒr3žə mašin3 k3j ba-lχ3d-t-aj].*
I neighbour-PL-ABL PV-hear-PST.TR.1SG recently car COMP PV-buy-TR-PST.2SG
‘I heard from the neighbours that you bought a car recently.’

In the immediate perception sense, the CTP takes the eventive type of complement with the subordinator *kʷəd*, while in the sense of indirect perception (where the meaning of the verb ‘hear’ shifts towards ‘learn, find out’) it takes *kʒj*.

Verbs of speech can introduce events, facts, or propositions. Eventive complements take the subordinator *kʷəd* (34), while *kʒj* introduces facts or propositions, as in (35).

- (34) *zalins zur-ə, [je= rəgon bon-t-ə kʷəd kafəd-i].*
 Zalina speak-PRS.3SG 3SG.POSS young day-PL-IN how dance-PST.INTR.3SG
 ‘Zalina says how she danced when she was young (*says that she danced).’
- (35) *m3= fəd ra-zərd-t-a, [3r3žə nog χid kʒj š-ar3št-oj].*
 1SG.POSS father PV-speak-TR-PST.3SG recently new bridge COMP PV-build-PST.TR.3PL
 ‘(Father came back from the village, and we asked him about the news. What’s new, what did father tell you?) Father told us that a new bridge has been built recently.’

The subordinator *kʷəd* can denote manner in complementation, as well as in adverbial clauses (36). For example, (32b) can be interpreted as “I like how you sing”.

- (36) *wəj kaf-g3 =d3r aft3 χorž k3n-ə,*
 DEM.DIST dance-PTCP PTCL so good do-PRS.3SG
[žar-g3 kʷəd k3n-ə], aft3.
 sing-PTCP how do-PRS.3SG so
 ‘He dances as well as he sings.’

Another meaning of the subordinator *kʷəd* is that of strict causation, see 2.3.3.

2.3.2. The subordinator *kʷə* ‘if, when’

The subordinator *kʷə* encodes generic events with emotive and evaluation predicates, cf.:

- (37) a. *3ž warž-ən, [χud-g3 kʷə f3-k3n-əš], wəj.*
 I love-PRS.1SG laugh-PTCP when PV-do-PRS.2SG DEM.DIST
 ‘I love it when you laugh.’

The sentence in (37a) presents an event, not a proposition, since it yields to the diagnostics of epistemic expressions: no epistemic expressions are acceptable in the complement clause:

- b. **3ž warž-ən, [χud-g3 3n3m3ng / 3v3c:3g3n kʷə f3-k3n-əš], wəj.*
 I love-PRS.1SG laugh-PTCP undoubtedly possibly when PV-do-PRS.2SG DEM.DIST
 Intended meaning: ‘I love it when you undoubtedly/possibly laugh.’

The subordinator *kʷə* is mostly used in conditional and temporal adverbial clauses; it could thus be suggested that (37a) is an example of an adverbial clause. However, in Ossetic there is clear syntactic evidence for the interpretation of these constructions as sentential complements, and not as adverbial clauses. This evidence is given by the type of correlative pronoun found in the matrix clause. Complement clauses take the correlative pronoun *wəj* ‘that/he/she/it’, while adverbial clauses take demonstrative adverbs:

- c. ? *[χud-g3 kʷə f3-k3n-əš], 3ž =d3 w3d f3-warž-ən.*
 laugh-PTCP when PV-do-PRS.2SG I 2SG.ENCL.GEN then PV-love-PRS.1SG
 ‘? I love you when you laugh.’

With the adverb *w3d*, the dependent clause is taken to be adverbial, with the result that it becomes difficult for native speakers to interpret (cf. the translation).

Emotive verbs exist that can take both correlative pronouns and adverbs with no apparent difference in meaning:

- (38) [bir3k **kʷə** f3-waš-ə], **w3d** / **wəm-3j** t3rš-g3 f3-k3n-ən.
 wolf when PV-howl-PRS.3PL then DEM.DIST-ABL fear-PTCP PV-do-PRS.1SG
 ‘When the wolves howl, I get scared / I’m scared of the howling of wolves.’

The two constructions in (38) are differentiated syntactically: the correlate *w3d* introduces adverbial dependent clauses, while *wəm3j* introduces complement clauses.

Another function of the subordinator *kʷə*, only observed with a small number of CTPs (e.g. ‘want’, ‘wait’, marginally with *χorž* ‘good’), is the encoding of propositions that fill the valency slot assigned to the stimulus:

- (39) *me=* 'mž3χχon-t-ə f3nd-ə, [**kʷə** =šən ba-χχʷəš k3n-iš], *wəj*.
 1SG.POSS compatriot-PL-GEN want-PRS.3SG if 3PL.ENCL.DATPV-help do-OPT.2SG DEM.DIST
 ‘My countrymen want you to help them.’ (ONC)

With these verbs this subordinator can only be used to encode the (non-)desired situation. With *χorž* ‘good’ it occurs only marginally, and encodes desire rather than pure evaluation (lit. “It would be good if...”).

2.3.3. The subordinator *s3m3j* and *kʷəd* ‘in order that’

The subordinator *s3m3j* ‘in order that’ is used to mark complements with future reference (with respect to the temporal reference of the matrix clause) (40) or gnomic meaning (41b).

- (40) *aχʷərg3n3g žaxt-a*, [**s3m3j** šk'ola-m3 3rba-s3w-at].
 teacher say-PST.TR.3SG PURP school-ALL PV-go-SBJV.2SG
 ‘(A boy says to his parents:) The teacher said that you should come to school.’

Most CTPs that take this subordinator require future reference in their complement (however, not all of them share this requirement, cf. for example ‘love’ (41a)). With many CTPs the subordinator *s3m3j* competes with the infinitive. Roughly speaking, the infinitive is only possible in control contexts if the semantic subject of the infinitive is coreferential to the subject/object of the CTP, while the subordinator can be used irrespective of the coreferentiality pattern. However, the subordinator is not acceptable with many verbs that take the infinitive, such as ‘try’, ‘get used to’, ‘teach’, ‘promise’ (cf. Appendix). The infinitive can encode both events and propositions (with future reference or gnomic meaning), while the subordinator has narrow semantics and can only encode propositions with future reference or gnomic meaning:

- (41) a. 3ž *warž-ən*, [*kaf-ən*].
 I love-PRS.1SG dance-INF
 ‘I love dancing.’
- b. 3ž *warž-ən*, [**s3m3j** r3šušd *wa*].
 I love-PRS.1SG PURP beautiful be.SBJV.3SG
 ‘I love it to be beautiful.’

For example, the verb ‘love’ takes the infinitive in (40a), where the speaker describes his/her emotions felt in the situation of dancing, while in (40b) the situation in the complement is being evaluated as positive. However, with the verb ‘love’ examples making use of *s3m3j* are attested rather rarely (the subordinators *kʷə*, *kʷəd*, and *ʒm3* are much more frequent in the corpus).

The verb ‘say’ takes the subordinator *s3m3j* only in the meaning of ‘tell to do smth., order’.

The verbs that can take both the infinitive and the subordinator are ‘want’, ‘must’, ‘love’, ‘let’, and ‘agree’. In the case of *waržən* ‘love’ their distribution is based on the semantic opposition of event vs. proposition, as shown above. Meanwhile, with the predicate *ražə w3vən* ‘agree’ their distribution is based on coreferentiality: the infinitive is used if its

subject is coreferential with the subject of the CTP, and otherwise the subordinator *s3m3j* is used:

- (42) a. žawər š-ražə iš ž3lin3-m3 a-s3w-ən.
 Zaur PV-agree EXST Zalina-ALL PV-go-INF
 ‘Zaur agreed to go to Zalina.’
- b. * žawər š-ražə iš, [s3m3j] ž3lin3-m3 a-s3w-a].
 Zaur PV-agree EXST PURP Zalina-ALL PV-go-SBJV.3SG
 ‘Zaur agreed to go to Zalina.’
- c. fəd š-ražə iš, [s3m3j] j3= čəžg j3= mad-ə
 father PV-agree EXST PURP 3SG.POSS girl 3SG.POSS mother-GEN
 fsəm3r-m3 ba-žžaj-a].
 brother-ALL PV-stay-SBJV.3SG
 ‘Father permitted his daughter to stay with her uncle (lit. agreed that his daughter stay).’

The subordinator is unacceptable in the case of coreferentiality (42b).

With the verbs *f3ndən* ‘want’, *q3wən* ‘must’ and *bar d3ttən* ‘let’ the situation is different: the infinitive can only be used if the subject (or experiencer) of the matrix clause is coreferential with the subject (with ‘want’ and ‘must’) / object (‘let’) of the complement. The subordinator can be used without any restriction on the coreferentiality pattern, cf. (43ab).

- (43) a. l3ppu-jə təng f3ndəd-i [čəžg-im3 a-qaz-ən].
 boy-GEN very want.PST-PST.3SG girl-COM PV-play-INF
 b. l3ppu-jə təng f3ndəd-i, [s3m3j] čəžg-im3 a-qazəd-aid].
 boy-GEN very want.PST-PST.3SG PURP girl-COM PV-play.PST-CONTRF.3SG
 a.=b. ‘The boy wanted very much to play with the girl’. (Vydrin 2011: 297)

The distribution of the infinitive and the subordinator with these CTPs is unclear. Vydrin (2011) shows that the choice of the construction with ‘want’ is not based on the intensity of the desire, knowledge about the realization of the wish, or the truth value of the matrix clause. Based on the use of the subordinator *s3m3j* with other CTPs, I suggest that the subordinator *s3m3j* here may only introduce a proposition, while the infinitive can encode both events and propositions. However, any such differentiation is rather subtle and hard to verify with these verbs.

The subordinator *kʷəd* (‘how’)⁵ in its second meaning ‘in order that’ marks strict orders, with three CTPs, ‘want’, ‘must’ and ‘say’:

- (44) armimaz 3m3 ardašuj-3n ž3k, [a-rd3m kʷəd ra-s3w-oj],
 Armimaz and Ardaguj-DAT say[IMP.2SG] DEM.PROX-DIR in.order.that PV-go-SBJV.3PL
 təng ž3rdiag qʷəddag-3n m3 q3w-əns...
 very important business-DAT 1SG.ENCL.GEN need-PRS.3PL
 ‘Tell Armimaz and Ardaguj to come here by all means: I need them very much for a certain important business.’ (ONC)
- (45) m3n f3nd-ə, [d3š šaxat-əl kʷəd 3rba-s3w-aj].
 I.GEN want-PRS.3SG ten hour-SUPER in.order.that PV-go-SBJV.2SG
 ‘I require that you come at 10 o’clock.’ (An order)

The subordinators described in this section differ from *k3j* and *kʷə* in that they require non-indicative mood in the complement verb. Most often this is the subjunctive (44); however, the counterfactual occurs if the situation in the complement clause contradicts the speaker’s actual knowledge (cf. Vydrin 2011 for details):

⁵ In this function it can occur together with the subordinator *s3m3j*.

- (46) *m3n f3ndəd-i* [s3m3] =*mən* *ba-χʷəš* *kod-t-aɪš*
 I.GEN want-PST.INTR.3SG PURP 1SG.ENCL.DAT PV-help do-TR-CONTRF.2SG
f3lvar3n-m3 ba-s3t3 k3n-ən].
 exam-ALL PV-prepare do-INF

‘I wanted you to help me to prepare for my exams. {But you didn’t, and I failed them.}’

2.3.4. The conjunction 3m3 ‘and’

The conjunction 3m3 is most often described as a coordinating conjunction with subordinative functions (Abaev 1950: 656; Kulaev 1959: 72–76; Gagkaev 1956: 222). It coordinates NPs, verbs, and clauses; however, it is also used as a subordination marker, in combination with other subordinators (as 3m3 kʷəd (47)), with correlative pronouns (48) or by itself (49).

- (47) *m3n f3nd-ə,* [3m3 d3š šaxat-əl kʷəd 3rba-s3w-aj].
 I.GEN want-PRS.3SG and ten hour-SUPER in.order.that PV-go-SBJV.2SG
 ‘I require that you come at 10 o’clock.’
- (48) *henər ʒž wəj žon-ən,* [3m3 s3wa-j3 nikʷəd3mwal a-irv3ž-zən3n].
 now I DEM.DIST know-PRS.1SG and Sawa-ABL nowhere PV-escape-FUT.1SG
 ‘Now I know that I will not escape from Sawa anywhere.’ (Nart sagas)
- (49) *z3nq3l d3n,* [3m3 je= mbal-m3 a-səd-iš].
 think be.PRS.1SG and 3SG.POSS friend-ALL PV-go-PST.INTR.3SG
 ‘(Where is your brother? – He’s not here) I think he went to his friend.’

The linear ordering of the clauses and the conjunction 3m3 is not the same as with the subordinators (Belyaev 2011; Belyaev 2014). In complementation, as well as in coordination, 3m3 can only occur between the two clauses (and never at the beginning of the whole sentence or preverbally). This is a strict rule and is never violated. The order of clauses is also strictly fixed: unlike all other subordinators in complementation, 3m3 requires that the matrix clause be preposed to the complement, as in (47)–(49).

In complementation, the conjunction 3m3 is used in the following contexts:

- 1) It is used to encode propositions with the verbs of speech ž3kən ‘say’ and ž3rd3 zv3rən ‘promise’, the mental CTPs wərnən ‘believe’, aft3 k3šən ‘think’, z3nq3lən ‘think’ and z3nq3l w3vən ‘think’, and the emotive CTPs ž3rd3 darən ‘hope’, t3ršən ‘fear’, ž3rd3m3 s3wən ‘like’ and waržən ‘love’.

Without the correlate, these constructions introduce propositions. (49) and (50) are examples of this function: the complement clause contains new information and belongs to the assertion.

- (50) *kʷəd =d3m k3š-ə,* *f3lvar3n-t-3 rat-z3n?* *3vi =d3m*
 how 2SG.ENCL.ALL seem-PRS.3SG exam-PL-NOM.PL give-FUT.3SG or 2SG.ENCL.ALL
aft3 k3š-ə, [3m3 dəww3 ra-jiš-z3n]?
 so seem-PRS.3SG and two PV-take-FUT.3SG

‘What do you think, will he pass the exam? Or you think he’s going to fail (lit. take a two)?’

With the correlate, the conjunction 3m3 introduces topical or previously mentioned propositions, as shown in section 2.3.8.6.

- 2) The encoding of propositions with the verbs f3ndən ‘want’, wazən ‘let’, and ž3kən ‘say’ in the meaning ‘tell to do smth.’; in this case the complement verb occurs in the subjunctive mood:

- (51) *m3n f3nd-a, [z̥m3 də žar-aj].*
 I.GEN want-PRS.3SG and you sing-SBJV.2SG
 ‘I want you to sing.’

Unlike *kʷəd* in (45), the conjunction *z̥m3* is more general with these verbs: it can introduce both orders and wishes, while *kʷəd* marks strict orders.

3) Another use is the combination of the conjunction *z̥m3* with the complement subordinators, such as *k3j* in (52) and *kʷəd* in (53).

- (52) a. *až3m3t š-ražə iš, [rašt k3j n3 wəd], u-wəl.*
 Azamat PV-agree EXST right COMP NEG be[PST.3SG] DEM.DIST-SUPER
 b. *až3m3t š-ražə iš, [z̥m3 rašt k3j n3 wəd], u-wəl.*
 Azamat PV-agree EXST and right COMP NEG be[PST.3SG] DEM.DIST-SUPER
 ‘Azamat agreed that he was wrong.’
- (53) a. *m3n f3nd-a, [d3š šaxat-əl kʷəd 3rba-s3w-aj].*
 I.GEN want-PRS.3SG ten hour-SUPER in.order.that PV-go-SBJV.2SG
 b. *m3n f3nd-a, [z̥m3 d3š šaxat-əl kʷəd 3rba-s3w-aj]. = (47)*
 I.GEN want-PRS.3SG and ten hour-SUPER in.order.that PV-go-SBJV.2SG
 ‘I require that you come at 10 o’clock.’

This construction is used to focalize the subordinate clause (cf. Belyaev in press). In this function, it occurs not only in complementation, but in all types of subordination.

2.3.5. The subordinator *səma* ‘as if’

The subordinator *səma* ‘as if’ is used to encode irrealis propositions. The speaker uses this subordinator if s/he is convinced that the proposition is false for certain or with a high degree of probability. Consider the following pairs:

- (54) a. *as̥a aft3 3nq3ld-t-a, [səma žawər 3gaš u].*
 Asja so think-TR-PST.3SG as_if Zaur alive be.PRS.3SG
 ‘Asja thought Zaur was alive. {But we know that he’s not}.’
- b. *as̥a aft3 3nq3ld-t-a, [žawər 3gaš k3j u].*
 Asja so think-TR-PST.3SG Zaur alive COMP be.PRS.3SG
 ‘Asja thought Zaur was alive. {We don’t know if this is the case or not}.’
- (55) a. *3nq3l d3n, [səma s3w-inag u].*
 think be.PRS.1SG as_if go-PTCP.FUT be.PRS.3SG
 ‘I think he might come. {But I’m not at all sure.}’
- b. *3nq3l d3n, [s3w-inag k3j u].*
 think be.PRS.1SG go-PTCP.FUT COMP be.PRS.3SG
 ‘I believe he is going to come {with more confidence}.’

In (54a) the speaker is absolutely sure that the situation in the complement is not true. This interpretation does not arise with the subordinator *k3j* in (54b): here the speaker is not making any prediction about the truth of the situation in question. The pair in (55a) and (55b) differ with regard to the epistemic value of the complement: there is more certainty in the (55b) example, where *k3j* is used, and less certainty in (55a) with *səma*.

The interpretation of the complement clause as false or doubtful depends on the pragmatic context. Hence, this subordinator can be characterized as bearing irrealis propositional value. It is unacceptable with factive verbs, such as ‘know’:

- (56) **3ž žonən səma...*
 ‘I know as if...’

2.3.6. The subordinators *k3d* ‘if, when’ and *salənm3* ‘until, as long as’

The subordinator *k3d* is used in temporal and conditional adverbial clauses⁶, cf. (Vydrin 2009). In sentential complement constructions, this subordinator can only be used with the CTP ‘wait’:

- (57) *šəv3llon 3nq3lm3 kašt-i, [də =jən k3d ba-χ3r-ən k3n-zən3].*
 child wait look-PST.SG you 3SG.ENCL.DAT when PV-eat-INF do-FUT.2SG
 ‘The child waited for you to feed him.’

The use of the subordinator *salənm3* ‘until, as long’ in complementation is also restricted to the CTP ‘wait’:

- (58) *maχ 3nq3lm3 k3š-3m, [salənm3 wažžə-t-3 3rba-s3w-oj].*
 we (wait) look-PRS.1PL until guest-PL-NOM.PL PV-go-SBJV.3PL
 ‘We are waiting for the guests to come.’

The use of a special construction for the verb ‘wait’ and its synonyms is widespread in the languages of the world, e.g. the subordinator *poka* ‘until’ in Russian, specialized converbs in Qunqi and Xuduc Dargwa (Nakh-Dagestanian; cf. Serdobolskaya 2009).

There is no apparent semantic difference between *k3d* and *salənm3* in complementation.

The complement clause of the verb ‘wait’ can be headed by the verb in the indicative or optative/counterfactual mood. The latter is chosen if the situation has counterfactual meaning:

- (59) *zž 3nq3lm3 k3š-ən, [urok k3d f3-wə-z3n], wəm3.*
 I (wait) look-PRS.1SG lesson when PV-finish-FUT.3SG DEM.DIST.ALL
 ‘I’m waiting for the lesson to end.’
- (60) *zž 3nq3lm3 k3š-ən, [Zaur k3d 3rba-s3w-id].*
 I (wait) look-PRS.1SG Zaur when PV-go-OPT.3SG
 ‘I’m waiting, in case Zaur comes. (It was arranged that he would not.)’

For the choice of the non-indicative mood (optative or counterfactual) cf. Vydrin 2011.

2.3.7. Parataxis

The paratactic construction contains two clauses, matrix and complement, without any overt marker of subordination⁷. The two clauses can occur in either order, cf.:

- (61) a. *zž 3nq3ld-t-on, [žawər 3gaš u].*
 I think-TR-PST.1SG Zaur alive be.PRS3SG
 b. *[žawər 3gaš u], zž 3nq3ld-t-on.*
 Zaur alive be.PRS.3SG I think-TR-PST.1SG
 ‘I thought that Zaur was alive.’

The paratactic construction introduces propositions (62) or irrealis complements (63) with non-factive verbs, mental verbs of opinion, speech verbs, emotive verbs and the verb ‘intend’. See (62), where the truth of the complement clause is asserted by the speaker, and (63), where it is strongly doubted.

- (62) *aχʷərg3n3g žax-t-a, [rənčən u].*
 teacher say-PST-3SG sick be.PRS.3SG
 ‘{Where is Zaur?} – The teacher said he was sick.’

- (63) *[žawər 3gaš u], wəj 3nq3l n3 d3n.*

⁶ The temporal/conditional *k3d* is differentiated from *k3d* in complement clauses, which has strict preverbal position (like the interrogative *k3d* used in direct and indirect temporal questions (as *When were you born?/I do not know when you were born*). By contrast, the temporal/conditional *k3d* is a ‘floating’ subordinator.

⁷ It has not been investigated in detail if these constructions can be described in terms of subordination; the “root clause” properties (Green 1976) of both clauses remain to be checked.

Zaur alive be.PRS.3SG DEM.DIST think NEG be.PRS.1SG
 ‘I’m not sure that Zaur is alive.’

This construction can take a correlative pronoun as in (63), see 2.3.8.2.

2.3.8. Correlative pronouns/adverbs in complementation

2.3.8.1. Position of the correlative pronouns/adverbs

Ossetic subordinators can occur with correlative pronouns/adverbs in the matrix clause, or without them:

- (64) 3ž žon-ən, [žawər čəžg **kʒj** 3r-χašt-a], (**waj**).
 I know-PRS.1SG Zaur girl COMP PV-take-PST.TR.3SG DEM.DIST.NOM/GEN
 ‘I know that Zaur has married.’

Correlative pronouns/adverbs are traditionally analyzed as component parts of complex subordinators: *kʒj* ... *waj* (64), *kʷəd*... *waj* etc. (Abaev 1950: 718–719; Kulaev 1959; Gagkaev 1956: 222–224 and others). However, as shown in (Belyaev, Serdobolskaya forthc.; cf. also Bagaev 1982), it is more appropriate to analyze the subordinators and the correlative pronouns separately: the pairs are not fixed (various correlates can be used with one and the same subordinator, as shown in 2.3.2, and the correlate does not even have to be a pronoun: a noun phrase with the demonstrative pronoun / adverb can also serve as a correlate). When two or more subordinate clauses coexist the correlate takes the plural form. Thus, the correlates and subordinators do not form fixed pairs that belong to the lexicon (unlike English *if... then...* and similar cases).

The correlate must be adjacent to the complement clause. The correlative pronoun *waj* (3rd person singular) takes the case marker required by the argument structure of the CTP, which is nominative/genitive in (64) and superlative in (65).

- (65) [*mʒ* = *mad* *ražə* **kʒj** šə-št-a], **uwəl** š-aχʷər *dʒn*.
 1SG.POSS mother early COMP PV-stand-PRS.3SG DEM.DIST.SUPER PV-study be.PRS.1SG
 ‘I’m used to mother’s getting up early.’

As exemplified in section 2.1, all subordination types in Ossetic make use of constructions with correlative pronouns/adverbs in the matrix clause and subordinators in the dependent clause. However, the possibility of omitting the pronoun (64) is only attested in complementation and the purpose construction (Belyaev 2011).

Abaev (1950) proposes the following rule for the omission of correlative pronouns in complementation: the pronoun is obligatory if the matrix clause is postposed, and optional if the matrix clause is preposed (Abaev 1950: 719), cf. (64) and (66):

- (66) a. [žawər 3gaš **kʒj** *u*], **waj** 3ž žon-ən.
 Zaur alive COMP be.PRS3SG DEM.DIST I know-PRS.1SG
 b. * [žawər 3gaš **kʒj** *u*], 3ž žon-ən.
 Zaur alive COMP be.PRS.3SG I know-PRS.1SG
 ‘I know that Zaur is alive.’

Hence, there are three possible constructions with respect to the order of the matrix and the complement clause:

- (A) MatrCl DepCl *waj* (C) DepCl *waj* MatrCl
 (B) MatrCl DepCl

This rule is strict and it works for all complement subordinators, with the exception of *3mʒ*: see 2.3.4.

It remains unclear what triggers the omission of correlative pronouns if the matrix clause is preposed, i.e. what semantic difference exists between the variants illustrated in

(64). It must be specified that the use of the pronoun does not obey strict grammatical rules, but merely demonstrates strong tendencies.

2.3.8.2. *The subordinators k3j and səma and the paratactic construction*

With the subordinator *k3j* the correlative pronoun distinguishes between facts and propositions, e.g. between complement clauses belonging to presupposition and assertion:

- (67) 3ž žon-ən, [žawər 3gaš **k3j** u], **wəj**.
 I know-PRS.1SG Zaur alive COMP be.PRS.3SG DEM.DIST
 ‘I know that Zaur is alive.’
- (68) žawər **k3m** iš? – aχʷərgənəzg žaxt-a, [rənčən **k3j** u].
 Zaur where EXST teacher say-PST.TR.3SG ill COMP be.PRS.3SG
 ‘Where is Zaur? – The teacher said that he is ill.’
- (69) as̊a 3nq3l n3 wəd-i, [žawər 3gaš u], **wəj**.
 Asja think NEG be-PST.INTR.3SG Zaur alive be.PRS.3SG DEM.DIST
 ‘Asja didn’t even think that Zaur could be alive. {But we know that he is.}’

Let us consider further evidence for this claim.

First, the correlative pronoun is most often present with factive verbs such as ‘know’. With non-factive verbs the correlative pronoun is most often absent in contexts where the dependent clause presents new information, cf. (68) and (70), or in irrealis contexts (71).

- (70) radio-j3 ra-zərd-t-oj, [rajšom wažal **k3j** wə-zən].
 radio-ABL PV-tell-TR-PST.3PL tomorrow frost COMP be-FUT.3SG
 ‘They said on the radio that it will be freezing tomorrow.’
- (71) 3ž n3 žaxt-on, [ražə d3n], 3pənd3r nisə š-zərd-t-on.
 I NEG say-PST.TR.1SG agreeing be.PRS.1SG at_all nothing PV-speak-TR-PST.1SG
 ‘{Why do you think I agreed?} I didn’t say I agreed, I remained silent.’

The same CTP ‘say’ takes the correlative pronoun if the truth of the complement is presupposed:

- (73) d3= mad-ən s3-wəl n3 žaxt-aj, [dəww3 **k3j** ra-jšt-aj],
 2SG.POSS mother-DAT what-SUPER NEG say-PST.TR.2SG two COMP PV-get-PST.TR.2SG
wəj?
 DEM.DIST
 ‘Why didn’t you tell mother that you got a bad mark?’

Second, the truth of the complement clause cannot be denied in the following context by the same speaker, cf.:

- (74) *də žon-əš, [žawər čəžg **k3j** 3r-χašt-a], **wəj**, f3l3 wəj
 you know-PRS.2SG Zaur girl COMP PV-take-PST.TR.3SG DEM.DIST but DEM.DIST
 3s3g n3w.
 true NEG:BE.PRS.3SG

Intended meaning: ‘You know that Zaur has married, but it is not true.’

This sentence is possible in the context of non-factive verbs and without the correlative pronoun.

Third, in performative and quasi-performative contexts the complement clause without the correlative pronoun must be used:

- (75) *qušən* = *dən* *k3n-ən*, [*nər-ʒj*] *f3št3-m3* *am*
 (declare) 2SG.ENCL.DAT do-PRS.1SG now-ABL later-ALL here
nal *kuš-əš]* (**wəj*).
 no.more work-PRS.2SG DEM.DIST
 ‘I declare that you’re fired.’ (pronounced by an authorized person)
- Fourth, complement clauses with factive verbs such as ‘know’ do not take correlative pronouns in the protasis of counterfactual conditionals:
- (76) *kʷə* = *j3* *žon-in*, [*amondžən*] *k3j* *wə-zən3], w3d
 if 3SG.ENCL.GEN know-OPT.1SG happy COMP be-FUT.2SG then
 = *w3* *n3* *qəgdar-in.*
 2PL.ENCL.GEN NEG object-OPT.1SG
 ‘If I knew that you were happy, I wouldn’t hinder [this marriage] (but I do hinder as I don’t believe it).’*

By contrast, in (77) the presupposition is kept (as can be seen from the context) and the correlate must be used:

- (77) *ba-sin* *kod-t-ain*, [*zawər k3j*] *zrba-səd-i], uwəl.*
 PV-joy do-TR-CONTRF.1SG Zaur COMP PV-go-PST.3SG DEM.DIST.SUPER
 ‘{Zaur came yesterday, it is a pity you didn’t see him.} – Oh yes, I would be glad he had come! (I am not glad now, since I haven’t seen him)’

Fifth, the subordinator *səma*, which introduces propositions but cannot introduce facts, does not take correlates in complementation:

- (78) a. *as'a aft3* *3nq3l-ə*, [*səma žawər*] *3gaš u], (??wəj)*
 Asya so think-PRS.3SG as_if Zaur alive be.PRS.3SG DEM.DIST
 b. [*səma žawər*] *3gaš u], (??wəj)* *as'a aft3* *3nq3l-ə*
 as_if Zaur alive be.PRS.3SG DEM.DIST Asja so believe-PRS.3SG
 ‘Asya believes that Zaur is alive.’

As stated in 2.3.5, this subordinator is used to introduce non-factive complements: hence the incompatibility with the correlative pronoun⁸.

Thus, the claim is sustained that the correlative pronoun is used in cases where the complement clause belongs to the presupposition.

This claim is in line with the word order rule formulated by Abaev, cf. (A)–(C). The dependent clause is often preposed to the matrix if it constitutes the topic of the sentence. In this position it obligatorily takes the correlative pronoun. That means that topical clauses take the correlative pronoun. Topical complement clauses are often encoded in the same way as presupposed complements (see the Adyghe data in Serdobolskaya, this volume).

Like factive clauses, irrealis clauses in topical position take the correlative pronouns:

⁸ In adverbial clauses, this subordinator can take correlates, e.g. the demonstrative pronoun in equative case:

- (i) ...*žaxt-a* *farn3g*, [*səma wə-m3*] *n3* *zərd-t-a*, *z3mbə-m3,*
 say-PST.TR.3SG Farnag as_if DEM.DIST-ALL NEG speak-TR-PST.3SG Dzamby-ALL
səma *3n3wi* *žaxt-a], wəj-aw.*
 as_if for_no_particular_reason say-PST.TR.3SG DEM.DIST-EQU
 ‘{Lumps of coal are only good in the fireplace}, – Farnag said, as if he were not speaking to Zamba, as if he were saying it for no particular reason (lit. as if just said, this way).’ (Nart sagas)

- (79) 3ž n3 feqʷəšt-on, χəl k3j kod-t-oj, wəj,
 I NEG hear.PST-1SG quarrel how do-TR-PST.3PL DEM.DIST
 3m3 = m3 n3 wərn-ə.
 and 1SG.ENCL.GEN NEG believe-PRS.3SG
 ‘{Zaur quarreled with his wife!} – I haven’t heard that they quarreled, and I don’t believe it.’

The context shows that the complement clause in (79) is interpreted as false. Hence it represents an example of an irrealis proposition and not a fact. However, the correlative pronoun is used, because the complement clause is topical.

The same distribution is observed with the paratactic construction, cf. 2.3.7: if the complement clause is postposed to the matrix, the correlative pronoun signals its presupposed (69) or topical status. As for preposed complement clauses, the correlative pronoun is not obligatory in parataxis, unlike in the construction with conjunctions. If the correlate is present with the order “complement + matrix clause”, it most often signals that the complement is topical:

- (80) [žawər 3gaš u], wəj 3nq3l n3 d3n.
 Zaur alive be.PRS.3SG DEM.DIST think NEG be.PRS.1SG
 ‘{Is Zaur alive?} – I don’t not think that Zaur is alive.’

With the remaining subordinators, the factor of presupposition/assertion is not relevant. The semantic opposition of the complements with and without the correlate is based on the opposition of old vs. new or expected vs. unexpected information. This opposition is directly formed by the pragmatic context, and hence, the semantic difference between the sentences with and without the correlate is often subtle and not easy to deduce either by elicitation or with the help of corpus examples. Similar generalizations have been made on the use of the correlate *es* in German complements, see (Dalmas 2013): the optionality of this correlate is dealt with in terms of topicality and/or mentionedness of the situation in the complement clause.

As the correlate is obligatory with all subordinators if the complement is preposed, in what follows I only consider examples with postposed complements.

2.3.8.3. The subordinators *kʷə* and *kʷəd*

With the subordinators *kʷə* and *kʷəd* the correlate is used to introduce old information present in the preceding discourse or pragmatic context. Compare (81), where the complement has been introduced earlier in the discourse and accordingly the correlative pronoun is present, and (82), where the speaker gives an opinion that has not been discussed before.

- (81) zawər 3m3 j3= uš f3-χəl štə! – 3ž = 3j n3 fe-qʷəšt-on,
 Zaur and 3SG.POSS wife PV-quarrel be.PRS.3PL I 3SG.ENCL.GEN NEG PV-hear.PST-1SG
 [kʷəd χəl kod-t-oj], wəj, 3m3 = m3 n3 wərn-ə.
 how quarrel do-TR-PST.3PL DEM.DIST and 1SG.ENCL.GEN NEG believe-PRS.3SG
 ‘Zaur has quarrelled with his wife! – I haven’t heard them quarrelling, and I don’t believe it.’
- (82) wən-əš, [kʷəd = n3 šaj-əns]!
 see-PRS.2SG how 1PL.ENCL.GEN deceive-PRS.3PL
 ‘{Now you have learnt how the men love!} You see how they deceive us!’ (ONC)

The same tendency is observed with the subordinator *kʷə*: see (83), where the complement has been mentioned previously, and the correlative pronoun is used, and (84),

where the complement belongs to the new information: the speaker introduces his/her request, and his/her fear that it will not be accepted.

- (83) *žon-ə* =j3, *b3rg3*, *j3=* *χi* *kʷə* *r-waz-id*, *w3d*
 know-PRS.3SG 3SG.ENCL.GEN certainly 3SG.POSS REFL if PV-let-OPT.3SG then
=ən *k3j fe-nson-d3r* *w-aid*, *waj*, *f3l3* =j3 *aft3*
 3SG.ENCL.DAT COMP PV-easy-CMPR be-OPT.3SG DEM.DIST but 3SG.ENCL.GEN so
=d3r n3 *f3nd-ə*, *wəm-3j* =d3r *t3rš-ə*, *[kʷə]* =j3n
 ADD NEG want-PRS.3SG DEM.DIST-ABL ADD fear-PRS.3SG when 3SG.ENCL.DAT
fe-nson-d3r *w-aJ*, *wəm-3j*.
 PV-easy-CMPR be-SBJV.3SG DEM.DIST-ABL

‘Certainly he knows that it would be easier for him if he lay down (for a rest; lit. if he let himself), but he doesn’t want that, he’s even afraid of it being easier for him.’ (ONC)

- (84) *f3l3* =m3m *iw kurdiat iš*, *3m3 t3rš-ən*, *[kʷə]* *n3 s-razə*
 but 1SG.ENCL.DAT one request EXST and fear-PRS.1SG when NEG PV-agreeing
waj].
 be.OPT.2SG

‘I have a request, and I’m afraid that you won’t consent.’ (ONC)

2.3.8.4. The subordinators *k3d* and *salənm3*

The subordinators *k3d* and *salənm3* are only used with the verb ‘wait’ (and its synonyms). The rationale for the use of correlates with these subordinators is more transparent than with *kʷə* and *kʷəd*. The correlate is used if the complement clause denotes an event that is sure to happen for pragmatic reasons (wait until the end of summer, the end of the lesson etc.):

- (85) *3nq3lm3* *kašt-əšt3m*, [war-ən *k3d ba-nsaj-z3nJ*, *wə-m3*.
 (wait) look-PST.INTR.1PL rain-INF when PV-stop-FUT[3SG] DEM.DIST-ALL
 ‘{The fire has built up and our wet clothes have dried.} We were waiting until the rain stopped.’ (ONC)
- (86) *d3w kʷə n3 fed-t-ain*, *w3d =ma =m3* *bir3 ba-qʷəd-aid*
 you.GEN if NEG see.PFV-TR-CONTRF.1SG then also 1SG.ENCL.GEN long PV-must-
 CNTRF.3SG
3nq3lm3 k3š-ən, [*salənm3 bazar ba-jgom wəd-aidJ*, *w3d-m3*.
 (wait) look-INF until bazaar PV-open be-CONTRF.3SG then-ALL
 ‘If I hadn’t seen you, I would have had to wait a lot until the bazaar opens.’ (ONC)

In (85) and (86) the correlate is used, since it is common knowledge that the rain will stop some time, and the bazaar opens every morning. By contrast, the complement clause occurs without the correlate if the event denoted by the complement is not certain to happen (or even impossible) for pragmatic reasons:

- (87) *kʷəz k'3š3r-ə* *š3r-t-ə ba-g3p: kod-t-a...* *3nq3lm3 kašt-i*,
 dog threshold-GEN top-PL-IN PV-jump do-TR-PST.3SG (wait) look-PST.INTR.3SG
[k3d =ən ištə χ3rinag ra-p:ar-ik:oj].
 when 3SG.ENCL.DAT something food PV-throw-OPT.3PL
 ‘The dog jumped over the threshold and inside the house, waiting for somebody to throw it some food. {No, nobody did, those two people were too busy.}’ (ONC)

- (88) *3nq3lm3 k3š, [salənm3 = dən wərəš-ə pacax j3= bandon*
 (wait) look[IMP.2SG]until 2SG.ENCL.DAT Russia-GEN emperor 3SG.POSS throne
3fštaw a-v3r-a].
 on.credit PV-give-SBJV.3SG
 ‘Wait for the Russian emperor to lend you his throne.’ (ONC)

Example (88) is especially telling, since the complement denotes an event that is pragmatically impossible.

This semantic opposition also influences the choice of the mood of the verb in the complement clause, cf. 2.3.6. Hence, it is not surprising that there is a correlation between the presence of the correlate and the choice of mood: the indicative mood is most often observed if the correlate is present, while non-indicative moods are mostly attested if the correlate is absent.

2.3.8.5. *The subordinator s3m3j*

Usually this subordinator does not take a correlate: of 63 examples of *s3m3j* in complement clauses (with a postposed complement clause), arbitrarily taken from the corpus, only four contain the correlate. In all those examples the complement denotes a situation that is somehow discussed in the previous context⁹, e.g.:

- (89) *aχχoš3g-t-3j = ma i wəj u, 3m3 səv3ll3-t-ə nəjjaržə-t-3j*
 reason-PL-ABL PTCL one DEM.DIST be.PRS.3SG and child-PL-GEN parent-PL-ABL
= d3r k3j-d3r-tə n3 f3-f3nd-ə, [s3m3j j3= šəv3llon
 ADD who.GEN-INDF-PL.OBL NEG PV-want-PRS.3SG PURP 3SG.POSS child
iron-aw aχʷər k3n-a], wəj.
 Ossetian-EQU learn do-SBJV.3SG DEM.DIST

‘There is one more reason: some of the children’s parents don’t want their children to learn the Ossetic language.’ (ONC)

The sentence in (89) is part of an article (“On Ossetic – from the point of view of the law”, from the magazine “Max dug”, 2006, № 5), which is focused on the problems of speaking Ossetic in nurseries and kindergartens, and the situations of “learning Ossetic” and “speaking Ossetic” are thus mentioned repeatedly throughout the article.

The complement in (90) is an answer to a question and, hence, presents new information. Therefore, the correlate is not used:

- (90) *w3d3 = d3 kʷəd f3nd-ə? – m3n f3nd-ə, [s3m3j tušan-ə*
 then 2SG.ENCL.GEN how want-PRS.3SG I.GEN want-PRS.3SG PURP Turan-GEN
ma-či š-šar-a].
 NEG-who PV-find-SBJV.3SG
 ‘What do you want then? – I want no one to find Tugan.’ (ONC)

2.3.8.6. *The conjunction 3m3*

The conjunction *3m3* does not show the same syntactic properties as other complement subordinators. First, the complement with the conjunction *3m3* cannot appear preposed to the matrix clause (construction C). Second, the correlate can either be placed inside the matrix clause (this construction does not occur with other subordinators), or postposed to the complement clause (construction A):

- (91) *henər 3ž wəj žon-ən, [3m3 s3wa-j3 nikʷədʒmwal airv3ž-zən3n].* =(48)
 now I DEM.DIST know-PRS.1SG and Sawa-ABL nowhere escape-FUT.1SG
 ‘Now I know that I will not escape from Sawa anywhere.’ (Nart sagas)

⁹ I thank Oleg Belyaev for this calculation and the example.

- (92) *s3wən n3 žaxt-aj*, [3m3 d3= *mad-3n 3χχʷəš kod-t-aj*], *wəj?*
 why NEG say-PST.TR.2SG and 2SG.POSS mother-DAT help do-PST.TR-2SG DEM.DIST
 ‘{Teacher scolded me for not having done my homework. – You should have lied.}
 Why didn’t you say that you had been helping your mother?’

However, it is noteworthy that the correlate is only rarely observed with *3m3*, which is not surprising if it serves to introduce propositions.

In spite of the syntactic differences between the construction with *3m3* and those seen with any other subordinator, the semantic difference associated with the presence vs. absence of the correlate is the same with *3m3* as was observed above for the constructions with other subordinators. The correlate is present if the complement is topical or refers to old / expected information (91). For example, the correlate is rejected by native speakers if the complement constitutes the focus:

- (93) *3nq3l d3n, [3m3 je= mbał-m3 a-səd-iš]* (**wəj*).
 think be.PRS.1SG and 3SG.POSS friend-ALL PV-go-PST.INTR.3SG DEM.DIST
 ‘{Where is your brother?} – I think he went to his friend.’

2.3.9. Citation particles *dam* and *ž3kg3*

Ž3kg3 is a participle-converb of the speech verb *ž3kən*. It is used as a complementizer, mostly to indicate propositions, with various classes of CTPs, cf.:

- (94) [*χ3zar nal w3j k3n-ən, ž3kg3*], 3ž *žaxt-on*.
 house no_more purchase do-PRS.1SG say-PTCP I say-PST.TR.1SG
 ‘I said that I wouldn’t sell the house.’ (TEXT)
- (95) 3ž *fe-qʷəšt-on, [m3škʷə-jə mit war-ə, ž3kg3]*.
 I PV-hear-PST.1SG Moscow-IN snow to.fall-PRS.3SG say-PTCP
 ‘I’ve heard that it’s snowing in Moscow.’

Ž3kg3 is grammaticalized as a complementizer. First, it can appear alongside the verb *ž3kən* in one and the same sentence, cf. (94), lit. “saying said”, without giving rise to a tautology. Second, it can be used with CTPs that do not denote speech acts:

- (96) *wəj =j3 fe-nq3ld-t-a [arš u, ž3kg3]*,
 he 3SG.ENCL.GEN PV-think-TR-PST.3SG bear be.PRS.3SG say-PTCP
3m3 j3= ražm3 ra-səd-i.
 and 3SG.POSS near PV-go-PST.INTR.3SG
 ‘He thought it was a bear and went before it.’ (TEXT)

The complementizer *ž3kg3* can be used with the imperative in the complement clause to denote orders and requests, cf.:

- (97) *m3 fəd mən žaxt-a, [don ra-χ3š, ž3kg3]*.
 1SG.POSS father I.DAT say.PST-3SG water PV-carry say-PTCP
 ‘My father asked me to bring some water.’

Cf. (Vydrin forthc.) on *ž3kg3*. The particle *dam* is mostly used with verbs of speech:

- (98) *uəm3 =i w=šən, [3ž =dam =w3m =š3 ba-t3r-zən3n]*.
 then ITER 3PL.ENCL.DAT I CIT 2PL.ENCL.ALL 3PL.ENCL.GEN PV-drive-FUT.1SG
 ‘Then he said: “I’ll drive Caucasian goats to you.”’ (TEXT)

It can be repeated several times in a single clause (99) or in combination with *ž3kg3* (100):

- (99) *3m3 raya aft3 ž3kg3-ə, [w3d =dam am =dam propisk3 š-k3]*.
 and Raya so say-PRS.3SG then CIT here CIT registration PV-do.IMP.2SG
 ‘And Raya says to me: “Then register here”.’ (TEXT)

(100) [našžən-t-3	χʒr-3n	zəχ	= dam	ž3k- g3],	3v3c3g3n,	aχ3m
pumpkin.pie-PL-NOM.PL	eat-ADJ	mouth	CIT	say-PTCP	probably	such

štar zəχ-3j f3-ž3k-əns.
big mouth-ABL PV-say-PRS.3PL

‘Such a big mouth they probably call a “pumpkin pie eating mouth”. (lit. Of such a big mouth they probably say “pumpkin pie eating mouth”)’ (ONC)

Both citation particles can occur in non-subordinate clauses to refer to a citation.

2.4. Non-finite complements: morphosyntax and functional distribution

2.4.1. Infinitive

2.4.1.1. Morphosyntactic properties of the infinitive

The infinitive in Ossetic shows the morphosyntactic properties of a verbal noun: it can take all the case markers, nominal number suffix, and possessive clitics available to nouns (Abaev 1950), as in the following examples:

(101) <i>f3šš-ən-3j</i>	<i>ba-f3llad-t3n.</i>
write-INF-ABL	PV-be.tired-PST.INTR.1SG

‘I’m tired of writing.’ (Abaev 1950: 614)

(102) <i>s3r-ən-t-3</i>	<i>ba-jdəd-t-oj.</i>
live-INF-PL-NOM.PL	PV-begin-TR-PST.3PL

‘They began to live well.’ (Abaev 1950: 614)

(103) <i>m3=</i>	<i>ž3rd3-m3</i>	<i>s3w-ə</i>	<i>[d3=</i>	<i>kaf-ən].</i>
1SG.POSS	heart-ALL	go-PRS.3SG	2SG.POSS	dance-INF
‘I like your dancing.’				

As for verbal categories, the infinitive does not show tense and mood differentiation. It preserves the perfectivity distinction encoded by preverbs, e.g. *k3nən* vs. š-*k3nən* ‘to do’ vs. ‘to have done’. The infinitive cannot take the finite negation particle *n3*; the non-finite negation *ma* can be used with some CTPs:

(104) <i>Alin3 ž3rd3 ba-v3rdt-a</i>	<i>nanaʃ-3n</i>	<i>[j3</i>	<i>nog</i>	<i>k'aba</i>	<i>ma</i>	<i>šč'izi k3n-ən].</i>
Alina	heart	PV-put-PST.3SG	mother-DAT	3SG.POSS	new	dress
‘Alina promised (lit. put the heart) her mother not to soil her new dress.’						

The infinitive preserves the active/passive voice distinction; the passive forms of the infinitive can be found in the corpus:

(105) “ <i>Irəston-ə</i> ” <i>volejbolist-t-3</i>	<i>kʷəd</i>	<i>ž3k-əns,</i>	<i>aft3m3j</i>	<i>š3=</i>
Iriston-GEN	volleyball.player-PL-NOM.PL	how	say-PRS.3PL	3PL.POSS
<i>bon</i>	<i>[f3-χ3rd</i>	<i>w3v-ən]</i>	<i>n3</i>	<i>wəd...</i>

‘“Iriston” volleyball players said that they could not be beaten (lit. it was not their possibility to be beaten) {because their victory was a birthday present to their coach Felix Khamikoev}.’ (<http://alaniatv.ru/habaerta/vesti-iryston/?id=6100>)

The infinitive cannot have a subject in the nominative; the subject of the infinitive may only be expressed via genitive clitics (103). The direct object and the other arguments of the infinitive are expressed in the same way as in the corresponding finite clause:

(106) <i>m3n</i>	<i>f3nd-ə</i>	<i>[χ3rinag</i>	/	<i>*χ3rinaž-ə</i>	<i>k3n-ən].</i>
I.GEN	want-PRS.3SG	dinner(NOM)		dinner-GEN	do-INF

‘I want to cook food.’

In Ossetic, non-animate direct objects most often occur without any overt marker, while animate DOs take genitive marking (Abaev 1950), as do dependent nominals in NPs. Hence, the unacceptability of the genitive in (106) signals that the infinitive marks its DO in the same way as in corresponding finite clauses.

Therefore, the infinitival clause preserves verbal argument structure, except for the marking of the subject and negation; morphosyntactically, however, the infinitive shows nominal properties.

2.4.1.2. Semantics of the infinitive

The distribution of the infinitive is very similar to the distribution of infinitives in English or Russian. It is used to encode complements with future or generic reference, controlled or caused by the subject (or experiencer) of the matrix clause:

- (107) čəžg *ra-jdəd-t-a* *k3w-ən*.
 girl PV-begin-TR-PST.3SG weep-INF
 ‘The girl started crying.’

- (108) *j3* = *bon* *u* [*r3šuwd* *kaf-ən*].
 3SG.POSS possibility be.PRS.3SG beautiful dance-INF
 ‘She can dance beautifully.’

Unlike infinitives in many languages, the Ossetic infinitive does not encode complements of the verb ‘finish’, ‘end’; instead the nominalization is used:

- (109) *l3p:u* [*kaš* *χ3rd*] *f3s-i*.
 boy porridge eat.PTCP.PST PV-EXST
 ‘The boy ate up the porridge (lit. finished eating).’

With control predicates, the infinitive is used if the coreferential pattern corresponds to the default for the particular CTP involved. This is subject control for ‘promise’, and object control for ‘let’.

Semantically, the infinitive can encode both events (including generic events) and propositions with control verbs. With evaluative predicates it encodes generic events – see the following examples with the predicate *χorž*, where the infinitive contrasts with the construction with *k3j* and the correlative pronoun:

- (110) a. *š3rdəgon* *χorž* *u* [*χ3χ-t-ə* *težvo* *k3n-ən*].
 in_summer good be.PRS.3SG mountain-PL-IN walk do-INF
 ‘In summer, it is nice to take a walk in the mountains.’
- b. *sə* *χorž* *u*, [*fən* *k3j* *wəd-iš*], *wəj!*
 what good be.PRS.3SG dream COMP be-PST.INTR.3SG DEM.DIST
 ‘It is so good that it was a dream!’ (ONC)

The sentence in (110a) describes the feelings experienced about the situation of walking itself, while in (110b) it is the fact of the situation being true that is evaluated as positive. Hence, (110a) presents an eventive context, and the infinitive is used, while (110b) presents a factive context, expressed by means of the subordinator *k3j* with the correlative pronoun.

However, the infinitive is not used in eventive contexts of the kind associated with verbs of immediate perception.

With the verbs ‘let’, ‘promise’ and others the infinitive encodes propositions:

- (111) *žawər* *n3* *waz-ə* *je* = *fšəm3r-ə* [*j3* = *χ3s3ngarž-m3* *zvnal-ən*].
 Zaur NEG let-PRS.3SG 3SG.POSS brother-GEN 3SG.POSS gun-ALL touch-INF
 ‘Zaur doesn’t let his brother take his gun.’

With verbs of speech the infinitive can only be used if causation is understood, as in *I told him to go*.

Thus, the distribution of the infinitive is governed not by the semantics of the complement, but by the coreferentiality pattern and the presence of causation.

For the distribution of the infinitive and the complement clauses with *s3m3j* see 2.3.3.

2.4.2. Nominalization

2.4.2.1. Morphosyntactic properties of the nominalization

The nominalization construction is headed by the participle in *-t/-d* (112). It can take all the morphological markers proper to nouns (Abaev 1950): possessive clitics (112), the nominal plural marker (113), and case markers (114).

(112) [de =	<i>rba-səd</i>]	=	<i>mən</i>	<i>ʒəʃəžgon</i>	<i>u.</i>
2SG.POSS	PV-go.PTCP.PST	I.DAT	joy	be.PRS.3SG	

‘I’m glad that you’ve come.’

(113) [j3 =	<i>k3nd-tət-3</i>]	<i>m3</i>	<i>n3</i>	<i>q3w-əns.</i>
3SG.POSS	do.PTCP.PST-PL-NOM.PL	1SG.ENCL.GEN	NEG	need-PRS.3PL

‘I don’t need what she has done (the things that she has done).’

The nominalization does not take the markers of verbal morphological categories, such as mood and tense, and it does not show a voice distinction. It can, however, take perfective preverbs, cf. (112). Negation (whether expressed by the indicative negation particle *n3* or the modal negation particle *ma*) is also impossible in nominalizations¹⁰.

Syntactically, nominalizations behave like nouns. The semantic subject of the nominalization appears in the genitive:

(114) 3ž	[<i>bir3k-ə</i> / * <i>bir3k</i>	<i>niwəd-3j</i>]	<i>t3rš-ən.</i>
I	wolf-GEN	wolf	howl.PTCP.PST-ABL	fear-PRS.1SG

‘I fear the wolf’s howl.’

(115) [<i>mašin3-jə</i> / * <i>mašin3</i>	<i>ʒlχ3d-ə</i>	<i>f3št3]</i>	<i>avtobus-əl</i>	<i>nal</i>	<i>s3w-3m.</i>
car-GEN	car(NOM)	buy-PTCP.PST-GEN	after	bus-INS	no.more

‘Since buying the car we do not take the bus any more.’

The direct object can only occur in the genitive, unlike in corresponding independent clauses (where the genitive is mostly used for animate and nominative for non-animate DOs). It is impossible for nominalizations to take both a subject and an object; only one of these is acceptable in nominalized clauses (unless the subject is expressed by means of a possessive pronoun). Circumstantials can only be encoded by adjectives: for example, temporal adverbs must take the genitive that functions as adjectivizer:

(116) <i>alin3-jə</i>	<i>žnon-ə</i> /	* <i>žnon</i>	<i>kaft</i>
Alina-GEN	yesterday-GEN	yesterday	dance.PTCP.PST
‘Alina’s dance yesterday’, lit. ‘yesterday’s dance of Alina’			

Therefore, nominalizations behave like nominals with regard to their morphosyntactic properties: they have nominal morphology, do not preserve verbal argument structure, and take adjectival modifiers.

2.4.2.2. Distribution of the nominalization in complement clauses

Nominalizations can occur with nearly all CTPs, except for modal verbs and the verb ‘begin’. However, they often carry a nuance of meaning, such as manner (e.g. *kaft* dance.PTCP.PST ‘dance, manner of dancing’) or status as a cultural event (*kʷəvd* pray.PTCP.PST

¹⁰ In some contexts the corresponding meaning can be expressed by the preposition *ən3* ‘without’ (e.g. ‘One cannot live **without eating**’). However, since this is not possible in complementation, we do not consider these examples here.

‘feast, prayer’), or they encode the semantic patient of the nominalized verb (*razərd* tell.PTCP.PST ‘story, tale’). Such examples lie on the periphery of complementation.

2.4.3. Participial forms

The morphosyntax of the participial forms in *-g3* (or *-g3j3*, the ablative form of the participle) is described in detail in (Belyaev, Vydrin 2011). It takes only one case marker, the ablative; possessive markers referring to the DO are possible, and the form in *-g3* may also (marginally) inflect for nominal number.

The participial forms take verbal morphological markers of aspect and negation. However, the finite negation (*n3*) can be replaced by the nominal preposition *z̄n3* ‘without’. Tense and mood are not differentiated in these forms. The voice distinction is preserved, cf. (117) with the passive construction.

(117) ... <i>mzn3</i>	<i>asə</i>	<i>dəww3</i>	<i>t3rx-ə</i>	= <i>d3r</i> ,	<i>iw</i>	<i>žip:-ə</i>	<i>wazd</i>
this.here	DEM.PROX	two	machine-GEN	ADD	one	model-IN	issue.PTCP.PST
<i>w3v-g3,</i>	<i>χis3n</i>	<i>k3n-əns</i>	<i>k3r3zi-j3.</i>				
be-PTCP	separate	do-PRS.3PL	RECP-ABL				

‘Those two machines, which have been issued as the same model, differ from one another.’ (ONC)

The arguments of the participle are encoded in the same way as in the corresponding independent sentence.

In complementation, it is used with verbs of immediate perception only:

(118) <i>z̄fed-t-on</i>	<i>de=</i>	<i>fšəm3r-ə</i>	<i>b3χ-əl</i>	<i>s3w-g3.</i>
I see.PFV-TR-PST.1SG	2SG.POSS	brother-GEN	horse-SUPER	go-PTCP

‘I saw your brother riding a horse.’

When these verbs denote cognitive (indirect) perception, they cannot take the participle. The paratactic construction or the subordinators *k3j*, *z̄m3* are used instead.

2.5. Conclusions

The Ossetic complementation system is comparatively rich: three non-finite strategies exist alongside a large number of subordinators available to introduce complement clauses. The finite strategies predominate. Non-finite strategies occur in the following contexts: the infinitive is restricted to control contexts with complements referring to the future (with respect to the temporal reference of the matrix clause); participles are used with immediate perception only; nominalizations are substantivized to a large extent and mostly denote not the situation itself, but institutionalized cultural events etc.

The number of complementation strategies is multiplied if we take into account the distribution of correlates. Correlative pronouns/adverbs are obligatory if the complement clause is preposed; otherwise they are used if the complement clause is presupposed, or is the topic, or encodes old/expected information. Hence, subordinators and correlative pronouns/adverbs bear different functions in Ossetic: the subordinator employed encodes the semantic type of the complement (*k3j* [less commonly *z̄m3* or the paratactic construction] is used to introduce facts or propositions, *kʷəd* – events or caused situations, *kʷə* – generic events (or stimulus of desire), *s3m3j* – propositions (mostly with reference to the future), *səma* – irrealis propositions, *k3d* and *salənm3* – events with the verb ‘wait’), while the correlates mark the status of the complement clause in the information structure of the sentence. An overview of the subordinators and correlative pronouns is presented in table 1.

Table 1. Semantics of finite complementation strategies in Ossetic

Subordinator / type of construction	with a correlative pronoun	without a correlative pronoun
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<i>kʒj</i>	fact/topical proposition	proposition
<i>ʒmʒ</i>	topical/ previously mentioned / expected proposition	proposition
paratactic construction	fact/topical proposition	proposition
<i>kʷəd</i>	previously mentioned or expected event or caused proposition	previously unmentioned or unexpected event or caused proposition
<i>kʷə</i>	previously mentioned or expected generic event (or stimulus of desire)	previously unmentioned or unexpected generic event (or stimulus of desire)
<i>sʒmʒ</i>	previously mentioned proposition, mostly with reference to the future	previously unmentioned proposition, mostly with reference to the future
<i>səma</i>	irrealis complement	—
<i>kʒd, salənmʒ</i>	with the verb ‘wait’ only: event that is certain to happen	with the verb ‘wait’: event that is not certain to happen

The following conclusions can be drawn. The Ossetic system is sensitive to the opposition of coreferentiality patterns with verbs of causation, speech causation and potential action, thus demonstrating the same control pattern that is observed in SAE languages.

The most relevant distinction is that between events and propositions/facts. The presupposition vs. assertion distinction is encoded by correlative pronouns/adverbs. However, the correlates are used to encode other semantic parameters, such as topicality/‘mentionedness’/expectedness, and are not subject to a strict grammatical rule (which brings this system close to that seen in Russian, where the fact/proposition distinction in complementation is mostly reflected in the intonation pattern or deduced from the context). See (Dalmas 2013) for similar generalizations on the use of the correlate *es* in German complements.

There is a special device for marking irrealis complements and generic events. An unexpected polysemy pattern is observed with the subordinator *kʷəd*, which can encode event and potential/caused situation in the future. Special devices are used with the verb ‘wait’.

Another interesting feature is the use of relativization (the correlative construction) to encode facts and topical propositions. This brings the system of Ossetic close to that found in North-West Caucasian languages and can be a result of the areal influence, cf. (Serdobolskaya, Belyaev forthc.) for the argumentation.

Appendix¹¹. Distribution of complementation strategies in Ossetic

Complement-taking predicate	Infinitive in -ən	Nominalization in -t-	Participles in -gʒ (-jʒ)	<i>kʒj</i> ‘that’	<i>kʷə</i> ‘if, when’	<i>kʷəd</i> ‘how’, ‘in order that’	<i>sʒmʒ</i> ‘in order that’	<i>ʒmʒ</i> ‘and’	Parataxis	Other conjunctions
<i>Phasal verbs</i>										
<i>idajən</i> ‘begin’	+	—	—	—	—	—	—	—	—	
<i>fʒwən</i> ‘finish,	—	+	—	—	—	—	—	—	—	

¹¹ Notation in the appendix: «+» means that a construction is acceptable, «—» that it is unacceptable; «+/-» that variation exists among native speakers; «?» marks insufficient information. Note that adverbial clauses and indirect questions with *kʷəd*, *kʒd* etc. are not taken into account in the Appendix.

end'										
<i>Modal predicates</i>										
<i>bon u</i> ‘can’	+	–	–	–	–	–	–	+	–	
<i>žonən</i> ‘know, be able’	+	–	–	+	–	+	–	+	+	
<i>f3ndən</i> ‘want’	+	–	–	–	+	+*	+	+	+	
<i>q3wən</i> ‘must’	+	–	–	–	–	+*	+		+	
<i>Predicates of emotion</i>										
<i>ž3rd3m3 s3wən</i> ‘like’	+	+	–	+	+	+	–	+	–	
<i>waržən</i> ‘love’	+	+	–	–	+	+	+	+	–	
<i>t3ršən</i> ‘fear’	+	+	–	+	+	–	–	+	+/-	ž3rg3
<i>ž3rd3 darən</i> ‘hope’	–	–	–	+	–	–	–	+	+	
<i>χ3l3g k3nən</i> ‘envy’	–	+	–	+	–	+	–	–	–	
<i>ʒχšážgon u</i> ‘rejoice’	+	+	–	+	–	–	–	–	–	
<i>sin k3nən</i> ‘rejoice’	+	+	–	+	–	–	–	–	–	
<i>diš k3nən</i> ‘be surprised’	–	+	–	+	–	–	–	–	+	
<i>Verbs of perception</i>										
<i>wənən</i> ‘see’	–	+	+	+	–	+	–	–	+	
<i>qušən</i> ‘hear’	+/-	–	+	+	–	+	–	+	+	ž3rg3
<i>Mental predicates</i>										
<i>ʒnq3lən</i> ‘think’	–	–	–	+	–	–	–	+	+	səma
<i>ʒnq3l w3vən</i> ‘think’	–	–	–	+	–	–	–	+	+	səma
<i>aft3 k3šən</i> ‘seem’	–	–	–	+	–	–	–	+	+	səma
<i>wərnən</i> ‘believe’	–	–	–	+	–	–	–	+	–	
<i>ʒnq3lm3 k3šən</i> ‘wait’	–	+	–	–	+	–	+	–	–	k3d, salənm3
<i>qʷəda k3nən</i> ‘remember’	–	+	–	+	–	+	–	–	–	
<i>roχ k3nən</i> ‘forget’	+	+	–	+	–	+	–	+	+	
<i>feroχ i</i> ‘forget’	+	+	–	+	–	+	–	-/+	+	
<i>Speech verbs</i>										
<i>ž3rən</i> ‘say’	+/-	+	–	+	–	+*	+	+	+	ž3rg3
<i>zurən</i> ‘tell’	–	+	–	+	–	+	+	-/+	-/+	
<i>f3ršən</i> ‘ask’	–	+	–	–	–	–	–	–	+	wh-words, ž3rg3
<i>bar d3ttən</i> ‘let’	+	–	–	–	–	–	+	+	+	
<i>wazən</i> ‘let’	+	–	–	–	–	–	–	+	–	
<i>Predicates of potential action or causation</i>										

¹² The asterisk means that the verb takes *kʷəd* in the meaning ‘in.order.that’.

<i>ž3rdz 3v3rən</i> ‘promise’	+	-	-	+	-	-	-	+	+	
<i>aχʷər k3nən</i> ‘teach’	+	-	-	-	-	-	-	-	-	
<i>aχʷər wən</i> ‘get used to’	+	+	-	+	-	-	-	-	-	
<i>f3lvarən</i> ‘try’	+	-	-	-	-	-	-	-	-	
<i>aryajən</i> ‘seek’	+	+	-	-	-	-	+	+	-	
<i>ʒχχwəš k3nən</i> ‘help’	+	+	-	-	-	-	+	-/+	-	
<i>qavən</i> ‘intend’	+	+	-	-	-	-	-	-	-/+	
<i>χi s3tt3 k3nən</i> ‘prepare’	+/-	+	-	-	-	-	-	-	-	
<i>ražə w3vən</i> ‘agree’	+	-	-	+	-	-	+	-	-	
<i>k3nən</i> ‘make’	+	-	-	-	-	-	-	-	-	
<i>Evaluative predicates</i>										
<i>χorž</i> ‘good’	+	+	-	+	+	-	-	+	-	
<i>3vž3r</i> ‘bad’	+	+	-	+	+	-	-	-	-	
<i>žən</i> ‘hard’	+	+	-	-	+	-	-	-	-	

Abbreviations

- ABL – ablative
 ADD – additive particle
 ADJ – adjectivizing suffix
 ALL – allative
 CIT – citative
 CONTRF – counterfactive
 COM – comitative
 COMP – complementizer
 CMPR – comparative particle
 DAT – dative
 DEM – demonstrative pronoun
 DIR – directive
 DIST – distal (demonstrative)
 DO – direct object
 ENCL – enclitic
 EQU – equative
 EXST – existential copula
 FUT – future tense
 GEN – genitive
 IMP – imperative
 IN – inessive/illative
 INDF – indefinite pronoun
 INF – infinitive
 INS – instrumental case
 INTR – intransitive marker
 ITER – iterative
 NEG – negation
 NOM – nominative
 OPT – optative

PFV – perfective verb
PL – plural
PL.OBL – plural of pronouns in oblique case
POSS – possessive
PROH – prohibitive
PROX – proximal (demonstrative)
PRS – present tense
PST – past tense
PTCL – particle
PTCP – participle
PURP – purposive subordinator
PV – preverb
RECP – reciprocal
REFL – reflexive
SBJV – subjunctive mood
SG – singular
SUPER – superessive/superlative
TR – transitivity marker

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