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# Complementizers in Kalmyk

## 1 Introduction

Kalmyk uses as complementizers what appear to be non-finite forms of the verb *gi-* ‘say’, especially, the converbial form *gižə* (but also the converbial form *giḅäd* and the participial form *gisən*). According to Noonan (1985), complementizers derived from verbs are rare compared to pronouns, conjunctions, adpositions and case markers. However, they are quite common in the Altaic languages and can also be found in a number of typologically diverse languages listed in Heine & Kuteva (2002).

One interesting fact about Kalmyk complementizers is that there is evidence for treating them *synchronically* as non-finite forms of the verb *gi-* despite the fact that they apparently lack the lexical content of this verb. The other interesting fact is that *contentful* uses of the verb *gi-*, in turn, share a number of syntactic properties with the complementizer *gižə*. This puzzling combination of facts calls for an analysis.

On a theoretical level the point of this paper is to disentangle verbal and complementizer-like properties of the verb *gi-* and its forms used as complementizers. I will arrive at the somewhat paradoxical conclusion that *gi-* is a verb and a complementizer at the same time, and present a formal implementation of this idea. The major focus of this paper, however, is empirical and it is to document the syntactic and semantic properties and the distribution of the verb *gi-* and its forms used as complementizers.<sup>1</sup>

The structure of this paper is as follows. In this section I give a brief overview of the Kalmyk language (Section 1.1) and its complementation system (Section 1.2). Sections 2 and 3 contain the empirical core of the paper. In Section 2 I describe the general properties of *gi-* as a complement-taking verb. In Section 3 I discuss uses of *gi-* as a complementizer focusing on the form *gižə*. I describe its general properties (Section 3.1) and its distribution (Section 3.2), including its distributional differences from the complementizer *giḅäd* (Section 3.3). In Section 4 I present my analysis of the verb *gi-* and its forms used as complementizers. Section 4.1 is

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<sup>1</sup> Kalmyk complementizers have been discussed to some extent in a few descriptive papers (see Baranova 2010, Knyazev 2009, Prokhorov 2009). The discussion there, however, centers around individual aspects of the behavior of the complementizers (such as their distribution, etymological source or interpretation of indexicals). In this paper I provide a more comprehensive description of the data and also present an account of the properties that Kalmyk complementizers have.

a general overview, in sections 4.2 and 4.3 I focus on the syntactic and semantic aspects of the proposed analysis. Section 5 concludes the paper.<sup>2</sup>

## 1.1 Overview of Kalmyk

In this section I give a brief overview of the Kalmyk language.<sup>3</sup> Kalmyk (Kalmuck) is a Western Mongolic language mainly spoken in the Republic of Kalmykia in the Russian Federation, where it is an official language, alongside Russian. According to a recent census (2010), Kalmyk is spoken by around 80,000 people. Kalmyk is considered an endangered language, according to UNESCO.

Kalmyk has many features in common with other Altaic languages. It is an agglutinative language with vowel harmony. In the nominal domain, Kalmyk lacks gender and a fully grammaticalized number, instead having possessive morphemes, including a possessive reflexive marker and a rich case system with differential object marking. An interesting property of Kalmyk is that it has optional accusative marking of embedded subjects. In the verbal domain, Kalmyk is a subject-verb agreement language with agglutinative tense and aspect markers and a rich set of markers for non-indicative moods. As to the word order, Kalmyk is an SOV language with postpositions. It has a relatively free word order with topicalization and verb phrase internal scrambling as possible options, and lacks obligatory fronting of *wh*-words.

One feature of Kalmyk particularly important for the subsequent discussion is that it has limited sentential embedding. Most embedded clauses, including both complement and adverbial clauses, are headed by non-finite forms. Yet, sentences, or finite clauses, can be embedded as complements when they are introduced by the forms of the verb *gi-*. It is finite complements that will be the focus of this paper but before I look at them in some detail I will briefly discuss the complementation system of Kalmyk.

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<sup>2</sup> The paper is based on the data obtained in a remote fieldwork setting from a language consultant (born in 1953, a speaker of the Dörbet dialect) in 2011–2013. I am grateful to Olga Seesing for her immense help with the fieldwork. I would also wish to thank the audiences of the Ninth Workshop of Altaic Formal Linguistics (WAFL 9) (Cornell University, 23 August 2013) and the Ling-Lunch at MIT (30 August 2013) for their questions and comments.

<sup>3</sup> For a fuller typological overview the reader is referred to Blaesing (2003) and Say et al. (2009)

## 1.2 Overview of the Kalmyk complementation system

Two major complement types can be identified in Kalmyk based on the morpho-syntactic properties of the predicative head of the complement. The first type is non-finite complements, which are headed by a predicate carrying (a) one of the participial suffixes in their nominalizing function or (b) one of the converbial suffixes.<sup>4</sup> The (a) subtype is illustrated with the complement of verb *üz-* ‘see’ in (1), where the embedded predicate carries the (contextual allomorph of the) past participle suffix *-sən* and also nominal morphology, namely, case and possessive agreement suffixes. Note that the embedded subject is marked with accusative case.

- (1) *bi*            [*čamagə*    *ger-ür-n*                    *ir-s-i-čən*]  
 1SG-NOM    2SG.ACC    home-DIR-POSS.REFL    come-PTCP.PST-ACC-POSS.2SG  
*üz-lä-v.*  
 see-REM-1SG  
 ‘I saw that you came home.’<sup>5</sup>

The (b) subtype is illustrated with the complement of verb *sed-* ‘want’ in (2), where the embedded predicate carries the purposive converb suffix *-xar*.

- (2) *küükəd*    [*nam-ta*    *naad-xar*]            *sed-əv.*  
 children    2SG-assoc    play-CVB.PURP    want-PST  
 ‘Children wanted to play with me.’

The second type is finite complements, where the verb appears in the indicative or one of the imperative forms.<sup>6</sup> Finite complements also come in two subtypes.

<sup>4</sup> Since it is not clear how complements of the (b) subtype can be formally distinguished from the corresponding adverbial clauses, their status as a separate complement type remains an open question.

<sup>5</sup> I follow the Leipzig Glossing Rules, supplying glosses along the lines of Say et al. (2009) where required. Note that most nouns, except for ones that idiosyncratically require the extension marker *-n* [EXT], have unmarked nominative forms. Since Kalmyk has differential object marking, there are also unmarked accusative forms, which coincide with unmarked nominative forms. However, in line with Say et al. (2009), I do not distinguish the unmarked accusative and the unmarked nominative in the glosses as the two are in complementary distribution, the former being restricted to the object position (hence embedded accusative subjects are always marked by a suffix), whereas the latter is restricted to the subject position.

<sup>6</sup> In finite complements the verb may also appear as a participle used finitely. Cf. the finite use of the past participle illustrated in (i).

- (i) *küü-n*            *ir-sən.*  
 man-EXT    come-PTCP.PST  
 ‘The man has come.’  
 (Blaesing 2003:242)

They are comprised of finite clauses either (a) directly embedded by a matrix verb (the only matrix verb that can directly embed a sentence is *gi-*; see the next section), or (b) introduced by the complementizers such as *gižə*, *giäd* or *gisən*, which are morphologically non-finite forms of the verb *gi-* ‘say’. The (a) subtype is illustrated in (3), where a clause headed by a verb in the jussive is embedded by *gi-*.

- (3) *eckə-nʲ*            [*Badma nan-də möngə ög-txä*]        *gi-və*.  
 father-POSS.3    Badma        1SG-DAT    money give-JUSS    say-PST  
 ‘His father said Badma should give me the money.’

The (b) subtype is illustrated in (4), where the same embedded clause as in (3) is introduced by the complementizer *gižə* to become an argument of the verb *kel-* ‘tell’.

- (4) *eckə-nʲ*            [*Badma nan-də möngə ög-txä gi-žə*]        *kelə-v*.  
 father-POSS.3    Badma        1SG-DAT    money give-JUSS    say-CVB.IPFV    tell-PST  
 ‘His father said that Badma should give me the money.’

In this paper I focus on the forms of *gi-* used as complementizers. I will also discuss uses of *gi-* as a contentful complement-taking verb since these are crucial for understanding the nature and status of the complementizers. An important terminological note is in order. Although I will eventually propose a unified analysis of both uses of *gi-*, for ease of exposition I will refer to forms of *gi-* used as complementizers simply as complementizers and to forms of *gi-* used as a complement-taking verb as simply the verb *gi-*.

## 2 *Gi-* as a complement-taking verb

In the previous section I noted that *gi-* is able to directly embed finite clauses. In (3) we saw an embedded clause headed by a verb in the jussive. In (5) some other imperative forms are illustrated.

- (5) a. *ekə*            *eckə*    [*namagə usə av-čə*            *irə-Ø*]        *gi-və*.  
 mother    father    1SG.ACC    water    take-CVB.IPFV    come-IMP    say-PST  
 ‘My parents asked me to bring some water.’  
 (Prokhorov 2009:193)
- b. *Badma*        [*Ajsa-gə Elst-ür jov-ij*]        *gi-və*.  
 Badma        Ajsa-ACC    Elista-DIR    go-HORT    say-PST  
 ‘Badma invited Ajsa to go to Elista.’  
 (Prokhorov 2009:193)

The embedded verb can also appear in the indicative, as is illustrated in (6a) and (6b).<sup>7</sup> It has to be pointed out that many speakers judge indicative sentences embedded by the verb *gi-* as slightly degraded (and prefer to introduce them with a complementizer).

- (6) a. *Ajsa [udlgo aavə-m ir-xə] gi-və.*  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-PST  
 ‘Ajsa said my grandpa will come soon.’  
 b. *Ajsa [ekə-m kövü barɣ-la] gi-və.*  
 Ajsa mother-POSS.1SG son give\_birth-REM say-PST  
 ‘Ajsa said my mother has had a boy.’

The embedding of finite clauses under the verb *gi-* has the following properties. Firstly, *gi-* is the only verb that is able to embed a sentence, as is demonstrated in (7) by the unacceptability of replacing the verb with *kel-* ‘tell’. To make (7) acceptable, one should plug in a complementizer such as *gižə*, as in (4). Similar facts are replicated for indicative embedded clauses, as is shown in (8a) and (8b).

- (7) *\*eckə-nʹ [Badma nan-də möngə ög-txä] kelə-v.*  
 father-POSS.3 Badma 1SG-DAT money give-JUSS tell-PST  
 intended: ‘His father said Badma should give me the money.’  
 (8) a. *\*Ajsa [udlgo aavə-m ir-xə] kelə-v.*  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT tell-PST  
 intended: ‘Ajsa said my grandpa will come soon.’  
 b. *Ajsa [udlgo aavə-m ir-xə gi-žə] kelə-v.*  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-CVB.IPFV tell-PST  
 ‘Ajsa said my grandpa will come soon.’

Secondly, embedded clauses introduced by *gi-* must immediately precede the verb. Thus neither a dative nor a subject DP may intervene between the clause and *gi-*, as can be seen in (9a) and (10a). Note that this is possible with complements introduced by the complementizer, as can be seen in (9b) and (10b); cf. also (10c), which shows that a dative DP is in principle compatible with a sentence embedded by the verb *gi-*.<sup>8</sup>

- (9) a. *\*[aavə-m udlgo ir-xə] Ajsa gi-və.*  
 grandfather-POSS.1SG soon come-PTCP.FUT Ajsa say-PST  
 intended: ‘Ajsa said my grandpa will come soon.’

<sup>7</sup> Note that the future participle in (6a) is used finitely. See footnote 6.

<sup>8</sup> A question arises whether the immediate precedence is a property of the construction with an embedded sentence or of the verb *gi-* in general, in which case we would expect that a nominal complement of *gi-* would also immediately precede it. This is somewhat hard to check since, as I will show shortly, speakers usually reject examples with *gi-* taking nominal complements.

- b. [aavə-m                      udlgo   ir-xə                      gi-žə]                      Ajsa  
 grandfather-POSS.1SG   soon   come-PTCP.FUT   say-CVB.IPFV   Ajsa tell-PST  
 ‘Ajsa said that my grandpa will come soon.’
- (10) a. \*Ajsa [aavə-m                      ir-xə]                      Badma-də                      gi-və.  
 Ajsa   grandfather-POSS.1SG   come-PTCP.FUT   Badma-DAT   say-PST  
 intended: ‘Ajsa said to Badma that my grandpa is coming.’
- b. Ajsa [aavə-m                      ir-xə                      gi-žə]                      Badma-də  
 Ajsa   grandfather-POSS.1SG   come-PTCP.FUT   say-CVB.IPFV   Badma-DAT  
 kelə-v.  
 tell-PST  
 ‘Ajsa said to Badma that my grandpa is coming.’
- c. Ajsa   Badma-də                      [aavə-m                      ir-xə]                      gi-və.  
 Ajsa   Badma-DAT   grandfather-POSS.1SG   come-PTCP.FUT   say-PST  
 ‘Ajsa said to Badma that my grandpa is coming.’

Thirdly, *gi-* disallows nominal complements. This is illustrated for the *wh*-word *jun* ‘what’ in the unmarked form, as in (11a); cf. the corresponding example with the verb *kel-* ‘tell’, as shown in (11b). The same holds for participial forms used as nominalizations, as shown in (12a); cf. (12b).

- (11) a. \*Bajrta čam-də ju gi-və?  
 Bajrta 2SG-DAT what say-PST  
 intended: ‘What did Bajrta say to you?’
- b. Bajrta čam-də ju kelə-v?  
 Bajrta 2SG-DAT what say-PST  
 ‘What did Bajrta say to you?’
- (12) a. \*Bajrta [bi xotə säänär ke-dg-igə]                      gi-və.  
 Bajrta 1SG.NOM food well do-PTCP.HAB-ACC say-PST  
 intended: ‘Bajrta said that I cook well.’
- b. Bajrta [bi xotə säänär ke-dg-igə]                      kelə-v.  
 Bajrta 1SG.NOM food well do-PTCP.HAB-ACC say-PST  
 ‘Bajrta said that I cook well.’

The fourth property of *gi-* is related to the interpretation of the complement clause. A clause introduced by *gi-* allows indexicals inside it to be interpreted both relative to the context of utterance and to the reported context. For example, the first person pronoun *nandə* in sentence (13), repeated from above, could refer either to the speaker, as in (13i), or to the subject, as in (13ii).<sup>9</sup> The same is true of the first person possessive marker *-m* in example (14) with the indicative.

<sup>9</sup> It is worth mentioning that the the interpretation of indexicals relative to the reported context does not necessarily involve direct speech or quotation. This can be shown by the fact that this interpretation can obtain even when the subject of the complement clause is marked with ac-

- (13) *eckə-nʲ* [Badma nan-də möngə ög-txä] gi-və.  
 father-POSS.3 Badma 1SG-DAT money give-JUSS say-PST  
 i. ‘His father said Badma should give me the money.’  
 ii. ‘His father<sub>i</sub> said Badma should give him<sub>i</sub> the money.’
- (14) *Ajsa* [udlgo aavə-m ir-xə] gi-və.  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-PST  
 i. ‘Ajsa said that my grandpa will come soon.’  
 ii. ‘Ajsa<sub>i</sub> said that her<sub>i</sub> grandpa will come soon.’

To summarize, *gi-* is the only verb in Kalmyk that can embed clausal complements directly, it has to immediately precede the complement clause, it disallows nominal complements and it allows indexicals inside the complement clause to be interpreted both relative to the context of utterance and to the reported context.

Before concluding this section, it is important to note that *gi-* can also be used outside complementation both as a functional element and as a contentful verb. As a functional element, (converbial forms of) *gi-* can introduce purpose clauses, as shown in (15) for *gibäd*.<sup>10</sup> Secondly, *gi-* can also be used in a construction with the modal converb expressing the avertive meaning, as shown in (16). Finally, non-finite forms of *gi-* can introduce ideophonic elements and proper names, as shown in (17a) and (17b), respectively. As a contentful verb, *gi-* can introduce onomatopoeic words, as shown in (18).

- (15) [čamagə tövknün gerg-tä-bän küünd-txä gi-bad]  
 2SG.ACC comfortable wife-ASSOC-POSS.REFL speak-JUSS say-CVB.PFV  
*bi* jöv-x-u.  
 1sg.nom go-PTCP.FUT-1SG  
 ‘I will go so that you could comfortably speak to your wife.’  
 (Say 2009: 433)
- (16) *Badma unə-n gi-və.*  
 Badma fall-CVB.MOD say-PST  
 ‘Badma was on the verge of falling.’  
 (Baranova 2010)

cusative case, indicating that the clause is embedded. This is shown in (i). This phenomenon is referred to in the literature as *indexical shift*; see Shklovsky & Sudo (2013).

- (i) *eckə-nʲ* [Badma-gə nan-də möngə ög-txä] gi-və.  
 father-POSS.3 Badma-ACC 1SG-DAT money give-JUSS say-PST  
 a. ‘His father said Badma should give me the money.’  
 b. ‘His<sub>i</sub> father said Badma should give him<sub>i</sub> the money.’

**10** Heine & Kuteva (2002) cite this as a possible path of grammaticalization of ‘say’.

- (17) a. *gils-gils*      *gi-žə*              *xälä-*  
 IDEO              say-CVB.IPFV      look  
 ‘look with eyes cast down’  
 (Baranova 2010)
- b. *eckə-m*              *nan-də*      *Ivan*      *gi-dəg*              *nerə*      *ogə-v.*  
 father-POSS.1SG      1SG-DAT      Ivan      say-PTCP.HAB      name      give-pst  
 ‘Father gave me Ivan as a name.’  
 (Baranova 2010)
- (18) *ɸAV-ɸAV*      *gi-*  
 bow-wow      say  
 ‘bark’  
 (Baranova 2010)

I will not discuss these uses of *gi-* any further and will ignore them in the proposed account of *gi-*, limiting myself to contexts where *gi-* introduces complement clauses – either as a contentful verb, as we just saw in this section, or as a complementizer, as we will see in the following section.

### 3 *Gi-* as a complementizer

As I mentioned above, Kalmyk uses non-finite forms of the verb *gi-* ‘say’ as complementizers, such as *gižə*, *gibäd* and *gisən*. More precisely, complementizer *gižə* is derived by the imperfective converb suffix *-žə*, complementizer *gibäd* is derived by the perfective converb suffix *-ad*, complementizer *gisən* is derived by the past participle suffix *-sən* (see Say et al. 2009) for the meaning of the relevant suffixes). In this paper I will focus on the complementizer *gižə*, which is illustrated in (19), repeated from above, with the embedded verb in the jussive; for examples with the embedded verb in the indicative and the imperative see, e.g., (8b) and (26), respectively.

- (19) *eckə-nʹ*              [*Badma*      *nan-də*      *möngə*      *ög-txä*      *gi-žə*]              *kelə-v.*  
 father-POSS.3      Badma      1SG-DAT      money      give-JUSS      say-CVB.IPFV      tell-PST  
 ‘His father said that Badma should give me the money.’

I will limit my discussion of *gibäd* to its distributional differences with *gižə* and only briefly touch on *gisən*.



### 3.1 General properties

In this section I will discuss general morphosyntactic and semantic properties of the complementizer *gižə*. Firstly, complementizers morphologically related to the verb *gi-*, such as *gižə*, *gižäd*, *gisən* and some other derivatives of *gi-* (see footnote 12) are the only ones that can introduce finite complement clauses.

Secondly, the complementizer *gižə* has to immediately precede the complement clause that it introduces, just like the verb *gi-*. Thus, for example, a dative DP cannot intervene between the clause and the complementizer, as can be seen in (20). This adjacency requirement might appear a self-evident property of complementizers. Yet, given that Kalmyk complementizers are morphologically related to a verb, one might in principle expect that they would share some behavior with ordinary verbs such as *kel-* ‘tell’, which allow dative DPs to intervene between them and their complements, as we saw in (10b).

- (20) \**[Ajsa aavə-m ir-xə] Badma-də gi-žə kelə-v.*  
 Ajsa grandfather-POSS.1SG come-PTCP.FUT Badma-DAT say-CVB.IPFV tell-PST  
 intended: ‘Ajsa said to Badma that my grandpa is coming.’

Thirdly, complement clauses introduced by *gižə* allow indexicals to be interpreted both relative to the context of utterance and to the reported context, as shown in (21) and (22).<sup>11</sup>

- (21) *eckə-n<sup>i</sup> [Badma nan-də möngə ög-txä gi-žə] kelə-v.*  
 father-POSS.3 Badma 1SG-DAT money give-JUSS say-CVB.IPFV tell-PST  
 i. ‘His father said that Badma should give me the money.’  
 ii. ‘His father<sub>i</sub> said that Badma should give him<sub>i</sub> the money.’
- (22) *Ajsa [udlgo aavə-m ir-xə gi-žə] kelə-v.*  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-CVB.IPFV tell-PST  
 i. ‘Ajsa said my grandpa will come soon.’  
 ii. ‘Ajsa<sub>i</sub> said her<sub>i</sub> grandpa will come soon.’

The fourth property of the complementizer *gižə* is that it cannot introduce complements of nouns. This is illustrated with *zakvər* ‘order’ and *zəngə* ‘news’ in (23a)

<sup>11</sup> Cf. (i) indicating that complement clauses introduced by *gižə* also allow indexical shift; see footnote 9.

- (i) *eckə-n<sup>i</sup> [Badma-gə nan-də möngə ög-txä gi-žə] kelə-v.*  
 father-POSS.3 Badma-ACC 1SG-DAT money give-JUSS say-CVB.IPFV tell-PST  
 a. ‘His father said Badma should give me the money.’  
 b. ‘His<sub>i</sub> father said Badma should give him<sub>i</sub> the money.’

and (23b). Instead of *gižə* the form *gisən* is used, which is morphologically the past participle of *gi-*.<sup>12</sup> This is shown in (24a) and (23b).

- (23) a. \**cerğč-nər* [*ɤolə tal jov-tən gi-žə*] *zakvər avə-v.*  
 soldier-PL river towards go-IMP.PL say-CVB.IPFV order receive-PST  
 intended: ‘Soldiers received the order to go towards the river.’  
 b. \*[*tüümər šatə-v gi-žə*] *zəŋgə terə soŋsə-v.*  
 fire burn-PST say-CVB.IPFV news that hear-PST  
 intended: ‘He heard the news that a fire broke out.’
- (24) a. [*tüümər šatə-v gi-sən*] *zəŋgə terə soŋsə-v.*  
 fire burn-PST say-PTCP.PST news that hear-PST  
 ‘He heard the news that a fire broke out.’  
 b. *cerğč-nər* [*ɤolə tal jov-tən gi-sən*] *zakvər avə-v.*  
 soldier-PL river towards go-IMP.PL say-PTCP.PST order receive-PST  
 ‘Soldiers received the order to go towards the river.’

Assuming that converbs only attach to a verbal predication, the incompatibility of *gižə* and complements of nouns suggests that *gižə* displays distributional restrictions typical of converbs, whereas *gisən* displays distributional restrictions typical of participles.

To summarize, complementizers related to the verb *gi-* such as *gižə* essentially share syntactic properties with the verb *gi-* (in their unique ability to introduce complement clauses, in the adjacency requirement and the interpretation of indexicals). This would suggest that the verb *gi-* and the complementizers should receive a unified analysis. This conclusion is reinforced by the fact that the complementizers syntactically pattern as the respective non-finite forms, which justifies their treatment as non-finite forms of the verb *gi-* synchronically. However, the complementizer *gižə* dramatically differs from the verb *gi-* in that it lacks lexical content as manifested by its distribution across complement-taking predicates, to which I now turn.

<sup>12</sup> Other derivatives that can introduce clausal complements of nouns are *gižäsən* and *gižəxə*, illustrated in (ia) and (ib).

- (i) a. *Bajrta-də* [*kövü-nʲ institut-tə sur-xə gi-žä-sən*]  
 Bajrta-DAT son-POSS.3 institute-DAT study-PTCP.FUT say-DUR-PTCP.PST  
*itkəl bi-lä.*  
 belief be-rem  
 ‘Bajrta had the belief that her son would study at the institute.’  
 b. [*tüümər šatə-v gi-žä-xə*] *zəŋgə irə-v.*  
 fire burn-PST say-DUR-PTCP.FUT news come-PST  
 ‘The news came that a fire broke out.’

### 3.2 Distribution across complement-taking predicates

So far we have seen examples where *gižə* introduces sentential complements of the verb *kel-* ‘tell’, which takes both indicative and imperative complements. Other utterance predicates<sup>13</sup> include *zəŋgl-* ‘announce’, which takes indicative complements, and *sur-* ‘ask’ and *zak-* ‘order’, which take imperative complements. These verbs are illustrated in (25), (26) and (27). Note that imperative complements in (26) and (27) are rendered with infinitive in English, which suggests that the verbs in those cases can also function as *manipulative* predicates (see Noonan 1985).

- (25) *axlač* [tüümər šatə-v gi-žə] zəŋglə-v.  
 chairman fire burn-PST say-CVB.IPFV announce-PST  
 ‘The chairman announced that a fire broke out.’
- (26) *Badma kövü-bän* [du duul-Ø] gi-žə surə-v.  
 Badma son-POSS.REFL song sing-IMP say-CVB.IPFV ask-PST  
 ‘Badma asked his son to sing a song.’
- (27) *Baatər cergč-nər-tə* [bolə tal jov-tən] gi-žə zakə-v.  
 Baatr soldier-PL-DAT river towards go-IMP.PL say-CVB.IPFV order-PST  
 ‘Baatr ordered soldiers to go towards the river.’

Importantly, examples with utterance predicates do not allow us to determine whether *gižə* has an independent semantic contribution. This is because speech acts, which are encoded by utterance predicates, in general have multiple semantic parameters such as the content, manner, goal, etc. of the speech act, and it is difficult to say in advance what parameters a given verb lexicalizes. As a result, it might be that various parameters are not exclusively lexicalized by the utterance predicate (in which case *gižə* would be lacking semantic contribution) but rather distributed across that predicate and *gižə* in a given construction. For example, this would be the case if *gižə* lexicalized the semantic feature corresponding to the transfer of information (the essential component of utterance predicates) whereas the predicate lexicalized the rest of the features associated with the speech act.

The distribution of *gižə*, however, is not limited to utterance predicates and extends to predicates that lack the ‘transfer of information’ component to their meaning. Thus, for example, *gižə* can introduce complements of *propositional attitude* predicates such as *san-* ‘think’ and *almac-* ‘doubt’, illustrated in (28) and (29), and the verb *ää-* ‘fear’, illustrated in (30).

<sup>13</sup> Hereafter I use the terminology of Noonan (1985) to refer to the classes of complement-taking predicates.

(28) *bi* [Ajsa-gə degtər umš-xə] *gi-žə* *san-žə-na-v.*  
 1SG.NOM Ajsa-ACC book read-PTCP.FUT say-CVB.IPFV think-DUR-PRS-1SG  
 ‘I think Ajsa will read a book.’

(29) [*enə naaran ir-xə*] *gi-žə* *bi* *almac-žə-na-v.*  
 this here come-PTCP.FUT say-CVB.IPFV 1SG.NOM doubt-DUR-PRS-1SG  
 ‘I doubt that he will come here.’

(30) *Bajrta* [*kövü-bän cerg-tə mord-xə*] *gi-žə* *ää-žə-nä.*  
 Bajrta son-POSS.REFL army-DAT leave-PTCP.FUT say-CVB.IPFV fear-DUR-PRS  
 ‘Bajrta fears that her son will go to the army.’<sup>14</sup>

*Gižə* is also compatible with the verb *nääl-* ‘hope’, which is classified as a *desiderative* predicate in Noonan (1985). The example is shown in (31). Interestingly, the more common desiderative verb *sed-* ‘want’ resists complements introduced by *gižə* and instead takes non-finite complements headed by the *-xar* converb, as shown in (32a) and (32b); see also (6) above.<sup>15</sup>

(31) [*kövü-bän institut-tə sur-xə*] *gi-žə* *Bajrta*  
 son-POSS.REFL institute-DAT study-PTCP.FUT say-CVB.IPFV Bajrta  
*nääl-žə-nä.*  
 hope-DUR-PRS  
 ‘Bajrta hoped that her son would study at the institute.’

(32) a. \**bi* [ *čamagə zurg zur-txa*] *gi-žə* *sed-žə-nä-v.*  
 1SG.NOM 2SG.ACC picture draw-JUSS say-CVB.IPFV want-DUR-PRS-1SG  
 intended: ‘I want you to draw a picture.’  
 b. *bi* [*čam-ar zurg zur-ul-xar*] *sed-žə-nä-v.*  
 1SG.NOM 2SG-INS picture draw-CAUS-CVB.PURP want-DUR-PRS-1SG  
 ‘I want you to draw a picture.’

Another verb *gižə* can combine with *soŋs-* ‘hear’, illustrated in (33). As suggested by the use of a *that*-clause in the English translation, *soŋs-* ‘hear’ is used as an (*acquisition of*) *knowledge* predicate rather than an immediate perception predicate (which would require a bare infinitive complement). Interestingly, the other perception verb *üz-* ‘see’ disallows complements introduced by *gižə* even though the verb is compatible with the acquisition of knowledge use.<sup>16</sup> Instead,

<sup>14</sup> Note that the possessive reflexive marker *-an* glossed as ‘POSS.REFL’ is restricted to accusative contexts when not accompanied by a separate case suffix.

<sup>15</sup> Note that in (32b) the converb has a causative suffix, which indicates that the action encoded by the embedded verb is performed by a participant distinct from the matrix subject. See Say (2009) for more on this construction.

<sup>16</sup> This is shown by the fact that *üz-* ‘see’ can take complements with the negated embedded verb, as illustrated in (i). According to Mittwoch (1990), negation is incompatible with immediate

*üz-* ‘see’ takes a non-finite complement headed by a participial form. This is shown in (34a) and (34b).

- (33) *Badma* [selän-də tüümər šatə-v] gi-žə soŋs-la.  
 Badma village-DAT fire burn-PST say-CVB.IPFV hear-PST  
 ‘Badma heard that a fire broke out in the village.’
- (34) a. \**bi* [čamagə ger-ürə-n irə-v] gi-žə üz-lä-v.  
 1SG.NOM 2SG.ACC home-DIR-POSS.REFL come-PST say-CVB.IPFV see-REM-1SG  
 intended: ‘I saw that you came home.’  
 b. *bi* [čamagə ger-ürə-n ir-s-i-čən]  
 1SG.NOM 2SG.ACC home-DIR-POSS.REFL come-PTCP.PST-ACC-POSS.2SG  
 üz-lä-v.  
 see-REM-1SG  
 ‘I saw that you came home.’

Other knowledge predicates also resist taking sentential complements introduced by *gižə*. This is, for example, the case with *mart-* ‘forget’, which instead takes a non-finite complement, as shown in (35a) and (35b). The verb *med-* ‘know’ also usually takes a non-finite complement, given in (36a). When confronted with sentences involving a complement introduced by *gižə*, speakers either reject them or report a shift in meaning and note that the verb should then be translated as ‘think’, as shown in (36b).

- (35) a. \**terə* [čamagə mör-i-n<sup>i</sup> edgä-və] gi-žə mart-čkə-v.  
 that 2SG.ACC horse-ACC-POSS.3 cure-PST say-CVB.IPFV forget-COMPL-PST  
 intended: ‘He forgot that you cured his horse.’  
 b. *terə* [čamagə mör-i-n<sup>i</sup> edgä-s-igə] mart-čkə-v.  
 that 2SG.ACC horse-ACC-POSS.3 cure-PTCP.PST-ACC forget-COMPL-PST  
 ‘He forgot that you cured his horse.’
- (36) a. [*bi* enü-gə zalu-vas-n<sup>i</sup> sal-s-i-n<sup>i</sup>] med-lä-v.  
 1SG.NOM this-ACC husband-ABL-POSS.3 split-PTCP.PST-ACC-POSS.3 know-REM-1SG  
 ‘I know that she has split from her husband.’  
 b. <sup>?</sup>*bi* [enü-gə zalu-vasə-n<sup>i</sup> sal-žə od-sən] gi-žə  
 I this-ACC husband-ABL-POSS.3 split-CVB.IPFV go-PTCP.PST say-CVB.IPFV  
 med-lä-v.  
 know-REM-1SG  
 ‘I think that she has split from her husband.’

perception complements. Hence, the example should involve the acquisition of knowledge use of the perception verb.

- (i) [xora-də šamə esə untər-žə-x-i-n<sup>i</sup>] *bi* üz-lä-v.  
 room-DAT light NEG fade-DUR-PTCP.FUT-ACC-POSS.3 1SG.NOM see-REM-1SG  
 ‘I saw that the light was not fading.’

When we look at the pattern displayed by knowledge predicates, we observe that ‘hear’ and ‘think’, compatible with *gižə*, do not presuppose the truth of their complement as opposed to ‘see’ and ‘know’ (and also ‘forget’), incompatible with *gižə*, which do presuppose the truth of their complement, that is, are *factive*, as dubbed by Kiparsky & Kiparsky (1970).<sup>17</sup> Thus we can expect that *gižə* would generally resist factive complements.

Consider in this light the data on *commentative* predicates, which are often classified as (emotive) factive predicates and hence expected to be incompatible with *gižə*. Interestingly, this is not the case, as demonstrated by examples in (37a) and (38a), which involve the verbs *bajrəl-* ‘be glad’ and *ɸund-* ‘be offended’ functioning as commentative predicates. Note that these verbs also take non-finite complements, as shown in (37b) and (38b).

- (37) a. *enə [Badma-gə bičəg bič-žə] gi-žə bajrəl-žə-na.*  
 this Badma-ACC letter write-EVID say-CVB.IPFV rejoice-DUR-PRS  
 ‘He is glad that Badma wrote a letter.’  
 b. *enə [Badma-gə bičəg bič-sən-də] bajrəl-žə-na.*  
 this Badma-ACC letter write-PTCP.PST-DAT rejoice-DUR-PRS  
 ‘He is glad about the fact that Badma wrote a letter.’
- (38) a. [*terə institutə tögśä-sən uga] gi-žə ɸund-žə-na-v.*  
 that institute finish-PTCP.PST NEG.COP say-CVB.IPFV be\_offended-DUR-REM-1SG  
 ‘I regret that he has not finished the university.’  
 b. [*terə institutə esə tögśä-sən-də-nʹ] ɸund-žə-na-v.*  
 that institute NEG finish-PTCP.PST-DAT-POSS.3 be\_offended-DUR-REM-1SG  
 ‘I regret the fact that he has not finished the university.’

However, when we look more closely at the difference in meaning between examples (a) and (b) in (37) and (38), we note that the verbs in (37a) and (38a) with *gižə* should in fact be more appropriately translated as ‘glad/regret to believe’. This is indicated by the felicity of the continuations in (39a) and (39b) for (37a) and (38b). These continuations ensure that the truth of the complement is not presupposed and thus require a non-factive interpretation of the sentence. Note that for the corresponding examples with participial complements in (37b) and (38b) the relevant continuations are not felicitous.

- (39) a. *...bolvə terə bič-sən uga bi-lä.*  
 but that write-PTCP.PST NEG.COP be-REM  
 ‘...but (it turned out that) he hadn’t write it.’

<sup>17</sup> For the observation about ‘see’ (with a *that*-clause complement) see Higginbotham (1983). ‘Know’ is usually analyzed as semi-factive as it loses its factivity in certain contexts such as questions and conditionals; see Hooper & Thompson (1973) and references therein. I am grateful to the reviewer for drawing my attention to this fact.

- b. ...*bolvə terə tögsä-lä.*  
 but that finish-REM  
 ‘...but (it turned out that) he had finished it.’

The contrast between the interpretation of complements introduced by *gižə* and that of non-finite complements in the case of commentative predicates is very similar to what we saw in the case of *med-* ‘know’, which reinforces the conclusion that complements introduced by *gižə* have to be non-factive.

It is important to note that although *gižə* is incompatible with factive verbs, it can be used to introduce propositions that are taken to be true by virtue of the immediate context, that is, contextually given, as shown in (40). I conclude then that the non-factivity requirement induced by *gižə* invokes the notion of factivity as a property of the complement-taking verb (or its particular sense) rather than the property of the concrete sentence.<sup>18</sup>

- (40) *Badma [tüümər šatə-v] gi-žə kel-sən uga.*  
 Badma fire burn-PST say-CVB.IPFV say-PTCP.PST NEG.COP  
 ‘{Even though he knew it...} Badma didn’t say that a fire broke out.’

To summarize, *gižə* is compatible with a wide range of complement-taking predicates including those that do not express speech acts, which suggests that it lacks the ‘say’ interpretation and has an impoverished semantic content. In addition, *gižə* displays the non-factive restriction. The non-factive restriction on *gižə* follows naturally from the fact that *gižə* is derived from the verb *gi-* ‘say’, whereas ‘say’ is classified as non-factive, as in Hooper & Thompson (1973).<sup>19</sup>

We may wonder whether *gižə* inherits the other semantic feature of the verb ‘say’, namely, *assertivity*. Following Sheehan & Hinzen (2011:33), I understand assertive complements as “taken to be true by the grammatical subject, and perhaps understood by the hearer as if asserted by the matrix subject”. On this understanding assertivity and non-factivity are two independent features as suggested by the existence of assertive verbs that are factive such as ‘know’ (but see footnote 17) and non-factive verbs that are non-assertive such as ‘doubt’, ‘order’ and ‘ask’. In this section we saw that *gižə* is compatible with *sur-* ‘ask’ (26), *zak-* ‘order’ (27) and *almac-* ‘doubt’ (29), which are non-assertive. Thus we can conclude that *gižə* does not inherit assertivity from *gi-* ‘say’ and, more generally, is

<sup>18</sup> This understanding of factivity is similar to the one used by Haegeman & Ürögdi (2010), who clearly distinguish factivity as a lexico-semantic property of verbs and contextually defined notions such as givenness. I am grateful to the reviewer for bringing up this point.

<sup>19</sup> In Section 4.3 this idea is slightly modified.

orthogonal to the assertive/non-assertive distinction. Interestingly, this might not be the case with the other complementizer *giḅäd*, to which I now turn.

### 3.3 Distributional differences between *giḅä* and *giḅäd*

Except for complements of nouns, which require participial forms such as *gisən*, verbal complements are introduced by converbial forms of the verb *gi-*. So far we have seen examples with *giḅä*, which is derived by the imperfective converb suffix. The other form is *giḅäd*, which is derived by the perfective converb suffix. The distribution of *giḅäd* is very close to that of *giḅä*, but appears to be more restricted.

All speakers accept examples where *giḅäd* introduces complements of the verb *kel-* ‘tell’ with a non-indicative complement, shown in (41), manipulative verbs like *sur-* ‘ask’, *zak-* ‘order’, shown in (42) and (43), and verbs *ää-* ‘fear’ and *nääl-* ‘hope’, shown in (44) and (45). Cf. examples with *giḅä* and the corresponding verbs in (4), (26), (27), (30) and (31).

- (41) *eckə-nʲ* [Badma nan-də möngə ög-txä] *gi-ḅäd* *kelə-v.*  
 father-POSS.3 Badma 1SG-DAT money give-JUSS say-CVB.PFV tell-PST  
 ‘His father said that Badma should give me the money.’

- (42) *Badma* [kövü-ḅän du duul-Ø] *gi-ḅäd* *surə-v.*  
 Badma son-POSS.REFL song sing-IMP say-CVB.PFV tell-PST  
 ‘Badma requested that his son sing a song.’

- (43) *Baatr cergč-nər-tə* [ḅolə tal jov-tən] *gi-ḅäd* *zakə-v.*  
 Baatr soldier-PL-DAT river towards go-IMP.PL say-CVB.PFV order-PST  
 ‘Baatr ordered soldiers to go towards the river.’

- (44) *Bajrta* [kövü-ḅän cerg-tə mord-xə] *gi-ḅäd* *ää-ḅä-nä.*  
 Bajrta son-POSS.REFL army-DAT leave-PTCP.FUT say-CVB.PFV fear-DUR-PRS  
 ‘Bajrta fears that her son will go to the army.’

- (45) [čamagə edgä-txä] *gi-ḅäd* *bi* *nääl-ḅä-nä-v.*  
 2SG.ACC get\_cure-JUSS say-CVB.PFV 1SG.NOM hope-DUR-PRS-1SG  
 ‘I hope that you will get cured.’

With other verbs, however, speakers generally reject *giḅäd* and instead prefer *giḅä*. This is illustrated for *kel-* ‘tell’ with an indicative complement in (46), for *zängl-* ‘announce’ in (47), for *san-* ‘think’ in (48) and for *med-* in the sense ‘think’ in (49). Cf. the corresponding examples with *giḅä* in (8b), (23b), (28) and (36b). The acceptability judgments are quite subtle but there is a perceptible contrast between *giḅäd* and *giḅä* in these cases.



- (46) <sup>??</sup>*Ajsa* [udlgo aavə-m ir-xə] gi-*bäd* kelə-v.  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-CVB.PFV tell-PST  
 intended: 'Ajsa said my grandpa will come soon.'<sup>20</sup>
- (47) <sup>??</sup>*axlač* [tüümər šatə-v] gi-*bäd* zänglə-v.  
 chairman fire burn-PST say-CVB.PFV announce-PST  
 intended: 'The chairman announced that a fire broke out.'
- (48) <sup>??</sup>*bi* [Ajsa-gə degtər umš-xə] gi-*bäd* san-žə-na-v.  
 1SG.NOM Ajsa-ACC book read-PTCP.FUT say-CVB.PFV think-DUR-PRS-1SG  
 intended: 'I think Ajsa will read a book.'
- (49) <sup>\*</sup>*bi* [eni-g zalu-basə-ni] sal-žə od-sən]  
 1SG.NOM this-ACC husband-ABL-POSS.3 split-CVB.IPFV go-PTCP.PST  
 gi-*bäd* med-lä-v.  
 say-CVB.IPFV know-REM-1SG  
 intended: 'I think that she has split from her husband.'

The question is what is, what makes the verbs in (46)–(49) resist taking *gi**ä**d*. All verbs in these examples introduce assertions, as opposed to verbs in (41), (42), (43), (44) and (45), which express notions generally associated with non-assertive contexts; see Noonan (1985). This is definitely true for commands and requests in (41), (42) and (43) but can also be extended to predicates of fearing and hope in (44) and (45), as those have a clear emotional component (desire or lack thereof) to their meaning.<sup>21</sup>

In view of these facts I would like to hypothesize that *gi**ä**d* is restricted to non-assertive contexts. If this hypothesis is on the right track, then in Kalmyk the assertive vs. non-assertive distinction is (optionally) marked by the choice of the complementizer, as opposed to languages where this distinction is marked by the choice of the indicative or non-indicative mood; see Noonan (1985).

It is certainly the case that the choice of mood is related to whether the context is assertive or non-assertive. We saw that with the verb *kel-* 'tell', which can render the context non-assertive once used with an non-indicative mood (by hypothesis).<sup>22</sup> However, the choice of mood is in principle orthogonal to the

<sup>20</sup> Speakers sometimes report that it is easier to get the interpretation where the first person possessive marker in *aavəm* refers to the matrix subject. I suspect that this is due to the fact that under this interpretation the complement clause can be construed as a quotation.

<sup>21</sup> According to Noonan (1985), predicates of fearing can be doubly classified on the assertive/non-assertive scale depending on their degree of certainty but the important thing is that they are in principle compatible with non-assertive contexts.

<sup>22</sup> The reviewer raises an objection according to which the semantic distinction between indicative vs. non-indicative uses of the verb *kel-* 'tell' in (41) and (46) should be analyzed in terms of mood rather than assertion. In my view, however, these two possibilities do not exclude each

assertive vs. non-assertive distinction. This is because the verb *ää-* ‘fear’, which takes an indicative complement, can take a non-assertive complement (again by hypothesis).

At this point I don’t have a clear understanding of why *gibäd* is restricted to non-assertive contexts, whereas *gižə* is not (both complementizers being non-factive). Under the account that I will propose below, according to which complementizers should be viewed as non-finite forms of the verb *gi-*, the distributional difference between *gibäd* and *gižə* should follow from the difference in the choice of the converbial suffix. Yet there is no clear connection between assertivity vs. non-assertivity and perfectivity vs. imperfectivity (of the converb). I leave this puzzle to future research.

## 4 A unified analysis

### 4.1 General considerations

In sections 2 and 3 I looked at the properties of the verb *gi-* and its forms used as complementizers. Taken together they seem to lead us to an apparent paradox. On the one hand, the shared syntactic properties of the verb *gi-* and the complementizers and the fact that the complementizers syntactically pattern with non-finite forms suggest that the complementizers should be treated as forms of the verb *gi-*. On the other hand, the fact that the complementizers could not have the ‘say’ interpretation as opposed to the verb *gi-*, suggests that, from the point of view of semantics, the verb *gi-* and the complementizers should be treated separately.

To resolve this paradox, I will pursue the idea that the complementizers are in fact forms of the verb *gi-* and explore ways to account for the semantic difference between the two. Two theoretical options present themselves, which I will consider in turn. Firstly, the root *gi-* used as a verb and the root *gi-* used in the complementizers could be analyzed as diachronically related but distinct lexical items with distinct semantic content – full lexical content in the former case and impoverished lexical content in the latter case. Alternatively, *gi-* in both syntactic configurations could be analyzed as a single lexical item.

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other if assertion is viewed as an abstract semantic feature associated with certain contexts of clausal complementation rather than a purely pragmatic notion having to do with what is presupposed in the sentence.

The first analysis could be couched in terms of *grammaticalization*. As a gradual process of loss of lexical properties (in particular, semantic erosion), grammaticalization could explain why the verb *gi-* lost its lexical content to become a complementizer. In addition, a grammaticalization account could explain why complementizers retained some of the semantic features associated with the semantic content of the source verb such as non-factivity. Moreover, as a multi-faceted process (see Lehmann 1995) grammaticalization does not have to target various morphosyntactic features of the source element all at once, so we can in principle have an item undergoing the process of grammaticalization that lost its lexical content without losing its categorial information and the syntactic distribution associated with it. A grammaticalization account has in fact been proposed for Kalmyk complementizers (see Baranova 2010). For grammaticalization accounts of other complementizers derived from the verb ‘say’ see Heine & Kuteva (2002).

Despite its attractiveness, a grammaticalization account has one conceptual problem. Under this account, the relevant data taken from a purely synchronic perspective require the postulation of two homophonous morphemes *gi-* related by a grammaticalization process. One *gi-* would be a verb with lexical content, while the other would be a bound root with an impoverished semantic content and appearing only in non-finite forms. I find this conceptually problematic.

Instead I will pursue the second option, which is a completely unified analysis of *gi-*, as this option is conceptually more attractive and more interesting to explore. There are two fundamental questions that a unified account raises. Firstly, there is the question of the special syntactic properties of *gi-*. If it is a verb, why doesn’t it behave on a par with other complement-taking verbs? Secondly, there is the obvious question about the semantic content of *gi-*, namely, what it means to have lexical content in some uses but not in others. The answers that I give to these questions can be summarized as in (50). I will now discuss them in turn.

- (50) a. *Gi-* is simultaneously a verb and a complementizer by way of lexicalizing V and C heads.  
 b. *Gi-* lacks any intrinsic lexical content and gets interpreted by a default interpretation rule.

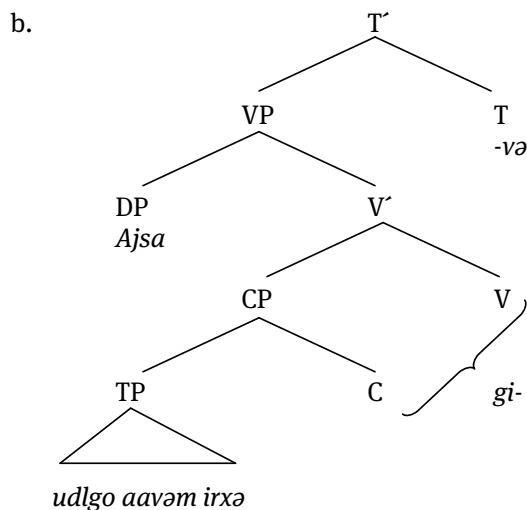
## 4.2 Lexicalization of V and C

To account for the syntactic properties of the verb *gi-*, I would like to propose that *gi-* is a verb and a complementizer at the same time. I present a technical implementation of this proposal in a *nanosyntactic* framework; see Starke (2009).

As in other syntactic approaches to morphology such as Distributed Morphology, in nanosyntax morphemes are syntactically represented. However, unlike Distributed Morphology nanosyntax assumes that morphemes can correspond to, or *spell out*, not only syntactic terminals but also larger syntactic structures. One option of such spellout is called *spanning*, a situation in which a morpheme realizes a continuous stretch of syntactic heads. To illustrate, the French portmanteau forms *du* and *au* can be analyzed as spelling out the preposition-determiner sequence, as in Svenonius (2012).

I would like to apply the same analysis to *gi-* and argue that *gi-* spells out the verbal head *V* and the head of its complement, that is, the complementizer head *C*.<sup>23</sup> For the uses of *gi-* as a contentful verb this is illustrated in (51b), where I present a partial tree corresponding to the sentence in (51a), repeated from above.

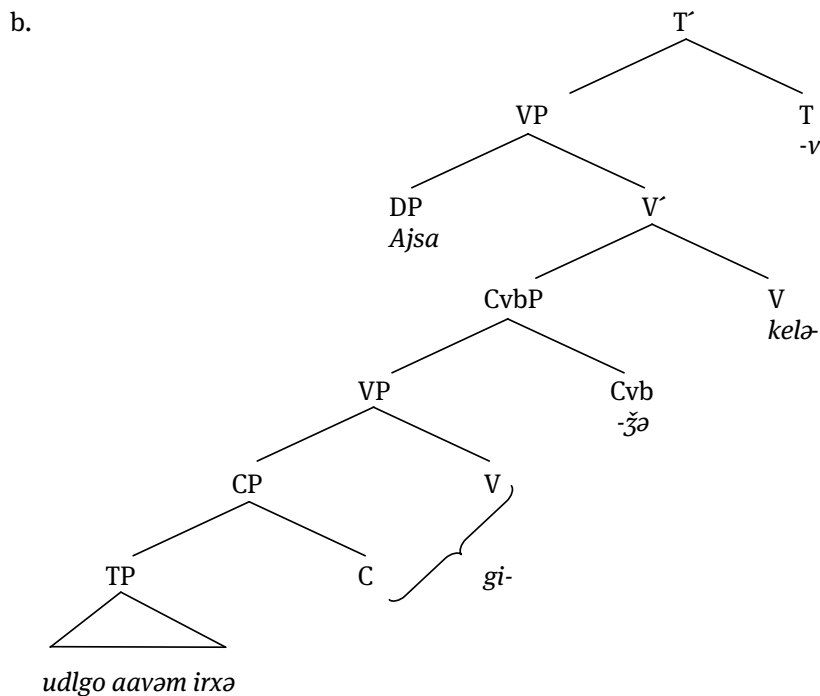
- (51) a. *Ajsa* [ *udlgo aavə-m* *ir-xə* ] *gi-və*.  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-PST  
 ‘Ajsa said my grandpa will come soon.’



The analysis for the uses of *gi-* as a complementizer is illustrated in (52b), where I present a partial tree corresponding to the sentence in (52a), also repeated from above. Note that in line with syntactic approaches to morphology, I represent the converb suffix as a separate syntactic terminal (Cvb).

- (52) a. *Ajsa* [ *udlgo aavə-m* *ir-xə* ] *gi-žə* *kelə-v*.  
 Ajsa soon grandfather-POSS.1SG come-PTCP.FUT say-CVB.IPFV tell-PST  
 ‘Ajsa said my grandpa will come soon.’

<sup>23</sup> Svenonius (2012) observes that while spanning is usually confined to an extended projection of a single head, in certain cases a single morpheme appears to spell out a head (e.g., *V*) along with a head or heads in the extended projections of its complement. This would be exactly the case at hand.



The analysis of *gi-* as lexicalizing both the V and C heads is able to account for why verbal morphology can attach to *gi-* and at the same time for why *gi-* in its uses as a lexical verb has special syntactic properties that set it apart from other matrix verbs. The fact that *gi-* is the only verb that is able to take sentential complements follows since *gi-* is also a complementizer and complementizers are closed-class elements. The adjacency requirement on the complement clause to *gi-* ‘say’ also follows from *gi-* being a complementizer since complementizers and clauses they introduce cannot be separated by material from the matrix clause. The incompatibility between the verb *gi-* and nominal complements also follows since C heads generally subcategorize for TP complements.

### 4.3 Default interpretation

In this section I will propose an account of the interpretation of *gi-*. I limit myself to a rather sketchy exposition leaving more detailed elaboration to future work. Under a unified analysis of *gi-* in its uses as a verb and its uses as a complementizer, we expect that it has a single interpretation. In principle there are two theoretical options. The first option is that *gi-* in both cases has lexical meaning and is interpreted as ‘say’. This option is clearly not available since, as we saw in Section 3.2, *gi-* as a complementizer is not restricted to utterance predicates. Consequently, I will adopt the other option which is that *gi-* in both of its uses lacks lexical content. As to the apparent meaning of *gi-* in non-complementizer

sentences I would like to propose that this is the result of a rule of default semantic interpretation, which fills in the missing content, given in (53).

- (53) A V with a propositional complement gets ‘say’ or ‘believe’ as its default semantic value (depending on the context).

The rule in (53) is essentially motivated by Pustejovsky (1995)’s analysis of cases like *John began a novel*. In Pustejovsky (1995)’s analysis the meaning of the understood verb (the action that John actually began) is recovered from the semantic content of the noun phrase complement, specifically, its qualia structure.<sup>24</sup> The understood verb in *John began a novel* tends to be interpreted as ‘read’ or ‘write’ since those actions are included in qualia structure of *novel* (as information related to how novels come about and what they exist for). The rule in (53) can be viewed as an application of this logic to propositions in general. The qualia structure of propositions would then include ‘say’ and ‘believe’ as the information about the origin and purpose of propositions, which generally come about by way of the speaker uttering them and are generally meant to be believed by the hearer.

Let’s see how the rule in (53) operates in the environments where *gi-* appears. The crucial question will be how the choice is made between the ‘say’ and ‘believe’ interpretation. As to the complementizer uses of *gi-*, I will be assuming that the V associated with *gi-* forms a complex predicate with the higher verb so that the two verbal heads share argument structure. Now suppose that for the formation of a complex predicate, the thematic roles of the two verbs should match. Consequently, in the case of utterance predicates the agent (speaker) role should match that of the agent role of *gi-* and hence *gi-* should be interpreted as ‘say’ (as ‘believe’ lacks the agent role). In the case of propositional attitude predicates, commentative predicates and other individual predicates such as *nääl-* ‘hope’, *soḡs-* ‘hear’, *med-* ‘know’ the role of the holder (of the propositional attitude) should match that of the holder role of *gi-* and hence *gi-* should be interpreted as ‘believe’. Note that this exactly predicts the non-factive interpretation of the sentences involving *med-* ‘know’ and commentative predicates such as *bajrəl-* ‘be glad’, as I discussed in Section 3.2. Moreover, this might also explain why the complementizer *gižə* is incompatible with factive verbs like *mart-* ‘forget’ and *üz-* ‘see’ if these verbs cannot be coerced into a non-factive interpretation.<sup>25</sup>

<sup>24</sup> The qualia structure is part of the lexical meaning of a word embracing information about the distinguishing features (so-called *formal* role), parts (*constitutive* role), purpose (*telic* role) and origin (*agentive* role) of an object designated by this word.

<sup>25</sup> In the case of the complementizer *gisən* restricted to complements of nouns (see Section 3.1; the interpretation of *gi-* should also be controlled by the content of the nominal predicate (pre-

As to what I called the contentful uses of *gi-*, I would like to propose that here pragmatic considerations favor the ‘say’ interpretation over that of ‘believe’.<sup>26</sup> One reason for this might be the following. Suppose that the meaning of the verb ‘say’ includes ‘believe’ as its component. This would be the case if speech acts are viewed as external manifestations of mental states.<sup>27</sup> Consequently, ‘say’ would be more informative than ‘believe’. As a result, we would expect that ‘say’ would be preferred over ‘believe’ as the more informative interpretation essentially in a Gricean fashion. Clearly, pragmatic consideration such as these will only come into play in the absence of complex predicate formation. This will ensure that in the complementizer uses *gi-* does not always come out as ‘believe’ but rather is interpreted depending on the content of the higher verb whereas in the unembedded uses the interpretation of *gi-* is fixed to ‘say’.

## 5 Conclusion

In this paper I have looked at the verb *gi-* ‘say’ and its non-finite forms (mostly *gižə* but also *giḅäd* and *gisən*), which function as complementizers. I have shown that the verb *gi-* ‘say’ has peculiar syntactic properties shared with complementizers derived from *gi-* ‘say’. I have examined the distribution of the complementizers showing that they are compatible with a wide range of complement-taking verbs going beyond utterance predicates provided the context is non-factive (and also non-assertive in the case of *giḅäd*). I have also shown that the complementizers distributionally pattern with the respective non-finite forms (complements of nouns requiring the form *gisən*).

I have proposed a unified analysis for the verb *gi-* and its forms used as complementizers according to which *gi-* is simultaneously a verb and a complementizer (by way of embracing both V and C heads in a nanosyntactic fashion) in both of its uses as a verb and a complementizer. The analysis is able to account for the peculiar syntactic properties of the verb *gi-* and the distributional pattern displayed by the complementizers, which would be totally unexplained if the verb *gi-* and the complementizers derived from it were (synchronically) independent lexical items.

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sumably in a different way than complex predicate formation). However, for reasons of space I have to leave the discussion of these cases for future research.

<sup>26</sup> I am grateful to a reviewer for the bringing up this issue.

<sup>27</sup> See Shinzato (2004) for a defense of this view.

I have also argued that *gi-* lacks any intrinsic lexical content even when used as a verb and gets interpreted (in those cases) by a default interpretation mechanism, which fills in the missing content. This completely unified analysis of *gi-* can be viewed as a conceptually simpler alternative to a more obvious grammaticalization analysis, according to which the verb *gi-* present in the complementizers has lost its lexical meaning despite retaining some of the verbal properties.

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