The Expression of Modality in Spanish Sign Language[*]

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Abstract

The aim of this paper is to analyse the expression of modality in Spanish Sign Language (*Lengua de Signos Española: LSE*) from a functional perspective. In order to do this, different semantic values associated with modality (volitive, epistemic, deontic, etc.) will be considered in order to determine the linguistic forms used for their expression in LSE. This language does not have bound morphological formatives with a modal value. Consequently, modality is expressed through lexical means: verbs, nouns, adjectives, and adverbs. This extensive group of markers express a wide range of modal contents with full communicative efficiency. Our study highlights the fact that the cross-linguistic generalisations made about modality in oral languages are also valid for LSE, which supports the idea that oral and sign languages are fully comparable. Finally, it should be pointed out that the procedures for expression in LSE differ from those described for other sign languages, particularly as regards the role played by iconicity.

1 Introduction

Modality constitutes what is unquestionably one of the most fascinating, but at the same time most complex, fields of knowledge in the study of any language. First, one must bear in mind that there is anything but consensus on the meaning of the term *modality*, as throughout the history of linguistic thought it has been used to refer to different types of reality. Roughly speaking, there are three traditionally accepted meanings for this term, depending on whether one is referring to logical, discursive or grammatical facts. Furthermore, in recent years it has acquired a new meaning, related to the channel employed in forming messages. Current literature about sign languages (henceforth, SLs) frequently uses the term *modality* as a synonym for *mode*, i.e. the articulatory procedure of transmission (cf. Meier 2002; Sandler and Lillo-Martin 2006; Vermeerbergen *et al.* 2007; etc.).[1] It mainly concerns the difference between *oral mode* in languages of vocal-auditive output (oral languages; henceforth, OLs) and *signed, or visual mode*, characteristic of SLs.

Given this situation, it should be taken into account that, even though we restrict ourselves to the grammatical sense of the term, modality is an extremely complex category which resists a general common definition capturing all the factors involved. Modality will be understood here as a category which expresses the degree or type of link to reality of a linguistic expression, and the perception or attitude that the speaker shows when faced with this link (cf. Trask 1993:174, *sub voce* MOOD). However, one should bear in mind that other authors employ different definitions, which at times are much wider (such as that of Fillmore 1968:23), but which may also be narrower (Palmer 1986:16; Simone 1990:278; Kiefer 1998:591; etc.). Basically, there are three factors

which intervene in the characterisation of this category: semantic value, scope regarding the different levels of the syntagmatic structure and, finally, formal procedures. Modern linguistics has not yet reached a high enough consensus on defining any of these three factors, which in turn explains the big differences detected in the theoretical approaches from which studies take their starting points. Thus, as regards semantic values of modality, there is general agreement on the fact that deontic modality and epistemic modality (degrees of *obligation* and *knowing*, respectively) constitute two of the basic modal contents. Additionally, volition and skill are commonly recognised as modal values, but there are some authors who exclude them from this category. Finally, there are some values which could be considered borderline, and whose presence within the general category of modality is the object of much controversy. These include evidentiality, factivity and polarity, among others.[2]

This paper studies the expression of grammatical modality in Spanish Sign Language (*Lengua de Signos Española*: LSE). Although the language concerned has a visual-gestural channel of transmission, the aim of this article is not to analyse its articulatory mode, but rather modality as a grammatical category, in analogy with the way that it is usually studied in OLs. We believe that this line of research may shed a new light on the interlinguistic congruity between OLs and SLs.

The paper is organized as follows: section 2 reviews the treatment of modality in the standard version of Simon Dik's Functional Grammar (henceforth: FG); section 3 presents the main preceding studies on modality in SLs; section 4 deals with inherent modality in LSE, divided into four semantic contents (ability, volition, obligation, and permission); section 5 analyses the expression of objective modality, focusing on deontic and epistemic scales in LSE; section 6 is concerned with so-called epistemological modality, which includes subjective contents of an epistemic and volitive nature, as well as evidentiality; section 7 offers a synthesis of our main conclusions.

2 Modality in Functional Grammar: a short review

This paper has been written within the theoretical framework of Simon Dik's Functional Grammar, as described in Dik (1997). According to Hengeveld (1987, 1988, 1999) and Dik (1989), modality is understood as a complex category which appears at different levels of the Layered Structure of the Clause. The three basic types of modality can be defined as follows (cf. Hengeveld, 1987:56f):

> *Inherent Modality*. Characterization of the relation between a State of Affairs (SoA) and the realization of that SoA.
>
> *Objective Modality*. Evaluation of a SoA.
>
> *Epistemological Modality*. Expression by the speaker of his/her commitment with regard to the truth of a proposition.

As can be seen, this initial division reflects the scope of each different type, i.e. as modifying a particular unit within a linguistic expression: inherent modality modifies predicates (layer 1), objective modality modifies predications (layer 2), and epistemological modality modifies propositions (layer 3).

Following this first structural characterization, a subdivision in semantic terms will be offered, based on the assumption that deontic and epistemic contents are present at more than one level:

Inherent Modality. Ability (physical or acquired), volition, and deontic contents of obligation and permission.

Objective Modality. Deontic and epistemic scales.

Epistemological Modality. Subjective epistemic contents, subjective volition (wishes or hopes)and evidential contents (experiential, inferential, quotative).

Finally, the procedures for expression can be of two types:

Lexical (satellites). Basic or derived predicates, embedding predicates, construed syntactic units (for instance, adpositional phrases).

Morphosyntactic (operators). Verbal mood, clitics or other particles.

Although the aforementioned description of expression procedures depends on a language-specific component which includes rules of expression, this model also allows one to make important cross-linguistic predictions , for instance the prediction that adverbs or adverbial phrases always express epistemological modality. The distinctions made in this section are summarised in Table 1:

MODALITY TYPE	SCOPE	SEMANTIC CONTENT	EXPRESSION PROCEDURE
INHERENT	Predicate	*Ability (physical or acquired), volition, deontic contents of obligation and permission*	Predicates, predicate operators.
OBJECTIVE	Predication	Deontic scale (from obligatory to forbidden) Epistemic scale (from certain to impossible)	Predicates, predication operators.
EPISTEMOLOGICAL	Proposition	Subjective epistemic contents, subjective volition (wishes, hopes, etc.), evidentiality (experiential, inferential, quotative).	Predicates (including adverbs and adverbials), proposition operators.

Table 1. Modality in FG

3 Studies on modality in sign languages

Janzen and Wilcox (2004:114) stated a few years ago that modality was a field of linguistic research on SLs which had received little attention. In fact, before the date of their publication we have only found three works specifically dedicated to this subject: that of Lucinda Ferreiro Brito (1990) for Brazilian Sign Language (BCSL) and those of Sherman & Phyllis Wilcox (1995) and Shaffer (2004) for American Sign Language (ASL).[3] Apart from these studies, the attention paid to grammatical modality in the linguistics of SLs was very scant. Proof of this is that Sutton-Spence & Woll (1999:125f), in their study on British Sign Language, dedicate a mere twenty lines to modality. They point out that one of the forms of expression of modality is "to use non-manual features, such as expressions of doubt or determination". Given, however, the lack of publications on the subject, they are hardly to blame. Fortunately, in recent years new publications have appeared (Wilcox & Shaffer 2006; Shaffer 2006, among others), which may be taken as an indication that this situation could change in the near future. Nonetheless, there is still a long way to go, and the three aforementioned studies are still priority references.

This situation is reflected in the research on LSE. In the first modern grammatical work on LSE, carried out by Rodríguez (1992), there are some brief references to modality under what the author called "expressive meaning" [*significado expresivo*]. In practice, she does not refer to the modal category, strictly speaking, but only to the "expression of doubt and possibility" [*expresión de la duda y de la posibilidad*] (Rodríguez 1992:150), shown in signs such as MAYBE, DOUBT, CAN-BE, BY CHANCE [*A-LO-MEJOR, DUDA, PODER-SER, CASUALIDAD*], etc. Simultaneously, other clearly modal signs such as IMPOSSIBLE [*IMPOSIBLE*] and CLEAR 'clear, clearly' [*CLARO*] appear under the label of "complex expression of affectivity" [*expresión compleja de la afectividad*] together with signs which are non-modal, such as: STOP!, I DON'T FEEL LIKE IT, CAREFUL!, HOW FUNNY! [*¡ALTO!, NO-TENGO-GANAS, ¡CUIDADO!, ¡QUÉ GRACIA!*], etc. (cf. Rodríguez 1992:139). After this study hardly any new references to modality have been added to the bibliography of LSE. Fortunately, this situation appears to have changed in recent years, with the publication of studies such as Iglesias (2006).

An important fact which derives from Rodríguez's study (1992), and which subsequent approaches to LSE grammar have confirmed, is that one does not perceive a direct repercussion of the modal category on the inflectional morphology of the verb. The expression of modality in LSE takes place fundamentally through lexical procedures.

Focusing now on the three foundational studies of research on modality in the linguistics of SLs, we can say that all of them unfold within a theoretical framework, similar to that of cognitive semantics. Thus, on analysing the signed forms for conveying deontic and epistemic modality, both Brito (1990) and Wilcox & Wilcox (1995) highlight the iconic-metaphorical relationship existing between the two. This is totally in line with Sweetser's hypothesis (1982:484; 1990:21) on the basic character of deontic modality and its projection on epistemic modality. According to this author, we model our understanding of logical and thought processes (which, by being internal, are not directly perceived) on the basis of our understanding of the physical and social world, about which we do have wider and more reliable information. This would explain why, as has been widely confirmed, markers belonging to deontic modality

widen their value, through metaphorical extension, to the epistemic domain, as well as why certain units of physical perception later become markers of epistemic perception.

In accordance with this, Brito (1990) confirms the metaphorical character of the place of articulation and movement in the expression of modality in Brazilian Cities Sign Language (BCSL; or, simply, Brazilian Sign Language). As signs with epistemic value correspond to mental processes, they are articulated on the head, while deontic signs are articulated on the central part of the body. Movements are simple and energetic in the case of deontic modality, while those of epistemic modality are repetitive and not energetic. Wilcox & Wilcox (1995) highlight a relatively analogous situation for ASL. The presence or absence of reduplication and of energetic movement, as well as of non-manual components, are features which interact in such oppositions as FEEL (perception) / FEEL (epistemic), MUST (strongly epistemic) / SHOULD (weakly epistemic), BRIGHT (perception) / OBVIOUS (epistemic), etc. Wilcox & Wilcox (1995:154) point out, like Stokoe (1960) did in his day, that these alternations reveal a property of semantic phonology – which they call phonological transitivity – associated with the idea of interpersonal transitivity. This idea is based on the fact that reduplicated signs are less active, atelic, and cyclical (non-momentaneous), features which point to low transitivity on Hopper & Thompson's scale (1980:252), and which, for their iconic value, can be easily employed in a metaphorical way (Hopper & Traugott 2003:85).

Shaffer (2004:177) also begins with the statement that deontic modality is more basic than epistemic modality, although such a belief is not inspired by Sweetser (who she does not cite in the bibliography), but by the parallel studies by Traugott (1989) and Bybee *et al*. (1994). Shaffer believes that, in their progression from deontic to epistemic, the modification of signs which express modality – be these manual or non-manual – correspond to the expression of different degrees of the signer's subjectivity. Furthermore, she perceives a direct relation between the syntagmatic range of modal markers and the informative structure of utterances: modal signs which modify the predicate appear beside the latter (normally, situated between the subject and the verb); conversely, modal signs with a propositional significance are placed at the end of the clause, where they carry out the function of comment (Shaffer 2004:192f).

The three above-mentioned studies place a special emphasis on the iconic and metaphorical origin of the formal procedures employed in the expression of modality.[4] Although we do not deny the validity of such conclusions as regards the SLs under consideration, it is important to point out that they are not applicable to LSE. As will be seen below, in LSE we have not found the derivative features of modality characteristic of BCSL and ASL, since in LSE repetition and energetic movements act as intensifiers only. Neither does the informative structure of utterances interact with modality in the terms that Shaffer (2004) specifies for ASL. Nevertheless, we have observed some iconic processes (cf., for instance, 5.2 and 6.1), as well as other phenomena (in relation to negation, pauses, and the order of constituents) which prove to be in keeping with what is common in other languages, and likewise support the idea that deontic modality is more basic than epistemic modality.

4 Inherent modality in Spanish Sign Language

As already stated, modality is not shown in LSE through inflectional morphology. LSE does, however, employ numerous lexical forms, such as specific constructions with a

clear modal value. Such circumstances are common in many languages of the world, be these oral or visual. We will now endeavour to describe the main markers used in LSE to express modality.

According to the standard version of FG, the first type of modality is represented by inherent modality, whose basic semantic values are: ability (dynamic), volition, obligation, and permission. We have been able to verify that in LSE all modal markers of this group are characterised as being originally lexical predicates (with a higher or lower degree of grammaticalisation). Syntactically, they are placed after the main predicate. Given that LSE is a language which usually shows an unmarked order of SOV, on many occasions the modal marker will appear at the end of the sentence, except when the sentence contains certain particles (for example: negative or interrogative markers), which must necessarily go after the predicate. Between the main predicate and the modal sign only an aspectual marker can be placed. This is in line with the linguistic universal pointed out by Bybee (1985:196-200), who states that, when expression procedures are formally analogous, aspect is placed closer to the lexical root of the predicate than tense, while modality is furthest removed from the root.[5] This can be illustrated by the following scheme:

(1)   [Modality] [Tense] [Aspect] ROOT [Aspect] [Tense] [Modality]

4.1 Ability: CAN, SKILL

In order to transmit dynamic modality expressing ability, LSE has two basic signs. One of these acts as a verb and could be translated as CAN [Spanish: *poder*]. The other is originally a noun which we will translate here as SKILL, although it could also be translated as 'ability' [Spanish: *habilidad*, *destreza*]. SKILL is only used for acquired ability. CAN, however, has a more general value, which makes it equally suitable for expressing a natural ability as for expressing an acquired one:[6]

(2)   a)   BROTHER MINE TELEVISION REPAIR CAN
        b)   BROTHER MINE TELEVISION REPAIR SKILL
               'My brother can repair the television'
(3)   a)   BROTHER MINE WALK++ UNTIL 20 KILOMETER CAN
        b)   *BROTHER MINE WALK++ UNTIL 20 KILOMETER SKILL
               'My brother can walk 20 Kms.'

4.2 Volition: WANT, FANCY

In order to express volition LSE has essentially two verbs, which we will translate here as WANT and FANCY, with a clear lexical distinction. The former has a more general value, whereas the latter is usually limited to desires and preferences related to personal well-being (food, drink, social activities, etc.):

(4)   MADRID, TOGETHER BROTHER MINE, I LIVE WANT
        'I want to live with my brother in Madrid'
(5)   I THEATER GO FANCY   'I fancy going to the theatre'

4.3 Obligation: MUST, NEED

In order to express the deontic content of obligation, in the framework of inherent modality, LSE has two verbs, which could be translated as MUST and NEED. The semantic difference between both verbs is very slight, and it is probably necessary to continue research on their uses. At this stage of our research, we offer the hypothesis that MUST accompanies a predicate which is understood as an **obligation** which depends on a **norm**. On the other hand, NEED accompanies a predicate which is understood as a **requisite** which depends on a **purpose**. The semantic nuance which differentiates both verbs can be neutralised due to the fact that often the accomplishment of that purpose could also be felt to be an obligation. Nevertheless, there are reasons to assume that, in the case of NEED, the existence of obligation is accepted both by the speaker and the agent. In the case of MUST, the norm which must be accomplished is assumed communicatively by the speaker, but no indication is given as to whether this is also assumed by the agent.

> (6)   YOU STUDY MORE MUST
>   'You must study more'
> (7)   BROTHER MINE CAR NEW BUY NEED
>   'My brother must buy a new car'

Apart from this, both signs show a clear non-modal origin. MUST is very similar to the interrogative particle WHAT? [Spanish: *¿qué?*], once it has lost the facial component characteristic of an interrogation (shown mainly by the raising of one's eyebrows). NEED has a non-modal use which, in our opinion, is its original one, with the meaning of 'to be absent' or 'to be missing' (cf. 8a). This verb can also be used to mean 'to be lacking' or 'to be needed' (cf. 8b), a meaning which probably acted as an intermediate stage in its evolution into a modal verb.[7] These facts may shed new light on semantic evolution from lexical to modal values in LSE.

> (8)   a)   LIBRARY, BOOK 2 NEED.2
>   'Two books are missing from the library'
>   b)   SOUP SALT NEED
>   'The soup needs salt'

4.4 Permission: CAN, FREE

Permission is expressed in LSE through two signs. On the one hand, there is the verb CAN, which has been described above with the value of ABILITY (dynamic modality). There is, however, also another sign, FREE, which usually acts as an adjective, but which in a postverbal position has acquired the modal value of permission.

> (9)   BROTHER MINE TELEVISION SWITCH-ON CAN
>   'My brother may switch the television on'
> (10)   HERE YOU SMOKE FREE
>   'You may smoke here'

At first sight, both signs are synonymous and interchangeable in many contexts. However, CAN requires a personal subject and FREE does not. This corresponds to a difference in scope, which will be studied in section 5: CAN, as a deontic verb, is used only as an inherent modality marker. FREE expresses both inherent and objective deontic modality.

4.5 Expression of inherent modality in LSE: some remarks

We would not like to finish this section without making some remarks which we consider relevant to the understanding of the grammatical behaviour of the modal markers which have been mentioned so far.

One striking fact is that three modal verbs of LSE present an irregular form of negation. These are the following: CAN, FANCY, and NEED:

(11)   TOMORROW BROTHER MINE COME CAN.neg
         'My brother cannot come tomorrow'
(12)   I TELEVISION WATCH FANCY.neg
         'I don't fancy watching television'
(13)   TOMORROW YOU HERE COME NEED.neg
         'You needn't come here tomorrow'

Specialised literature on SLs considers them examples of suppletive negation and here we do the same. However, it is not easy to determine whether these are cases of suppletion or of incorporation. Be this as it may, what is important is that this irregularity is not exclusive to LSE. Shaffer (2002) already mentioned irregularity in ASL, whereas Zeshan (2005) finds it in most of the SLs of her sample.[8] According to this author, the semantic domains in which irregular negation is most frequently found are the following: cognition, emotional attitude, modals, possession/existential, tense/aspect, and evaluative. The data offered by LSE are consistent with this generalisation, because only the aforementioned modal verbs and HAVE (possessive and existential) present irregular negatives. It is important to note that both the suppletion and the incorporation of negation in modal verbs are quite common phenomena in OLs (cf. English: *will not > wont*), as a consequence of a particular interaction existing between modality and negative polarity.

A second issue which should be highlighted is related to the possible elision of the main verb. According to Fischer & Gough (1978) in ASL it is quite common for the presence of a modal verb to imply the ellipsis of the main predicate. Consider in this respect the following examples:

(14)   a)   I CAN.neg CINEMA; MUST ALGEBRA
                 'I cannot *go* to the cinema; I must *study* algebra'
         b)   YOU MUST CUP
                 'You must *use* a cup'

This phenomenon has not been observed in LSE, which behaves differently in this case. This possible omission has only been found in sentences which express volition, particularly with FANCY, where it is optional. However, one must understand

that in these cases volition is predicated of a first order entity (*individual*), without needing to link the latter to a zero order entity (*property/relation*). Therefore, it is not clear whether a structure such as that represented in 15a and 15b should really be understood as involving ellipsis of the main verb. Furthermore, although we admit this possibility, what is certain is that, apart from really exceptional communicative situations, it is easy to deduce that in 15a the verb which should be added is EAT, and in 15b it is the verb WATCH (any other possibility would be illogical in a normal situation):

(15)   a)   I ORANGE FANCY
                 'I fancy (eating) an orange'
       b)   I TELEVISION FANCY
                 'I fancy (watching) television'

A structure of this type is not only found in LSE, but is common in many OLs. Nevertheless, when other modal verbs are concerned, the presence of the main predicate is obligatory. For this reason, 16a is ungrammatical in LSE. The only acceptable option in this case would be 16b:

(16)   a)   *(S)HE FRUIT VARIETY CAN.neg
       b)   (S)HE FRUIT VARIETY EAT CAN.neg
                 '(S)He cannot eat any kind of fruit'

As has been seen, LSE presents semantic contents of inherent modality appropriately. It is worth highlighting the semantic duality between permission and obligation. Similarly, LSE offers homonymy, also common in cross-linguistic terms, of the verb CAN, which, as well as having a deontic value of permission, also has a dynamic value of ability, either given or acquired. This is further proof of grammatical congruity between LSE and OLs.

5 Objective modality in LSE

FG states that objective modality deals with predication (layer 2), and that it is concerned with the actuality status of the SoA (Hengeveld 1989:13; Dik 1989:205). In the successor of FG, Functional Discourse Grammar (henceforth, FDG), it is called "event-oriented modality" (cf. Hengeveld & Mackenzie 2008:174). The aforementioned assessment can be carried out in both the epistemic and the deontic domains, which, as already seen, are present in other layers: the deontic contents are also present in inherent modality (layer 1), whereas epistemic modality has a subjective angle which deals with proposition (layer 3). The distinction between objective and subjective epistemic modalities has already been widely justified by Lyons (1977:797-804). Objective modality comes half-way between the two poles usually taken into consideration by other theories: participant-oriented (or agent-oriented) and speaker-oriented modalities (cf. Bybee *et al.* 1994; Bybee & Fleischmann 1995). What caracterizes objective modality is that veritative (epistemic) or normative (deontic) conditions which determine the present SoA are communicatively assumed as something external to the

speaker, who, as such, has no direct responsibility for the judgements involved (Hengeveld & Mackenzie 2008:174).

The semantic description of objective modality is carried out through a series of values which can be grouped on two scales: a deontic scale, ranging between what is obligatory and what is prohibited, and an epistemic scale, which ranges from the certain to the impossible. In LSE the existence of the aforementioned scales are fully covered, although with some features which we will now proceed to explain.

5.1 Deontic scale

The distribution of fundamental semantic values of objective deontic modality are summarised in Table 2:

Completely obligatory	Obligatory	Permissible	Forbidden
LAW	MUST/NEED	FREE	FORBIDDEN

Table 2: deontic scale in LSE

The expression of objective deontic modality is carried out through lexical units belonging to different parts of speech: noun, verb, and adjective. One can also perceive that the semantic distribution of the different deontic values is not symmetrical, as two different degrees of obligation are found. On the one hand, we have a sign which deaf Spaniards mouth as LAW [Spanish: *ley*].[9] It serves to express an extremely strict and unquestionable obligation. For this reason, its use is quite marked from a pragmatic point of view, and it is conditioned by the content of obligation as well as by the existence of a hierarchical relationship between interlocutors. In order to express prohibition from a more general and less strict point of view the verbs MUST and NEED are used indiscriminately, as already explained in 4.3:

(17)   a)   CLASSROOM QUIET LAW
                'It is completely obligatory to be quiet in the classroom'
        b)   CLASSROOM QUIET MUST
                'It is obligatory to be quiet in the classroom'
        c)   CLASSROOM QUIET NEED
                'It is necessary to be quiet in the classroom'

The next step on the scale is represented by the sign FREE, which, as in inherent modality, indicates permission. Finally, prohibition is expressed through the sign FORBIDDEN:

(18)   a)   HERE SMOKE FREE
                'Smoking is allowed here'
        b)   HERE SMOKE FORBIDDEN
                'Smoking is not allowed here'

Several signs which have been described as indicating obligation or permission in inherent modality appear again in the expression of objective modality. Given the fact

that their semantic values and distributional conditions are essentially analogous, one could think at first that we are faced with the same construction. However, there is an important difference between the inherent and objective uses of modal markers which carry out both functions. In the case of inherent modality it is necessary to include a participant (prototypically, the agent) in the predication, onto which the deontic weight of the modal sign is projected. In the case of objective modality, deontic values are presented in general terms, with a focus on the event and not on any of its participants. From the perspective of grammatical codification, this means that the modal sign acts in objective modality as the main predicate in the sentence, whereas modified predication is codified as an embedded predication which acts as the argument of the modal sign. Examples 10 and 18a are now presented together here as 19a and 19b as they clearly illustrate this difference:

(19) a) HERE YOU SMOKE FREE [inherent, participant-oriented]
'You may smoke here'
b) HERE SMOKE FREE [objective, event-oriented]
'Smoking is allowed here'

Before we bring this section to an end, attention should be paid to a special construction, one which allows the expression of certain intermediate contents which are not illustrated in Table 2. Here we are referring to the SoA being acceptable (between obligatory and permissible) or unacceptable (between permissible and forbidden). In these cases, LSE makes use of a performative verb: RECOMMEND, with positive and negative polarity depending on whether we are talking about a recommendable or an unadvisable event. Although theoretically it is possible to address this recommendation to a third person, the normal thing would be for it to be directed to the addressee of the speech act, according to the following format:

(20) a) Acceptable (between obligatory and permissible):
I RECOMMEND.2p, + (YOU) +… + (MUST)
b) Unacceptable (between permissible and forbidden):
I RECOMMEND.2p, + (YOU) +… + (MUST) + NO

There are two optional elements in this structure. The presence of the subject of the predication (YOU) is not strictly necessary as it has already been expressed with the performative verb. RECOMMEND has the peculiarity of morphologically incorporating its second argument (in this case, a second person), through changes in the direction of the sign. Furthermore, the modal verb (MUST) is not strictly necessary as the deontic intention of these utterances is implied in the content of the performative verb.

(21) a) I RECOMMEND.2p, (YOU) STUDY MORE (MUST)
'You had better study more'
b) I RECOMMEND.2p, HERE (YOU) SMOKE (MUST) NO
'You had better not smoke here'

Perhaps it is relevant to add here, briefly, a question which has been raised in some of the first studies developed within the framework of FDG. The standard theory of FG only considers deontic contents from the point of view of inherent modality and

objective modality, but not from that of epistemic modality. In contrast to this, Verstraete (2004) proposed the inclusion of a subjective deontic modality, used to account for those cases in which the speaker, in some way, assumes responsibility for establishing or applying the reference norm. Although this debate requires more detailed study, we can advance the fact that the data which we have at our disposal about LSE do not confirm Verstraete's approach. As can be seen in examples 21a and 21b, the assessment of a SoA as acceptable or unacceptable in LSE requires the direct involvement of the speaker in the form of a specific speech act ("recommendation"). This speech act is involved in the layer of utterances (layer 4). The deontic content could be implied or it could make itself explicit through a modal verb which affects the predicate and a participant (layer 1). However, units which affect the proposition (layer 3) do not come into play, the proposition being the scope of subjective epistemic modality and also of that possible subjective deontic modality. For all these reasons, our provisional conclusion is that, at least in LSE, one cannot talk about the existence of a subjective deontic modality, and cases which could apparently be thought to reflect its existence are really reflecting a combination of inherent modality and certain illocutive features of utterances.

5.2 Epistemic scale

Parallel to what happens in the deontic domain, the semantic values of objective epistemic modality can be said to form a scale, which in LSE corresponds basically to the Table 3:

Certain	Very Probable	Probable/Possible	Improbable	Impossible
SURE	ALMOST SURE	CAN	DOUBT	IMPOSSIBLE

Table 3: epistemic scale in LSE

This scale shows a range beginning with what is certain and ending with what is impossible. The signs which are situated at the two extremes (SURE and IMPOSSIBLE) have well-defined values. In contrast, the middle signs are of a vaguer nature. Indeed, the commonly used verb sign CAN, when adopting an epistemic value, covers the area which includes what is probable and what is possible. The sign DOUBT (which depending on its context could be interpreted as a noun or as a verb) shows that the SoA is assessed as improbable. In order to express values which are close to the two extremes, but with a slightly different meaning, the corresponding modal signs are modified by an adverb which could be translated as ALMOST. This in turn gives rise to ALMOST SURE for those predications which are assessed as very probable. Although we have not considered it necessary to include ALMOST IMPOSSIBLE in table 3, it is used for very improbable predications. It is relevant to state that ALMOST acts in other contexts as a noun, with the meaning of 'danger'. All evidence points to the idea that this nominal meaning is the original one, whereas its adverbial content is a result of a later semantic expansion. Let us now look how these modal markers are used:

(22)   a)   TOMORROW RAIN SURE
                'It is sure that it will rain tomorrow'
        b)   TOMORROW RAIN ALMOST SURE
                'It is very probable that it will rain tomorrow'
        c)   TOMORROW RAIN CAN
                'It is possible/probable that it will rain tomorrow'
                'It may rain tomorrow'
        d)   TOMORROW RAIN DOUBT
                'It is improbable that it will rain tomorrow'
        e)   TOMORROW RAIN IMPOSSIBLE
                'It is impossible that it will rain tomorrow'

This analysis brings to light the parallelism between deontic and epistemic modality in the field of predication. In both cases modal signs belong to different parts of speech (noun, adjective, and verb) which tend to be placed at the end of utterances. From the perspective of grammatical codification, the modal sign acts as the main predicate,[10] whereas the modified predication is an embedded predication which acts as the argument of the modal sign.

Having said this, it is important to point out that these epistemic signs offer different features which deserve some further elaboration. To be precise, the sign SURE, just like in its oral language counterpart [Spanish: *seguro*], also has a non-modal use meaning 'safe'. This non-modal use is usually characterised by the multiple repetition of this sign, as the following example illustrates:

(23)   CAR MINE SURE++ NO
        'My car is not safe'

However, this repetition has not been observed in the modal use of SURE. This fact contrasts strongly with the data offered by Wilcox & Wilcox (1995) and Shaffer (2004) for ASL. In the latter, repetition is a characteristic feature of several signs with epistemic value, in contrast to their deontic or non-modal uses. Discrepancies between LSE and ASL in this field show that ways of expressing modality in SLs are not universal, but language-specific.

The fact that ASL and LSE do not have similar forms of expression does not mean that one cannot find certain semantic processes in LSE, such as metaphorisation, which have been widely recorded in other SLs. They definitely exist in LSE, although with their own particular development. We have already alluded to this when referring to the adverb ALMOST (originally a noun meaning 'danger'), and other even more obvious examples could also be given. Thus the sign DOUBT is the same sign employed to designate a typical dessert which in English is sometimes called *cream caramel* [Spanish: *flan*]. It is plausible to assume that this sign has acquired a modal value following its use as a visual metaphor. This dessert has a gelatinous texture which produces a typical movement (a quiver) on the dish. From a cognitive point of view, it is easy for this sign to be converted into one representing insecurity and instability; indeed, doubt.

Another fact which should be mentioned is that the sign IMPOSSIBLE and its counterpart in the deontic field, FORBIDDEN, are very similar. The only difference between the two is a slight change in the configuration of the hands. This suggests that

the two signs are closely related, and may even have a common origin, both probably being related to/derived from the sign NO, which expresses negative polarity in a regular way.[11] Unfortunately, a lack of data (especially from a diachronic perspective) does not allow us to go deeper into these questions.

As for the verb CAN, its use as a marker of permission has already been analysed in section 4.4. Indeed, it is a sign which can adopt both a deontic and an epistemic value. Until now, it is the only sign in LSE in which this semantic duality has been observed. Nevertheless, this semantic duality does not usually lead to ambiguity as one can appreciate a clear distributional difference between both domains. CAN acts as a deontic sign of permission only within the area of inherent or participant-oriented modality. However, when it acts as a sign of objective, event-oriented modality, its semantic content is of an epistemic nature, indicating possibility or probability. Nonetheless, CAN never expresses permission from the perspective of objective modal content integrated on the deontic scale. This type of modal content is expressed using the sign FREE, as already stated in section 5.1.

Finally there is no incompatibility between the two forms of expression of objective modality: deontic and epistemic. As a result of this, both can appear in the same utterance. What takes place in that case is that the deontic sign is placed closer to the (verbal or non-verbal) predicate, while the epistemic sign is placed at the end, normally separated by a pause which is identified in glosses as a comma. This is illustrated in the following example:

(24)   HERE SMOKE FREE, SURE
        'It is sure that smoking is allowed here'

This phenomenon seems easy to explain if one bears in mind that modern linguistics, at least since Bybee (1985), has stated that deontic contents are more basic than epistemic ones, a fact which usually goes hand in hand with several formal consequences. In this case, the deontic sign is placed nearer to the lexical predicate on which it is acting. The epistemic constituent, on the other hand, is not only placed further from this predicate, but is also isolated by a prosodic pause, clear proof that it is marked with the pragmatic function Tail. All this confirms that the constituent with epistemic value is more external to the utterance than the constituent with deontic value. In our opinion, this should be understood as yet further proof of the essential grammatical congruity between LSE and OLs, going beyond their different articulatory procedures.

6 Epistemological modality

FG designates the complex set of attitudinal contents which play a role in the area of proposition (layer 3) with the somewhat infelicitous name of *epistemological modality*.[12] Roughly speaking, this corresponds to what other theoretical perspectives call speaker-oriented modality. Within this scope, Dik (1989: 252ff) includes subjective epistemic modality, speaker's subjective volition and evidentiality.

6.1 Subjective epistemic modality

Subjective epistemic modality, just like objective epistemic modality, allows the expression of an assessment in terms of different degrees of certainty or probability. The difference is that in this case, what is being assessed is not the actuality of a SoA, but the veracity of a proposition. Furthermore, the determining factor of assessment is now the speaker's own attitude, in terms of his/her certainty or opinion. Indeed, this subjective epistemic modality allows the speaker to modulate his/her level of commitment with the propositional content of their utterance. This type of modality is shown in table 4:

Certainty (strong commitment with regard to the truth of the proposition)	Probability, belief	Possibility, improbability (weak commitment with regard to the truth of the proposition)
SURE	THINK, OPINION MINE	DOUBT, PERHAPS

Table 4: subjective epistemic modality in LSE

Again we find some markers which were also used in the expression of objective epistemic modality: SURE and DOUBT. Nevertheless, their grammatical behaviour is now clearly different because these signs should be preceded by the first person pronoun, which refers directly to the speaker. This is also valid for the sign THINK, and leads to the conclusion that, in these contexts, the sign DOUBT should be interpreted as a verb and not a noun. The nominal constituent OPINION MINE ('my opinion'), SURE and THINK are placed in an unmarked way immediately before the modalised proposition. This distinguishes them clearly from inherent and objective markers, which are systematically situated in a later position. Furthermore, there is complete compatibility, in the same utterance, of subjective modality with other modal contents (cf. 21a-d). The only markers of subjective modality which tend to stay in a final position are PERHAPS and DOUBT.

(25) a)   I SURE, HERE SMOKE FREE
          'I am sure that smoking is allowed here'
      b)   I THINK, TOMORROW RAIN CAN
          'I think it is possible/probable it will rain tomorrow'
      c)   OPINION MINE, YOU STUDY MORE MUST
          'In my opinion, you must study more'
      d)   HERE SMOKE FREE, I DOUBT
          'I do not think that smoking is allowed here'
      e)   CAR MINE SURE++ NO, PERHAPS
          'Perhaps my car is not safe'

Apart form these unmarked options, LSE can express subjective epistemic modality through an alternative procedure. As already stated (cf. Herrero & Salazar 2005: 290ff), LSE frequently uses what can be called *question-answer constructions*. The utterance is codified as a microdialogue made up of a question, a brief prosodic pause, and an answer. Our hypothesis is that this construction serves as a procedure to identify the constitutent with the pragmatic function Focus, which corresponds to the

last component of the microdialogue. Still, it is surprising that the first part of the utterance frequently adopts the form of a wh-question, and the interrogative element used systematically in these cases is the raising of the eyebrows, the corresponding facial sign of yes/no questions. This non-manual component is obligatory in the articulation of the last sign of the question, which does not necessarily have to be the interrogative pronoun, as the latter only appears optionally (cf. 26c):

(26) a) I THINK $\underline{WHAT}_{y/n}$, FATHER YOURS SAD
'I think that your father is sad'
b) OPINION MINE $\underline{WHICH}_{y/n}$, LONDON CITY WONDERFUL
'My opinion is that London is a wonderful city'
c) OPINION $\underline{MINE}_{y/n}$, TOMORROW BROTHER MINE COME
'My opinion is that tomorrow my brother will come'

In the previous examples it is the proposition which carries the pragmatic function Focus. There is also the possibility of assigning this pragmatic function to the modal component of the utterance. In order to do this, the proposition must appear at the beginning and necessarily includes the raising of the eyebrows. The manual sign YES-NO, which identifies a yes/no question in LSE, is facultative. The modal constituent is placed at the end of the utterance, as the answer to the preceding question:

(27) a) HERE SMOKE FREE $\underline{YES-NO}_{y/n}$, I DOUBT
'I do not think that smoking is allowed here'
b) TOMORROW $\underline{RAIN}_{y/n}$, PERHAPS
'Perhaps it will rain tomorrow'

Finally, let us briefly mention that here certain metaphorical processes have taken place, which up to a point are analogous to those observed in other SLs. In section 5.2 we already commented on the sign DOUBT, whose metaphorical origin in our opinion is quite clear. In addition, both THINK and OPINION are articulated at the height of the head, indicating that both signs refer to mental processes. Finally, the sign PERHAPS is articulated in a similar way to the adversative sign BUT. Only slight differences in non-manual components (speed of movement and facial expression) are perceived, which suggests that both signs could be connected etymologically. Thus it is plausible to think that the modal content of PERHAPS is not primarily related with the very mental process (opinion, belief), but with the existing **contrast** in the fact that the speaker utters a proposition and at the same time refuses a strong commitment to the truth of its content.

6.2. Speaker's subjective volition

We have already analysed volition as one of the semantic domains characteristic of inherent modality (cf. 4.2). This volition takes place when it is transmitted that an entity (which could eventually coincide with the speaker, cf. examples 4 and 5) wishes to participate in a certain SoA. In the field of epistemological modality we find what could be called *speaker's subjective volition*. Through this subjective volition the speaker expresses his/her desire or hope that a certain propositional content will come true. In

order to avoid confusing both types of volition at times the latter has been called *boulomaic modality* (cf. Hengeveld 1989:15; Kiefer 1998:593).

In LSE subjective volition is expressed basically with two signs: WISH and LUCK. Both may be considered modal adverbs, just like their Spanish counterpart *ojalá*.[13] However, LUCK is also used as a noun, probably its original use. The difference in use between the two signs lies in the fact that WISH is a general marker of wishing and is, thus, valid in all contexts. On the other hand, LUCK only appears when the predicate of the preposition has the feature [+Control] and, consequently, includes a participant with the feature [+Animate]. This would explain why 28a is unacceptable in LSE, whereas 29a offers no problem:

(28)   a)   *TOMORROW RAIN, LUCK
        b)   TOMORROW RAIN, WISH
       'I hope it rains tomorrow'
(29)   a)   YOU EXAM PASS, LUCK
        b)   YOU EXAM PASS, WISH
           'I hope you pass the exam'

6.3 Evidentiality

In the standard theory of FG (Hengeveld 1989:14ff) modality includes evidentiality, which is argued to come in three fundamental types: inferential, quotative and experiential.[14] This seems to be in agreement with Palmer's (1986) views on modality. Nevertheless, one must admit that nowadays many specialists consider evidentiality to be an autonomous category quite unconnected to modality. Hengeveld & Mackenzie (2008: 153ff) continue to uphold that there are evidential contents within the general category of modality, but with substantial modifications as compared to the FG standard version.

In many OLs it is obligatory to express evidentiality, which is organised in morphological systems, at times of considerable complexity (cf. Chafe & Nichols 1986; Willett 1988). LSE lacks an evidential system, which means that the expression of this type of content is always of a facultative character. In fact, at least at this stage of our research, everything seems to point to the idea that this constitutes a relatively marginal domain in LSE. The data elicited show that some lexical units are able to adopt an evidential function: SAY (quotative), SMELL (inferential, used metaphorically), SEE (experiential), etc. But this is probably common in any language (spoken or signed), and, in LSE, these evidential uses are really quite infrequent in everyday discourse:[15]

(30)   a)   PERSON++ SAY, LONDON CITY WONDERFUL
           'People say that London is a wonderful city'
        b)   I SMELL, LONDON CITY WONDERFUL
           'I infer that London is a wonderful city'
        c)   I $\underline{SEE}_{y/n}$, LONDON CITY WONDERFUL
           'I see that London is a wonderful city'

Despite this, there are other signs which in a way offer a meaning which is to be found on a middle ground between subjective epistemic modality and inferential

evidentiality. This is due to the fact that they express a subjective certainty or possibility obtained in an inferential way. This ties in with the data from certain OLs in which subjective epistemic modality and inferential evidentiality constitute a single paradigm (cf. Hengeveld & Mackenzie 2008:155). It also supports the idea defended by Van der Auwera & Plungian (1998:85f), who argue that, although evidentiality does not belong to the general category of modality, inferential evidentiality is an **overlap category** which is situated between evidentiality and epistemic modality. Among the signs that make up this group, OBVIOUS and CLEAR express subjective certainty (strong commitment), whereas SUPPOSE, IMAGINE and SEEM express subjective possibility (weak commitment). As is shown in 31 and 32, these signs are compatible with markers of objective modality, which confirms that their scope is the proposition:

(31)   a)   TOMORROW RAIN IMPOSSIBLE, OBVIOUS
                     'Obviously, it is impossible that it will rain tomorrow'
         b)   TOMORROW RAIN IMPOSSIBLE, CLEAR
                     'Clearly, it is impossible that it will rain tomorrow'

(32)   a)   BROTHER MINE EXAM PASS CAN, SEEM
                     'It seems that my brother may pass the exam'
         b)   I IMAGINE, BROTHER MINE EXAM PASS CAN
                     'I suppose that my brother may pass the exam'
         c)   I SUPPOSE <u>WHAT</u>$_{y/n}$, BROTHER MINE EXAM PASS CAN
                     'I suppose that my brother may pass the exam'

SUPPOSE and IMAGINE are placed before the proposition, preceded by the first person pronoun. This suggests that in these cases they keep their status as transitive verbs, whose two arguments are the speaker and the proposition. The possibility of adopting a question-answer construction (cf. 32c) is a clear indication in favour of this hypothesis. In contrast, SEEM, OBVIOUS and CLEAR are not accompanied by any personal pronoun. Furthermore, they are normally placed at the end of the utterance, separated from the proposition by a prosodic pause. This makes it no easy task to classify them within the system of parts of speech. There are at least two possibilities. On the one hand, it could be said that this modal use does not alter the original classification of such units. Therefore, SEEM should be considered a verb (specifically, a pseudotransitive verb, just like Spanish *parece*), whereas OBVIOUS and CLEAR would maintain their adjectival character. This idea implies recognising that such units act, at least formally, as predicates whose argument would be the modalised proposition. On the other hand, these units could be interpreted as modaliser Tails as functionally they should be recognised essentially as adverbs. In our opinion, these two interpretations are not incompatible as they shed light on two diachronic states within a slow process of grammaticalisation. What remains to be solved is to what extent this process of grammaticalisation is found in LSE, and whether it has already produced a change in the categorisation of the constituents with a modal content.

7 Conclusions

As is well known, modality is a very complex grammatical category which is the object of an intense debate in present-day linguistic theory. However, research into modality in SLs of deaf communities is a field which has not yet been thoroughly explored. In order to make progress in this line of research, we have in this paper endeavoured to offer an analysis of modality in LSE. We have taken as a theoretical framework the standard version of Dik's FG. We believe that the results obtained are promising. They confirm that the theoretical perspective adopted reveals a high level of explanatory power when expressing modality in LSE. In particular, the distinction made in this model between inherent, objective and epistemological modality constitutes a more refined analytical tool than others that are frequently used in the literature on this subject (such as the binary opposition between agent-oriented vs. speaker-oriented modality).

Previous studies on modality in SLs (Brito, 1990; Wilcox & Wilcox, 1995; Shaffer, 2004) have highlighted certain formal procedures which have an iconic or metaphorical origin: repetition, energetic movement, etc. Nonetheless, these procedures have, however, not been documented in LSE. On the other hand, this language does possess other procedures which, apparently, have not been found in BCSL or in ASL. Therefore, one could think that, although certain cross-linguistic tendencies may exist, iconicity and metaphor finally act upon grammatical codification in a language-specific way. Unquestionably, iconicity and metaphor play a relevant role in the grammatical configuration of modality in LSE, but it does so in terms which are equivalent to what occurs in OLs, which means that it does not constitute a specific feature. Other factors, such as the existence of suppletive negation for different modal verbs, are also not restricted to SLs.

Another important question is the role carried out by the non-manual components of modal signs. Indeed, Iglesias (2006) emphasises their importance. Nevertheless, we think that their grammatical relevance is far from being proved. It is true that several signs include non-manual elements such as mouthing (for instance: LAW), head movement (for instance: suppletive negatives), etc., but these appear as complementary elements of hand articulation. In LSE, modal contents are identified unequivocally only by the manual components of signs, and they are never expressed exclusively in a non-manual way.

Probably the main conclusion of our research is that there is an essential grammatical congruity between LSE and OLs in the field of modality. Extremely significant features in LSE coincide with tendencies which are widely observed in OLs and, as a consequence, appear to be in complete accordance with our cross-linguistic knowledge about modality: the placing of modal markers in peripheral positions, the acknowledgement that the deontic contents are more basic than the epistemic ones, etc. Thus, the characterisation, in typological terms, of grammatical modality in LSE is not conditioned by the fact that it is a visually transmitted language. The only nuance which should be mentioned is related to the fact that the polyfunctionality of modal markers is noticeably less than what is usual in OLs (cf. Van der Auwera & Ammann 2005). Hence, only a few modal signs operate on more than one structural level and only CAN transmits, under different contextual conditions, several semantic contents: dynamic, deontic, and epistemic. However, we believe that this fact does not detract from the congruity just mentioned. The low level of polyfunctionality could be explained as a strategy destined to safeguard the communicative efficiency of modal signs. As has

been stated, the expression of modality in LSE rests practically exclusively on a wide group of signs which could be classified as lexical units, belonging to different parts of speech: verbs, nouns, adjectives, and adverbs. It is completely lacking in morphological operators (for example, verbal mood, clitics, etc.), which in many languages act concomitantly. It seems plausible to think that, under such conditions, a high level of polyfunctionality would have generated ambiguities which are not always easy to solve. The existence of a high level of functional specialisation avoids this risk and guarantees the modal markers' full communicative efficiency. Thanks to this, LSE is totally able to express the complex variety of modal contents, without showing any type of semantic deficiency.

Notes

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1.   Sandler and Lillo-Martin (2006:477-510) dedicate a long chapter to the typological implications of articulatory mode, which they call *physical modality* (cf. Sandler & Lillo-Martin 2006:478).

2.   Most supporters of cognitive linguistics think that evidentiality is not a modal content even though it shares some elements with the latter. According to Kiefer (1998), factive utterances (in the sense given by Kiparsky & Kiparsky 1971) do not belong to modality. On the other hand, Palmer (1986:18) considers factivity to be a modal content due to the fact that it introduces a subjective, speaker-oriented component. Furthermore, it is expressed in many languages through a subjunctive which Givón (1994:304) called *super realis*. Dik (1989:205), on his part, includes polarity as a subtype of epistemic modality. Van der Auwera & Plungian (1998:80) consider that there is not only one correct form of defining modality and its types. The classification which they propose is based on the combination of two axes: on the one hand, one which establishes a basic opposition between possibility and necessity; on the other hand, between participant-internal and participant-external domains. Subsequently, semantic domains such as volition and evidentiality are excluded from the general category of modality (cf. Van der Auwera & Plungian 1998:82-86).

3.   We could add Shaffer (2002), but it is only focused on the negative modal CAN'T in ASL.

4.   At the end of each of these publications, there are sections dedicated specifically to this point. These are entitled, respectively, "Orientational Metaphors of the Modal System in BCSL" (Brito 1990), "Iconicity in ASL" (Wilcox & Wilcox 1995), and "Iconicity and information ordering" (Shaffer 2004).

5.   In LSE, tense is expressed lexically at the beginning of the discourse. Therefore, the question of relative order in regards to the predicate only affects aspect and modality. One must also point out that despite this, some aspectual markers are not free morphemes but modifiers of the lexical root of the predicate.

6.   It is necessary to observe that for the expression of SKILL there are at least two different signs, depending on dialectal variation. The standard sign is articulated on the head, but in Galicia (northwest Spain) another sign, articulated on the left hand, is used (cf. Iglesias 2006:182).

7.   Through modifications in its configuration, the sign NEED, in its non-modal use, agrees with the numeral of the argument if this is less than 10. This is reflected in the gloss in example 8a.

8.   Zeshan believed that there was only one verb with suppletive negation in LSE: HAVE. Such inaccuracy is explicable due to the scarcity of data available up to now in this field of LSE grammar. Nonetheless, LSE offers relatively few examples of suppletive negation, at least if it is compared with other SLs of European origin. In accordance with his own fieldwork, Zeshan (2005) points out that those languages with fewer irregular negatives are mainly to be found in Asia: one Pakistani variety of Indo-Pakistani Sign Language entirely lacks such forms; other varieties of this language have only one sign of suppletive negation with existential value.

9.   Here, LAW does not refer to a 'legal text' – which in LSE is expressed using another sign – but a norm that is compulsory to fulfil, regardless of its origin (legal, religious, social, etc.).

10.   Evidently, here we refer to a verbal predication when the modal sign is recognised as a verb (for example: CAN), whereas in all other examples we would be dealing with non-verbal predications (cf. Hengeveld 1992).

11.   The signs NO and FORBIDDEN are also similar. The difference between these two is that NO is articulated only with the active hand (prototypically, the right hand), whereas FORBIDDEN is articulated with both hands which are moved symmetrically.

12.   Other authors prefer *subjective modality* (cf. Verstraete 2004). The term *epistemological modality* is still used by Butler (2003:465ff), but it doesn't appear in Hengeveld & Mackenzie (2008).

13   One could add some remarks about dialectal variation of WISH. As far as we have been able to confirm, what we could consider to be the standard form of this sign (or, at least, its main form) coincides with the letter *J* in the Spanish dactylological (or fingerspelling) alphabet. This favours the idea that this sign in LSE has its origin in an initial adoption of the Spanish word *ojalá* through a dactylological channel. This sign is quite polysemous, as it expresses other contents which are probably the result of an analogous process. Thus, as well as 'wish' and 'j', it also means, at least, 'boss' and 'stupid'. One can only see through the context which is the meaning corresponding to

this sign in each case and hence unravel possible ambiguities. For this reason, it is no surprise that a new sign has appeared which has the same modal value, which is not at all ambiguous. It is a totally different sign which is articulated at the height of the mouth. What is necessary is to confirm the areas of distribution of both forms through a detailed dialectal and sociolinguistic study which is still pending. Our observations, which are not conclusive, suggest that as yet this second form is only used by a minority in the Spanish deaf community. Nonetheless, it is already fully consolidated and, in fact, is the form of general use in some places (for instance, in Jaén, south Spain). This second sign appears to be a conjunction of another two signs: SAY and NEED. Therefore, and showing caution due to a lack of diachronic data, we present the hypothesis that this sign initially corresponded to the sequence *SAY NEED*, which could be interpreted as 'it is necessary to say'. From here it has probably evolved until acquiring its actual use as a marker of boulomaic modality.

14.   García Velasco (2003:155) includes a fourth component of evidential content: prediction. However, it is necessary to state that prediction really forms a part of the inferential contents, of which it constitutes, at the most, a particular subtype.

15.   Sentence 30c is also an example of question-answer construction.

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