13. Mood and modality in Berber

*Amina Mettouchi*

1. Introduction

As the title of our chapter suggests, less will be said here about modals\(^1\) than about mood and modality in Berber. Indeed, in Berber, there are no modals such as those that can be found in English for instance. Instead, particles and aspect-mood markers inside the verb stem combine to convey the whole range of meanings that other languages express through modal auxiliaries or periphrastic expressions. V1-V2 structures expressing ability, volition and sometimes obligation, possibility and probability do exist, but they are elaborations on basic “particle + TAM-marked stems” structures.

Our aim in this chapter is to show that this organisation of the modal system in Berber is linked to the fundamental non-temporal and deictic feature of those languages, and that the core of the modal domain revolves around the position of the speaker, with respect to whom situations manifest themselves as real or non-real. This organisation entails that the dimension of mood, in Bhat’s (1999: 63) sense (“[m]ood is concerned with the actuality of an event”) is dominant in the verbal system of Berber. This dimension has mostly been labelled “aspectual” by berberologists and afroasiaticists, but with a definition of aspect as “viewpoint aspect” that is not the commonly accepted use of the term: a focus on boundaries and intervals.

The chapter is organised as follows: first we will make a few remarks on the framework of the study and the terminology used, then we will present the relevant facts about Berber morphosyntax and give a typological profile. We will then study in detail the system of a Northern variety of Berber, Taqbaylit (Kabyle). After having characterised the Kabyle system, we will present the form-function mapping of modality in other varieties of Berber, and show that although there is considerable variation, the main building block of mood and modality remains the preverbed aorist. We will conclude by claiming that the deictic nature of the *irrealis* particle points to a particular grammaticalisation process that does not follow the same paths
as Romance and Germanic, where the system is rooted in agent-oriented predications.

2. Preliminary remarks

Bybee et al. (1994: 176) propose that grams indicating "obligation, probability, and possibility" as well as "ability and desire" are associated with moodality, whereas "imperative, optative, conditional, and subordinate verb forms" are associated with mood. We will see that the forms which pertain to the domain of mood in Bybee’s sense of the term can express moodality in Berber. Bhat’s less restrictive definition of mood seems to better account for Berber data (1999: 63):

“There are three different parameters that are used by languages while establishing modal distinctions; these are the following:
(i) a speaker’s opinion or judgement regarding the actuality of an event,
(ii) kind of evidence that is available for the speaker to form this judgement, and
(iii) kind of need or requirement which forces the speaker (or someone else) to get involved in an event (or to carry out an action).

The first two parameters establish ‘epistemic’ (knowledge-based) moods and the third one establishes ‘deontic’ (action-based) moods .”

Berber is a language family belonging to the Afroasiatic phylum. Berber languages are spoken in the North of Africa, from Egypt to the Atlantic ocean, and from the Mediterranean to Burkina-Faso.

In Berber, the verbal stem is completed by an obligatory personal affix which refers to the main participant of the event or state. The following examples are from Kabyle, but this morphological characteristic is valid for the whole of Berber.

ye-ḍḍa : SBJ.3M.S-eat[PVF] : ‘he ate/has eaten’
basic utterance = personal affix : ye- stem : ḍḍa
stem = root (ḍḍ) + aspeccual scheme (here perfective, realised -a).

The verb can be followed by clitics (dative and accusative), and a proximal or distal particle. The order of clitics is rigid.

(1) tagcict te-fka
   yas ten iD.
girl SBJ.3F.SG-find[PFV] DAT.3SG ACC.3M.PL PROX
   ‘The girl gave them to him/her.’

TAM^3 configurations are based on apophonic distinctions, or gemination or prefixation of the verbal stems. The systems are quite varied, depending on the language. For instance Kabyle (Table 1) only has four basic themes, whereas Aïr Tuareg (Table 2) has six.

<table>
<thead>
<tr>
<th>Aorist</th>
<th>Perfective</th>
<th>Negative perfective</th>
<th>Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ddu-</td>
<td>-dda-</td>
<td>-ddi-</td>
<td>-jjaddu-</td>
</tr>
<tr>
<td>-kraz-</td>
<td>-kraz-</td>
<td>-kris-</td>
<td>-karraz-</td>
</tr>
</tbody>
</table>

Table 1. Taqbaylit aspeccual bases (roots DD ‘come’, and KRZ, ‘plough’)

<table>
<thead>
<tr>
<th>Aorist</th>
<th>Perfect</th>
<th>Perfective</th>
<th>Neg. Perfective</th>
<th>Imperfective</th>
<th>Neg. Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>-rtok-</td>
<td>-rtak-</td>
<td>-rtaak-</td>
<td>-riek-</td>
<td>-raattok-</td>
<td>-rattok-</td>
</tr>
<tr>
<td>-g(u)-</td>
<td>-ge/a/-</td>
<td>-gee/aa-</td>
<td>-ge/a/-</td>
<td>-taagg(u)-</td>
<td>-tagg(u)-</td>
</tr>
</tbody>
</table>

Table 2. Aïr Tuareg aspeccual bases (roots RTK, ‘fall’, and G, ‘do’)^4

The proto-Berber system, as reconstructed by Cohen (1989: 155), was originally based on an opposition between what is now the aorist (A), and what is now the perfective (B). Secondary distinctions appear with the imperative (geminated, level II), the drift of the aorist into the modal domain (level III), and the introduction of a concomitance particle lla. This reconstruction is tentative, and does not take into account the negative themes, especially the negative perfective, which is pan-Berber, but it gives an idea of one of the possibilities of evolution of the system.
Table 3. Reconstruction of the Proto-Berber aspectual system (Cohen 1989: 155), with root GM 'draw water from a well'.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>σ</td>
<td>y-agem</td>
<td>y-agem</td>
</tr>
<tr>
<td>a</td>
<td>ye-ttagem</td>
<td>y-agem</td>
</tr>
<tr>
<td>β</td>
<td></td>
<td>ye-ttagem</td>
</tr>
</tbody>
</table>

3. A detailed survey of Kabyle (Tuqbaylit)

Kabyle is spoken in the North of Algeria (and in some big cities like Algiers, alongside Arabic) by about four million speakers, to which another million of emigrant speakers in Europe and Canada can be added. The region is quite small but very densely populated. It is mountainous, and is separated into two dialectal areas: the Western area, and the Eastern one. Our examples are from Western Kabyle.

3.1. Typological profile of Kabyle

Predicates can be verbal or non-verbal, but our focus in this chapter will be on verbal predication. The verbal system is dominated by mood and aspect, which are marked thanks to vocalic alternations, prefixation or consonant gemination. Preverbal particles are used to modify the basic mood-aspectual schemes and provide specific modal and aspectual values (irreals, progressive). As far as the noun phrase is concerned, there are no articles, and noun phrases are either in the citation (unmarked) form — the "free state" — or in the "annexed state" (marked). Independent pronouns form a special paradigm, with no state alternations. The possessor always follows the possessee, and adjectives are placed after nouns. Word order at the clause level is quite flexible (information-structure dependent) but Kabyle is clearly a head-initial language. All verbs are finite. The verbal system is asymmetrical with respect to negation (Mettouchi 2006): the aorist can only be negated in the optative, and there is a negative perceptive as the counterpart of the perceptive. Moreover, the imperfective appears in negative modal contexts. This will be studied in detail below.

3.2. Mood and modality in positive utterances

The two forms encountered in this domain are the unpreverbed aorist (imperative, hortative, bare aorist), and the preverbed aorist (also sometimes the preverbed imperfective). The (preverbed or unpreverbed) aorist is very frequently used: counts on data from conversational and narrative corpora show that it appears in almost 35% of occurrences. This is due to the fact that it has a wide range of uses, which will be discussed below. The survey of all uses (see also Mettouchi 2002) is necessary to understand the scope of the modal domain in Kabyle.

3.2.1. Unpreverbed aorist

The aorist stem is used in Kabyle mainly for the formation of imperatives and hortatives, with special sets of personal affixes. The following table presents the imperative set of affixes, with the stem ečč ('eat', aorist).

Table 4. Imperative affixes

<table>
<thead>
<tr>
<th></th>
<th>2 singular</th>
<th>2 plural masculine</th>
<th>2 plural feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>ečč</td>
<td>ečč-et</td>
<td>ečč-emt</td>
<td></td>
</tr>
</tbody>
</table>

In the following example, the wild cat (protagonist of a traditional oral tale) addresses things and objects in his house.

(2) yli d a tiquit tacninent /
    SBU.2SG.fall[IMP,AOR] PROX VOC drop.FS light
t-ermu-d a talmunt ugercel.
    SBU.2SG-add[AOR]-2SG VOC pancake.FS bran.AS
‘Fall, light drop, and you too, bran pancake.’
The unpreverbed aorist also, rarely, appears (with the standard set of affixes) in sequence with a perfective, an imperative or an optative, to link a series of actions done or to be done. This is the case with *t-ermu-t* ‘you add’ in example (2) above, which follows an imperative, and therefore is interpreted as an order in this context.

Imperatives can also be formed on the imperfective stem, conveying insistence on the desired involvement of the hearer. By contrast, the aorist imperative *hadar* ‘be careful’ in example (3) below would be simply oriented towards the realisation of the process.

(3) *yur-ek* thadər
    iman-ik
    at-2M.SG SBJ.2SG.take.care[IMP.IPFV] self-POSS.2M.SG
    ‘Beware, take good care of yourself.’

3.2.2. Preverbed aorist

Most of the occurrences of the aorist in the data are preverbed with the particle *ad*, which derives from a proximal deictic marker. It is still used as a proximal demonstrative (‘this’) in some Berber languages (Shilha for instance), but not in Kabyle. The *ad+aorist* form covers a wide range of meanings, and can be found either in independent or main clauses, or in complement clauses.

*ad+aorist in main or independent clause*

In main or independent clauses, the value of *ad+aorist* is often that of a future statement:

(4) *a* *d* ini-γ sin wa-walen
    IRR PROX say[AOR]-SBJ.1SG two words.AS
    ‘ad* le partis* yagi,
on ‘les partis’ those
    ‘I’ll say a few words about those (political) parties.’

In this context, the imperfective stem can appear after the irrealis preverb instead of the aorist. This adds a conative or habitual dimension to the future, or underlines the Aktionsart (with activity-type verbs).

The preverbed aorist also has optative uses, as in the following example:

(5) *a* wen i-barek
    IRR ACC.2M.PL SBJ.3M.SG-bless[AOR]-3M.SG God.AS
    ‘May God bless you.’

It is also the basis of the formation of hortatives, which in Kabyle are based on the aorist stem, circumfixed by the 2nd person plural imperative suffixes and the 1st person plural standard prefix, and preverbed by *ad* or its variant *a*. The following example shows how the hortative is used.

(6) *hwa-ht* a n-lelh-ht
    come[IMP.AOR]-SBJ.2M.PL IRR SBJ.1PL-walk[AOR]-2M.PL
    Iwalid.
    the.one
    ‘Come and let’s walk as one.’

But the *ad+aorist* form is not limited to future, hortative or optative (i.e. non-present and non-past contexts). It is very often found in narratives to describe a series of actions or deeds in a habitual framework. In the following example, while leading her sisters home, the elder sister regularly utters a magical formula in order to protect herself and her sisters from the lion.

(7) *a* s id te-nni awal agi
    IRR DAT.3SG PROX SBJ.3F.SG-say[AOR] word.FS those
    ye-qgel
    IRR SBJ.3M.SG-return[AOR] to behind
    ‘She would tell him those words, and he (the lion) would walk back.’

In similar contexts, an imperfective or a perfective could be used, with a proper habitual frame in the preceding context. The *ad+aorist* form, contrary to the perfective or imperfective, implies that the series of actions is not seen *a posteriori*, or as characterizing the protagonist, but as it unfolds, materialises.
The preverbed aorist can also be used for recipes or instructions for use. In the following example a woman is explaining how to realise a piece of witchcraft:

(8) *a ten te-zzi-di sebea mgerat*
   IRR ACC.3M.PL SBJ.2S-turn[AOR]-2SG seven times
   *i 7finast-im, a s t-int-di "...".*
   to cow.AS-POSS.3SG IRR DAT.3SG SBJ.2SG-say[AOR]
   ‘You turn the thing seven times above your cow, and say “...”.’

When they describe a tendency of the topic, proverbs are very often in the *ad+aorist* form. In example (9), an imperfective could be used (see example (10)), but the effect is more descriptive. In example (9), the situation described is understood as everyone’s potentiality, as something that we are all bound to do, something that stems from our nature as human beings. The translation here uses (prosodically marked) will with precisely the same nuance it has in English: not the future meaning, but the idea that this is something that occurs quite naturally, in the course of things.

(9) *kul yiwen ad i-thae tajadit-is.*
   all one IRR SBJ.3M.SG-follow[AOR] ancestry.FS-POSS.3SG
   ‘Everyone will (= is bound to) follow the example set by their forefathers.’

(10) *kul yiwen ye-ttabae tajadit-is.*
    all one SBJ.3M.SG-follow[IPFV] ancestry.FS-POSS.3SG
    ‘Everyone follows the example set by their forefathers.’

The *ad+aorist* form can therefore be characterised as marking the coming into existence or the advent of a situation or action, viewed as the outcome of a potentiality.

**ad+aorist in complement clauses**

It is in this part perhaps that the comparison with modals in the languages of Europe can be most fruitful. In most cases we have a V1-V2 structure, with V2 in the *ad+aorist* form. Given that all verbs have a personal affix,
When the judgement of possibility concerns a realised event or situation it is followed by a verb in the perfective or imperfective.

The verb mken is however not the most often heard. Instead, the adverbial waqila ‘maybe’ is almost always used in sentence-initial position (see example 13). This shows, in our opinion, that Kabyle prefers particles and adverbials to verbs for the expression of modal concepts.

(13) waqila ad i-ruh ar Tizi Wezou.
 maybe IRR SBJ.3M.SG-go[AOR] to Tizi Ouzou
 ‘It’s possible that he might go to Tizi Ouzou (city).’

The next type of probability is interesting, because V1 is itself in the ad+aeorist form. It can be either the verb ili ‘be’, or the verbs asf ‘find’ or as ‘arrive’, bearing the appropriate person affix. It is followed by a V2 in the perfective.

The following dialogue is about the onset of the liberation war in Algeria. A young man is explaining how his father reacted to the news.

(14) - I babak, ye-sla?
 - and your dad, SBJ.3M.SG-hear[PFV]?
 - ‘what about your father, has he heard (about that)?’
 - ad y-ili ye-sla, ...
 - IRR SBJ.3M.SG-be[AOR] SBJ.3M.SG-hear[PFV],
 - ‘probably, (lit. it will be he heard: he probably heard).’

It is possible to use the following expressions in lieu of ad y-ili ye-sla: ad t-af-ed yesla (lit. ‘you’ll find he heard’), and a d y-as yesla (lit. ‘it will arrive (that) he heard’).

(14’) - ad t-af-ed ye-sla, ...
 - IRR SBJ.2M.SG-find[AOR]-SBJ.2M.SG SBJ.3M.SG-hear[PFV],
 - ‘probably, (lit. you will find he heard: he probably heard).’

(14”) - a d y-as ye-sla, ...
 - IRR PROX SBJ.3M.SG-arrive[AOR] SBJ.3M.SG-hear[PFV],
 - ‘probably, (lit. it will arrive he heard: he probably heard).’

This set of modal expressions points to an element that we consider central in the expression of modality in Kabyle: the deictic dimension. Indeed, just as ad, the preverbal irrealis particle, is derived from a deictic element, those expressions imply that probability is the coming into existence (verbs as, ‘arrive’, and ili, ‘be’ or asf, ‘find’) of a situation that could be witnessed by the hearer as well (14’), in a joint, converging, pointing gesture.

Verbs expressing ability have the same personal affixes as their V2; cf.:

(15) Tamedda-kweit-is te-zmer a s
 friend.FS-POSS.3SG SBJ.3F.SG-able[PFV] IRR DAT.3SG
t-imi.
SBJ.3F.SG-say[AOR]
‘her friend, she could tell her.’

Verbs expressing want, desire, and need are characterised by the fact that their personal affixes vary, as well as those in the complement clause.

(16) te-byam a t-eiw-em,
SBJ.2M.PL-want[PFV]-2M.PL IRR SBJ.2M.PL-help[AOR]
ur te-qi-m ara amek.
NEG SBJ.2M.PL-know[NEG.PFV]-2M.PL NEG how
‘you want to help, (but) you don’t know how.’

The introduction of another participant, as in ‘you want him to help’ would be expressed by:

(16’) te-byam ad t-eiwn.
SBJ.2M.PL-want[PFV]-2M.PL IRR SBJ.3M.SG-help[AOR]
‘You want him to help.’

Refusal and need work on the same pattern:

(17) y-ugwi a s d
SBJ.3M.SG-refuse[PFV] IRR DAT.3SG PROX
i-ddu.
SBJ.3M.SG-come[AOR]
‘He refused to accompany him.’

(18) ye-hweg ad i-ruh.
SBJ.3M.SG-need[PFV] IRR SBJ.3M.SG-go[AOR]
‘He needs to go.’
When the judgement of possibility concerns a realised event or situation it is followed by a verb in the perfective or imperfective. The verb *mken* is however not the most often heard. Instead, the adverbial *waqila* ‘maybe’ is almost always used in sentence-initial position (see example 13). This shows, in our opinion, that Kabyle prefers particles and adverbials to verbs for the expression of modal concepts.

(13) *waqila ad i-ruh* ar Tizi Wezuz.

maybe IRR SBJ.3M.SG-go[AOR] to Tizi Ouzou

(It’s possible that) he might *go* to Tizi Ouzou (city).

The next type of probability is interesting, because V1 is itself in the *ad+aorist* form. It can be either the verb *illi* ‘be’, or the verbs *af, ‘find’* or *as, ‘arrive’*, bearing the appropriate person affix. It is followed by a V2 in the perfective.

The following dialogue is about the onset of the liberation war in Algeria. A young man is explaining how his father reacted to the news.

(14) *- I babak, ye-sla ?*

- and your dad, SBJ.3M.SG-hear[PVF]?

- ‘what about your father, has he heard (about that)?’

- *ad y-illi ye-sla,* ...

- IRR SBJ.3M.SG-be[AOR] SBJ.3M.SG-hear[PVF],

- ‘probably, (lit. it will be he heard: he probably heard).’

It is possible to use the following expressions in lieu of *ad y-illi ye-sla: ad t-af-ed yesla* (lit. ‘you’ll find he heard’), and *a d y-as yesla* (lit. ‘it will arrive (that) he heard’).

(14') *ad t-af-ed ye-sla,* ...

- IRR SBJ.2M.SG-find[AOR]-SBJ.2M.SG SBJ.3M.SG-hear[PVF],

- ‘probably, (lit. you will find he heard: he probably heard).’

(14") *- a d y-as ye-sla,* ...

- IRR PROX SBJ.3M.SG-arrive[AOR] SBJ.3M.SG-hear[PVF],

- ‘probably, (lit. it will arrive he heard: he probably heard).’

This set of modal expressions points to an element that we consider central in the expression of modality in Kabyle: the deictic dimension. Indeed, just

as *ad,* the preverbal *irrealis* particle, is derived from a deictic element, those expressions imply that probability is the coming into existence (verbs *as,* ‘arrive’, and *illi,* ‘be’ or *af,* ‘find’) of a situation that could be witnessed by the hearer as well (14’), in a joint, converging, pointing gesture.

Verbs expressing ability have the same personal affixes as their V2; cf.:

(15) *Tameddakwelt-is te-zmer a s*

friend.FS-POSSESS.3SG SBJ.3F.SG-be.able[PVF] IRR DAT.3SG

t-ini.

SBJ.3F.SG-say[AOR]

‘her friend, she could *tell* her.’

Verbs expressing want, desire, and need are characterised by the fact that their personal affixes vary, as well as those in the complement clause.

(16) *te-by-a-m a t-siw-em,*

SBJ.2M.PL-want[PVF]-2M.PL IRR SBJ.2M.PL-help[AOR]

ur te-zri-m ara amek.

NEG SBJ.2M.PL-know[NEG.PVF]-2M.PL NEG how

‘you want to help, (but) you don’t know how.’

The introduction of another participant, as in ‘you want him to help’ would be expressed by:

(16') *te-by-a-m ad t-eiwn.*

SBJ.2M.PL-want[PVF]-2M.PL IRR SBJ.3M.SG-help[AOR]

‘You want him to help.’

Refusal and need work on the same pattern:

(17) *y-ugwi a s d*

SBJ.3M.SG-refuse[PVF] IRR DAT.3SG PROX

t-ddu.

SBJ.3M.SG-come[AOR]

‘He refused to accompany him.’

(18) *ye-hweq ad i-ruh.*

SBJ.3M.SG-need[PVF] IRR SBJ.3M.SG-go[AOR]

‘He needs to go.’
Semantically, all these examples are characterised by the fact that the predicate in V2 is construed as potential, virtual. This is in keeping with the definition we gave of the ad+aorist form above.

These “V1-V2” modal expressions have not attained the same degree of grammaticalisation. The following parameters can be used to classify these expressions on a cline of grammaticalisation:

- if the personal affix of V1 is coreferential with the personal affix of V2, we consider V1 as less auxiliarised than if the personal affix of V1 is the third person masculine, and stands for the complement clause;

- given that in Berber the NP that is coreferential with the personal affix (the ‘lexical subject’) can appear after the verb (“VS” word order), we can say: if an NP cannot appear after V1 (before V2) although it is coreferential with the V1 affix, then the structure is more auxiliarised than if that NP can appear after V1 and before V2.

The cline is then as follows:

- Obligation (deontic values), probability and possibility are the most grammaticalised,

- desire, need and ability are the least grammaticalised.

Note, however, that it is possible that periphrastic obligation, probability and possibility are actually structural borrowings, since they coexist with ad+aorist forms that are not preceded by V1, but rather by particles, adverbials or thetic-deictic expressions (‘you will find that...’, ‘it will arrive that...’, ‘it will be that...’, etc.).

**ad+aorist in concessive and purposive clauses**

Those clauses are introduced by concessive or purposive markers. We will show two examples, one with *xas* (‘even if’, ‘although’), the other with *akken* (‘so that’, ‘in order to’).

(19)  
{xas}  
\[ IR\]  
\[ ACC.3.M.S \]  
\[ SBJ.3.M.PL \]  
\[ INSULT[AOR] \]  
\[ even.if \]  
\[ word.FS \]  
\[ ‘Even if they insult him, he doesn’t (‘won’t’) say a word.’ \]

(20)  
{wid}  
\[ UR k \]  
\[ ne-ssin \]  
\[ ara \]  
\[ those NEG ACC.2.M.S NEG.PTCP-know[NEG.PVF] POST-NEG \]  
\[ ‘Let him go.’ \]
Other markers

Other markers can be combined with ad+aorist to express modal values. The first such marker is the word wissen, ‘perhaps’, the outcome of an amalgamation process between *wi ‘who* and *ye-ssn-en ‘knowing*. This word is reinforced in (25) by ad *y-ili ‘possibly’, ‘probably’, already presented under section 3.2.2.2., example (14).

(25) \[ \begin{align*}
\text{imi } & \text{te-ssusen,} \\
\text{since } & \text{SBJ.3F.SG-be.quiet[PFV] who.knows} \\
\text{ad } & \text{y-ili } \text{hw}i \text{-} \gamma \\
\text{IRR } & \text{SBJ.3M.SG-be[AOR] please[PFV]-SBJ.1SG DAT.3SG} \\
\text{‘if she stopped talking, perhaps it was} & \text{because) she was attracted to me.’}
\end{align*} \]

The second marker to be discussed here is a complex construction. In (26), the verb ini, ‘say’ is in the ad+aorist form, and is complemented both by a complement clause, and by a dative clitic, which has a reflexive meaning when used with verb ini. This structure, quite close to French on *dirait* ‘one would say’ or Italian *si direbbe*, is the most frequent for the expression of interpretational judgement.

(26) \[ \begin{align*}
\text{a } & \text{s } \text{t-ini-} \text{ag} \text{g} \text{ur} \\
\text{IRR } & \text{DAT.3SG SBJ.2SG-say[AOR]-2SG month.FS} \\
\text{ur } & \text{ttise-} \gamma . \\
\text{NEG } & \text{sleep[NEG.PFV]-SBJ.1SG} \\
\text{‘It seemed (you’d think) I hadn’t slept for a month.’}
\end{align*} \]

3.2.3. Conclusion on modality in positive utterances

This survey of the various uses of the bare aorist stem and the ad+aorist form in positive modal utterances shows that:

- the bare aorist rarely appears as such, except in imperatives. Its value is simply to posit a relation between a subject and a verb, the precise nature of which is determined either by its insertion in the imperative paradigm, or by its dependency with regard to a preceding verb.
- the ad+aorist form is very frequent. The (former deictic) particle ad plays the role of a semantic linker between the sub-specified predication
construed by the aorist, and the speaker’s situation of utterance or viewpoint.\textsuperscript{10} It covers the whole domain of modals, subjunctive and infinitive in English. It can be employed as past, present or future, and is therefore unspecified for tense. Its aspectual value is mostly perfective, since for habitual or conative predications, the \textit{ad}+/\textit{imperfective} form is sometimes preferred. Its modal value is that of a potential in the course of, or aiming at, actualisation. Depending on the context, either the potential domain or its actualisation is given prominence. The dimension of assessment linked to the speaker’s judgement is always present, so \textit{ad}+/\textit{aorist} is never a realis marker.

3.3. Mood and modality in negative utterances

In Kabyle, the aorist is excluded from negative contexts, except for the negative optative:

(27) \textit{a\ wer \ d \ y-uylal!}\smallskip
\textsc{opt.\ neg \ prox} \textit{SBJ.3.M.sg\-come.back[AOR]}
\textquoteleft May he not come back!’

The expression \textit{a wer} is probably derived from the combination of irrealis particle \textit{ad} and negative particle \textit{ur}.

The prohibitive is built of the combination of the imperfective stem with the imperative set of affixes, preceded by the negative particle \textit{ur}. The negative particle is the same for all verbal\textsuperscript{11} negative utterances.

(28) \textit{Anf-et \ as \ ur}\smallskip
\textsc{leave}[\textit{imp.aor}]-\textit{Sbj.2-pl} \textit{dat.3sg \ neg}
\textit{xeddem-t}\smallskip
\textit{acemma}.
\textit{Sbj.2-pl\-do[imp.ipfv]\-2pl \ thing,fs}
\textquoteleft Leave him alone, don’t do anything.’

The negative hortative has the same form as the negative future (see below): a preverbal negative particle followed by the imperfective stem with the standard first person plural prefix. It is here followed by the postverbal “negative”\textsuperscript{12} particle \textit{ara}.

(29) \textit{ur \ ne-tru\mbox{-}hu \ ara!}\smallskip
\textsc{neg \ sbj.1.pl\-go[ipfv]} \textsc{neg}
\textquoteleft Let’s not go!’

Otherwise, perfective utterances are negated thanks to particle \textit{ur} and the use of the negative perfective form, which has a basic counterfactual value\textsuperscript{13}, as in example (20). The negative perfective can be considered as a modal form, though it hasn’t been viewed as such in Berber studies, which consider it simply as the negative “counterpart” of the perfective, and therefore an aspect.

The negative “counterpart”\textsuperscript{14} of positive utterances in the \textit{ad}+/\textit{aorist} (30), and in the imperfective (30’), is the imperfective (30’’).

(30) \textit{ad \ y-ali \ ar \ taddart.}\smallskip
\textsc{irr \ sbj.3.m.sg\-climb[aor]} \textit{to village.as}
\textquoteleft He will climb to the village.’

(30’) \textit{ye-tali \ ar \ taddart.}\smallskip
\textit{Sbj.3.m.sg\-climb[ipfv]} \textit{to village.as}
\textquoteleft He (usually) climbs to the village’ (also: ‘he is climbing to the village’).

(30’’) \textit{ur \ ye-tali \ ara \ ar \ taddart.}\smallskip
\textsc{neg \ sbj.3.m.sg\-climb[ipfv]} \textsc{neg \ to village.as}
\textquoteleft He will not climb to the village’ (also: ‘he is not climbing to the village’, or ‘he doesn’t (habitually) climb to the village’).

This phenomenon points to a close interaction between aspect and mood in Kabyle (Mettouchi 1996 and to appear). The negative domain has its own mapping, organised around the notion of counterfactuality. We have shown that in Kabyle the negative domain only contains forms whose semantic values underline the confrontation of the contents of the prediction to the actual situation assessed, or the confrontation of competing viewpoints on that situation (Mettouchi 2000, 2006).

To conclude, mood (in the wide sense of the term) and modality are rooted in the system of verbal oppositions, deemed “aspectual” by berberologists, but which we would tend to call mood-aspectual. No “modals” emerge as such, even if some verbs expressing need, ability, etc. are used in modal expressions. Moreover, for the deontic domain as well as
for the domain of possibility and probability, the use of *ad+aorist*, associated in some cases with adverbial particles or markers, is more frequent than the use of expressions of the type ‘it is possible/necessary that...’.

One can propose to represent the building-blocks of modal expressions as in the following schema:
- first level: the stem is associated with either the imperative, the hortative, or with standard affixes;
- second level: this construction is either preverbed or remains unpreverbed;
- third level: the *ad+aorist* construction is used as a complement clause in modal structures involving a V1 expressing obligation, possibility, probability, want, need etc. It can also be used, as in our examples revolving around probability, to modify a complement clause in the perfective or imperfective.

Contrary to French where the subjunctive is clearly a subordination mood, the *ad+aorist* form is quite autonomous in Kabyle. It appears in main and complement clauses (the variant *ara+aorist* appears in relative clauses), and is motivated mainly by its semantics. It looks at the way the link between the sub-specified predication conveyed by the aorist and the speaker’s situation of utterance or viewpoint is construed, namely as a potentiality in the course of, or aiming at, actualisation.

4. Modal configurations in other Berber languages

Not all Berber languages have the minimalistic modal configuration of Kabyle, with a polyvalent *ad+aorist* form for almost the whole of the irreals domain. Actually, each system should be studied in itself, in considerable detail. There is no space to do so here, and we would only like to give an overview of the various configurations, in the following varieties: Tachelhit, Figui Berber, Ahaggar Tuareg, Siwi Berber, in order to characterise the role of mood and modality in each language.

The imperative is attested in all varieties, and based on the aorist stem. The imperfective imperative may be used, as in Kabyle, for specialised effects.

The hortative is always based on the aorist stem, but its formation differs in the various languages: in Tachelhit it involves the suffixation of the (first person plural) dative clitic –*ay* to the stem, itself associated with imperative affixes: if the imperative is second person singular, then the hortative is addressed to one person; if the imperative is second person plural, then the hortative is addressed to a group. In Figui Berber the construction also involves the aorist stem, the suffixation to the stem of the dative clitic –*add* (first person plural dative clitic, probably amalgamated with the proximal particle *dd*), and the imperative affixes. Kossmann (1997) also mentions an adhortative whose structure is similar to that of Kabyle: a first person plural standard (i.e., non-imperative) prefix, a feminine or masculine suffix, and the preverbed particle *ad*.

The prohibitive in Tachelhit is based on the aorist stem, with the standard second person affixes, preverbed by the sequence “irreals + negative marker” (*ad ur*). In Figui Berber the prohibitive is based as in Kabyle on the imperfective stem, with the imperative affixes, and preceded by the negative marker *ur*. In Ahaggar Tuareg, the prohibitive is built on either the negative perfective or the negative imperfective stem, with the
standard second person affixes, preceded by the negative marker ur. Siwi Berber uses the imperfective stem and the standard affixes, preceded by the negation la (a loanword from Arabic).

The bare aorist has different values in the various Berber languages. In Tachelhit it is still quite frequently used in narratives, with a perfective value, whereas in other dialects it is limited to the modal domain.

The semantic domain of the ad+aorist form (which we could label the “virtual”) is different depending on the emergence or not of “future tenses”. Indeed in Tachelhit, for instance, the emergence of a temporal future based on the verb ‘want’ has limited the ad+aorist form to the expression of potentiality (and the optative). In some Tachelhit varieties (Hebaz 1979) there is a second distinction between neutral (temporal) future (particle rad), and “certain” future (particle ddayd). The rad+aorist form comes from the grammaticalisation of i-ra ‘he wants’ + ad+aorist. The ddayd+aorist form comes from the grammaticalisation of i-dla ‘he comes’ + ad+aorist.

We therefore have a threefold opposition between prospective (ad+aorist), neutral future, and “certain” future. Only the ad+aorist form has a range comparable to that of Kabyle, and can refer to present or past. The two other forms are more temporal in that they are non-present and non-past. Leguil (1982) uses this argument to claim that Tachelhit is introducing the parameter of tense in its system. Similarly, in Figuig a future, described by Kossmann (1997) as expressing certainty or will, has appeared. Its form, sad+aorist, comes from the grammaticalisation of i-xes ‘he wants’ joined with the ad+aorist form. Interestingly, its negation does not imply the use of the imperative (preceded by the verbal negation ur), as for the ad+aorist form, but the preverbering of a negative marker normally used for non-verbal sentences to the sad+aorist form. In Siwi Berber, there is no mention of a “future split”. The ga+aorist form is negated simply by the preverbering of the negative marker la, with no change of TAM stem.

From the survey presented here, we can conclude that each system has its own organisation, even if some forms are clearly modal for the whole of Berber: the aorist, preceded or not by particle “ad” (or its equivalent “ga”/“ed”).

The personal affix paradigm is the primary factor in the distinction between the potential-virtual (including future and optative), and the hortative, imperative and prohibitive.

Finally, from the available data, it is very difficult to determine whether periphrastic expressions of obligation, probability or possibility are widely used or not. The texts we had access to tend to show that, in Kabyle, these are alternative formulations, the ad+aorist form being flexible enough to accommodate a number of readings.

5. Conclusion on mood, modality, viewpoint and staticity

What can we conclude on the expression of mood and modality in Berber?

First the extension of the use of forms such as ad+aorist suggests that mood as a component of predication is a central category in the grammar of Berber. We would even argue that it is dominant, as the realis/irrealis distinction plays a role at various levels of the language. For instance, in some Berber languages, like Kabyle, there are two “relators” for relative clauses, one is realis, and the other irrealis. We have shown (Mettouchi 2000) that for Kabyle the semantic value of the perfective was actually that of a realis marker. Tense is obviously not relevant, and this has been noted by berberologists from the start, but aspect, in the interval/boundaries sense of the term, is not central either. Rather, what is interpreted as completeness and incompleteness is actually more of a factual/counterfactual distinction (see Mettouchi 2000, 2006). The asymmetry of the system with respect to negation, and the existence of specific negative themes is another argument in favour of mood-dominance in Berber.

Secondly, the morphological material used, namely particles, implies two things:

- as particles, and not verbs, they do not give information on agent-participation.
- as deictic particles, they show that at least in the first (pan-Berber) stage modal values were construed as the potentiality of the manifestation of a situation in the speaker’s sphere.

This type of modal construal is linked to other features of the verbal system of Berber, revolving around the notion of staticity. We have shown this notion to be central in Kabyle (Mettouchi 2004), in which a high number of verbs have a basic stative reading that is not resultative, and in which another category is composed of ambitransitives. The rarity of occurrence of the passive derivation, and the frequency of the causative one (which is actually centrally transitivizing, and changes stative predications into dynamic ones) are arguments in favour of an underlying, original stativity of the system. Deixis is also fundamental in Berber: apart from the deictic origin of ad, the proximal particle plays a very important role at various
levels of predication: its proximal uses (direction towards the speaker) only represent a small part of its semantic range: it is also a benefactive marker, a resultative one, it is linked to thetic verbs, and expresses manifestation in the speaker’s sphere (Mettouchi 1998).

We propose to link the stativity of the verbal system to mood-dominance and the role of deixis, by claiming that predication in Berber, and particularly so in Kabyle, is speaker-oriented, not agent-oriented (Mettouchi to appear).

Lehmann’s treatment of the grammaticalisation of modal verbs and mood as the derivation of modal verbs or auxiliaries from full verbs (2002: 24-25) does not account for languages such as Berber, where such processes are peripheral and partly contact-induced. However, the Berber ad+aorist may not be all that distant from the English modals: like ad, modals are not inflected for person, like ad, they act directly on the verbal stem. The English bare infinitive has some common features with the aorist. If we do not take into account the etymology of modals, we can consider that they form a set of irrealis preverbal particles with specialised uses. Romance modal verbs are more liable to express agent-oriented modality, because they inflect for person. However, when “dummy” il ‘he/it’ and the middle voice are used, the orientation of the predication is shifted away from the protagonist and towards the speaker’s viewpoint, as in, for instance, the distinction between il peut venir (‘he can come’, ‘he is able to come’, ‘he may come’) and il se peut qu’il vienne (‘it is possible that he might come’).

Notes

1. I thank the organisers of the workshop on ‘Modals in the languages of Europe’ at the Valencia SLE meeting for inviting me to present data on a non-European language. I believe as they do that the study of languages surrounding the European area, and Kabyle is one of them, may help to grasp by comparison the specificities of the expression of modality in the languages of Europe.
2. For an overview of Berber languages, see Chaker and Mettouchi (2005).
3. Tense–Aspect–Mood is the usual name for those types of markers, but it is important to note that Berber languages are tenseless.
4. The data are from Galand (2002 1974: 125-127). The vowel /u/ appears in forms where there is no personal suffix; the vowels e/a/o alternate depending on the personal affix.
5. A: unmarked form expressing the subject-predicate relationship; B: marked form expressing a limitation of the subject-predicate relationship; il: preverb expressing concomitance, simultaneity, a: unmarked; β: marked; α: ancient A forms that have drifted into the modal domain.
6. In Kabyle around 30% of the lexicon is borrowed from Arabic, but totally integrated morphosyntactically.
7. Another verb, zmar, is used for ability/capacity (see example (15)). It is not impersonal, and is of Berber origin.
8. It can be reconstructed as the grammaticalisation of a noun meaning “thing”.
9. In this, we are in full agreement with previous studies on the aorist in Berber (Galand 1977, 1987 and 2003, Prasse 1972, Pengouen 1973 and Chaker 1997).
10. See Mettouchi (2002) for a more detailed study of the ad+aorist form.
11. Only the non-verbal negations are different (Mettouchi 1996, 2006).
12. For a detailed study of the uses of the postverbal particle, which does not always appear in negative utterances, see Mettouchi (2001). In that paper, we have argued that the irrealis ara found in relative clauses (see 3.2.2.5.) and the postverbal negator ara are actually the outcome of two grammaticalisation paths starting with the same item, the indefinite ara (‘thing’).
14. This formulation is rather broad and doesn’t account for the deep pragmatic difference between the negative and the positive domains. I have addressed this question elsewhere, for instance Mettouchi (1996, 2006), but will not dwell on it here, for lack of space.
15. Figueur Berber (Kossmann 1997) is spoken in oases in the East of Morocco, near the Algerian border, around Oujda. Tachelhit (Hebaz (1979), completed with Galand 1994 and Aspinion 1953) is spoken in Southern Morocco. Ahaggar Tuareg (Cortade 1969) is spoken in the Hoggar mountains of Southern Algeria, in the Sahara, and Siwi (Lacout 1931) is spoken in the Egyptian oasis of Siwa, west of Cairo towards the Libyan border.
16. Hebaz (1979: 14) considers this a dual marker.
18. ad+aorist in Ahaggar, ga+aorist in Siwi.
19. It expresses prospective values (will, obligation, necessity), optative ones, introduces complement clauses, concessive clauses, purposive clauses.
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