

On Modality in Georgian Sign Language (GESL)

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1. Introduction

Modality is one of the most fascinating and complex fields in language studies. In linguistics, the term *modality*¹ has been used for different types of relations to reality. In general, there are three traditionally accepted meanings for this term depending on whether one is referring to the logical, discursive, or grammatical facts. The traditional definition of modality refers to the speaker's attitude or opinion (among others Palmer 1986). Thus, this is a category of discourse showing the relationship between the speaker and the discourse (Herrero-Blanco & Salazar-García 2010), and meanwhile, as a grammatical category, modality has different morphosyntactic forms in different languages. Modality is also concerned with the logical structure of the text or sentence, and it can also be regarded as a kind of logical category. Even if we consider only the grammatical content of this term, modality is an extremely complex category that resists a general common definition that captures all of the factors involved (Herrero-Blanco & Salazar-García 2010). Grammatical modality can be classified into DEONTIC and EPISTEMIC modality types (Palmer 1979; Hoyer 1997). Epistemic modality is concerned with matters of the knowledge or beliefs on which speakers express their judgments about states of affairs, events, or actions (Hoyer 1997:42). Deontic modality is concerned with the possibility or necessity of acts in terms of which the speaker gives permission or asserts an obligation for the performance of actions at some point in the future (Hoyer 1997:43).

The Georgian linguistic literature lacks research on modality in spoken Georgian. There are a few papers on this topic (Vamling 1989, Sharashenidze 1999, Boeder 2010), and there are only a few paragraphs regarding modality in GESL

¹ Recently the term *modality* has acquired a new meaning related to the channel employed to form messages. In case of sign languages, this term is often used as a mean of exposition for linguistic categories, such as 'modality-specific' pathway of grammaticalization (Pfau & Steinbach 2006). Thus, we deal with polysemy in the English term *modality*.

(Makharoblidze 2012, Makharoblidze & Pfau 2018). The research presented here describes modality in general terms in Georgian Sign language (GESL), and it shows the main types of modal constructions in this language. It reveals a three-value interaction of Tense, Modality, and Negation.

GESL is a language of about 2500 Deaf and hard of hearing people (DHH) in Georgia. This language has strong influence from Russian Sign Language (RSL), as there was only one Soviet Sign Language (of course based on RSL) for all DHH in the Soviet country, thus all the Soviet Sign Languages (SLs) were highly influenced by RSL and spoken Russian.

Georgia was typical in that respect. In the post-Soviet period, the reintegrated countries began investigations of their own SLs, as the process of nationalization and reintegration of SLs has begun everywhere in the post-Soviet region. The post-Soviet countries created their own dactyl alphabets and undertook scientific research of their own national sign languages. Besides Georgia, such processes have taken place in many other former Soviet republics, such as Ukraine, Byelorussia, Estonia, Lithuania, Latvia and Moldova. Currently, GESL is an understudied language. The lexical level of GESL has been strongly influenced by RSL until now, but the grammar level of GESL shows its unique system.

This paper consists of three sections: Section 1 is the introduction; Section 2 gives basic information about modality across SLs and describes the modality in GESL – modals, word order, doubling forms and negation. Section 3 is the conclusion.

2. Modality in Georgian sign language

2.1. Modality across sign languages

SLs are the natural native or primary languages of Deaf people worldwide. SLs communicate via nonverbal channels, using manual and non-manual means to convey the different grammatical and lexical meanings. Manual and mimicking units are used to encode the information in SLs. The last Edition of Ethnologue listed 144 sign languages worldwide (Eberhard et al. 2019), though Georgian Sign Language (GESL) is not one of them.

This paper is one of the first descriptions of GESL's grammatical modality. Modality is an object of intense debate in present-day linguistic theory. However, research into modality in the SLs of deaf communities is a field that has not yet been thoroughly explored. Previous studies on modality in SLs (Brito 1990; Wilcox & Wilcox 1995; Shaffer 2004) have highlighted the iconic or metaphorical origin of modal constructions including repetition, energetic movement, and so on. Although certain cross-linguistic tendencies may exist, iconicity and metaphor finally act upon the grammatical codification in a language-specific way.

In Brazilian Sign Language, verbal movements are simple and energetic in the case of deontic modality (Brito 1990), while they are repetitive and not energetic in case of epistemic modality. Wilcox and Wilcox (1995) highlight a somewhat analogous situation for ASL. Shaffer (2004:177) states that deontic modality is more basic than epistemic modality, which explores the iconic relationship between the expression of

speaker subjectivity and information ordering in ASL. According to Shaffer, the position of the modal in an utterance corresponds to the modal's scope and to its role in the discourse. Modals with scope over only the verb appear near the verb, while modals with clausal scope appear at the end of the clause.

As was discussed above, modality is frequently defined as the conceptual domain of necessity and possibility, that is expressed by modals (lexemes or auxiliaries) or grammatical mood (inflectional coding in the verbal morphology), and this is the same for SLs. Modals in American Sign Language (ASL) are auxiliary verbs which modulate the meaning/mood/feeling of the verb and occur in grammatically specified positions, mostly preverbal. According to Wilcox (2016), grammaticalization (including modality-related issues) in SLs operates similarly to spoken languages.

A number of SL researchers have argued that iconicity and metaphor play a major role in the grammatical configuration of modality. Another important question is the role of the non-manual components of modal signs, typically involving a cluster of facial mimics including eye contact with the addressee, eyebrow-raising, and head and body positions. These non-manual components play an important role in modal constructions across SLs, just like the intonation that is very relevant for certain modal constructions in many spoken languages.

Wilcox (2004) shows that in Italian Sign Language and in ASL, movement alternations accompanied by mimic² express different meanings of modal verbs. Modals performed with faster, larger, and intensive kinetics express stronger obligation, evidentiality, and possibility, while modals performed with slower, smaller, and less intensive movements express weaker obligation, evidentiality, and possibility. Manner of movement corresponding to weak or strong forms (colors, adjective/adverbial manner, and degree) is also attested in many spoken languages (Pfau & Steinbach 2006:72). "As opposed to sign languages, spoken languages use different articulatory and perceptual systems as gesturing. Therefore, they do not have the option of integrating manual and non-manual gestures... However, spoken languages can integrate acoustic gestures, since the acoustic-auditory domain is the articulatory and perceptual domain characteristic of spoken languages." (Pfau & Steinbach 2006:84).

2.2. Modality in GESL: Modals and word order

For the present research I used elicitation. My language sources were GESL native signers, four females and one male with very good knowledge of GESL, as they are the third generations born in deaf families. The age of my language sources varied from 22 to 55. In addition to elicitation, I also checked modal constructions in free narrative texts in videos. I used several five-hour videos of natural GESL signing.

Modality in GESL is expressed by manual and non-manual means, but GESL is a manual dominant language in contrast with some other SLs (e.g. German Sign language, ASL, etc.). In this paper, I will leave out the non-manual means and focus on manual signs only. I have to note that mimic is always added to the manual modals in

² Mimic is a non-manual marker.

GESL; however, it does not have any independent grammatical meaning, and no kind of modal content, positive or negative, can be delivered without manual signs.

The following modal verbs³ are identified in GESL:

- One-handed ipsilateral sign WANT (Figure 1), and its negative form, a one-handed contralateral sign WANT NOT (Figure 2):



Figure 1. WANT



Figure 2. WANT NOT

One-handed MUST/SHOULD (Figure 3), and its negative form MUST NOT/SHOULD NOT (Figure 4)

³ The actual meanings of the modal verbs are identical to their English glosses. CAN and CAN/POSSIBLE are partly overlapping near-synonyms.



Figure 3. MUST/SHOULD



Figure 4. MUST NOT/SHOULD NOT

Two-handed sign CAN/POSSIBLE (Figure 5) and its negative form CANNOT/IMPOSSIBLE (Figure 6);

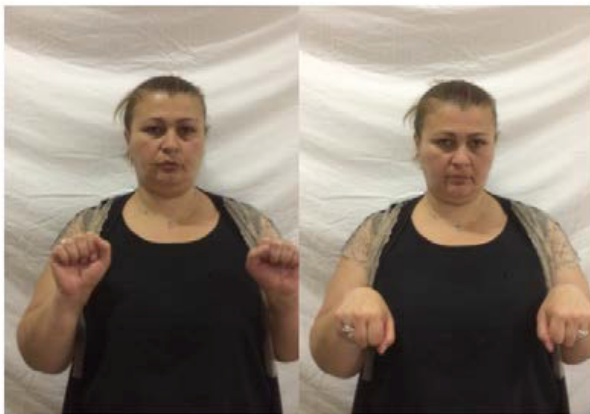


Figure 5. CAN/POSSIBLE



Figure 6. CANNOT/IMPOSSIBLE

Alternative one-handed forms for CAN (Figures 7 and 8) with the common one-handed negative sign CANNOT (Figure 9);



Figure 7. CAN.



Figure 8. CAN₂



Figure 9. CANNOT

Special negative forms of modals appear to be common across SLs (e.g. Shaffer (2002) for ASL; Pfau & Quer (2007)). Modal verbs in many SLs display irregular negation, as they are the results of cliticization, affixation, or suppletion (Makharoblidze & Pfau 2018). In GESL, with the sign-specific irregular negative forms (Figures 2, 4 and 6) we are dealing with a stem-internal change, i.e. partial suppletion, not with cliticization or affixation (cf. Zeshan 2004; Quer 2012). These forms display sign-specific stem-internal phonological changes, and they are not morphologically complex.

Like many other SLs, modals in GESL can occur in pre-verbal, clause-final, or clause-initial positions, as we can see from the examples in Figures 10, 11, and 12.



Figure 10. DOCTOR WANT READ INDEX₃ BOOK BOY SAY.
'The doctor wants to read this book, the boy says.'



Figure 11. WANT READ DOCTOR INDEX₃ BOOK BOY SAY.
'The doctor wants to read this book, the boy says.'



Figure 12. BOY SAY INDEX₃ BOOK DOCTOR READ WANT.
'The boy says the doctor wants to read this book.'

Interestingly, the preferred and the most frequent version is in Figure 10.

Modals usually precede the lexical verbs (Figure 13), although the opposite sequence can also be observed in GESL (Figure 14). It is important that the modals and verbs are adjacent in the majority of cases.



Figure 13. INDEX₁ CAN/POSSIBLE DRIVE.
'I can drive.'



Figure 14. INDEX₁ DRIVE CAN/POSSIBLE. 'I can drive.'

GESL marks the forms of subjunctive and conditional moods by suffixed signs. Actually, mood is an important player for modality, but this paper does not aim to describe Tense-Aspect-Mood (TAM) categories in GESL, which is a topic for a separate inquiry.

In addition to the modal verbs and the grammatical realization of modality, there are also some lexical signs that express modality in GESL. These lexical signs commonly show degrees of certainty or obligation. Such signs are:



Figure 15. PROBABLY

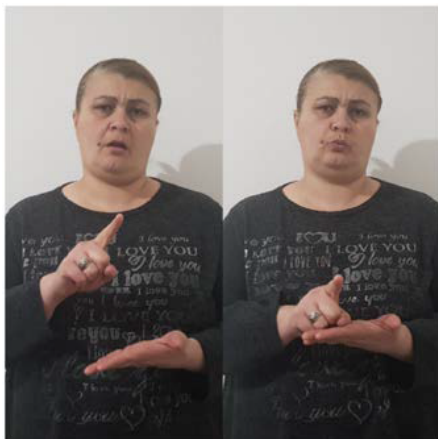


Figure 16. NECESSARILY



Figure 17. OF COURSE

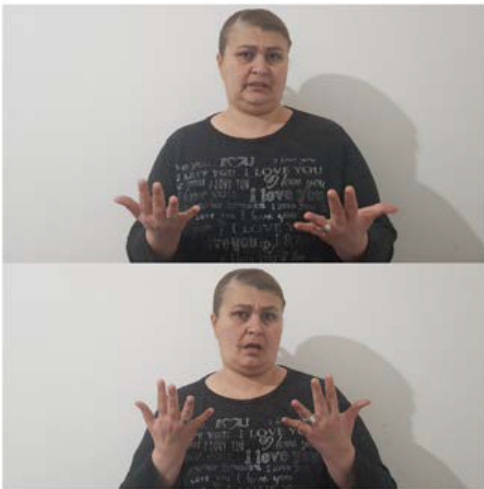


Figure 18. OBVIOUSLY



Figure 19. DOUBTFULLY

These modal lexical signs usually appear in clause-final or clause-initial position, and involve non-grammatical, lexical exposition of modality.

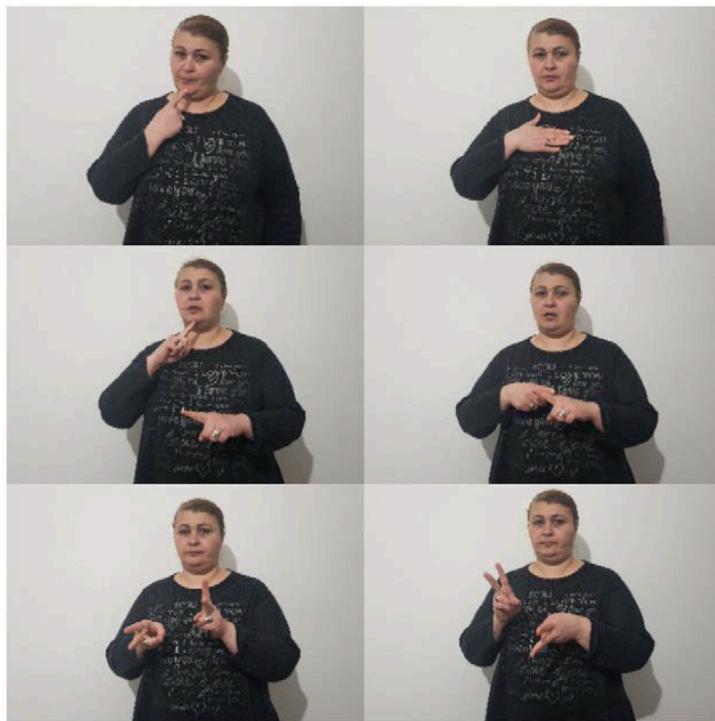


Figure 20. PERHAPS MY SISTER COOK. 'Perhaps my sister is cooking.'



Figure 21. INDEX₃ ARRIVE PERFECT/MORPH⁴ INDEX₃ MORNING NOW INDEX₃ TBILISI OBVIOUSLY.
'He arrived this morning, now he is in Tbilisi obviously.'

⁴ This one-handed sign is the morpheme of the perfect aspect, which comes from the two-handed sign ALREADY. This is a typical process of grammaticalization in SLs.



Figure 22. INDEX₃ PROBABLY MEET INDEX₃ STUDENT⁵
'He probably meets this student.'

In GESL, these modal signs can also appear along with the verbal modal constructions. The combination of a lexical and grammatical representation of modality is common in many languages. This type of combination is shown in Figure 23.

⁵ The last three photos in Figure 22 show the composed sign STUDENT consisting of UNIVERSITY and PERSON.



Figure 23. PERHAPS MY BROTHER CAN/POSSIBLE DO INDEX₃.
 'Perhaps my brother can do it.'

As shown in the examples above, GESL can display both types of modality: deontic (Figures 10-14) and epistemic (Figures 20-23).

2.3. Doubling of modal forms in GESL

As mentioned above, in GESL, modals often occur with semantically doubling forms. In most cases, the meaning of 'can' doubles the corresponding signs. All the above-listed versions of CAN may be combined in any sequence. In Figure 24, the second (CAN/POSSIBLE) and the third (CAN) photos show the signs with identical meanings. Although the same content could be delivered with a single modal (either of these two), GESL prefers to have both. However, a version with a single modal is also common in this language (Figure 25). Double negative modal forms can also be observed in GESL, as shown in Figure 26.



Figure 24. NEIGHBOR CAN/POSSIBLE CAN GO VILLAGE.
'The neighbor can go to the village.'



Figure 25. NEIGHBOR CAN/POSSIBLE GO VILLAGE.
'The neighbor can go to the village.'



Figure 26. TEACHER⁶ CANNOT CANNOT/IMPOSSIBLE WORK.
IDEX3a. 'The teacher cannot work here.'

2.4. Negative modality in GESL

Standard negation in GESL is formed with the negative particle NOT. It is a one-handed sign, which is a common sign for many SLs (Figure 27). GESL has another negative particle NEG(MOD) with a modal flavor. This is an influence of spoken Georgian '*vera*'. Figure 28 shows this one-handed sign. These negative particles can either precede or follow the verb (Figures 29-32).

⁶ The first two photos in Figure 26 show the compound sign TEACHER consisting of TEACH and PERSON.



Figure 27. NO/NOT

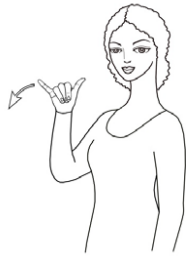


Figure 28. NEG(MOD)



Figure 29. INDEX₁ NOT PAINT.
'I do not paint.'



Figure 30. INDEX₁ PAINT NOT.
'I do not paint.'



Figure 31. INDEX₁ NEG(MOD) PAINT.
'I cannot paint.'



Figure 32. INDEX₁ PAINT NEG(MOD).
'I cannot paint.'

It must be noted that the nominal negators in GESL (WITHOUT and EMPTY) always appear after nouns.

For GESL negative concord is usual, as in spoken Georgian. The significant case is that in modal constructions negative concord is tense-related. As was discussed above (in section 2.2), negation in modals shows partial suppletion, and these negative modals in Figures 2, 4, and 6 do not need the negative particles. GESL adds the negative particle NOT to the forms of the past tense (Figure 33).



Figure 33. INDEX₁ WANT-NOT DO INDEX₃.
'I did not want to do this.'

In the past tense, omitting the negative particle NOT leads to an ungrammatical sentence (A), and adding this particle to the present or future tenses also results in an ungrammatical sentence (B), as we can see in the examples A and B.

- A. * INDEX₁ WANT-NOT DO INDEX₃
'I did not want to do this.'
- B. * INDEX₁ WANT-NOT NOT DO INDEX₃
'I do not want to do this.'

Thus, we can observe tense-specific negative concord in the past tense, as we have the partial suppletion for the negative modal and the negative particle (Makharoblidze & Pfau 2018). In such sentences, adverbs of the past tense may not be used as this combination of negative modals and negative particle already shows the past tense. In these forms of past tense negative modality we deal with the three-value interactions –

Tense-Negation-Modality – and such tense-related negation concord occurs only in the modal constructions of GESL.⁷ Modality-related two-value interactions are well attested in many spoken languages and SLs, e.g. Tense-Modality interaction appears in spoken Georgian and in many other spoken languages as well, Modality-Negation interaction occurs in ASL and in German Sign Language with partial suppletion for negative forms of modals. Tense-Negation interaction can be observed in Arapesh, in Papua New Guinea (Miestamo 2005).

To the best of my knowledge, the three-value interactions of Tense-Negation-Modality have not been observed in SLs. Thus, the GESL data shows a very interesting specific case from the typological point of view.

3. Conclusions

This paper has described modality in GESL with the following results:

- GESL can use both grammatical and lexical means to represent modality.
- Both epistemic and deontic modality can be observed in GESL.
- Modals and verbs in most cases are adjacent.
- Modal verbs have partial suppletion for negative forms.
- GESL shows tense-specific negative concord in the past tense with modal verbs.
- In GESL, Tense-Modality-Negation interactions are observed, in contrast to many other languages where only two-value interactions are reported.

This typological analysis of GESL modality can now be used in cross-linguistic comparison with other SLs.⁸

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⁷ Interestingly, the verb KNOW follows the modal verbs in negation – showing the same kind of partial suppletion for its negative form and a tense-specific negative concord in the past tense.

⁸ We thank our GESL informants. This project has been supported by the Shota Rustaveli National Science Foundation of Georgia (SRNSFG) grant No. 218 000 “The Category of Modality in the Georgian Language”.

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