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The Aorist in Zenaga Berber and the Imperfective in two Arabic dialects
A comparative viewpoint

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The Arabic and Berber languages, which belong to the same Hamito-Semitic (or Afro-Asiatic)[1] phylum, show many typological similarities. In the verbal system, this similarity appears namely in the central role played by aspectual meaning, in both synchrony and diachrony, even though important changes have taken place over these languages' long history.[2] In Hamito-Semitic, there are usually few distinctions marked within the verbal system, however it is unlikely that there are verbal systems which mark only the perfective vs. imperfective distinction.[3] Berber takes into account a third verbal base, which, in the tradition of francophone Berber studies, is called the 'Aoriste' and which I will henceforth call Aorist.[4]

One of my goals is to determine the fundamental meaning(s) of the Berber Aorist, but my study here (in its approach as well as in the variety it is principally based on) aims to complement Lionel Galand's study in this volume. I shall proceed in two stages and shall begin by detailing the system of a specific Berber language: Zenaga, which stands out given that its secondary uses of the Aorist (with particle) are much less extensive than in other dialects. I shall then compare this tense-aspect-mood (TAM) system to that of Arabic, basing the study on two dialect varieties representing two distinct stages of historical change. I believe that, beyond the differences between Arabic and Berber, those found in the two Arabic dialects shed light not only on the dynamics at work in Arabic, but also on comparable dynamics which have influenced Berber in the past, and which could explain the current uses of the Aorist in the TAM system.

[1] Arabic belongs to the vast family of Semitic languages whereas Berber, alongside Libyan, constitutes a separate family.
[2] On the multiple additions to the verbal system, through the introduction of originally nominal forms, see Cohen 1984.
[3] These are equivalent to the French *accompli* and *inaccompli*.
[4] The uppercase is used to indicate forms and the lowercase, semantic meanings.

1. The Berber Aorist in the light of Zenaga

The Aorist is evidenced in various Berber dialects, with often identical meanings. Its low frequency —at least in its 'bare' form— and its relatively diverse uses make it difficult to analyze however. This can be explained namely by the fact that over the course of history the Aorist seems to have lost many of its former uses, coming to be used as what some have called, for that very reason, an 'intensive Aorist' (on the renewal of the verbal system, see e.g. Basset 1952, Cohen 1968, Galand 1977 and 1987, Chaker 1995).
To better understand the complex semantics of the Berber Aorist, I will initially explore them indirectly, beginning with the study of the verbal system through other, more highly specialized forms.
My presentation will focus more specifically on Zenaga, a Berber variety spoken in Mauritania. It has certain special features that I will point out as the analysis progresses.

1.1 *The perfective vs. imperfective distinction in Zenaga*

This aspectual distinction applies to almost all verbs.
As a general rule (for both non-derived and a large number of derived verbs), the Imperfective form is morphologically 'heavier' than the Perfective form. In fact these are former derived forms which were later integrated in the system of base verbal stems. This explains their diversity of forms (bearing the prefix *t(t)-* or having a geminated second root consonant).
Table 1

A Form: Imperfective:	B Form: Perfective:
y-əttäddär 'he(it) stings / is stinking'	*y-əddär* 'he (it) stung'
y-issäffäy 'he (it) fetters / is fettering'[5]	*y-əsbäy* 'he (it) fettered'
y-ittuṃdih 'he (it) is aging; it is wearing out'	*y-uṃdäh* 'he (it) has aged; it is worn out'
y-iṛaṣṣaḏ / yətturṣuḏ 'he (it) stinks; it is becoming / starting to stink'	*y-uṛṣaḏ* 'he (it) stank / has stunk; he (it) became / has become stinky'

Semantically, however, the Perfective forms appear to have more precise, clearly delimited meanings, as can be seen in the table.

In the case of processive verbs (both transitive and intransitive), the A form expresses a process which has begun and is not yet completed, while the B form denotes an interrupted process. This is precisely the perfective aspectual distinction; the B form can be used both for completed processes and for processes which are simply perfective. For non-punctual processes, there is regular ambiguity between perfectiveness and completeness. This pertains even when there is a plural object complement, because in the absence of the definite article one cannot choose between the two possible interpretations:

(1) *y-əsbäy* *iʾymän*

[5] The alternation between *b* and *ff* is a particular case, as the most frequent alternations are between a simple fricative consonant and a geminate stop.

3M.SG-fetter.PFV camel.M.PL
'He fettered / He has fettered (the) camels.'

In sentences of this type however, temporal localization is implicit, but can immediately be deduced by the simple fact that the process is in the perfective, which entails that it is past as compared to the time of speech (T_0). It is distinct from (2) which denotes a process which has already begun or which had already begun in T_0:

(2) *y-issäffäy* *iʾymän*
3M.SG-fetter.IMPFV camel.M.PL
'He fetters (the) camels.'

In sentences of this type, the only regularly used temporal indication is *yänhäyä* (< 'be busy doing'), a verb which has grammaticalized as an expression of the future. It makes it possible to explicitly locate the beginning of a process at a time following T_0.

Such a correspondence between perfective aspect and past tense exists for most but not all verbs. Indeed, some verbs in the Perfective can be translated in the present, for example *yəftʸäš* in:

(3) *yuṃṃih* *t-əftʸäš* *äm* *äđ* *t-äguhāḌ*
mother.F.SG 3F.SG-be.trustworthy.PFV even if COP F-hyena.SG
'The mother is trustworthy, even if it is a hyena.'

The fact that the sentence is of a proverbial nature does not affect the temporal meaning attached to *yəftʸäš*. The generic present often found in sayings and proverbs is in fact usually expressed by the Imperfective, thus *yizässän* in:

(4) *əvəffiʾ=n=k* *y-izässän=ki*
udder.M.SG=of=PR. 2M.SG 3M.SG-inform.IPFV=PR.DO.2.SG
əvəffiʾ-n *ämäddäwkʸ-ən-k*
udder.M.SG =of neighbor.M.SG=of =PR.2M.SG
Lit. 'Your teat informs you as to your neighbor's teat' (meaning: 'If you have no money, know that your neighbor doesn't either').

If the aspectual form chosen differs in (3) and (4), it is because the two verbs belong to different categories. While the Imperfective of the dynamic verb 'make known, inform' (factitive of *yəssän* 'know, be aware of') indicates a process which has begun and is still ongoing, the Perfective of the stative verb 'be trustworthy' expresses entry into a state.

The Perfective/Imperfective distinction always bears on the crossing (Perfective) or non-crossing (Imperfective) of a boundary,[6] but this boundary is not identical for all verbs. For processive verbs, it is the final boundary which counts, whereas for stative verbs, distinctions concern the initial boundary. The Imperfective of stative verbs, when there is one, can thus only express a state projected after T_0, e.g. Imperfective *yəttūkiy* 'he will love' vs. Perfective *yäwkiy* 'he loves'.

One observes that stative meaning is often restricted to Perfective forms, however many verbs can have both dynamic and stative meaning, e.g. 'sit; be sitting':

(5) *y-aʾmä* *gäräy* *əmdukkäyən=š*
3M.SG-sit/be.sitting.PFV between friend.M.PL.[of]=PR.3M.SG

[6] We are only concerned here with 'extrinsic' boundaries, which characterize states and activities, unlike 'intrinsic' boundaries, which characterize completion and accomplishment, following the distinction between process sub-groups proposed in Gosselin (1996: 56).

‘He sits between his friends / He sat between his friends.’

In Zenaga, the distinction between these two meanings, with verbs such as *yaʾmä*, can only stem from the context. However, this Berber variety is unusual in that it partially distinguishes between the two meanings, for a restricted number of verbs. Thus, while *yäʾwur* may mean either ‘it is dry’ or ‘it has become dry, it has dried’, the presence of the negation particle leads (or not) to modification of the vowel pattern. This provides a criterion for differentiating between the two meanings (Taine-Cheikh 2009a):

(6a) *wär^ y-äʾwur*
NEG =3M.SG-be.dry.PFV.NEG
a) ‘He (it) is not dry.’

(6b) *wär^ y-uʾwur*
NEG =3M.SG-get.dry.PFV.NEG
b) ‘He (it) has not dried, he(it) has not got dry.’

One should note that the verb *yäʾwur* with stative meaning is used only in the Perfective: the Imperfective *yətti ʾwur* always has processive meaning, i.e. ‘it is drying/will dry, it is becoming/will become dry'.

That being said, processes are not only envisaged from the simple above mentioned ‘perfective vs. imperfective’ distinction. Although only two aspects (perfective and imperfective) are possible in assertive sentences, there are various linguistic means for specifying various phases within the process when so desired. This happens e.g. with verbal elements such as inchoative *yunkär* ‘begin to, start to’ (< ‘stand up’), continuative *yuktäy* ‘continue doing’ (< ‘stay, continue being’), terminative *yuṃrä* ‘(have) already’ (< ‘already be’). The study of these means, and of their compatibility with one another within the verb form makes it possible to refine the semantic distinctions linked to verbal sub-categorization, however this would take us too far from the issue of the Aorist.

1.2 *The affirmative vs. negative distinction*

In Zenaga, it is rare that negative sentences differ from the corresponding affirmative sentences by the sole addition of a specialized particle.[7] Among the differences, there is a notable tendency towards the specialization of given verbal forms in affirmative or negative uses. In the case of the Aorist, however, this specialization concerns only a portion of its uses: non-modal ones.

1.2.1 Negation in indicative sentences

Zenaga example (6a) illustrates the simplest case, where the negative sentence can only be formally distinguished from the affirmative by addition of the negation particle *wär*. This particle, in the same form, is found in all sentences with a verbal or adjectival predicate. The only exceptions, in the indicative mood, are sentences with a nominal predicate, as in (7b):

(7a) *nəttä* *äđ* *ämäž̲är*
he COP emir.M.SG

(7b) *nəttä* *wä-ygi* *ämäž̲är*
he NEG-become.PFV.NEG.3MSG emir.M.SG

a) ‘He is an emir.’ b) ‘He is not an emir.’

[7] This bolsters criticism of ‘lumper’ and ‘splitter’ views on negation (Forest 1993: 16 and *sq*.).

Stative verbs of the type *y-ä'wur* 'it is dry' are not alone in retaining the same vowel pattern in both affirmative and negative sentences, as there are other verbs which always have the same vowel pattern in the Perfective, however they are rare outside monosyllabic verbs or derived verbs with passive meaning bearing the prefix T^y:

(8a) *t-äT^{y}äD^{y}ä*
3F.SG-PASS.divorce.PFV
a) 'She was divorced.'

(8b) *wär t-äT^{y}äD^{y}ä*
NEG 3F.SG-PASS.divorce.PFV.NEG
b) 'She was not divorced.'

Other verbs retain the same vowel pattern in the Imperfective, namely some intransitive verbs and derived verbs with reflexive meaning bearing the prefix *m(m)*:

(9a) *ətkuḍḍur-än*
get.large/rich.IPFV-3PL
a) 'They (will) get large/rich.'

(9b) *wär ətkuḍḍur-än*
NEG get.large/rich.IPFV.NEG-3PL
b) 'They will not get large/rich.'

In general, however (with the exception of verbs borrowed from Arabic —or behaving as such), the vowel patterns of verbs differ between the Perfective and the Imperfective. The existence of negative Perfective forms ((10b) and (11)) is a feature shared by all Berber varieties (distinctions can be marked to a greater or lesser degree however). With regard to negative Imperfective forms (12b), they are to be found in sufficient numbers of Berber varieties (Kossmann 1989) for their presence in Zenaga to be considered a Proto-Berber feature.

(10a) *y-uḍḍaḍ t-äššı*
3M.SG-suck.PFV F-cow.SG

(10b) *wär^ y-uḍḍuḍ t-äššı*
NEG=3M.SG-suck.PFV.NEG F-cow.SG

a) 'He sucked a/the cow.'
b) 'He has not sucked on cow/the cow.'

(11) *i'ð äð^ nä y-äbðā-n əð=äẓoL*
this that=OP2 3M.SG-leave.PFV-PRTC with=good.M.SG
wär^ y-əbðīh
NEG 3M.SG-leave.PFV.NEG
'What has been given in doing good is not lost.'

(12a) *y-ətma'ðär=ti*
3M.SG-see.IPFV=PR.DO.3M.SG

(12b) *wär=ti y-ətmi'ðir*
NEG=PR.DO.3M.SG 3M.SG-see.IPFV.NEG

a) 'He sees him (it).'
b) 'He does not see him (it).'

In (12b), the object pronoun is affixed to the negation particle and not, as in (12a), to the verb. This type of antepositioning (which applies to pronoun affixes as well as to the so-called OP orientation particles) is a pan-Berber feature. This contributes to giving negative sentences not only their own distinctive verbal morphology, but also a partially different structure. However this also occurs with other particles, i.e. it is not restricted to negation (see *äð* in (11)).

1.2.2 Negation in sentences with modal meaning

A/ In Zenaga, the Aorist is mainly found in moods other than the indicative and in non-assertive clauses. Even though their frequency is relatively

low, injunctive clauses may be considered the reference use. In addition to rising intonation, characteristic of injunctions, this type of clause is recognizable in that it bears the particle *äđ*, originally a demonstrative, in initial position.

The negative form of a sentence of this type differs from the affirmative only by the presence, preceding the verb in the Aorist, of the negation particle *wär* (if there is a particle governed by the anteposition constraint, the latter is affixed to the particle *äđ*, whether the particle *wär* is present or not).

(13a) *äđ^ti* *y-äšbi*
that=PR.DO.3M.SG 3M.SG-drink.AOR
'Well, let him drink it!'

(13b) *äđ^ti* *wär ^* *y-äšbi*
that=PR.DO.3M.SG NEG 3M.SG-drink.AOR
'Let him not drink it!'

With the exclusion of exclamatory intonation, one finds the same formal elements (particle *äđ*, use of the Aorist, negation by simple adjunction of *wär*) in more complex sentences.

i) In general, clauses introduced by *äđ* depend on the main clause predicate. This can be a completive clause, following a verb expressing a request, an order or a wish, or a dependent clause with consecutive meaning (in both cases, *äđ* may be omitted if there is no particle susceptible of being fronted).[8]

(14) *ä^{w}kḟ(i)^ iʾh* *[tn-oʾbih]* *äđ* *aʾʒəff-äg*
give.IMP.SG= PR.IO.1SG cigarette for smoke.AOR-1SG
'Give me [a cigarette]to smoke!'

It may also be indirect speech ('tell to... of...'):

(15) *y-ənn(ä)^ āš* *äđ^* *y-äwktiy* *y-äybđāh*
tell.PFV.3M.SG= PR.IO.3M.SG to 3M.SG-continue.AOR 3M.SG-walk.IPFV
'He told her to go on walking'.

In these various cases, the Aorist is also used in negative contexts:

(16) *əzgi* *t-äđiymäm-t* *äđ* *wär t-aḍəṛ*
hold.IMP.SG F-baby-SG for NEG 3F.SG-fall.AOR
'Hold the little girl (so) that she does not fall'.

(17) *y-ənn(ä)^ āš-än* *äđ* *wär* *ät^{y}šaʾ-n*
3M.SG-tell.PFV= PR.IO.3-PL to NEG eat.AOR-3PL
'He told them not to eat.'

ii) *äđ* can also introduce the protasis of a conditional clause:

(18) *äđ^* *y-äšbi* *wär^ y-ətfuđ*
if 3M.SG-drink.AOR NEG=3M.SG-be.thirsty.IPFV.NEG
'If he drinks, he is not (will not be) thirsty'.

This type of sentence, highly frequent in Zenaga when the Aorist of the protasis is in the affirmative, is much rarer in the negative:

[8] The presence of *tn-oʾbih* (lit. 'the smoking one') is not mandatory in this sentence.

(19) *äđ* *wär^ y-ätʸši* *y-uṃṃuġziy*
if NEG=3M.SG-eat.AOR 3M.SG-be.hungry.AOR
'If he does not eat, he will be hungry'.

It is possible that these constructions originate in a sequence of two juxtaposed independent clauses (which would render, by paraphrasing (18) and (19), respectively 'That he drink! He is not (will not be) thirsty!' and 'That he do not eat! He will be hungry!'). The intonation of conditional clauses clearly shows, however, that the injunctive meaning has disappeared and has been replaced by a hypothetical system where *äđ* has grammaticalized as a conditional particle (Taine-Cheikh 2010a : 387 et *sq.*).[9]

B/ In addition to sentences characterized by the use of the Aorist, other types of modal sentences are found in Zenaga. Some, such as volitionals, show no special features as to the affirmative vs. negative opposition.[10] I will only mention particular cases here.

i) Orders are generally expressed by the Imperative. In some Berber varieties (including Zenaga) the Imperative is only found in the 2nd person. It bears no person marker in the singular and suffixal markers (gender and number) only in the plural.[11] In the affirmative, the stem has the same vowel pattern as the Aorist.

(20a) *äḥḥuđ* (20b) *äḥḥuđ-äm*
jump.IMP.SG jump.IMP.M.PL
'Jump!' => a) SG b) PL

Prohibitions are usually expressed using the injunctive (*äđ wär* + AOR.: 13b). However, for some verbs, there is a negative imperative where the verbal stem is identical to that of the affirmative Imperfective.[12]

(21a) *wär tättä* (21b) *wär tätta'-m*
NEG eat.IPFV.IMP.SG NEG eat.IPFV.IMP.M.PL
'Don't eat!' a) SG b) PL

ii) In Zenaga, verbs used for swearing oaths are always in the Perfective. When the oath bears on a past event, the particle *ār* precedes the verb, the latter quite normally being in a negative Perfective form following the negation marker *wär*. However if the oath bears on a future event, it is only the particles (*āš* vs. *āf*)

[9] This is also confirmed by the fact that, although the Aorist after *äḍ* is only used for conditionals expressing pure possibilities or general conditions (equivalent, very often, to 'when, whenever'), *äḍ* 'if' is also found in the other hypothetical systems, both factual and counter-factual.
[10] The expression of volition belongs to the type *aġäy* + Perfective (Taine-Cheikh 2010b: 198-9).
[11] Generally speaking, in Berber the 2PL affix (with *-t*) is specific to the Imperative. In Zenaga, on the other hand, the plural affixes are identical to those of the other modes.
[12] The 'Imperfective' imperative vowel pattern is that of the affirmative Imperfective (y-*əttättä* 'he is eating') —not that of the negative Imperfective (*wär^ y-əttitti* 'he is not eating'). This feature is all that much more noteworthy as it is shared by almost all Berber varieties which formally distinguish between the two Imperfectives (Kossman 1989: 26-7; Lafkioui & Kossman 2009; Taine-Cheikh 2010b: 195-7).

which mark the distinction between affirmative and negative, with the verb always being in the affirmative Perfective (without *wär*).

(22) *waḷḷāh* *ār^ t(i)^* *ənn-äg*
by.God PART.SERM.1=PR.DO.3M.SG say.PFV-1SG
'By God, I (already) said it!'

(23) *waḷḷāh* *āš^ t(i)^* *ənn-äg*
by.God PART.SERM.2=PR.DO.3M.SG say.PFV-1SG
'By God, I will say it!'

(24) *waḷḷāh* *āf^ t(i)^* *ənn-äg*
by.God PART.SERM.3=PR.DO.3M.SG say.PFV-1SG
'By God, I will not say it! / I refuse to say it!'

In these examples, it is the assertive meaning of the Perfective which is significant. It contrasts with the Aorist's modal meaning noted above. Other examples however must be taken into account to have a more comprehensive view of the Aorist's uses.

1.3 *Neutrality and/or underspecification of the Aorist?*

The meanings ascribed to the Aorist vary with each author, nonetheless reference to Andre Basset's definition is recurrent. For him, the underspecification in meaning of the Aorist is due to the fact that what he called the 'Preterit' (later analyzed as a *accompli* [perfective], see Galand 1977) was distinct from the Aorist as an unmarked element is distinct from a marked one, with the Aorist being the unmarked term in the pair' (1952: 14). From this point of view, there are two underspecified elements: the Aorist on one hand and the Imperfective on the other. Variation can be useful in determining similarities and differences, especially as they are often pan-Berber.

1.3.1 Permutation phenomena

I will begin by presenting permutations between the Aorist and the Imperative. Although they are rare, they clearly illustrate the case of 'sequential' Aorist.[13]

A/ Permutations between the Aorist and the Imperative

In the apodoses of conditionals, the Aorist is as frequent as the Imperative, with each form retaining its own meaning. There is one case however where the two conjugations permutate without any change in meaning: when there is a string of orders beginning with a verb in the Imperative, followed by several verbs in the 'bare' Aorist (without *aḍ* or *wär*).

(25) *aẓṛi* *äššaʾfär* *t-äšb-äḍ^ ti*
find.IMP.SG M.medicine.SG 2-drink.AOR-SG=PR.DO.3M.SG
t-äžžig-äḍ

[13] On the concept of sequencing, in relation to the 'marked juxtaposed position', see Bentolila 1981: 151 et *sq*.

2-get.cured.AOR-SG
'Find the medicine, drink it and get cured!'

B/ Permutations between the Aorist and the Imperfective

The Aorist and the affirmative Imperfective can be in free variation, however following negation, it is often mandatory to replace the Aorist by the negative Imperfective in Berber.

i) Habitual

In Zenaga, it is relatively common that the Aorist be used with habitual meaning in main clauses, however the main clause must be preceded by a clause expressing a habit or general condition. Preceded by a temporal clause, the Aorist clause must be introduced by a conjunction such as *oʾgđ-ār* 'when, at the time when' (with the generic meaning of 'whenever, each time that').

Preceded by a conditional clause, it must be introduced by *äđ* and the predicate be a verb in the Aorist.

(26) *iʾŽ* *äđ^ y-uṛṣuḍ* *äžy-ä(g)^ ti*
M.milk.SG si=3M.SG-stink.AOR throw.away.AOR-1SG=PR.DO.3M.SG
'If the milk smells bad, I throw it away.'

The main Aorist clause must come in second position as without the space-time framework provided by the first clause, the Aorist cannot be used. In Zenaga such a framework may be provided by a semantically equivalent adverb or temporal noun phrase such as *äkk aṣṣ* 'every day' in:

(27) *äkk* *aṣṣ* *y-ätʸši* *mārih*
every day 3M.SG.eat.AOR rice
'Every day he eats (some) rice!'

In affirmative contexts, habitual meaning may be expressed either by the Aorist or by the Imperfective (in this case *y-ittättä)*. In negative sentences however the (negative) Imperfective is mandatory.

ii) Hypotheticals

There are several hypothetical systems in Zenaga. If it is a case of alternatives assessed in the light of real facts, there is no verb form in the protasis and the apodosis is always in the Aorist (Taine-Cheikh 2010a: 379-380). This factual-type system can be recognized by the presence, following *äđ*, of *yu(u)gä* (frozen form of 'become') at the beginning of the protasis. However in the case of counter-factual hypotheses, the protasis introduced by *äm/häm/ḥam* is in the Perfective (affirmative or negative) while the verb in the apodosis is in the Aorist (Taine-Cheikh 2009b: 255) or, following *wär*, in the negative Imperfective.

(28a) *(h)äm=đä* *t-əšš-äđ* *t-näzzäT* *t-aẓṛ-ađ=iʾh*
if=OP1 2-come.PFV-SG F-morning.SG 2-find.AOR-SG=PR.DO.1SG
'If you had come (here) this morning, you would have found me.'

(28b) *(h)äm=đä* *t-əšš-äđ* *t-näzzäT*
if=OP1 2-go.PFV-SG F-morning.SG
wär=iʾh *t-uẓuṛ-ađ*

NEG=PR.DO.1SG 2.find.IPFV.NEG-SG

'If you had come this morning, you would not have found me.'

Following a protasis stating a simple condition (*äđ* followed by the Aorist, with or without *wär*), Zenaga seems to allow either the Imperative, the Aorist or the Imperfective.[14] It is only mandatory to replace the Aorist in negative contexts.

iii) Uses with future connotations

In Zenaga, verbs in the Aorist in the apodosis sometimes have future (rather than present) connotations. However the explicit expression of the future is conveyed using the auxiliary verb *yänhäyä*.

On the other hand, in the other varieties of Berber, it is often the combination between the Aorist and the particle *ad* (the equivalent of Zenaga *äđ*) which indirectly sets the temporal framework for an event (see Galand, this volume). In addition, in some varieties, *ad* can be used both with the Aorist and with the Imperfective — with more or less differentiated shades in meaning.

Be that as it may, this same incompatibility holds for the Aorist and negation, as in the presence of the negation particle, it is the Imperfective which is regularly associated with *ad*.

iv) 'Chained' uses

In expressions of sequences of incomplete processes, one generally finds verbs in the Imperfective. More rarely, at least in Zenaga, one finds an Imperfective followed by one or more verbs in the Aorist (29). The use of the Aorist seems to indicate a particular link (of a sequential or contrastive type) between the various processes.

(29) *äyiʾm* *y-əTʸäšätʸšä* *ūṣkäw-n* *y-uffuđ*
M.camel.SG 3M.SG-PASS.feed.IPFV M.straw.PL 3M.SG-be.thirsty.AOR

'The camel is fed with straw and he is thirsty.'

C/ Permutations between the Aorist and the Perfective

There are no cases of permutation between the Aorist and the Perfective in Zenaga. Two observations can be made however.

i) Wishes

The formulaic expression for wishes in Zenaga is *aġäy* followed by the Perfective, whereas verbs denoting desires and wishes normally introduce a second verb in the Aorist. This appears to be a feature particular to this language. In the other Berber languages, one rather finds the Aorist preceded by *ad*, including for the usual expression of wishes which can be introduced by a specific particle (such as *mri ʿa* in Tarifit).

Tarifit (Lafkioui 2007: 188)

(30) *mri* *ʿa* *ad* *y-as*
if that PART 3M.SG-come.AOR

['Pourvu qu'il vienne!'] 'Let's hope he comes!'

[14] The Imperfective seems to have a value more factual —of potential meaning.

ii) Narrative uses

The use of the Aorist after a verb in the Perfective, while impossible in Zenaga, is found in other Berber languages. Galand (1987: 368-370) gives examples for Shilha, Kabyle and Tuareg, but notes that they are only frequently found in southern and central Morocco.

Shilha (Destaing 1940 : 176, see Galand 1987 : 368)

(31) *žḥa* *i-fta* *s=Suq* *y-awi=d*
Jha 3M.SG-go.PFV to=market.M.SG 3M.SG-give.AOR=OP1
gi=s *sin* *ṛṭal* *n=t-fiyi*
for=PR.3M.SG two pound of= F.meat.SG
i-fk=tn *i* *t-mġar-t* *N=s*
3M.SG-give.AOR=PR.DO.3PL to F.woman.SG of=PR.3M.SG

['Jha alla au marché, il en apporte (apporta) deux livres de viande et les donne (donna) à sa femme'.] 'Jha went to the market, brings (brought) two pounds of meat and give (gave) them to his wife.'

1.3.2 Fundamental meanings

The small number of tense, aspect and mood modality markers makes it difficult to define meanings, especially as they change across language varieties, sometimes corresponding to different stages within a given historical change, and sometimes to different grammaticalization paths. Nonetheless one does find certain regularities.

A/ The Aorist's (relative) underspecification

In Berber, a verbal predicate may normally be limited to a conjugated verb form: the presence of the person marker is sufficient to anchor a given process or state in the verb. The Aorist's stem however is an exception to the rule[15] as its anchoring depends on the context.

i) The 'bare' Aorist

When the Aorist is used on its own, whatever the Berber dialect, it always appears in second position and can only be used in the affirmative.

In lists, its meaning is usually identical to that of the verb preceding the Aorist. It is restricted to orders or imperfectives in languages such as Zenaga, but frequently also extends to perfectives in some Moroccan languages.

In cases where the Aorist has the 'supporting' (or second position) role, one finds, *mutatis mutandis*, the same distinctions in languages such as Zenaga where the main clause Aorist always has imperfective meanings (possibilities, generics or habituals) and others such as Shilha or Kabyle where the Aorist can also refer to perfective single and factual actions.

Shilha (Destaing 1940 : 142, see Galand 1987 : 368)

(32) *Liġ* *Šan* *i-ftu* *g^{w}ma=s*
when eat.PFV.3PL 3M.SG-leave.AOR M.brother.SG.[of]= PR.3M.SG

[15] Except in the particular case of the Imperative, where the vowel pattern effectively has the same stem as the Aorist, but where the anchoring is effected following other criteria.

‘When they had eaten, his brother leaves (left).’

Therefore the Aorist's underspecification or unmarkedness depends on the language. In Zenaga, the Aorist never encodes perfective meaning (nor even factual imperfectives). Thus its underspecification is to be understood as being essentially a ‘referentially dependent form'. In varieties such as Shilha, the Aorist appears to be both referentially dependent and semantically neutral.

ii) The Aorist preceded by *ad* (Zenaga *äđ*)

Throughout the Berber languages one finds injunctive and completive uses of the Aorist preceded by *ad*, all of which correspond to requests, wishes or desires. However, in addition, Berber languages also show uses of *ad* + Aorist, either in independent (or main) clauses, or in the protasis of conditional clauses. In both cases, the presence of *ad* preceding the Aorist furnishes sufficient referentiality for the Aorist to be licensed in topic position. In my view (Taine-Cheikh 2010a), rather than constituting factual actualization, this is actually a case of virtual actualization, an anchoring in all possible worlds, based on the fact that the particle *ad* has its origins in a demonstrative, cf. (18).

In the case of conditionals in Zenaga (the only Berber variety to have developed this use of *ad* + Aorist), the *am phantasma* nature of the actualization is clear enough so that this use of the Aorist is compatible with negation —as is generally the case in Berber dialects, with injunctives, wishes and requests.

In vernaculars other than Zenaga, where *ad* + Aorist conveys the meaning of possible processes (with future connotations), the Aorist, once again, can only be used in the affirmative.

B/ Realis and irrealis

On the continuum between realis and irrealis, the Aorist basically expresses what is possible (in addition, in Zenaga, it is common to find the Aorist following phrases such as ‘it is possible that’ or ‘you must’), whereas the Perfective and Imperfective are mostly used to express factuals. However, while the opposition between the Aorist and the Perfective is well marked, the difference between the Aorist and the Imperfective seems fuzzier.

i) Secondary meanings of the Perfective

To summarize, from an aspectual viewpoint the Perfective expresses a state or an interrupted process. It is used e.g. to encode an event which has just taken place and, with the exception of particular contexts or specific temporal indications, verbs in the Perfective place the action in the past. Thus perfective aspectual and ‘past’ temporal meanings tend to go together.

In addition, given that there is a degree of certainty concerning past events which is much higher than with present or future events, this seems to have given rise to tight links between Perfective forms and assertion. This is undoubtedly what explains the use of the Aorist in oaths (including ones that bear on the future) and the expression of wishes. By presenting a fact as having already taken place while

it is still only being envisaged, the Perfective in effect confers discursive force on utterances. It should be noted, however, that in this case the Perfective belongs to the domain of possible, virtual referentials (as does the Aorist) rather than to the domain of discursive referentials (see Desclés & Guentchéva 2011).

ii) Factual and non-factual negation

One characteristic of Berber is that it has two Perfective forms; moreover in many dialects there are also two Imperfective forms, one for affirmative contexts and one for negative ones, whereas there is only one form of Aorist. This seems to indicate that the negation of facts differs in nature from the negation of possibilities. While the first is a negation of a recusative type which modifies representations of reality, negative conditions or negative orders simply posit the contents of negative thought (without denying previously established representations).[16]

Lastly, given that negation does not function in the same manner when it is part of the speech instantiation context of reference as when it is part of the virtual world, the fact that the Aorist is systematically replaced by the Imperfective in declarative sentences could be interpreted as an incompatibility between the fundamentally underspecified nature of the Aorist and the recusative nature of negation.

Renewal has been noted as a possible explanation for the historical relations between the Aorist and the Imperfective (often dubbed 'intensive Aorist', following André Basset). The facts mentioned above seem to show that the differences are indeed to be understood in terms of 'factual' vs. ''non factual', and not necessarily interpreted in the light of what is to be found in languages such as Shilha (Galand 2003: 237), which shows polarity from 'totally neutral' (or 'aspectually neutral') to 'un-bounded' (imperfective).[17]

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[16] This could explain why the stem Imperative II (Imperfective) is identical to that of the affirmative Imperfective, despite a negative context. The fact that in Tuareg languages where the affirmative Imperfective usually shows vowel lengthening (see Sudlow 2001: 82-3, Heath 2005: 334-9), it is a specific affirmative Imperfective stem which is used, without vowel lengthening, would seem to indicate that here the 'short' affirmative is actually a basic, unmarked, stem.

Given the vowel distinctions between the affirmative Perfective, the negative Perfective and the Aorist (Cohen & Taine-Cheikh 2000) on one hand, and between the affirmative Imperfective and the Aorist (Taine-Cheikh 2009b: 243-251) on the other hand, there is a clear convergence tendency between the negative stems and the Aorist for some sub-categories of verbs. Thus, e.g. in Zenaga, the main ontological distinction seems to be between factuals and counter-factuals, while the representation of a non-existent state is not fundamentally different from its virtual representation (setting aside the act of negation).

[17] This has been pointed out e.g. in Kabyle (Manseri 1999: 50-2), namely that verbs of state are never in the Aorist, which also seems to indicate proximity between the Aorist and the Imperfective —and argues against a completely neutral Aorist. Prasse, who labels the Aorist 'simple Imperfekt' and the Imperfective 'intensive Imperfekt', believes that in Tuareg the first could only be a 'cursive' (Prasse 2008: 92-3).

To better understand the specificities of the Aorist and clarify its relations with the Imperfective, I propose comparing the history postulated for Berber to that of present day Arabic through a study of two of its varieties.

2. Compared usage of the Imperfective in two Maghreb Arabic dialects

Contemporary Arabic specialists no longer use the term Aorist, however it is interesting to note that it is to be found in the oldest studies written in French. When in 1810 Silvestre de Sacy published the first *Arabic grammar*, edited in French, for the students of the Advanced School of living Oriental languages, he used the term 'aoriste' for one of Arabic's two 'simple' tenses (1831: 148):[18]

> Arabic grammarians called the first of the simple tenses [*māḍī*], that is to say, *past*: I will call it *preterit*. The second is called [*muḍāriʿ*], i.e. *similar*, because it has various accidents which it shares with nouns: it may on its own indicate the present or the future. The *present* is called [*ḥāl*] and the *future* [*istiqbāl*]: because of its double destination, I will call this tense *aorist*, a term derived from Greek, which means *indefinite*.

In the 19th century, the terms most often used became Perfect and Imperfect (or Perfekt and Imperfekt), both for Classical Arabic and for the dialects. The impetus for their replacement by Perfective and Imperfective came from Marcel Cohen. He even explicitly took a stand against the use of the term Aorist, wishing to establish the primacy of aspectual meanings (1924: 53, note 1):

> Some European grammarians use the term 'aorist' for the imperfective, which respects the form's temporal underspecification (but does not take aspect into account).

In Arabic, the distinction between the two 'simple' forms is well marked. In effect, the person markers, always present in the verb form, are suffixed in the Perfective, whereas they are essentially prefixed in the Imperfective —whence the terms proposed by David Cohen (1984): 'suffixal conjugation' (SC) and 'prefixal conjugation' (PC) (henceforth, respectively, SC and PC). In the literary language, the PC (*muḍāriʿ*) is presented as three separate paradigms (*yaqtul/yaqtul-u/yaqtul-a)*, with the ending tending to vary with mood.[19] No Arabic dialect has the same PC tripartition, however many varieties of spoken Arabic clearly differentiate between the PC's two (or sometimes more) uses, by having recourse to preverbal particles.

Let us now look at the roles and meanings that PC plays in the verbal systems of two Maghreb Arabic varieties, both in contact with a variety of Berber,

[18] In square brackets I have phonetically transcribed the Arabic characters.

[19] While the paradigm of *yaqtul-u* in *-u* has become the 'indicative mood', the distinction between the paradigm of the 'jussive' *yaqtul* in *-ø* (still called 'apocope') and that of the 'subjunctive' *yaqtul-a* in *-a* is semantically much less clearcut. The last paradigm (in *-a*) could be a later development (Fleisch 1968). On the limits, in synchronic linguistics, of the 'modal' view of tripartition, see e.g. Ibn El Farouk 1994.

but representative of well distinguished dialect types. We will see that Ḥassāniyya (despite belonging to the same geographical area as Zenaga) shares fewer common features with Berber than does Moroccan Arabic —although it must be noted that the two Mauritanian varieties seem to show less frequent recourse to preverbed particles than most northern varieties.

2.1 *Ḥassāniyya, Arabic without an 'indicative' mood*

In descriptions of Ḥassāniyya, one finds the same tendencies as observed above for literary Arabic. Thus Reynier, at the beginning of the 19th century, mentions the 'preterit or past tense' and the 'aorist or present or future tense' (1909: 47-8) whereas Cohen, a half-century later, presents an analysis based on the basic aspectual opposition 'perfective' vs. 'imperfective' (1963: 87 and ff.*)*. I will begin by examining PC and SC in their descriptive and factual uses, and will then —continuing my contrastive study— present their uses in dependent clauses and non-declarative sentences.

2.1.1 The aspectual system and temporal anchoring

The distinction between prefixed and suffixed conjugations is the heart of the verbal system, but, for a large number of verbs, account must be taken not only of the verbal auxiliaries, but also of the participial forms.

A/ Conjugated and non-conjugated verb forms

Formally, the PC person markers show much in common with those of Berber (they are identical in the Perfective, the Imperfective and the Aorist). In Table 2 below are the conjugations of the Ḥassāniyya verb 'wash' and the Aorist conjugation of the Zenaga verb 'sting'. The prefixed person markers for 'wash' in the Imperfective and of 'sting' in the Aorist (3rd and 4th columns) are identical to the 2nd SG., 2nd PL., 3rd SG. and 1st PL. (the difference in the 1st SG. being due to generalization, in the Maghreb Arabic dialects, of the PL *n*-).

Table 2

	Ḥassāniyya SC	Ḥassāniyya PC	Zenaga AORIST	Zenaga Conjugated adjective
1 SG C	*ġsəl-**t***	***n**-əġsəl*	*äddər-**äg***	*maẓẓūg-**äg***
2 SG M	*ġsəl-**t***	***t**-əġsəl*	***t**-äddər-**äđ***	*maẓẓūg-**äđ***
F	*ġsəl-**ti***	***t**-əġ^{ə}sl-**i***		
3 SG M	*ġsəl*	***y**-əġsəl*	***y**-äddər*	*maẓẓūg*
F	*ġəsl-**ət***	***t**-əġsəl*	***t**-äddər*	*maẓẓūg-**äđ***
1 PL C	*ġsəl-**nä***	***n**-əġ^{ə}sl-**u***	***n**-äddər*	*maẓẓūg-**əđ***
2 PL M	*ġsəl-**tu***	***t**-əġ^{ə}sl-**u***	***t**-äddər-**äm***	*maẓẓūg-**äm***
F			***t**-äddər-**əmn**^{y}*[20]	*maẓẓūg-**əmn**^{y}*
3 PL M	*ġəsl-**u***	***y**-əġ^{ə}sl-**u***	*äddər-**än***	*maẓẓūg-**än***
F			*äddər-**ən**^{y}*	*maẓẓūg-**ən**^{y}*
	to wash		to sting	to be small

The differences between the two paradigms mainly concern the suffixed conjugation elements. In Arabic PC, they correspond to gender and number markers whereas in Berber conjugations, they only correspond to this type of marker in the 2nd and 3rd PL. In effect, the 1st and 2nd SG. suffixes (realized *-äg* and *-äđ* in Zenaga) belong to index markers and give Berber conjugations a 'mixed' character (Prasse 1974: 9 and ff.*)*. This appears to be due to influence from another conjugation, akin to Arabic SC and found in only some of the Berber languages. In Zenaga, this combination appears clearly, both formally and semantically, as a case of adjective verbalization (Taine-Cheikh 2003). An example is provided in column 5 of Table 2.

In Zenaga (and more generally in Berber), adjectives of the *maẓẓūg* type are few in number, and this is one of the reasons why the distinction between state and process is so rarely marked. Thus one notes an important distinction between *yuṃdäh* 'he (it) has aged; it is worn out' and *yuṛṣaḍ* 'he (it) has stunk; he has become stinky' (two verbs from Table I). While *yuṃdäh* can also mean 'it is worn', the state is expressed, in the second case, by the adjective *ṛaṣṣuḍ* 'stinking'. The equivalent of the Perfective *tuṛṣaḍ* 'she has become stinky' is therefore provided not by the adjective alone (33a), but by the adjective preceded by the verbal auxiliary *yäwgä-(ddäh)* (33b), the person marker in this case making the presence of the full subject optional:

(33a) *t-fiˀžih* *ṛaṣṣuḍ-äđ* (33b) *t-äwgä=ddäh* *ṛaṣṣuḍ-äđ*
F-meat. SG stinking-3F.SG 3F.SG-get.PFV=OP1 stinking-3F.SG
a) 'The meat is stinking.' b) 'It got stinking.'

In Ḥassāniyya (and more generally in Arabic), adjectives on the contrary are highly numerous and, apart from the fact that the verbalization markers of the

[20] In Zenaga, the F. PL. affixes ending in *-n^{y}* are optionally followed by *-äđ*.

adjectival predicate are more limited in number,[21] the similarity between sentences (33) in Zenaga and (34) in Ḥassāniyya is fairly clear.

(34a) *əl=lḥam* *ṃəḫnəz*
DEF=meat.M.SG stinking.M.SG
(34b) *ʿād* *ṃəḫnəz*
get.PFV.3M.SG stinking.M.SG
a) 'The meat is stinking.' b) It got stinking.'

Again, the presence of the verbal auxiliary meaning 'become' before the adjective entails that sentence (34b) is the semantic equivalent of a sentence containing the processive verb *ḫnəz* only, in the SC. With a verb of the *ḫnəz* type, SC signifies that the process is completed and that a certain state has begun, without specifying whether the state has been completed since or is still prevalent. The explicit expression of concomitance with the interval of the discourse process (T_0) can only be effected with a qualifying adjective (here *ṃəḫnəz*). As for the PC *yəḫnəz*, it is practically only used for a process which has not yet begun[22] and which is envisaged in an indefinite, more or less near future.

While there are numerous adjectives, they are only attested for some of the roots, and there is rarely more than one per word family (unless one separately counts diminutive and comparative-superlative forms). However, in parallel to the sub-class of adjectives, there is another verb-noun sub-class: participles, which has no true equivalent in Berber.[23]

These participles —and especially participle I ('active~middle/Present')[24]— play a very important role in the aspect-tense system, alongside SC and PC, but it is not easy to define their place as their usage and meanings depend largely on a given verb's semantics. Thus for a verb such as *gʿad* 'sit down', the participle *gâʿəd* has stating meaning. If it is used as predicate, this indicates that the reference subject is given as having adopted a sitting posture (and still being in one). For a verb such as *mšä*, which generally means 'leave' —and in some contexts 'walk' (as in *mšä bə-š-šäwṛ* 'he has walked slowly')—, the participial predicate with *mâši* takes on either the meaning 'being in the process of leaving' or 'in the process of walking', both express an action with variable duration which has begun and which is still ongoing.

However, all verbal participles are not used in predicative function, even when the process expressed by the verb unfolds over a certain length of time. For example, PC *yəžri* 'he is running', *yəbni* 'he is building', *yaḥläb* 'he is milking', *yəḥki* 'he is

[21] The presence of the personal pronoun after negation (*mā-hu, mā-hi* etc.) does however constitute a verbalization marker (Cohen 1975; Taine-Cheikh 1996).

[22] Except when the auxiliary 'become' precedes the PC, marking the beginning of the process, with distinctions in mood varying with the form chosen (SC *ʿād*, PC *iʿūd*).

[23] In Berber, the term 'participle' is used to refer to the form taken by the verbal predicate when the antecedent of the relative clause (or its representative) is subject.

[24] In practice, with any verb, a participle I ('active~middle/Present') can be formed, either by infixation of an *ā* in the $C^1āC^2əC^3$ pattern, or by prefixation of an *m-*. The participle II ('Past/Passive'), having the pattern *mä*C1C2*ū*C^3 or the prefix *mu-,* is only found with active verbs.

reciting, narrating' or *iḥaṛṛas* 'he is watching' are used more frequently than the corresponding participial forms (some of which are never found, e.g. the last). Thus PC does retain its imperfective meaning, in the usual sense, i.e. an ongoing process (corresponding to a topological interval bounded on the left and unbounded on the right). It is frequent in proverbs (35), but in no way restricted to this purpose, and no formal marker shows this sentence to be proverbial.[25]

(35a) *ḫû=yä* *n-bəṭṭ=u* *u*
brother.[of]=PR.1SG 1SG-strike.IPFV=PR.3M.SG and
lā *n-ḫalli* *lli* *i-bəṭṭ=u*
NEG 1SG-let.IPFV REL 3M.SG-strike.IPFV=PR.3M.SG
'My brother, I strike him and let nobody strike him.' (litt. 'and do not let the one who strikes him')

Outside of proverbs, the only possible interpretation would be in terms of habitual actions, but in that case one would rather expect something like:

(35b) *ḫû=yä* *n-bəṭṭ=u* *dāʾimän*
brother.[of]=PR.1SG 1SG-strike.IPFV=PR.3M.SG all.the.time
yäġäyr *mā* *gaṭṭ[äyt]* *ḫall-äyt* *ḥadd*
but NEG have.already.PFV[-1SG] let.PFV-1SG somebody
i-bəṭṭ=u
3M.SG-strike.IPFV=PR.3M.SG
'My brother, I strike him all the time but I have never let somebody strike him.'

B/ Aspects and tenses

(35b) already shows that on the one hand temporal extensions (here the adverb *dāʾimän*) and verbal auxiliaries on the other hand (here *gaṭṭ* which, combined with negation, means 'never'), play a crucial role for understanding discourse. In (35), however, the action 'beat' is not necessarily habitual, and the choice between PC, SC and Participle I would in effect, in two out of three cases, locate the process in the future (35c), present (35d) or past (35e):

(35c) *ḫû=yä* *lāhi* *n-bəṭṭ=u* *yäġäyr*
brother.[of]=PR.1SG FUTURE 1SG- strike.IPFV=PR.3M.SG but
mā *n-ḫalli* *ḥadd* *i-bəṭṭ=u*
NEG 1SG-let.IPFV somebody 3M.SG-strike.IPFV=PR.3M.SG
'My brother, I shall strike him but I (shall) let nobody strike him.'

(35d) *ḫû=yä* *bâṭṭ=u* *yäġäyr ...*
brother.[of]=PR.1SG strike.PRTC.I=PR.3M.SG but...
'My brother, I am striking him but...'

(35e) *ḫû=yä* *[gaṭṭ-äyt]* *bäṭṭ-äyt=u*
brother.[of]=PR.1SG [have.already.PFV-1SG] strike.PFV-1SG=PR.3M.SG

[25] After *u* 'and' it is normal that the negation be *lā*, and not *-mā.* However some infrequent uses appear rather literary here: on the one hand, the use of the coordinator *u* instead of the adversative *yäġäyr*, and on the other hand, the use of the relative *lli* instead of an indefinite such as *ḥadd*. The fact that this proverb lays out a fundamental principle of Moorish society may explain the somewhat formal character of its expression.

yäġäyr...
but...

'My brother, I struck him [sometimes] but...'

lāhi is, in Ḥassāniyya, an invariable morpheme used for expressing the future — whether in terms of posteriority or imminence (Taine-Cheikh 2009c).[26] Its presence in the first clause in (35c) is sufficient and *lāhi* therefore does not necessarily need to be repeated before the verb *n-ḫalli.* Similarly, the imperfective meaning conveyed by the PC is neutral enough to be compatible with the first processes of the following sentences (whence the use of three dots), even if *mā n-ḫalli* can be replaced by *mâ-ni mḫalli* in (35d) and by *mā [gaṭṭäyt] ḫall-äyt* in (35c) —a change which then situates the entire sentence in a completed past.

There is also a verbal auxiliary (*kân* 'be, exist') which is used as a past tense marker (relative anteriority). It frequently combines with PC, in which case it serves to express actions in the past repeated over a given period:

(35f) *ḫû=yä* *kənt* *n-bəṭṭ=u*
brother.[of]=PR.1SG exist.PFV.1SG 1SG-strike.IPFV=PR.3M.SG
mnäyn *kân* *sġayyər* *yäġäyr...*
when exist.PFV.3SG small but

'My brother, I struck him when he was small but...'

In other contexts, *kân* combines with PC preceded by the temporal marker *lāhi* to express imminence in the past (36a) and, for some verbs such as *bkä* 'cry', with participle I (36b) to express concomitance in the past:

(36a) *ḫû=yä* *kân* *lâhi* *y-əbki*
brother.[of]=PR.1SG exist.PFV.3SG FUTURE 3M.SG-cry
sâbəg *t-ži* *uṃṃ=u*
before 3F.SG-come.IPFV mother.[of]= PR.3M.SG

'My brother was going to cry before his mother's coming.'

(36b) *ḫû=yä* *kân* *bâki* *sâbəg ...*
brother.[of]=PR.1SG exist.PFV.3SG cry.PRTC.I before

'My brother was crying before...'

The participle appears to be the privileged means to express simultaneity between an unfolding process and a reference period of time (past or present) along the timeline. This coincidence takes on quite a peculiar dimension when it is no longer a case of intransitive verbs but of transitive ones instead. In this case, participle I is opposed primarily to SC (perfective), instead of PC (imperfective). These are rare, almost idiomatic, cases, which only occur with some verbal uses. Thus the participle I *râvəd* 'carrying' locates the process in a concomitant present (as opposed to the indefinite, generic or habitual present *yərvəd* 'he is carrying') when it has its concrete meaning (37), whereas it corresponds to a resultant state

[26] If the participial form of the verb is not used as predicate, only the presence or absence of *lāhi* before the PC differentiates between localization in the future or in the present.

(a well-known meaning of the perfect) when it is used with abstract meaning (38a):

(37) *huwwä* *râvəd* *zgîbä* *mən* *mâṛu*
he carry.PRTC.I bag of rice
'He is carrying a bag of rice.'

(38a) *huwwä* *râvəd* *hämm* *ähl=u*
he take.PRTC.I care.[of] family.[of]=PR.3M.SG
'He has taken charge of his family's affairs (and goes on doing it).'

(38b) [*huwwä*] *rvəd* *hämm* *ähl=u*
he take.PFV.3SG care.[of] family.[of]=PR.3M.SG
'He took / has taken charge of his family's affairs.'

Unlike the SC in (38b) which has perfective meaning (the process is given as interrupted without one knowing whether the 'taking charge' *rvûd* continues or not), participle I *râvəd* indicates that the 'taking charge' started in the past and continues.[27] At times participle I marks concomitance in the present and in the perfect:

(39) *huwwä* *gâdi* *n=nâṛ*
he light.PRTC.I DEF=fire
a) 'He is lighting the fire.' b) 'He has lit the fire (and it is still burning).'

Only a handful of 'internal' verbs such as *kâl* 'eat' and *šṛab* 'drink' may have perfect meaning in both the participial form and SC,[28] thus in (40) where the semantic difference between *wâkəl* and *kâl* is minimal:

(40) *əs=sbaʿ* *wâkəl* / *kâl* *əl=bägṛa*
DEF= lion eat.PRTC.I / eat.PFV.3M.SG DEF= cow
'The lion has eaten the cow (the cow is dead, the lion stuffed).'

In contrast, there are many more verbs where the SC can be used with resultant state meaning (perfect meaning), starting with posture verbs such as *gʿad* 'he sat down; he is sitting'. Often, however, on their own, perfectives only express events that are not located in the discourse referential (which is why they have been often compared to the Greek Aorist). Some specific constructions do nonetheless connect the SC to a reference situation, e.g. when the first element is *kîv-ənn* (+ pronoun):[29]

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[27] « Le fondement du parfait, avec des particularités d'usage dans chaque langue [...], c'est partout ce qui a été appelé plus haut **incidence**, la mise en relation de l'événement, comme aboutissement d'un procès, avec la situation de référence (dont d'ailleurs l'état résultant peut être considéré comme un cas particulier). » [The basis of the perfect, with the particularities of usage in each language [...], is everywhere what was called **incidence** above, establishing relations between the event, as the fruition of a process, and the reference situation (whose resultant state may be considered a particular case).] (Cohen 1989: 116).

[28] For more details, see Tauzin 1986: 89-90. Note that Ḥassāniyya is not the only variety where one finds participles with perfect meaning (Cohen 1984: 282 and *sq.*).

[29] On the genesis of this construction, see Taine-Cheikh 2004.

(41) *ânä* *kîv=ənn=i* *žäyt*
I as=that=PR.1SG come.PFV.1SG
'I have just arrived.'

In narratives, aspectual markers play a very important role. They limit the process to the crossing of the final (*kîv-ənn)* or the initial boundary (*gâm*), or extend it to cover the entire interval between the two boundaries (*tämm* and *mä-zâl)*. Simple clause juxtaposition is very frequent and coordinators are seldom used. One interesting use is to be noted however in stories: the narrator draws attention to a new process by inserting *gâm wä* before a SC. Hence the contrast between inchoative *gâm* + PC in (42) and narrative *gâm (wä...)* + SC in (43) marking a sequence:[30]

(42) *gâm* *y-ərgəd*
go.up.PFV.3M.SG 3M-fall.asleep.IPFV.SG
(Litt. 'He got up he sleeps') 'He fell asleep.'

(43) *gâm* *wä* *rgəd*
go.up.PFV.3M.SG and fall.asleep.PFV.3M.SG
(Litt. 'He got up and he slept') 'Then he fell asleep.'

The study of indicative meanings of the simple forms (PC, SC, and participles) deserves to be pursued, taking particular account of differences between verbs as far as the expression of the perfect is concerned. That being said, comparison with Berber Aorist also forces me to take into consideration the meanings taken on by these forms in modal sentences.

2.1.2 Modal sentences

Without going into too much detail, it is possible to show that PC fulfills most of the functions served by the Aorist and the Imperfective in Zenaga.

A/ Independent sentences

i) Simple orders are expressed by the Imperative. Like in Berber, the Imperative has fewer person markers than the other moods: it is restricted to the 2nd person, and in the affirmative bears only suffixed markers (gender in the SG and number in the PL), however in this case the vowel pattern is the same as for PC (which is that of the Aorist, like in Berber).

(44a) *ädva*^{ʕ} (44b) *äd*^{ə}*v*^{ʕ}*-u*
run.IMP.M.SG run.IMP-PL
'run!' a) SG b) PL

In the negative, the form used is that of PC and in Ḥassāniyya, it is the negation morpheme (*lā* vs. *mā*) which, alongside intonation, distinguishes it from the indicative:

(45a) *lā* *t-ädva*^{ʕ} (45b) *mā* *t-ädva*^{ʕ}
NEG.2 2-run.IPFV.M.SG NEG.[1] 2-run.IPFV.M.SG
'Don't run!' a) SG b) PL

[30] Sometimes *gbaḍ wä...* (lit. 'He took and...') serves the same function as *gâm wä...* (Taine-Cheikh 2011).

ii) In affirmative wishes, and in particular when calling upon God to grant a wish, only PC is used.
In negative wishes (47), the negation form *lā* (the same as in prohibitions) is sufficient on its own to denote the virtual nature of the process in question. Instead of PC, one sometimes finds SC with future meaning (so that the sentence takes on the meaning of a fictitiously granted wish).

(47a) *lā* *y-aʿmî=k*
NEG.2 3-make.blind.IPFV.M.SG=PR.2M.SG
'Let Him not make you blind!'

(47b) *lā* *əʿmäyt*
NEG.2 become.blind.PFV.2M.SG
'Let's hope you don't become blind!'

Here, the two sentences correspond to different contexts,[31] but, generally speaking, SC shows more restricted uses (for additional examples, which are more or less frozen, see Taine-Cheikh 2000: 62-3).

iii) Contrary to Zenaga,[32] oaths in Ḥassāniyya do not show any particularities in the use of verb forms. SC is usual in oaths relating to past events, while the PC participial form (with or without *lāhi*) is used for incomplete processes, located in the present or future. Only intonation and, generally, the exclamation *waḷḷâh(i)* 'by God!' distinguish oaths from declarative sentences. Negation is effected by the morpheme *mā* of the declarative sentence.

B/ Complex sentences

In principle in complex sentences, the negation *mā* is used —with the exception of indirect orders (see below (48b) where the prohibitive negation *lā* is used).

i) In expressing requests or indirect orders, the predicative function of the second clause is served by a verb in PC. There are no specific morphemes for explicitly marking dependency (48), contrary to what is found with indirect speech (49) where the verb in the subordinate clause (SC, PC preceded or not by *lāhi*, a participle...) is introduced by the conjunction (*ʿan/ənn)*.

(48a) *n-dôṛ=ak* *t-äsmaʿ*
1-ask.IPFV.SG=PR.2M.SG 2-listen.IPFV.M.SG
'I ask you to listen.'

(48b) *gālû^* *l=u* *lā* *y-ädvaʿ*
say.PFV.3M.PL to=PR.3M.SG NEG.2 3M-run.IPFV.SG
'They told him not to run.'

[31] While the use of PC in (47a) traditionally has votive meaning, the use of SC in (47b) corresponds to a situation where someone is being congratulated for having had clear vision in particular circumstances.

[32] And some Arabic varieties which, on this count, are more similar to literary Arabic usage (Taine-Cheikh, *ibid.*: 58 and *sq.*).

(49) *gâl* *əl=hum* *ʕann-u* *lāhi* *y-ädvaʕ*
tell.PFV.3M.SG to=PR.3M.PL that FUTURE 3M-run.IPFV.SG
'He told them he was going to run.'

ii) In consecutive and final clauses, the dependent verb is generally in the PC and is introduced by a conjunction (*(yä)kân, bâš* or *äyyâk*). In (50), *äyyâk* could be omitted, without other changes, but then one would find apposition marked by intonation, corresponding to a simple sequence of actions ('call me, I will come help you').

(50) *ʕayyaṭ* *l=i* *äyyâk* *n-ʕawwn=ak*
call.IMP.M.SG to=PR.1SG for 1-help.IPFV.SG=PR.2M.SG
'Call me so that I come and help you.'

(51) *äftaḥ* *əl=bâb* *kân* *y-əmši* *d=daḥḥân*
open.IMP. M.SG DEF=door for 3M-go.away.IPFV.SG DEF=smoke
'Open the door so that the smoke goes away.'

The subordinator *(yä)kân*[33] is rarely used for this purpose, where constraints governing the choice of dependent verb forms are very strict. In fact, in Ḥassāniyya*, (yä)kân* usually serves to introduce indirect questions where the verb forms in the subordinate clause show much more variety (as with indirect speech).

iii) In complex sentences with subordinate adjunct clauses, the choice of possible verb forms is roughly the same as in simple clauses. However, there are a few special cases. Thus 'without' is expressed by "Siamese" clauses with a double negative, where the first *mā* is followed by PC and the second by SC:

(52) *mā* *i-ži* *hown* *mā* *žâb* *ši*
NEG 3M-come.IPFV.SG here NEG give.PFV.3M.SG something
'He never comes here without bringing something.'

In this case one would find exactly the same construction in Zenaga, barring replacement of the V2 SC by the negative Perfective form (Taine-Cheikh 2008: 131). In contrast, when the subordinate clause expresses temporal limits, the tense-aspect distinctions are not effected in the same way, despite similarities in the use of auxiliaries expressing continuity. While in Ḥassāniyya the V2 verb form alternates with the auxiliary 'continue', in Zenaga it is the subordinate clause which changes (*ārädđ* vs *šäwgəš*), V2 remaining in the Perfective. Compare Ḥassāniyya (53a)-(54a) to Zenaga (53b)-(54b):

(53a) *tämm* *mâši* *iläyn* *žbaṛ* *aḥmäd*
continue.PFV.3M.SG walk.PRTC.1 until find.PFV.3M.SG Ahmed

(53b) *y-uktäy* *y-äybđāh* *ārädđ* *y-uẓ̣ra* *aḥmäd*
3M.SG-continue.PFV 3M.SG-walk.IPFV until 3M.SG-find.PFV Ahmed
'He kept walking until he found Ahmed.'

(54a) *i-tämm* *mâši* *iläyn* *y-äžbaṛ* *aḥmäd*
3M-continue.IPFV. SG walk.PRTC.1 until 3M-find.IPFV.SG Ahmed

(54b) *y-ikättäy* *y-äybđāh* *šäwgəš* *y-uẓ̣ra* *aḥmäd*

[33] This is the result of grammaticalization of the existence verb *kân* (Taine-Cheikh 2014).

3M.SG-continue.IPFV 3M.SG-walk.IPFV until 3M.SG-find.PFV Ahmed
'He keeps walking until he finds Ahmed.'

iv) In the conditional system, one finds the almost reverse situation. Whereas in Zenaga the choice of verb forms is effected on the basis of aspect and tense, the particle introducing the protasis usually being *äđ*, in Ḥassāniyya, the verb in the protasis tends to always be in the SC, whether the particle is *ilā/ilä*, *(yä)lu (kân)* or *kân*. Thus the SC (55) expresses pure possibility which, in Zenaga, would have been expressed by an Aorist (26).

(55) *əl=lbän* *ilā* *ḫnəz* *n-äzˀrg=u*
DEF=milk.SG if stink.PFV.3M.SG 1SG-throw.IPFV=PR.3M.SG
'If the milk stinks, I throw it away.'

Here is one of the rare cases where the Zenaga Aorist corresponds not to PC but to SC. However, the Ḥassāniyya SC has no past meaning here: it is a form which is not actualized on a time line (i.e. it is a pure 'event' as defined by Desclés & Guentchéva 1997: 151-2).

2.2 *The two Moroccan Arabic imperfectives*

In his works, Cohen examines the diversity shown by the verbal systems of the various Arab dialects (1984: 278-298; 1989: 187-189). He shows that a large part of them, especially among sedentary speakers, have grammaticalized the concomitant vs. non-concomitant distinction in either one or both aspects (perfective or imperfective). The Moroccan dialects belong to the group of Arabic varieties where the notion of concomitance has become well established, through the use of the participial and the preverbed Imperfective forms. However, among Maghreb dialects, they differ in that « the simple form of the pref. c. [PC] shows uses which could be labeled modal in a broad sense » (Cohen 1984: 284). This peculiarity, shared by dialects spoken e.g. in Rabat and in Cairo, is said to be due to secondary developments (*ibid.*: 293-294). According to this hypothesis, the originally concomitant forms have lost their expressive meaning to become simple indicative (non-modal type) forms.
Caubet's publications on Moroccan Arabic (e.g. 1993a) give a precise idea of the complexities of the situation in urban varieties of the northern type.[34] Therefore I will not repeat here the full analysis of the meanings of SC and participles. Although one notes some differences with Ḥassāniyya — such as a more extensive use of participles to express the perfect — they are globally minimal. The same is not true, in contrast, for PC usage, therefore I will look into this matter more closely.

[34] His investigations focused on a family living in Fez (or its vicinity). All the examples given here are taken from volume II of *L'arabe marocain* (pp. 170-251).

2.2.1 The preverbed PC and its uses

In the dialects of sedentary Moroccans, PC tends to be preceded by a particle for all or some indicative type uses. This is *ka-* (or *kā-)* in the urban varieties of the North.[35] Like most preverbs, this particle has verbal origins: in all likelihood, it is a truncated form of the existence verb — in its SC form *kān* or its participial form *kāʾin*.[36]

The preverbed PC may have actualization or concomitant meaning. But, while this meaning is considered the basic meaning in some varieties,[37] in Fez it is just one of the possible meanings (Caubet, *op. cit.*).

The actualization meaning can be transposed in the past by the simple presence of a temporal adjunct:

(57) *f=ʿašrīn* *ʿām* *ka=n-ʿṛəf* *īṭālya*
in=twenty year.SG PREV=1-know.IPFV.SG Italy
'At twenty, I knew Italy!'

As for concomitant meaning, it is not always clearly apparent, unless the preverbed PC is preceded by a form used for expressing concomitance. This is the case of the participle *ġādi* in (58) and of the presentative expression *ha hūwa* in (59):

(58) *hūwa* *ġādi* *hūwa* *ka=y-ḍḥak*
he go.out.PRTC.I he PREV=3M-laugh.IPFV.SG
'He leaves while laughing (lit. He leaves he laughs).'

(59) *ha=hūwa* *ka=y-ḥmāṛ*
here=he PREV=3M-rougir.IPFV.SG
'Here he blushes!'

In contrast, the following examples show that preverbed PC may have habitual or generic meaning —which proves that in this variety preverbs do not serve only to express concomitance.[38]

(60) *dġīya* *ka=y-ḥmāṛ*
fast PREV=3M-blush.IPFV.SG
'He blushes fast!'

(61) *ka=n-fəddəl* *əl=həḍṛa* *ʿal=əs=skāt*
PREV=1-prefer.IPFV.SG DEF=speak.F.SG to=DEF=keep.quiet.M.SG
'I prefer to speak rather than be silent.'

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[35] It is *tā-* in the southern type urban varieties and the cities along the coast to the south of Rabat, whereas one finds *lā-, qā-, ʾā-* in the mountain varieties (Colin 1935: 133-5).

[36] This matter has been widely discussed (see in particular Cohen 1924: 70-1; Colin 1935: 134; Cohen 1984: 292; Ferrando 1996).

[37] Thus in Casablanca (Aguadé 2003: 304):

(56) *kā=t-ākŭl*
PREV=3F-eat.IPRV.SG
'She is eating.'

[38] On the ongoing grammaticalization in Fez of the verb *gləs* 'sit' to express concomitance, see Caubet 1996: 93.

(62) *ka=n-mši* *ʿand=ha* *kull* *nhāṛ*
PREV=1-go.IPFV.SG to=PR.3F.SG every day
'I go to her place every day.'

(63) *əš=šəms* *ka=t-ṭlaʿ* *f=əš=šərq*
DEF=sun.F.SG PREV=3F.SG-rise.IPFV in=DEF=east.M.SG
'The sun rises in the east.'

(64) *ka=n-ḫāf* *mən=əl=klāb*
PREV=1-be.afraid.IPFV.SG of=DEF=dog.M.PL
'I'm afraid of dogs.'

These uses of preverbed PC appear to be one of the characteristic features of sedentary dialects. However, in parallel, the non-preverbed PC continues to fulfill multiple functions.

2.2.2 Regular uses of non-preverbed PC

Bare PC often appear in second ('propped' or subordinate) position, but also in independent clauses.

A/ Isolated uses

One of bare PC's meanings is that of a 'vague' future (Colin 1935: 133). This is exemplified e.g. by:

(65) *gāl* *l=u*
say.PFV.3M.SG to=PR.3M.SG
āna *n-žīb=u=l=ək*
I 1-bring.IPFV.SG=PR.3M.SG= to=PR.2M.SG
'I said to him: «I will bring it to you».'

From this point of view, the bare PC is distinct from the preverbed PC as an actualized form is distinct from a non (or not yet) actualized form. This may explain why the preverb *ka-* is also not present in other expressions of the future, imminent or prospective, when the PC is preceded by *dāba* 'now' or *ġādi* (in its invariable or shortened form *ġā*).

(66) *dāba* *n-kəmməl*
now 1-finish.IPFV.SG
'I finish at once!'

(67) *ġādi* *t-əbki*
go.PRCP.M.SG 3F-cry.IPFV.SG
'She's going to cry!'

The bare PC is also the verb form used in sentences with injunctive or optative meaning.

(68) *ḷḷah* *y-əʿṭē=k* *əṣ=ṣaḥḥa*
God 3M-give.IPFV.SG=PR.2M.SG DEF=health.F.SG
'God give you health!'

In (68), the replacement of *əṣ=ṣaḥḥa* by *əs=sḥāna* 'fever' transforms the wish into an insult: 'May God bring you fever!'. Typically these are modal sentences, with exclamatory intonation.

B/ Dependent uses

I) Dependency with a coordinating conjunction

u/w is the dialectal form of the Arabic coordinating conjunction *wa.* It is used to coordinate verbs, (pro)nouns and adjectives. In principle, verb forms linked by *u/w* must be of equivalent status, but if the second verb is in the bare PC, Moroccan Arabic uses a specific construction. Cohen (1984: 285) believes these to be « dependent adjunct clauses linked to the main clause by *w/u* ». Caubet provides several examples and points out that there is always an independent pronoun between *w/u* and the bare PC. According to her (*op. cit.*: 178), this construction « marks the simultaneity of two clauses », but « [i]n narratives, it serves rather to change the pace, like a hinge, and as such indicates events unfolding one immediately after the other »:

(69) *əṣ=ṣolṭān* *ġādi* *y-əšṛəb* *dāk=l=ma*
DEF=sultan.M.SG go.PRCP.M.SG 3M-drink.IPFV.SG this.M.SG=DEF=water
u *hīya* *t-ži* *dīk=əl=bnīta*
and she 3F.come.IPFV.SG this.F.SG =DEF=girl.F.SG

'The sultan was about to drink this (poisoned) water, and here is the girl who arrives...'

(70) *əd=džäža* *dyāl=i* *tāḥ-ət* *f=əl=bīr*
DEF=hen.F.SG of=PR.1.SG fall.PFV-3F.SG in=DEF=well
w=āna *n-žīb=ha*
and=I 1-look.for.IPFV.SG=PR.3F.SG

'My hen has fallen down the well, and here I am leaving to look for it...'

It is clear that, despite the presence of the coordinator and pronoun, these dependent bare PC clauses show a great deal of similarity to 'chained' uses of the Aorist.[39]

ii) Dependency without a subordinator

When there is an auxiliary such as *bqa* 'stay', the main verb (in second position) is in the non-preverbed PC if the process is not complete:[40]

(71) *ka=y-bqa* *y-əḥləm*
PREV=3M-remain.IPFV.SG 3M-dream.IPFV.SG

'He remains there dreaming...'

The same holds for consecutive clauses situated in the future. The verb form is a bare PC such as *yəšṛəb* or *y-mūt* in (73):

(73) *ʿṭē=ha* *l=əṣ=ṣəlṭān*

[39] That being said, the meaning to be attributed to the chained Aorist is currently the subject of some debate (for a summary, see Galand 1987: 375-7). In addition, « there are many ways in Berber, as in Arabic, to show sequencing » (Leguil 1989: 75).

[40] Compare with (72) where the process is situated in the past:
(72) *bqāt* *kā=t-tsənna*
remain.PRV.3F.SG PREV=3F-wait.IPRV.SG
'She remained there waiting.'

give.IMP.SG=PR.3F.SG to=DEF=sultan.M.PL
y-əšṛəb=ha *u* *y-mūt*
3M.drink.IPFV.SG=PR.3F.SG and 3M.die.IPFV.SG
'Give it (the powder) to the sultan, so that he drinks it and dies.'

These are two of the cases where there is a bare PC in second position, they are also to be found preceded by a subordinator.

iii) Dependency with a subordinator

Final subordinate clauses show great similarity with consecutive clauses, however they are generally introduced by the subordinator *bāš*. On the other hand, other adjuncts may be fronted, especially temporal adjuncts. Thus in (74):

(74) *mnin* *y-ži* *gūl=ha* *l=i*
when 3M-come.IPFV.SG say.IMP.SG=PR.3F.SG to= PR.1SG
'When he arrives, tell me.'

Without over-elaborating, I would like to add that this use of the bare PC is very common and that it also extends to the hypothetical system, where it has potential meaning, with verbs in both the protasis and the apodosis.

2.2.3 Cases of permutations

Thus far I have attempted to list cases where the preverb was either mandatory or excluded before the PC. However, it must be pointed out that the preverb appears to be optional in a number of contexts. Thus proverbs and poetry are particularly open to variation: one may find a bare PC, even when the process expresses a general truth (highly frequent in proverbs).

Caubet has observed that PC are either bare or preverbed in three contexts: following specific auxiliaries, following verbs expressing thought processes, and in narrating a succession of events. For example in (75) the preverb *ka-* is repeated before the second verb, but not before the third.[41]

(75) *bqāt* *kā=t-tsənna* *kā=t-šūf*
remain.PFV.3F.SG PREV=3F-wait.IPFV.SG PREV=3F-see.IPFV.SG
fī=h *u* *y-šūf* *fī=ha*
in=PR.M.SG and 3M.see.IPFV.SG in=PR.F.SG
'She stayed waiting, she looks at him and he looks at her too.'

The rarer presence of the preverb in oral tradition sentences shows older usage (better preserved, in more or less frozen expressions). On the other hand, usage in lists shows more of a tendency towards economy.

In addition, these variations also show the somewhat fluctuating limits between the use of bare PC and preverbed PC. As the uses of *ka-* evolved little by little, under pressure from communicative needs, the major distinction between indicative and modal uses is easily adapted to an intermediate domain, where

[41] This case appears to be distinct from the one seen above (adjunct with *w*) because the first verb here is not in the PC. In addition, it should be noted that the past morpheme *kān* would have not have been repeated if *kān* had been used instead of *ka-* before *t-šūf* in (75).

assertion is deployed in a minor role, at the border between a quasi-certain future and a present eternally rich in possibilities.

Having come to the end of this study, one wonders why the term Aorist continues to be used to refer to one of the basic verb forms in Berber. We saw above that the term Aorist had its moment of glory in Arabic studies, but then little by little fell into disuse, especially after Marcel Cohen analyzed the forms formerly labeled 'aorist' as imperfectives.

As far as the verbal system of a Bedouin type Arabic variety such as Ḥassāniyya is concerned, it became apparent that the opposition between the two conjugations (SC and PC) mainly bore on aspectual meaning and only secondarily (and rather indirectly) on tense. Modal meanings remained highly marginal, given that there is no opposition between indicative and non indicative forms (or only through the negation particles associated to the predicate).

In Mauritanian Arabic, the impact of the process on the realis referential continuum is primarily marked by the active participle, contrary to a wide variety of dialects spoken by sedentary Arabic speakers, where concomitance in the imperfective is expressed by adding a preverb before the PC. However, in varieties such as that spoken in Fez, the preverbed PC is used much more widely, not only for concomitant or actualized forms, but also for habituals and generics. Thus it has taken on indicative meaning, as opposed to the bare PC which shows mostly modal uses.

In his 1935 article, Colin had already noted this opposition, which he identified as being between realis and potential, and highlighted resemblances to features found in Berber. Caubet makes it possible to continue the comparison, both by her description of the uses of the various verb forms and by her presentation of the bare Moroccan Arabic PC as a « form waiting to be anchored » (1993b), similar to what Robert (1991) has described for the Wolof Aorist.

The role of the Arabic preverb *ka-* is comparable to that of the Berber particle *ad* (except in Zenaga). However, the syntactic dependency of the bare Berber Aorist is more marked than for the bare Arabic PC, as it retains, at least in Moroccan varieties, many independent, 'un-supported' uses. This is surely due to the fact that expressions of non assertive meanings are — or have become — much clearer in the Berber form. From this point of view, the Berber Aorist shows perhaps more features in common with Aorist conjugations in languages such as Wolof (Robert 1996) or Mwotlap (François 2003), even though usage never completely overlaps. Retaining the label Aorist would at least have the advantage of more easily establishing parallels between conjugations with similar meanings, although there is a risk involved as comparison to the Aorist in languages such as Bulgarian is not always obvious.

Comparison between Berber and Arabic shows that there are shared historical developments —Cohen (1984, 1989) provided the main pressure areas— even

though the point reached and the paths to it vary widely from one language to the next.[42] Thus one finds polarity in the modal system: from the least differentiated (Ḥassāniyya) to the most differentiated (northern Berber: Bare Aorist vs. *ad* + Aorist vs. Imperfective [vs. preverbed Imperfective]). As for Zenaga's binary system (Aorist vs. Imperfective), it rather appears akin to that of Moroccan Arabic (bare PC vs. preverbed PC), even though the Zenaga Aorist shows much fewer uses than the bare Moroccan Arabic PC.

In Zenaga, the situation appears relatively simplified to the extent where the Aorist has neither perfective meaning (not even in narratives), nor future meaning (even when preceded by *ad* —this particle is not used for this purpose). Furthermore, in the case of Mauritanian Berber, it does not take a great stretch of imagination to consider that the Aorist is an Imperfective with modal meanings, as opposed to an indicative Imperfective (whether factual or 'intensive').

One problem persists however, i.e. the risk of considering the modal Imperfective as a sort of subjunctive with specific modal meanings. The heaviest semantic load is borne by the indicative Imperfective —which is also the most marked form, in both Arabic and Berber. This can be explained by historical changes, the emergence of new forms which consequently marginalized the older forms, limiting them to modal or dependent uses. In the absence of direct testimony on the history of Berber, comparison with Arabic allows for better understanding what forces are at work and the general direction of change.

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[42] But it would be more accurate to say: from one language's family to the other (Arabic or Berber).

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