

## 75. Epistemic Possibility

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### 1. Definition of values

This chapter deals with the kind of modality expressed by English *may* in (1).

(1) *John may have arrived.*

In (1) *may* indicates that the speaker holds that the proposition that John has arrived is not certain, relative to what he knows or to available evidence. It contrasts with the statement in (2).

(2) *John must have arrived.*

In (2) the speaker indicates that the proposition that John has arrived is certain, again relative to what he knows or to available evidence. This type of modality is commonly called **epistemic**, and it is distinguished from what we call **situational** modality, illustrated in (3) (see chapter 74).

- (3) a. *You may leave the hospital after a week.*  
b. *You must leave the hospital after a week.*

In (3), *may* and *must* express a permission and an obligation. What is at issue is not any degree of certainty or uncertainty, but rather the degree to which the speaker tries to make a situation possible or necessary.

The map gives some indication of the strategies used to express epistemic possibility in positive main clauses. Three types of languages are distinguished. The definitions refer to three types of marking: verbal constructions, affixes on verbs, and other constructions, ordered in terms of increasing cross-

linguistic frequency. Languages of the first type use the least frequent markers, whether or not they also use the more frequent ones. Languages of the second type use the medium frequency markers, whether or not they also use the most frequent ones. Languages of the third type only use the most frequent markers.

@	1. The language can express epistemic possibility with verbal constructions.	65
@	2. The language does not express epistemic possibility with verbal constructions, but with affixes on verbs.	84
@	3. The language does not express epistemic possibility with verbal constructions or with affixes on verbs, but with other kinds of markers.	91
	total	240

The first type shown is that of languages in which **verbal constructions have epistemic possibility as one of their meanings**. Example (4) illustrates this with Harar Oromo (Cushitic; Ethiopia). The verbal construction involves the verb *taha*, which also means ‘be’ or ‘become’.

(4) Harar Oromo (Owens 1985: 78)

*Ní d’uf-t-i taa-t-i.*  
 FOC come-F-IMPF become-F-IMPF  
 ‘She may come.’

As (4) shows, a verbal construction need not be uniquely dedicated to epistemic possibility. The verb responsible for the epistemic sense can also mean ‘become’ or ‘be’. In Bambara (Mande; Mali), for example, epistemic possibility is rendered by a fixed expression *í b’ǎ soro*, which contains imperfective

marking, a demonstrative pronoun and the verb *soro* ‘get’. The construction as a whole could be glossed as ‘you’ll get this’, followed by the proposition (Valentin Vydrine, p.c.).

In some languages, a verbal construction may occur in an impersonal use, i.e. with a third person (singular). In Harar Oromo, an alternative to (4) involves the same verb in an invariable third singular masculine form.

(5) Harar Oromo (Owens 1985: 78)

*Ní d’uf-t-i taha.*  
 FOC come-F-IMPV become.3SG.M  
 ‘She may come.’

As illustrated with Harar Oromo *taha* and Bambara *soro*, epistemic modal verb constructions may contain verbs with a variety of literal or etymological meanings, including ‘be/become’ (Harar Oromo) and ‘get’ (Bambara). Verbs of propositional attitude like ‘think’ or ‘suppose’, however, i.e. expressions meaning ‘I think’ or ‘I suppose’, which are not grammaticalized and are probably universal, will not be included.

A language of the first type may have markers other than verbal constructions. Northern Saami (Uralic; Finland) can express epistemic possibility both with the “potential” inflection on the verb — marked with the suffix *-ž/žž/čč* — and with a verb *dáidit* for ‘may, might’.

(6) Northern Saami (Sammallahti 1998: 77; Bartens 1989: 296)

- a. *Bōđe-žan.*  
 come-POS.PRES.1SG  
 ‘I may come.’
- b. *Mii dáid-it orrut dás geasi.*  
 we may-IND.PRES.1PL stay here.LOC summer.ILL  
 ‘We may be staying here all summer.’

The construction with the modal verb occurs more frequently than the “potential” inflection (Bartens 1989: 296f.), but this is irrelevant for our purposes. Northern Saami is thus assigned the value that specifies it as a language possessing epistemically modal verb constructions.

The second type includes **languages that cannot express epistemic possibility with verbal constructions, but that employ affixes on verbs**. This type is illustrated by Koasati (Muskogean; southeastern United States), which can employ the verbal suffix *-sahá:wa* with the meaning ‘might be’.

(7) Koasati (Kimball 1991: 200)

*Á:t-ok*                      *hó:pa:-sahá:w-ok*

person-NOM.FOC    be.sick-POS-SS.FOC

*oh-hí:c-á:hi-k*              *amá:k.*

go-see-INTENT-SS      go.PL.IMP

‘Someone might be sick, go over and look, you all!’

Languages with clitics attached to verbs will also be included here. This is not to say that clitics and affixes are the same, but in cases where the clitic is described as occurring within a grammaticalized unit containing the verb, the similarity is rather high. For example, in Lakhota (Siouan; Nebraska and Minnesota), clitics – among them the enclitic *séčA/načhéčA* ‘probably, maybe, I guess, I suppose’ – occur in a fixed post-verbal order and are frequently not stressed (Rood and Taylor 1996: 473f.).

Not all epistemic possibility affixes are uniquely dedicated to this function. The affix may also code related meanings like future – in Epena Pedee (Choco; Colombia; Harms 1994: 101) – and epistemic necessity – in Evenki (Tungusic; Siberia; Nedjalkov 1997: 265, and p.c.) – or more general meanings like subjunctive – in Gooniyandi (Bunaban; Western Australia; McGregor 1990: 193).

The third type **does not have either verbal constructions or verbal affixes to express epistemic possibility, but there are**

**other markers.** These include adjectives like ‘uncertain’, or ‘possible’, as well as particles and adverbs, such as English *maybe* or the element *yilama* in Wardaman (Yangmanic; Northern Territory, Australia).

(8) Wardaman (Merlan 1994: 299)

*Yilama*    *ya-yinyja*    *ma-yinyja*  
 maybe    IRR.3SG-go    HAB.3SG-go  
*wurrugu*    *ngarlg-ba*.  
 3N.SG.DAT    call-PCL

‘Maybe he’ll go, he always goes to call them.’

As to clitics, we have already stated that clitics which occur on the verb and form a kind of unit with it are included in the affix type. But there are other kinds of clitics. For example, epistemic possibility is expressed in Jakaltek (Mayan; Guatemala) by a clitic =*m(i)*, which is usually attached to the first element of the sentence and is followed by the verb (see also Craig 1977: 86–87).

(9) Jakaltek (Day 1973: 55)

*Chin=mi*    *wayoj*.  
 FUT.1SG=POS    sleep

‘I may be sleeping.’

Just as with modal affixes and modal verbs, these markers need not be dedicated expressions of (epistemic) possibility. One that is not is the phrase *yíghēe mǎ́* ‘sometimes’, which can be used for epistemic ‘may’ in Babungo (Bantoid; Cameroon; Schaub 1985: 229).

Note that epistemic particles and adverbs may have a verbal origin. In Welsh there is a marker *gallu* ‘can, be able’. When used as a marker of situational possibility, *gallu* is a verb, but for epistemic possibility there is a form *efallai* ‘perhaps’. It historically derives from *gallu*, but according to Fife (1990: 279),

speakers no longer make the connection, and *efallai* is treated as an adverb by King (1993: 261). Interestingly, *gallu* does allow epistemic uses in relative clauses (Jones and Thomas 1977: 100), but since the present map only documents the expression of epistemic possibility in positive main clauses, these uses do not count here. On the basis of the adverb *efallai*, and the absence of a verbal construction (in positive main clauses) or any verbal affix, Welsh is coded as language of the “other” type.

## 2. Geographical distribution

In most European languages epistemic modality can be encoded by means of verbal constructions. This holds for most Indo-European and Uralic languages. In northern Eurasia, only Russian, Tuvan (Turkic; Altai region, Russia) and Mandarin show verbal constructions, while the other languages are divided between verbal affixes and the “other” type. In South Asia, the center and south of India contrast as a verbal–auxiliary area with a verbal–affix area to the northwest and a mixed area to the northeast. Except for a relative sparseness of languages with epistemic verbal constructions, no pattern emerges in East Asia. The verbal construction type appears to be almost unattested in New Guinea and Australia. The languages of New Guinea prefer affixes, and for the languages of the Pacific our sample documents only markers other than verbal constructions or verbal affixes. On the African continent, the “other” type dominates in the center. Semitic languages predominantly have verbal constructions, as do, apparently, the languages of West Africa. In the Americas not a single language investigated uses verbal constructions to express epistemic possibility.

## 3. Theoretical issues

In European languages, most epistemic modality markers are historically related to situational ones. This has given rise to an

ongoing debate about the conceptual relationship of the two. Cross-linguistic work on this issue is presented by Bybee et al. (1994) and by van der Auwera and Plungian (1998). Both stress that not all epistemic markers are related to situational ones.

A controversial point that needs to be noted is that there is little agreement as to what to include or not to include under the term “epistemic”. The relationship with “evidential” marking is especially difficult to characterize (see chapter 77). Are these two notions distinct, do they overlap, are evidentials a subtype of epistemic modality or is it the other way around? We have taken a fairly liberal approach and included markers, for instance in Aymara (Aymaran; Peru and Bolivia) and Barasano (Tucanoan; Colombia), which occur in evidential-prominent systems but were described as having functions closely corresponding to epistemic possibility.