Acknowledgments
The editors would like to express their thanks to the faculty and
staff of the Linguistics Department for their invaluable assistance
in the preparation of this volume. Funding for this journal is pro-
vided by the Graduate Student Council from the Student Activity Fee.

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As far as is known, all languages have ways of expressing modality, i.e., notions of possibility, necessity, contingency, etc. But this pervasive phenomenon has so far been the object of little systematic linguistic analysis. In fact, investigators do not even agree on the scope of the term modality. Very roughly speaking, two kinds of modality have been distinguished, namely epistemic and deontic. The former involves the speaker's judgment as to the degree of certainty of an event or state of affairs being referred to. Deontic modality, on the other hand, has to do with such notions as obligation, permissibility and necessity. However, as useful as this distinction is, little is known so far concerning the linguistic patterns which express those ideas. It is clear that the modality systems of a great many languages will need to be thoroughly scrutinized and compared before any conclusions can be drawn as to their place in 'universal grammar.'

The papers included in this volume of the Kansas Working Papers in Linguistics were written by graduate students at the University of Kansas for a seminar on modality taught by Professor Choon-Kyu Oh in the spring of 1979. They deal with a variety of topics bearing on modality and with a variety of languages and language families. It is our hope that these papers will stimulate comments from colleagues at other institutions.

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MODALITY IN ALSATIAN

Marguerite A. Hessini

Abstract: This descriptive study focuses on the special verbal category of Alsatian modal auxiliaries with distinct syntactic characteristics. They include: {kënà} (can), {mënde} (would like to), {völe} (want to), {därfe} (be allowed to), {sxls} (ought to/must), and {mën} (must). These modal verbs specify the speaker's point of view in regard to the reported event. They are able to express several levels of probability regarding the event's potential fulfillment. They form two subcategories depending on the presence or absence of an external source of authority imposed on the agent. The deontic and epistemic meanings of Alsatian modals support Horn's (1972) hypothesis that the latter two meanings are semantically related.

Introduction

The present study on modality pertains to Alsatian, a German dialect of Alemannic origin, spoken in the province of Alsace in Eastern France. Alsatian comprises a variety of closely related, mutually intelligible dialects. My corpus is limited to examples of the dialect variety spoken in Strasbourg, the provincial capital, of which I am a native.

As Alsatian is basically a spoken dialect whose closest written expression is standard German, but which has no standardized written form of its own, I am using a broad phonetic transcription for my examples. For clarification, a few observations seem appropriate. Alsatian stops are voiceless, lenis in word initial and medial positions, fortis in word final position. I will represent the former by {b, d, g} and the latter by {p, t, k}. The approximant {r} is a uvular trill or a uvular fricative, the latter adjacent to a voiceless consonant or

word—finally after a vowel. I am using the symbol [w] to designate a
front rounded vowel that is lower than [a] but higher than [e].
Alsatian has incorporated numerous French borrowings in its lexi-
con, but the syntactic structures closely parallel those of standard
German.

The Verbal Category of Modals

Function. Modality may be conceived of as a broad notion including modal
adverbial expressions (it is possible, it is probable...), mood, modal
infinitives (I have to...), and modal auxiliaries (Brinkman, 1962). The
present study focuses on the special verbal category of modal auxiliaries
whose function is to “express a relation of the event to reality” (Bouma,
1973). This may be expressed by the formula:

\[ S \rightarrow X \rightarrow M \rightarrow Y \]

in which X plus Y specify the event, and M stands for a finite modal
which specifies the attitude of the speaker in regard to the reported
event, or what Brinkman (1962) labels more broadly as “Satzintention”.

Alsatian Modals. Alsatian has six modals which form a distinct verbal
category with specific syntactic characteristics. Their broad basic
meanings within the domain of social customs may be described as follows:

- **[kos]:** ability, opportunity
- **[meus]:** inclination, desire
- **[vel]:** intent, want
- **[darfe]:** permission, right
- **[sola]:** duty, obligation
- **[min]:** compulsion, absolute obligation

**[meus]** is used only in the subjunctive (see chart p.49).

Syntactic Characteristics. Modals in Alsatian are used with a depen-
dent verb which is in the infinitive, and thus they function like
auxiliaries.

1a) **ar min blyve**
   (ip=esbj must stay)
   'we must stay'

1b) **ar sin gëblive**
   (ip=esbj because stay=pp)
   'we have stayed=we stayed'

2a) **di kos rëds hun**
   (2sg=esbj can right have)
   'you (sg. informal) may be right'
(2b) dů hašt rāšt ghett
(3g3sg:obj have=aux right have=PP)
'you were right=you have been right'

Under certain conditions the dependent infinitive may be omitted from modal expressions (1) when the goal is explicitly stated in the sentence:

(3) iš mes hain (gehain)
(lges:obj must home (go))
'I must go home'

(4) do ṭoṛ kūn elekṣiṭā (redo)
(the George can Alshtian (speak))
'George know (how to speak) Alshtian'

(11) when the context would make the infinitive repetitions or unnecessary.

(5) A: meši li ak go:n?
(must=you (sg. informal) already go)
'do you have to go already?'

B: jo, iš me:s
(yes, lga:obj must)
'yes, I must go'

(11i) when the idea of 'to do' is present:

(6a) n3r kena s moxe
(lpl:obj can 3g3 neut=DO do)
'we can do it'

(6b) n3r kena(s)
'we can do it'

A dependent infinitive used with a modal verb can never be preceded by [το] 'to' which is customary with most other verbs: 1

(7a) ar mešt hīla
(3=mac=sg:obj would-like-to cry)
'he would like to cry'

(7b) ar foğt-n te ṭe hīla
(3=mac=sg:obj starts to cry)
'he starts to cry=he is starting to cry'

(8a) ar kont gāj ṭi{s}na
(3=mac=sg:obj can=pres. subj intelligent be)
'he might be intelligent'
2. Modals do not take the 3rd person singular marker [-t] in the present indicative, but do take the 2nd person singular marker [-s]:

(9a) iš söl läːve 'I am supposed to live'
(9b) dú sölš läːve 'you are ...
(9c) or söl läːve 'he ...
(10a) iš lāːp 'I live=I am living'
(10b) dú lāːpš 'you ...
(10c) or lāːpt 'he ...

3. Modals remain single in the present subjunctive like the auxiliaries [kön] 'to have', [sín] 'to be' and [dwa:n] 'to do' (the latter only when used as an auxiliary). Other verbs usually form the subjunctive with the present subjunctive of the verb [dwa:n] 'to do', which then functions as an auxiliary:²

<table>
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<th>modals</th>
<th>subjunctive:</th>
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<tr>
<td>kēns 'can'</td>
<td>or kēnt 'he can'</td>
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<tr>
<td>võla 'want'</td>
<td>or vōt 'he would like to'</td>
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| hōn 'have' | or vātt 'he would have' |
| sūn 'be' | or vār 'he would be' |

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<th>other verbs</th>
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<th>dāt (pres. subj. of [dwa:n]) + inf. of the verb:</th>
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<td>gu:n 'go'</td>
</tr>
<tr>
<td>glāva 'believe'</td>
</tr>
<tr>
<td>dwa:n 'do'</td>
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³ A double infinitive construction is found in a compound tense when a modal verb is used with a complementary infinitive. The modal verb functions, then, as an alternate past participle identical in form to the infinitive. This is clearly illustrated when the main verb is omitted, but understood, and the past participle of the modal auxiliary is used:

| (14a) iš lāmp moːxa kēns |
| [iːs=sg=aux do can] |
| 'I was able to do it' |
The double infinitive occurs only when the complementary infinitive is expressed, whereas the alternate past participle is used only when the complementary infinitive is implied. 9

The future tense with a modal verb also yields a double infinitive construction:

(16a) as vurt kume kene
(3-s.neut=sg=3b) fut. aux come can)
'she (informal) will (probably) be able to come'

(16b) as vurt kume
'she will (probably) come'

The preceding sentences (1a through 16) clearly indicate that the modals in Alsatian are a separate verbal category as illustrated by their distinct syntactic characteristics.

The Verb [brüüs] Used As A Modal. There is an additional verb [brüüs] 'need to' which is usually substituted for [mːːn] 'must' in the negative, and thus functions as a modal within that limited context. However, it does not share the characteristics of the other modals which form a distinct verbal category. [brüüs] takes a [-t] in the 3rd person singular in the present indicative, and requires [sːː] when preceding an infinitive:

(17a) as brüüs mt taa hine
(3Negat=sg=3b) Need not to cry)
'she (informal) must not cry'
'she doesn't have to cry'

[brüüs] is also used as a non-modal:

(17b) as brüüs ne nːːt
'she doesn't need him'
Semantic Characteristics

Modals Involving An External Source of Authority. The modals in Alsatian may be specified as relative to the speaker's point of view and to whether or not the agent in a sentence is submitted to some exterior influence with which the speaker concurs. Thus [m:n], [solo], and [darrë] are modals that involve a source external to the agent that affects the event.

(15a) dë darrë ro:do
(2-agr:bj may guess)
'you may guess'

Someone gives the permission to the agent; if it is not the speaker, then the latter concurs:

(15b) dë solö ro:do
'you should guess' (the suggestion implied in Alsatian is much stronger than that of English 'should')

Someone strongly suggests the obligation to the agent; if it is not the speaker, then the latter concurs.

(15c) dë mw:š ro:do
'you must guess'

Someone absolutely compels the agent. If it is not the speaker, then the latter concurs with him.

Modals Involving an Internal Source of Authority.

1. In the case of the modals [kenë], [mešë], [vela], the agent is the carrier of the ability, the desire, the will; the source of the event lies with the agent, and the speaker confirms it.

(19a) dë kenë gla:ve
'you can believe'

The agent has the ability to believe, and the speaker confirms this.

(19b) dë mešë gla:ve
'you would like to believe'

The agent has the desire to believe, and the speaker confirms this.

(19c) dë vët gla:ve
'you want to believe'

The agent has the will to believe, and the speaker confirms this.
2. It seems that in the case of [kœm], [œmo], and [vœl], there is a clear tie between the subject and the predicate. This is further underscored by the fact that, on the syntactic level, only these modals can take a real object, whereas [dœrf], [sœl], and [mœn], which involve an external authority, cannot.

(20) iœ kon elsœis
'I know Alsatan - I can speak Alsatian'

(21) iœ maœt no niœt
'I don't like to have him - I wouldn't want him'

(22) iœ nœl ken õnœœ
'I don't want any snails'

Range of Probability Expressed by Alsatian Modals. The degree of probability regarding the potential fulfillment of an event is another dimension expressed by Alsatian modals. The two subcategories mentioned earlier each have a range of three levels (see lœa, b, c and lœa, b, c), from great uncertainty to strong probability, from mere suggestion to strong compulsion. The use of the subjunctive further allows expansion of the range of varying degrees of probability:

(23) œœ nœ œœ¿œœ ţœœ
(mœn:pres.ind.)
'the must work hard'

(24) œœ sœl œœ¿œœ ţœœ
(sœl:pres.ind.)
'the must work hard=he is expected to work hard'

(25) œœ sœœ œœ¿œœ ţœœ
(sœl:pres.subj.)
'the is supposed to work hard=he should...

(26) œœ mœœ œœ¿œœ ţœœ
(mœn:pres.subj.)
'the would have to work hard'

In (23) the agent is under absolute obligation to comply. In (24) the agent is under strong obligation to comply, but has a choice available. In (25) the agent is under strong obligation to comply, but according to the speaker's point of view, most likely doesn't or won't comply, either by choosing not to or by being unable to. In (26) the agent is under a strong hypothetical obligation to comply, but according to the speaker's point of view, he doesn't, and the chances are extremely slight that he will do so in the future. As illustrated in (25) and (26), the subjunctive carries a negative connotation not conveyed by the indicative.
Negation of Modals

Negation Expressed Through Standard Oppositions.

1. In Alsation the negation of modals may be expressed through the following oppositions:

a. \textit{min} : it is necessary that...

\[ \square \text{furt ge:n} (\tilde{s}) \equiv \not\square \text{furt ge:n} (\tilde{s}) \]
\[ (\tilde{s}) = \text{sors} \quad \text{(George)} \]

(27) da-sors n:s furt ge:n
        (the-George must away go)
        'George must leave'

b. \textit{nt kena/nt därfə} : it is not possible that...\[\square \equiv \not\square \text{furt ge:n} (\tilde{s})\]

(28a) da-sors kum nt furt ge:n
        (can not)
        'George may not leave' (= it is not the case that George may leave)

(28b) da-sors därf n:t furt ge:n
        (is not permitted to)
        'George may not leave' (= it is necessary that George not leave'

c. kəna/därfə : it is possible that ...\[\not\square \equiv \square \text{furt ge:n} (\tilde{s})\]

(29a) da-sors kum furt ge:n

(29b) da-sors därf furt ge:n
        'George may leave'

d. \textit{nt bräa} : it is not necessary that...\[\not\square \equiv \square \text{furt ge:n} (\tilde{s})\]

(30) da-sors bräit nt furt tsa ge:n
        'George doesn't have to leave'

2. These basic relationships between the modals in Alsation may be illustrated schematically as follows, taking the "logisches Quadrat" (square of opposition) cited by Blumenthal (1976) as a model, with the following root meanings of the modals:
Referring to the Alsatian examples (27 to 30) given under sections a, b, c, and d, we obtain the following:

1. The use of the negative as pertaining to Alsatian modals needs to be specified further. The negation of [mit:n] (d) [mit:n] may replace [mit brü:fe] (d) as illustrated below.

\[(31a)\] ar n:is n:it å:vr: å:rs\n
\[(31b)\] ar brü:ft n:it å:vr: toe å:rs\n
(3=n=m=sg=gen must not hard work) need to 'he doesn't have to work hard!

\[(32a)\] då m:is:å n:it br:is:å

\[(32b)\] då brü:ft n:it tæmbr:is:å

(2=sg=gen must=press.subj not shout) (need=press.subj to) 'you wouldn't have to shout!'
In all of the preceding examples, the negation refers to the modal, and thus [nit m:n] p has the meaning of ~□ p.

2. There are other instances, when [nit m:n] may replace [nit dårfs] (b) or [nit kena] (b):

(35a) dül m:n:is dül m:n, so eps m:xt ar: n:t
(2-ag:obj must this not do, such something does not) 'you must not do that, one doesn't do such a thing'

(35b) dül dårfs dül m:n:is, so eps m:xt ar: n:t

(35c) dül kena dül m:n:is, so eps m:xt ar: n:t
'the must not do that, one doesn't do such a thing'

(36a) dül m:n:is nit vor: sm
(this must not true be) 'this is certainly not true=this is most likely not true'

(36b) dül kena nit vor: sm

(36c) dül dårfs nit vor: sm
'this cannot be true'

(37a) ar m:n:is nit grub: sm
[3-m:as-ag:obj must not sick be] 'it is imperative that he not be sick'
(a second reading would be: he is probably sick?, but 3b and 3c would not paraphrase that meaning)

(37b) ar kena nit grub: sm

(37c) ar dårfs nit grub: sm
'the must not be sick'

(38a) dül m:n:is nit druí: sm
(2-ag:obj must not sad be) 'you must not be sad'
(38b) dü xaná ni t drüríš sin
(38c) dü darrá ni t drüríš sin

'it is necessary that you not be sad'

In all of these cases the negation seems to refer to the predicate rather than to the modal, and may be schematised as follows: □ ~ P: it is necessary that... not P. As illustrated above, each sentence containing [ni t sin] may be paraphrased using (b) [ni t kemæ]/[ni t darræ], the two latter modals implying a lesser degree of compulsion than when [ni t sin] is used. Furthermore, whenever the subject is 2nd. pers. singular [di], the sentence has the character of a negative imperative rather than of a statement. In that case it implies from the speaker's point of view that the subject is in a position to comply with the prohibition, which would explain why this type of sentence, in which [ni t sin] may optionally replace [ni t kemæ]/[ni t darræ], is only used in the present tense and never in a question form:

(39) "wu:sa du ni t džrɪš sin?"

3. The use of alternate negative forms is restricted, however, as there are instances in which only [ni t sin] may be used, and others when only [ni t brūšæ] is appropriate:

(40) v'un ìš ni t vo:vo ha:t mën, wär ìš ñun leŋ than mën (if I not wait have=prs.subj. must, be=prs.subj. I already long at-home)  
'if I hadn't been compelled to wait, I would have been home long ago'

(41) mën ni t en dreje wdar däxra?  
[must=you not at 3 again work]  
'don't you have to work again at three?'

Examples (40) and (41) imply a strong obligation imposed on the subject by an external authority. Examples (42) and (43) on the contrary, imply the absence or an obligation which has been assumed by the subject:

(42) iš hup da guntas do: ni kx mëx brëšæ  
([=ag=aux have=the whole day do need])  
'I didn't have to do anything the whole day long - I needn't do anything...'

(43) dü hátš aŋdiš ni kx sa:ve brëšæ  
([=ag=aux have=prs. subj. strictly-speaking nothing say need])  
'Actually you didn't have to say anything'
It may perhaps be possible to conclude here that when [nit m:n:n] is used exclusively, there is a real obligation that exists and that is external to the agent, whereas when [nit šrú:š] is used exclusively, the obligation is merely assumed by the agent.

Negation and Modal Subcategories. The division between the two categories of modals, those that depend on an outside source of authority ([šrú:š], [ša:jš]), and those that don't ([kuma], [medša], [vela]), remains the same in the negative:

(44) ilš hip ka:n húgar, ilš kän nox nika nesa
    [liš̪a:jš] have no hunger, [liš̪a:jš] can yet nothing eat
    'I am not hungry, I can't eat anything yet'

(45) ilš hip ka:n húgar, ilš mäst nox nika nesa
    '..., I would like not to eat anything yet'

(46) ilš hip ka:n húgar, ilš vil nox nika nesa
    '..., I don't want to eat anything yet'

(47) ilš hip ka:n húgar, ilš darp nox nika nesa
    '..., I may not eat anything'

(48) ilš hip ka:n húgar, ilš sol nox nika nesa
    '..., I (strongly) should not yet eat anything'

(49) ilš hip ka:n húgar, ilš cast nox nika nesa
    '..., I must not eat anything yet'

Examples (47), (48), and (49) indicate a reference to an external authority, which is not the case in examples (44), (45), and (46).

Negation Expressed Through Adverbial Expressions. Negation may not be expressed solely through the negation of a modal, but may be conveyed through an adverbial expression, which may be either a clear negation such as [ni:] 'never', [unu:šiš] 'impossible', or a limiting expression such as [kma:] 'hardly', [numa:] 'only', [ši Š š ka:n:šiš] 'it is hardly possible', [unu:šišiš] 'unprobable', [venikššans] 'at least', [mareššans] 'at the most'...

(50a) diš meš venikššans avetusš frunš do dovšer basčišo
     'you must at-least 70 francs there for-it pay'
     'you must pay at least 70F for that'

(50b) 'diš trouš venikššans avetusš frunš do dovšer basčišo

(51a) diš meš hekššans avetusš frunš do dovšer basčišo
     'you must pay at the most 70F for that'
(51b) ðii brui hekaðans avatia frauge do defir Bates:le
you must (need) pay at the most 70F for that!

The implicit negative in [hekaðans] 'not more than' has a wider scope than the modes, while that of [venikðans] has a narrower scope. (51a) and (51b) may be paraphrased as follows:

(51c) ðii brui nit me ols avatia frauge do defir Bates:le
you must not pay more than 70F for that'

and translated as 'it is not necessary for you to pay more than 70F for that' or 'you must pay at the most 70F for that'. (50a) may be paraphrased as follows:

(50c) ðii me: ols avatia frauge do defir Bates:le
you must pay more than 70F for that'

and translated as 'it is necessary for you not to pay any less than 70F', [hekaðans] 'at the most' x(z ≥) marks the maximum, but [venikðans] 'at the last' indicates that x(z ≤) is minimal which in Alsatian is incompatible with [brui] 'need' (50b), which in this context may be used to express sufficiency but not necessity.

[venikðans] 'at least' (50b):
* \( x > 70 \)

[hekaðans] 'at the most' = [but me: ols] 'not more than'
(51a and 51b):
* \( x \geq 70 \)

External and Internal Negation. External and internal negation are possible in Alsatian with possibility expressions such as [s kon sin] 'it is possible', and [s ñe: jë];(51) 'it is possible':

(52a) a kon sin; da; s-gerdel grunk ë
(it can be, that the-Gredel sick is)

\[ \square \text{grunk (U)} \sim \square \text{grunk (G)} \]

1. internal negation:

(52b) a kon sin; da; s-gerdel nit grunk ë
(it is possible that Gredel is not sick)

\[ \sim \text{grunk (U)} \quad \Leftrightarrow \quad \square \text{grunk (G)} \]
11. external negation:

\[ (52c) \text{s wu nd sin, } \text{doh a-gredil sraik } \text{t} \text{a } \text{it is not possible, that Gredel be sick} \]

\[ \sim \Box \text{grokn (O)} \equiv \square \sim \text{grokn (O)} \]

11i. internal-external negation:

\[ (53d) \text{s kw nd sin, } \text{doh a-gredil sraik sraik } \text{t} \text{a } \text{it is not possible, that Gredel not be sick} \]

\[ \sim \Box \text{grokn (O)} \equiv \square \text{grokn (O)} \]

\[ (53a) \text{s } \text{ma:ju:la } \text{das sas si } \text{frajt } \text{in unders umstánda } \text{toe sin } \text{it is possible that she (informal) herself be-happy in other circumstances to be "she with child" } \text{it is possible that she is happy to be pregnant} \]

\[ (53b) \text{s } \text{ma:ju:la } \text{das as si } \text{frajt } \text{in unders umstánda } \text{toe sin } \text{it is possible that she is not happy to be pregnant} \]

\[ (53c) \text{s } \text{ma:ju:la } \text{das as si } \text{frajt } \text{in unders umstánda } \text{toe sin } \text{it is not possible that she is happy to be pregnant} \]

\[ (53d) \text{s } \text{ma:ju:la } \text{das as si } \text{frajt } \text{in unders umstánda } \text{toe sin } \text{it is not possible that she is not happy to be pregnant} \]

External and internal negation are possible also with an expression such as [s ma: sin] "it must be the case," provided that the negative form is either [s kw nd sin] or [s dáf nd sin] "it can/may not be within the context below:

\[ (54a) \text{s ma: sin, } \text{doh a majdala } \text{drúli } \text{t} \text{a } \text{it must be the case that the little girl is sad} \]

\[ (54b) \text{s ma: sin, } \text{doh a majdala } \text{drúli } \text{t} \text{a } \text{it must be the case, that the little girl is not sad} \]

\[ (54c) \text{s kw nd sin, } \text{doh a majdala } \text{drúli } \text{t} \text{a } \text{it is impossible that the little girl is sad} \]

\[ (54d) \text{s kw nd sin, } \text{doh a majdala } \text{dará } \text{t} \text{a } \text{it is impossible, that the little girl not be sad} \text{ (= she must be sad) } \]
Epistemic and Deontic Meanings of Alaskan Modals

Relationship Between Root Meaning and Epistemic Meaning. This section pertains only to the modals 'dürfe' 'be permitted to', [sola] 'hold!', [m:n] 'must', which imply an external source of authority. Modals in Alaskan support Horn's (1972) hypothesis that there is a systematic connection between the root meaning and the epistemic meaning of modals, the latter being based on the speaker's knowledge, and that the two meanings are related semantic concepts. While the Alaskan syntactic modals may be ambiguous between epistemic and root meanings, they are so in a systematic way as the following sentences illustrate:

(55a) dä därfe väšt hun' (you may possess subj right have)
'you may be right'

(55b) dä därfe a glas hun (you may an ice-cream have)
'you may have an ice-cream'

(56a) sini švenär sol šet state, hun' is geiert (his sister must pretty be, have I heard)
'his sister must/is supposed to be pretty, I've heard'

(56b) a holtä sol šet state, hun' in dä raštołon svišt tea grejo (a hostess must pretty be, for in that fair work to get)
'In order to get a job at that fair, a hostess has to be pretty'

(57a) d noxorä nas' ran mon forhaye, ur heert no brišle (the neighbor (fem.) must her husband beat-up, one hears him yell)
'the neighbor must be beating up her husband, one hears him yell'

(57b) d noxorä nas' ran mon forhaye, sunä däd or mits uršte:n (the neighbor (fem.) must her husband beat-up, otherwise, aux-to-pres. subj he not get-up)
'the neighbor must beat up her husband, otherwise he wouldn't get up

'dürfe' in (55a) indicates possibility, in (55b) permission. [sola] in (56a) indicates probability/assumption, in (56b) weak requirement/obligation (there may be an exception to the rule regarding physical appearance when hiring a hostess for the fair). [m:n] in (57a) indicates certainty, in (57b) strong obligation/requirement. Thus these modals are ambiguous between epistemic and root meaning, as [dürfe] may fluctuate between the meaning of possibility and that of permission, [sola] between probability and obligation, and [m:n] between certainty and requirement. Yet there
is consistency in that possibility is matched by permission, and probability and certainty are matched by weak or strong obligation.

Concepts of Modality Occurring in Alsatian. The various notions of modality occurring in Alsatian are conveyed through the following modalities.

1. Ability. Only [kene] in its root meaning is used to express either physical or mental ability.

   (58a) dr-sors kwa-s mwe (physical)
       (the-George can-it do)
       'George can do it'

   (58b) dr-sors kon-s n't mwe (physical)
       (not)
       'George can't do it'

   (58c) kon-s dr-sors (n't) mwe? (physical)
       'can (it) George do it?'

   (59) a-gredel kon ditz (mental)
       (the-Gredel can German)
       'Marguerite knows German.'

   (60) (fut): ma e-jor vurd er a-wt áglis kwe (mental)
       (in-a a-year will he well English know)
       'Within a year he will know English well.'
       (certainly or probably)

   (61) (past): vi iš glain b'n gärn, hvv iš elsāsēs
       (kent)
       (mental)
       'when I small have been, have I Alsatian known/speak)
       'when I was small, I knew (how to speak) Alsatian.'

   (62) (pres. subj): kentā dr eo epa līrfo? (physical)
       (can-pres. subj you such something lift-up)
       'could you lift that?'

   (63) (pres. subj): dr kentā mr on ģär hālf (physical)
       (you can-pres. subj me at-the dishes help)
       'you could help me with the dishes.'

   (64) (past subj): hátā dr eo epa el:wē kene? (mental)
       (have-pres. subj-aux you such something believe can)
       'could you have believed that?'
When the subjunctive is used, there is either an indication of serious doubt from the speaker's point of view (62, 64): 'I'm not so sure...' or a degree of politeness (65) not indicated by the indicative. 6

2. Permission. Both [kensa] and [därfo] in their root meaning may be used, with [kensa] paraphrasing the permission sense of [därfo].

(65) nr [därfo] gen:  
{kensa}  
'we are permitted to go'

(66) [därfo] (nit) nr kuma?  
{kensa}  
'are you (not) permitted to come along?'

(67) (fut): nr väre nit furt [därfo] bli:vo  
{kensa}  
'(we fut. aux not away may stay)  
'we won't be allowed to stay away'

(68) (past): nr hve nr furl därfo sin  
{kensa}  
'(we have not lazy be-permitted be)  
'we were not allowed to be lazy'

(69) (pres. subj): [därfo] ba:sk ra:mno?  
{kenta}  
'(say pres. subj you grass smoke)  
'might you smoke grass?' (more doubt involved than if indicative were used)

(70) (past subj): hât de gult åtga därfo le:ra?  
(bas sex pres. subj the Gustave embroider be-permitted learn)  
'could Gustave have been permitted to learn to embroider?'

As in the examples referring to ability, the use of the subjunctive indicates a certain amount of doubt from the speaker's point of view, or some polite suggestion.

3. Obligation. Both [mi:n] (absolute obligation/requirement) and [sole](obligation, but the agent has a choice available as to whether or not to comply) are used with [nit bruma] and [nit därfo] as possible negatives as indicated in the Negation section. The root meaning of [sole] corresponds roughly to English 'should', as defined by Boyd and Thorn (1969:66), stating 'that somebody or something makes a demand'. In Alsatian that demand seems to be stronger than that conveyed by 'should'.

(71a) nr mi:n un a:naa dor t:n  
{(we must at the one-o'clock there be)  
'we must be there at one'}
Both internal and external negation may apply.

(71b) mr min won a:nee nit dort sin

(71c) mr min nit on a:nee dort sin

'we must not be there at one'

[solo] may be substituted for [min] in the above sentences, indicating then a lesser degree of requirement. (The agent may possibly either be unable or unwilling to comply).

In their root meaning [min] and [solo] may be used in all tenses and also in the question form.

(72a) (past) hei avarr a:ofe min?

(72b) hei avarr min a:ofe?

'did you have to work hard'

(have-you hard work must/must work)

The flexible word order of [a:ofe] and [min] allows one to emphasize either the obligation in (72a) or the work in (72b).

(73) (ful) i:s wur d:s farti:s moxe min

'we futuro this finish do must'

'I will have to finish this'

It seems that the negation of the root meaning of [min] and [solo] is done respectively with [nit bru:fe] and [nit d:rfse] unless the negations [nit min] and [nit solo] are used.

(74a) du m:is a:lo:fe

'you must sleep'

(74b) du bru: fe nit tse a:lo:fe

'you don't have to sleep'

(75a) mr solo uenri ma:nuj sa:ve

'we must our opinion say'

'We are supposed to tell our opinion'

(75b) mr d:rfse uenri ma:nuj nit sa:ve

(75c) mr d:rfse nit uenri ma:nuj sa:ve

'we must not tell our opinion'

The use of the subjunctive again conveys a lesser degree of obligation, and involves a certain amount of doubt or uncertainty.

(76) [pres. subj]:i:s m:st mis drumb:re, vam i:s nit a:fe m:st

'(I must=pres.subj myself err, if I not work must=pres.subj)

'I would be mistaken, if I didn't have to work'

(77) (past subj): di hitt:s riks sa:ve solo

(you have=pres.subj nothing say should)

'you shouldn't have said anything'
4. Possibility. To indicate possibility both [kənə] and [dāرفə] are used in their epistemic sense, the latter modal in the subjunctive only.

(78) dū kənə rāšāt hənə 'you may be right'
(you may right have)

(79) s kənə sənə, dəs d rāšāt həs
'it may be, that you are right'

Both internal and external negation seem possible:

(80a) s kənə sənə, dəs d nət rāšāt həs
'it is possible that you may not be right'

(80b) s kənə nət sərə, dəs d rāšət həs
'it can not be that you are right'

When external negation is used (80b) the meaning is 'it must not be the case that'.

Only present indicative and subjunctive may be used with epistemic [kənə]. When the subjunctive is used a greater degree of doubt is conveyed. The subjunctive of [dāرفə] paraphrases the subjunctive meaning of [kənə] with no difference in meaning. Interrogative forms are possible:

(81) jənt (or so əlt sənə?
[əlt]
(ωst-pres.subj he so old be)
(μay
'can he possibly be so old?'

(82) bət so-eptə me:glə kənə sənə?
(have-past subj=aux such-something possible can be)
'could something like that have been possible?'

Only embedded verbs can take the past or future tense.

(83) s əs me:glə dəs ər ɡrəwək əs ɡəin
(it is possible that he sick is been)
'it is possible that he was sick'

(84) s əs me:glə dəs ər ɡrəwək əs ɡəin
(became fut. aux)
'it is possible that he will be sick'
5. Probability/Supposition/Assumption

a. To express probability the future auxiliary [värə], an adverbial expression such as [vöränliː] 'probably', or both may be used.

(85a) də vürə räːt hən
(you fut. aux right have)
'you are probably right'

(85b) də hə vöränliː räːt
(you have probably right)
'you are probably right'

(85c) də vürə vöränliː räːt hən
'you are probably right'

In (85c) there seems to be a greater commitment on the part of the speaker to assert the probability of the proposition. It may be noted here that the future auxiliary carries the meaning of probability rather than that of futurity. To express a future event which, in the mind of the speaker, is certain to occur, Abasian generally uses the present tense with a time adverb indicating futurity such as [morja] 'tomorrow', [iværə] 'the day after tomorrow', [hitəːwa] 'tonight', [iə a jor] 'in a year', and so on. An alternative is to use the future auxiliary [värə] with the infinitive or the main verb (see chart p. 30).

(86a) or kust morja
'he will come tomorrow'

(86b) or vurt morja həna
'he will come tomorrow' or 'he probably comes tomorrow'

(86b) is ambiguous as it could convey either probability or futurity. To specify that futurity is meant, an adverbial expression such as [mats səxər] 'entirely certain' or [unbedətə] 'without fail' may be added to a sentence having the future auxiliary.

(86c) or vurt mats səxər morja həna
'he will certainly/most likely come tomorrow'

Without such an adverbial expression the difference between (86a) and (86b) lies in the degree of certainty, the latter implying some degree of doubt.

b. To express supposition, assumption, and related probability, [mən] and [sə] may be used in the various tenses, in the declarative and negative forms, but not, it seems, in the question form.
6. Necessity/Conclusion. To express necessity, conclusion, only [m:n] 'must' in its epistemic sense is used, and the modal cannot be negated nor take an interrogative form.

(92a) or m:s tham sini, s l:ne kot is on
  (he must at-home be, the light is on)
  'he must be home, the light is on'

(92b) or m:s nit than sin, s l: ne las finkador
  (he must not be home, it is all dark)
  'he must not be home, everything is dark'

(93) s majdala m:s grvink sin, s let gebruxa
     'the little girl must be sick, she vomited'

(94) s m:s rüja, s vekat nika me;
     (it must rain, there grows nothing more)
     'it is necessary that it rains, nothing grows anymore'

While the modal in this sense can only be in the present tense, either indicative or subjunctive, the event denoted by the main verb may be in the past.

(95) or m:s than sin gain, íš hob na rod na re.
    (he must at-home be be=PF, I have him talk hear)
    'he must have been at home, I heard him talk'

When the subjunctive is used, there is always a counter-factual meaning.
or m:st tham sint gain
'It would have been necessary that he be home (but he wasn't)'

or m:st d:st sin, um a-mìl nìmi uf te moso
(he must-pres.subj dead be, for the mouth now:more open to do)
'he would have to be dead not to open his mouth anymore'

7. Volition

a. Alatian has two modals [vela] and [meše] (the latter used only in the subjunctive) which in their root meaning express either want or intent (indicative) or inclination (subjunctive).

(98) ìs vil vise vos d mosò
'I want (to) know, what you are doing'

(99) vət eps sa:va?
'What you something say'
'do you want to say anything?'

(100) nr vela nìke de:ìm vìse
(we want nothing from-it know)
'we don't want to know anything about it'

(101) ìs (mešt) rw:ì hox
{vot}
'I would like to have peace'

(102) votò jurt amukume?
{meštò}
'wouldn't you like to come along?'

[vela] in the subjunctive paraphrases [meša], but with a slightly stronger degree of volition. [vela] is distinct from other modals considered so far, in that the event denoted by the main verb lies in the future; the time point referred to by the modal is always prior to that referred to by main verb. Thus there is often a notion of futurity inherently involved in the use of [vela] by the mere fact that the potential realization of the event often falls in the future. Futurity, however, does not seem essential to the meaning of [vela] and [meša].

(103) or sct or vil si: o ì:ve nìmè
(he says he wants himself the life take)
'he says he wants to kill himself' (volition)

(104) or sct er vurt si: o .navì nìmè
(fut.aux)
'he says he is going to kill himself' (future)
[vele] may be used in all tenses, in declarative, negative and question forms.

(105) (past) he ø nit svîme vele?
'(you) not swim want'
'didn't you want to swim?'

(106) (fut) mi vârê svîme vele
'(we) swim want'
'we will (probably) want to swim'

(107) (fut) dû vurê svîme kene vele
'(you) swim can want'
'you will want to be able to swim'

(108) [past subj] hâts nit svîme vele?
'(have-3pl-subj) not swim want'
'wouldn't you have liked to swim?'

b. Whenever [vele] is used with the main verb in a perfective tense, there is ambiguity in the meaning conveyed.

(109) or vî ghsa hun
'(he) wants eat-PP have
'(he) wants others to eat' or
'(he) claims to have eaten'

Either the subject of the main verb is understood to be different from that of [véla] '(he wants the food to be eaten by someone!)' and [véla] is then used in its root meaning, or there is only one subject for both [véla] and the main verb '(he claims to have eaten!)' and then [véla] is used in its epistemic meaning (IV.B.7.c.). This seems to be consistent with the observations made earlier (IV.B.7.a.) that the root meaning of [véla] is based on information that comes from the future. Therefore [véla] in its root meaning is incompatible with a main verb in the past. Although (109) uses the perfective [ghsa hun] 'have eaten' the meaning conveyed refers to the future '(he wants others to eat' and not '(he) wants others to have eaten'.

c. [véla] in its epistemic meaning seems to convey an assertion which the speaker questions.

(110) or vî gâst am. un debi: hun ø mî tf drej tae:lo
'(he) wants smart be., and by-that can be not up-to 3 count
'(he) claims to be intelligent, yet he can't count up to three' '(yet he is really utterly dumb'

(112) sî vele:fce:1 gîlt hun, un debi: voim so im = lox
'(they want much money have, and by-that live they in a hole)
'(they) claim to have a lot of money, yet they live in a very shabby place'
In the preceding examples, the second clause is not necessary to convey the speaker's doubt; non-linguistic devices such as gestures, intonation may do as well. It seems then that in the case of epistemic [vela], while the speaker asserts the existence of the subject's volition, he also seriously questions, if not rejects, the reality of the object of the subject's volition. That latter dimension does not occur with any of the other modals.

There are a few rare instances, when [vela] may mark an imperative demand and then comes close to the meaning of English 'will'. The example I have is an indirect speech act in which the imperative implies a threat directed toward the listener, and is syntactically a question.

When, instead of [vela], Al Satin uses [vi:re] the future auxiliary corresponding to English 'will', the meaning conveyed is simply a question regarding the subject's intention about the future event expressed by the main verb, and no longer carries any threat.

V. Conclusion

Much remains to be investigated about modality in Al Satin, and the preceding observations are merely a preliminary attempt to describe some of its aspects. In general, the modals seem to express presuppositions to a certain extent. When the modals [ven], [sela], [virfe] are used, the speaker views the event as being dependent on some external authority. When [kena], [sode],[vela] are used, the speaker views the agent as the initiator of the event. Within each category there are points along a probability continuum which may be expanded through the use of the subjective.
<table>
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<th>Force</th>
<th>Source of Authority Internal</th>
<th>External</th>
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<tr>
<td>great uncertainty</td>
<td>[kem]</td>
<td>[darfe]</td>
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<td>slight possibility</td>
<td>[meko:]</td>
<td>[sola]</td>
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<td>[vela]</td>
<td>[m:en]</td>
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<td>or compulsion</td>
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When the modal is in the subjunctive rather than in the indicative mood, an additional counter-factual dimension is added, which increases the degree of doubt conveyed (see footnote 6). Aisianian modals support Horn’s hypothesis of a semantic connection between root modality and epistemic modality. Aisian epistemic modals stand in contrast to the factual in that they invoke the speaker’s point of view, and are capable of expressing various kinds of relation to reality.

There are other semantic questions which would need to be considered in a more comprehensive study. How does the speaker view modality, how does he choose one particular modal in a particular mood rather than another, and what is the relationship between modality and aspect? These are but a few areas of possible investigation.

Footnotes
1 The verb [ge:n] ‘to go’ is modal-like in this respect:
   1) [ge:n] ẖona
      ‘we are going to work’
      which then indicates also imminence.
   2) A few very common verbs have two alternate forms, a simple verb
      form and the construction with [dik:d] which may be used interchangeably.
      [vins]
      ‘to know’
      11) [vins] ki [dik:d] ən ərvə:j
          [vins] ‘I wouldn’t know any way out’
      [ge:n]
      ‘to go’
      iii) [ge:n] wən ən əms gəlt
            [ge:n] wən əm əms gəlt ge:n
            ‘it would go him not about money’
            ‘it wouldn’t be a matter of money according to him’
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[kums] 'to come'

iv) vân or kums kent, kâm or sofort
vân or kums kent, dêd or sofort kums
'if he could come he would come right away'

3 By compound tense is meant any tense involving an auxiliary and a main verb, such as a perfective tense.

4 The double infinitive construction is not restricted to modals; it may occur with a very few verbs such as [he:re] 'hear' and [sâ:n] 'see':

v) is hâm se re:fe he:re
   (I have them call hear)
   'I heard them call'

vi) is hâm se hile sk:n
    (I have him cry see)
    'I saw him cry'

5 Only in the subjunctive can [dârs] have an epistemic reading in Alsatan. However [dârs] in the subjunctive may also have the root meaning of permission:

vii) dü dársfâ v glas hâm vân d âlge kentâ
   'you would be permitted to have an ice-cream, if you could swallow'

6 This study doesn't deal with an investigation of the relationship between subjunctive and modality, which would be necessary for a comprehensive analysis of modality. The following observations seem pertinent, however. According to Bouma (1973),

Subjunctive and modality contrast in that the former focuses on the fact that the event stands in no designated relation to reality, whereas in the latter the focus is on a particular relation.

When the subjunctive is used with epistemic modals, the speaker asserts the lack of reality of a certain modality; thus the event is doubly removed, first by the subjunctive and second by the use of the modal. In conditional sentences, in which in Alsatan the subjunctive is used, the speaker asserts a particular modal relation of the event to reality as counter-factual.

viii) vân or kums vot, not ar d raís moro kena
     (if he come wâ:n=pres.subj, mâ=sus=pres.subj he the trip make can)
     'if he wanted to come, he should be able to make the trip'
     (both the intention of the agent and the event are negated: the agent won't come, he doesn't want to)
Example (106) illustrates the stackability of Alsatian modals, a common phenomenon in that dialect. Stackability of Alsatian modals would need a thorough investigation, but is beyond the limits of this paper. The following examples are simply to illustrate further the concept.

ix) dü wurª dort ¨wime kene m:n
   (you fut=aux there swim can must)
   'you will have to be able to swim there'

x) s kent sin, des dü gla=ve kene vela meti
   'it could be possible, that you would like to want to be able
   to believe'
   (it c accessing) he, that you believe can want would-like

xi) er kent rªst hon
   'it might be possible that he is right'

xii) or nist rªst kene hon
    'he would have to be able to be right' (but isn't)

xiii) va u rªst sa va re, set er rªst kene hon
    'if he wanted to say something, he should be able to be right'

In both (xii) and (xiii) [kene] no longer retains the epistemic meaning of (xi). It seems then, that in Alsatian, when modals are stacked, only the highest in the phrase-structure tree may be epistemic.
References


Kratzer, A. 1977 What 'must' and 'can' must and can mean. Linguistics and Philosophy 1: 337-355.


<table>
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<tr>
<th>Tense</th>
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*Except for [mnds], medals in Alsatian occur in all tenses.*
MODALITY IN AIGATTAN
Abbreviations and Symbols Used:

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☐  it is necessary that
◇  it is possible that
~  negation
p  proposition