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Condition, interrogation and exception

Remarks on particles in Berber

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Comparison of the different Berber dialects (whether they be considered languages, dialects or local varieties) shows that there are a great many shared characteristics, particularly from a typological perspective. The degree of similarity varies however depending on the element studied.

Conjunctions have been recognized as one of the least unified of elements:

«Le système des conjonctions varie notablement d'un parler ou d'un dialecte (ou langue) à l'autre, ce qui permet de les considérer comme un outillage relativement récent, que chacun des groupes berbérophones a élaboré pour son propre compte. À côté d'éléments berbères, on y reconnaît souvent des emprunts à l'arabe» (Galand 1988: 225).¹

This diversity is indeed found in the inventory of those Berber particles which introduce the protases of hypotheses. However, the number of markers is much lower if one takes into account the probable origin of the basic units these markers are built upon. From this perspective, it is necessary to examine all of these particles' uses and meanings. This examination will focus on observed convergence in order to shed light on grammaticalization pathways.

1. *ad* in Zenaga

Zenaga is an endangered Mauritanian language. It is generally classified apart, as a language variety belonging to a distinct linguistic set. In this peripheral variety (located in the south-westernmost part of the Berber area) the uses of *ad* vary widely, as in other Berber varieties, and show some specificities. For example, Zenaga is the only Berber variety where *ad*² has a fully grammaticalized use as a conditional particle ('if').

The various occurrences of Zenaga *ad* are examined in Taine-Cheikh

¹ The conjunction system varies noticeably from one local variant or dialect (or language) to the next. This indicates that they are a relatively recent tool, which each of the Berber speaking groups created independently. Alongside Berber elements, one often finds borrowings from Arabic.

² /ad/ is generally pronounced [æð], with an interdental consonant, hence its transcription *ād*. Furthermore, for simplicity's sake, assimilations are generally not transcribed (only marked by ^).

2010a where several possible grammaticalization pathways are laid out, based on uses of *ad* as a deictic, for instance as a demonstrative and copula.

Below is a brief summary of the various uses of *ad* in Zenaga.

A/ *ad* is a proximal demonstrative pronoun (M.Sg *äd* vs. F.Sg *täd* vs. M.Pl *ədnid*), a demonstrative clitic (Sg *-äd* vs. Pl *-id*) and an invariable copula (with non adjectival nominal predicates). These three possibilities are illustrated in (1):

- (1) *äd* / *äräbīy* = *äd* *äd* *änähtəf*
 this.one / M.child.SG = this.SG COP M.wary.SG
 ‘This one / this child is wary.’

B/ *ad* is an invariable particle used to introduce independent clauses expressing orders, prohibitions or injunctions

C/ *ad* is an invariable particle used to introduce dependent clauses in second position. The latter may be:

- i) completive clauses (verb in the aorist) of governing verbs expressing orders, requests or wishes (expressed to others or to oneself)
- ii) indirect speech (verb in the aorist), e.g. indirect orders, following verbs such as ‘say’ or ‘ask’
- iii) quotatives (verb in the perfective or imperfective) following the verb ‘say’³
- iv) indirect polar questions following verbs such as *yäzgäD’äh* ‘ask, question, interrogate’, *yuzza’r* ‘look’, *wär yässən* ‘not know’, *yäznäzgäm* ‘think, seek to understand’.

In the case of indirect questions, *äd* must be followed by a verbal auxiliary frozen in the 3rd M.sg person: either *yu(u)gä* ‘become, unfold (time)’, or (more rarely) *yumrä* ‘already be’.

- (2) *wär Sən-äg* *äd*^ *y-u(u)gä* *y-əššäh^däh*
 NEG know.PFV-1SG if 3M.SG-become.PFV 3M.SG-come.PFV = PROX
 ‘I do not know if he came.’

When the verb in the subordinate clause is in the imperfective —and not in the perfective as in (2)—, it is usually preceded by the future auxiliary *yänhäyā* (... *äd*^*y-u(u)gä y-änhäyā y-əttäššäh^däh* ‘... if he will come’).

D/ *ad* is an invariable particle used to introduce protases of conditional clauses.

- i) When *äd* is used on its own (+ verb in the aorist, with or without negation) it is used as a conditional (the ‘simple’ condition which often shows a tendency to conflate with the temporal in ‘when, every time that’):

- (3) *äd* *wär*^ *y-äšbi* *y-uffud*
 if NEG 3M.SG-drink.AOR 3M.SG-be.thirsty.AOR
 ‘If (when) he does not drink, he is thirsty.’

³ This use of *ad* is only found in Zenaga (as is the case for the two following uses).

ii) When *äd* is followed by the frozen form *yu(u)gä*, the sentence takes on the meaning of a factual, referential hypothesis, used to express an alternative:

- (4) *äd* *y-u(u)gä* *y-əšbä* *wär* *y-uffäd*
 if 3M.SG-become.PFV 3M.SG-drink.PFV NEG 3M.SG-be.thirsty.NEG.PFV
 ‘If he drank, he is not thirsty.’ [but if he did not drink, he is thirsty]

Within the irrealis system, one thus sees that *äd* covers a wide array of uses, where only counter-factual hypotheses are impossible (the particle *(h)äm* is used instead).

Similar to the *äd* used to introduce injunctions, prohibitions, wishes, requests, or even simply speech, the *äd* used in conditionals probably stems from a deictic (in a broad sense). Moreover, the *äd* used in protases can be more specifically used as an actualizer, where the clause is used to express fictional actualization (setting the clause in the referential sphere of all possible worlds).⁴ From that perspective, the conditional *äd* may be more closely linked to injunctive *äd* and polar question *äd*.

This possibility of a tighter link between conditions and questions has only one visible manifestation in Zenaga, which is the widespread —and highly specific— use of the frozen verb form *y-u(u)gä*. In other Berber varieties certain factors seem to indicate that the systems are evolving in similar ways.

Table 1. The particle *ad* in Zenaga

	condi- tional	indirect question	deictic/pre- sentative	comple- mentizeur	injonction /wish
<i>ad</i>	+	+	+	+	+
<i>ad</i> <i>y-u(u)gä</i>	+	+	–	–	–

2. *is* in Tamazight and Tashlhit

Tamazight⁵ and Tashlhit refer to two large dialect areas in central and southern Morocco, corresponding, respectively, to the Middle-Atlas and to Soûs. The particle *ad* is found there, but the invariable morpheme *is* is used in a great variety of contexts, for example in questions and, to a more limited extent, in conditionals.

A/ *is* is regularly described as being used to introduce independent or content questions. In this use, *is* is never mandatory («Une intonation montante suffit à donner à l'énoncé chleuh une valeur interrogative»

⁴ The set protasis-apodosis then functions as a pairing of the type topic-commentary (cf. Taine-Cheikh 2011: 390-393).

⁵ The term Tamazight is used here in its narrow sense.

Galand 1988: 222),⁶ but its presence does trigger affix displacement (such as the pronominal or adverbial *-t* in (6), used for spatial orientation).⁷

In Tashlhit:

- (5) *is* *i-ša* *u-srdun?*
 Q 3M.SG-eat.PFV M.AS-mule.SG
 ‘Did the mule eat?’ (Galand 1988: 222)⁸

- (6) *is* *t* *t-ut-t?*
 Q PR.OBJ.3M.SG 2-hit.PFV-SG
 ‘Did you hit him?’ (Destaing 1920: 261)

In Tamazight:

- (7) *is* *t-kerz-d* *assa?*
 Q 2-plow.PFV-SG today
 ‘Did you plow [the field] today?’ (Taifi 1991: 607)

- (8) *iz = d* *i-dda* *ass-ənnat*
 Q = PROX 3M.SG-come.PFV yesterday
 ‘Did he come yesterday?’ (Penchoen 1973a: 82).

B/ In contrast, *is* is obligatory when it introduces an indirect question. Example (11) shows that these two uses of *is* (as a direct and an indirect question marker) can coexist in a single sentence.

Tashlhit (Destaing 1920: 261)

- (9) *i-seqsa* *t* *is* *i-herš*
 3M.SG-ask.PRV PR.OBJ.3M.SG if 3M.SG-be.sick.PFV
 ‘He asked him if he was sick’

Tamazight (Taifi 1991: 607)

- (10) *ʔlu* *is* *da* *y-snuʔus*
 see.IMP.SG if LOC 3M.SG-rain.IPFV
 ‘See if it is raining.’

- (11) *is* *te-ssen-d* *is* *i-zzenzaʔ* *a-gmar = n = s?*
 Q 2-know.PFV-SG if 3M.SG-sell.PFV M.FS-horse.SG = of = PR.POSS.3SG
 ‘Do you know if he sold his horse?’

⁶ Rising intonation is sufficient to indicate a question in Chleuh.

⁷ Displacement is usually triggered by the presence of verbal modality (e.g. negation) or of a particle in a subordinating function. It can also happen however with sentence modalities such as injunctive *ad*.

⁸ For most of the examples given, we are responsible for the transliteration and translation into English. And, in some cases, for the morphological segmentation. We have also attempted to standardize the transcriptions (thus the palatal fricatives are always transcribed by *š* and *ž*, the voiced pharyngeal fricative by *ʕ* and the post-velar fricatives by *g* and *h*).

- (19) *Ni-ġ* / *is* *i-Qn* *imi*
 say.PRIV-1SG COMP 3M.SG-be.closed.PRIV M.AS.door.SG
 ‘I thought the door was closed.’

as opposed to

- (19’) *Ni-ġ* *i-Qn* *imi*
 say.PRIV-1SG 3M.SG-be.closed.PRIV M.AS.door.SG
 ‘I said the door was closed.’

- (20) *Sn-ġ* *is* *y-ara*
 know.PRIV-1SG COMP 3M.SG-write.PRIV
 ‘I know he wrote.’ [... it is that ...]

as opposed to

- (20’) *Sn-ġ* *ad* *ara-ġ*
 know.PRIV-1SG POT write.AOR-1SG
 ‘I can write.’

These examples show that *ini* ‘say’ takes on the meaning of ‘think’ when it is followed by *is*, whereas *isin* ‘know’ retains its full verb meaning with *is* but takes on modal ability meaning when the construction contains the particle *ad*.

For Galand, the *is*, in (19) and (20), is not a true subordinator, but is rather a particle made up of the determiner prop *i* and the preposition *s*.⁹ Thus the original construction would be better rendered by the explanatory phrase ‘it is that’.

D/ Presentative particle usage, found e.g. in Tamazight, can be illustrated by examples (21) to (23), taken from Taifi’s *Dictionnaire* (1991: 607-608).

i) It usually introduces clauses with explanatory or causal meaning (‘it is that’, ‘because’):

- (21) *meš* *ur* *t^ t-ufi-d* *asekka*
 if NEG PR.OBJ.3M.SG = 2-find.NEG.PRIV-SG tomorrow
ha = t *is* *i-safer*
 here.is = PR.OBJ.3M.SG because 3M.SG-travel.PRIV
 ‘If you do not find him tomorrow, it means that he traveled.’

- (22) *ur* *i-ri* *ad^ d = i-ddu*
 NEG 3M.SG.will.NEG.PRIV POT = PROX = 3M.SG-come.AOR
is *i-gg^wed*
 because 3M.SG-be.afraid.PRIV
 ‘He does not want to come because he is afraid.’

ii) At times it also introduces clauses, having the meaning ‘as for’. In this case, it is usually accompanied by the predicative particle *d* and has the form *idd/id* (< *iz-d* < *is-d*).

⁹ For further information on the origins and explanatory values of *is*, see the article by Galand (2002 [1987]: 241-256), and more particularly pages 249-253.

- (23) *id* *nekk,* *ša* *wr* *tannay-ḥ*
as.for me something NEG see.IPRV-1SG
‘As for me, I have not seen anything.’

E/ Lastly, the particle *is* is also found in hypotheses.

i) *is* is used relatively rarely as a conditional particle, nonetheless the Tamazight *Dictionnaire* (Taifi 1991: 607) provides several examples.

- (24) *is* *t-ri-d* *ad^ t-eddu-d* *ger* *ssuq,*
if 2-want.PRV-SG POT = 2-go.AOR-SG to M.souk.SG
kker *zikk*
get.up.IMP.SG early
‘If you want to go to the souk, get up early.’

In contrast, Bentolila (1981: 310) considers that in Aït Seghrouchen Tamazight, hypothetical meaning is rendered through inversion (like in the two verses of La Fontaine’s fable: ‘Se mire-t-on près d’un rivage / Ce n’est pas soi qu’on voit’). In (25), the initial *is* indeed appears to function in the same way as the interrogative adverb *is*:

- (25) *is* *i-La* *u-zǧal,* *La* *TKs-n-t*
Q 3M.SG-be.PRV M.AS-good.weather.SG HAB take.away.IPRV-3PL-F
t-ʿYalin *timṣ̌in* *i* *u-ḥam*
F.AS-woman.PL F.FS.timshin.PL to M.AS-tent.SG
‘Is the weather beautiful? Women are taking the *timshins*¹⁰ from the tent.’

Therefore the grammaticalization of *is* as a conditional marker appears limited, even within Tamazight.¹¹ However, given that the difference in analysis for (24) and (25) is mostly due to the difference in intonation, it is easy to see how the language may have gone from free association between two independent clauses to a single sentence with two linked clauses.

ii) In Tuareg, the particle *as*, for which the etymology and usage in relatives are comparable to that of *is*, has undergone specific changes in the southern varieties. In these varieties it is used both as a complementizer (following verbs such as *issân* ‘know’) and as an adverbial subordinator. The particle, which literally means ‘the situation entailing (such and such a thing)’ can, in certain contexts, take on temporal meaning (‘when’), causal meaning (‘given that’), or hypothetical meaning (‘if’). The various stages in this grammaticalization process are well documented in Galand (2002 [1987]). Although these uses are quite different from what one finds for *is*, it is interesting to note that in

¹⁰ *timṣ̌in* was not translated by Bentolila, but this lexeme is comparable to *timṣ̌uṣ̌in*, the plural of *tamṣ̌ušt* which Taifi (*ibid.*: 438) translates as ‘old threadbare mat’.

¹¹ In Ighchan Tashlhit, the conditional particle is *iǧ* ‘if, when’ (virtual). The origins of this particle are similar to those of *is*: see *i s* ‘the one with’ and *i ḡ* ‘the one in’ (cf. Galand 1988:226). There is also *mtaD* ‘if’ (irrealis), but in this case the presence of *is* probably denotes a lesser degree of specificity than *mta(D)*.

Tamasheq of North-East Burkina Faso, «[t]he conjunction *as* is frequently used to express ‘if’ or ‘when’» (Sudlow 2011: 95). For example as in (26):

- (26) *as* *ămtăll-ăġ* *sasseġadăd = ahi*
 if make.a.mistake.PR.V-1SG correct.IMP.SG = PR.OBJ.1SG
 ‘If I make a mistake, correct me.’

F/ In Tamazight and Tashlhit, exceptions are often expressed by the prepositions *ġār* and/or *(a)bla* (cf. Destaing 1920: 256, Bentolila 1981: 217, Taifi 1991: 17). These originally Arabic particles clearly show no relation to *is/as*. On the contrary, the Zenaga preposition *ăš* ‘with the exception of, except’ (Taine-Cheikh 2008: 470, 2011: 546) is akin to *is/as*. The difference in frication is simply the regular reflex of the change *s > š* (which is why in Zenaga the complementizer for example is *ăyš* and not *is/as*).

In support of this posited kinship is Bentolila's study of oaths (1988). He shows that the particles which appear in the positive real verb phrases of oaths often had the original meaning ‘only’. This is true not only of *abla* and *(a)ġar/ġir*, but also of *has* and *hs*, particles ending in -s found in central Morocco, amongst, respectively, the Zemmours and the Aït Sadden (Bentolila *op. cit.*: 52-3, 64).

In Zenaga, one finds a particle *ăš* (which is different from but similar to the exception particle *ăš*) used in a positive oath concerning a future event (Taine-Cheikh 2010b: 202-3). Its close correspondence to central Moroccan *has* strengthens the kinship hypothesis between the various *s/š* particles. In this context, a relation between the above mentioned particles *is/as* and the restrictive particles becomes entirely plausible.

Table 2. Particles with -s/-š in Berber

	condi- tional	direct & indirect question	excep- tion	deictic/ presen- tative	comple- mentizeur	temporal subor- dinator
<i>is</i> Maroc	(+)	+	–	+	+	–
<i>as</i> touareg	+	–	+	–	+	+
<i>ăš</i> zénaga	–	–	+	–	–	–

3. *m(a)* in the northern varieties

Chamito-Semitic shows a varied use of particles built upon the basic element *m*¹² — e.g. in interrogatives and indefinites. This phenomenon is also found in Berber, particularly in interrogative pronouns (‘who?’, ‘what?’) and adverbial ones (‘where?’, ‘when?’, ‘how?’, ‘why?’), with a

¹² For Semitic, see Faber (1991) and Lipiński (2001: 336-8, 467, 480, 546).

3.1. The polyfunctional *ma*

A/ *ma* is an interrogative adverb, it is sometimes in competition with *is*, but is more widely found outside of Tashlhit and Tamazight.

(28) *ma* *d* ?*li*?
Q PRED Ali
'Is it Ali (or not)?'

(29) *ma t-əlli-d mliḥ?*
Q 2-be.IPRV-SG well
'Are you well?'

(30) *ma i-lla ša n^w=wa t-ssn-d*
 Q 3-be.PR.V.SG something of=PR.DEF.M.SG 2-know.PR.V-SG
 ‘Do you know something about it?’ (Penchoen 1973b: 55)

(31) *ma i-lla qli m b°eqqi?*
 Q 3-be.PR.V.SG a.little of love.sg
 ‘Is there a little love?’ (Lafkioui & Merolla 2002: 52-3)

(32) *ma t-efra dde^hwa?*
 Q 3F.SG-be.solved.PRIV matter.F.SG
 ‘Is the matter solved?’ (Dallet 1982: 475)

(27) *iz d ʕli?* ‘is it really Ali?’

B/ The use of *ma* for indirect polar questions is found in the same varieties (with the apparent exception of Tamazight).

i) In eastern Rifain (Kossmann, *ibid.*: 180):

- (33) *ʕabbəɾ* ***ma*** *a* *lam = d = y-as*
 measure.IMP.SG if POT PR.OBL.2F.SG = PROX = 3M.SG-go.AOR
 ‘See if it fits you!’

ii) In Aures Chaouia (Penchoen, *ibid.*: 54):

- (34) *t-raʕa* ***ma*** *dag = ʃ*
 3F.SG-look.PRV if in = PR.3SG
ʃa *nʸ = h.brar*
 something of = lumps
 ‘She checks if it (the milk) contains lumps.’

iii) In the Algerian Chenoua dialect (Cherchell region)

- (35) *kʕabel* ***ma*** *tsaɣ-en*¹⁴
 look.IMP.SG if IPRV.rain-3PL
 ‘Check if it rains.’ (Laoust 1912: 77)

iv) In Kabyle:

- (36) *Ur* *ʒri-ɣ* *ara* ***ma*** *ad* *y-eddu*
 NEG know.NEG.PRV-1SG NEG.2 if POT 3M.SG-come.AOR
 ‘I do not know if he will come.’ (Naït-Zerrad 2001: 147)

C/ In some of these same varieties, the particle *ma* may be used to introduce the protasis in conditionals.

i) In Aures Chaouia, where *ma* ‘if’ and *ma* ‘what’ are homonymous with the negative particle *ma*:

- (37) ***ma*** = *u = ɣar = s.n = ʃ* *labas* *nʸ = surɣgn*
 if = NEG = to = PR.3PL = NEG2 much of = M.AS.money.PL
 ‘If they do not have much money [...]’ (Penchoen, *ibid.*: 55)

ii) In Kabyle where, on its own, *ma* can take on the meaning ‘if’ when it is followed by the perfective, as in (38):

- (38) ***ma*** *y-ehwa = yak* *has* *at = t-egred*
 if 3M.SG-like.PRV = PR.OBJ.2SG only POT = 2-read.AOR.SG
 ‘If you like it, you can read it.’ (Dallet, *ibid.*: 476)

Furthermore, it must be noted that one also finds longer forms in Kabyle: *ma d ay* and *ma d ara* (Naït-Zerrad, *ibid.*: 145).

3.2. *m(a)* derivatives

Chaouia very clearly shows the three cumulative uses of *ma* (direct and

¹⁴ *tsaɣen* [implied *ouaman*] ‘it is raining’ — literally ‘get caught [waters]’, cf. Laoust *ibid.*: 138.

indirect questions + condition), as does Kabyle, to a lesser degree. This is less the case in other varieties where the particle *ma* often needs additional material to be used as a conditional. Moreover, it is important to note that many varieties only use the element *m(a)* as a constitutive part of larger pronominal, adverbial or conjunctive units. In the case of conditional particles, it can be very difficult to identify the origin of all of the elements, but the presence of *m(a)* is as recurrent in conditionals as it is in units with interrogative meaning.

A/ *mer* and its variants

In Berber, for irrealis hypotheses, specific particles are used, e.g. *mer/mur/mr* in Tamazight and *mer/mmer/lemmer* in Kabyle. The fact that they are usually followed by the negative perfective strengthens Taifi's proposed etymology (1991: 426; 1993:218-9) which posits that in *m(e)r/mur* one can detect the presence of the negation *ur/wr*.¹⁵

B/ *mata*, *mala*, *mara* and their variants

Generally speaking, variation consists in the presence or not of a vowel following the nasal *m-*, and possible gemination of the second consonant. In some dialect areas, the second consonant varies but the overall pattern appears invariable (this is said to be the case in Soûs, where one finds *m̥la*, *m̥ra*, *mta* 'if'). In other areas, e.g. in the Rif, the pattern shows variation, but the second consonant is usually a liquid: *mala*, *malla*, *may*, *mara* (Lafkioui 2007: 230).¹⁶ Lastly, in certain cases, the dental variant is dominant: *mta/metta* in Figuig,¹⁷ *matta* (or *batta*) in Ouargla.

Furthermore, it is probably necessary to consider that there are at least two distinct formations. Even though in Ouargla the conditional particle *matta* does not require verb satellite displacement, in contrast to the indefinite *matta* (Delheure 1987: 200), etymological kinship is not impossible. As for the liquid consonant particles, their origin could be «la particule *ma* suivie de la forme verbale *yalla* 'il est'»,¹⁸ as suggested by Kossmann (2000: 199) for eastern Rifain, where the variant *mayalla* coexists alongside *malla*.

C/ *maka* and its variants will be studied in the next section of this paper.

¹⁵ Its use for the potential, as in Kabyle (cf. Dallet, *ibid.*: 511), thus appears to be a secondary expansion.

¹⁶ See also *mala* in the Beni-Salah dialect, spoken on the slopes of the Blida Atlas, not far from Algiers (Laoust 1912:77).

¹⁷ It is important to note that in Figuig *m(et)ta* is also used to link an operant verb to the following clause if that clause expresses doubt or uncertainty (Kossmann 1997: 322).

¹⁸ the particle *ma* followed by the verb form *yalla* 'it is'.

Table 3. Particles with *m-* in Berber

	conditional	direct question	indirect question
<i>ma</i>	+	+	+
<i>m(e)r, m(a)ta, m(a)la...</i>	+	–	–

4. Variants to the element *k(a)*

In many ways, the element *k(a)* appears to be a variant of *m(a)* (and even sometimes of *is*), even though, within the conditional system, it mostly appears as a second element added to *m(a)*, as in *maka*.

Like *m(a)*, *k(a)* is an element found in Semitic with negative and interrogative meaning (see Faber 1991: 414).¹⁹

In Berber, *k(a)* may either be used on its own, or may constitute part of various particles, often with interrogative meaning.

A/ The use of *ka* in polar questions is rare but not unknown: it is found in western Rifain even though most of that dialect area uses *ma* (Lafkioui 2007: 237; 240, map 292).

In Figuig, the particle *waš* serves to introduce direct questions. It is also used for indirect questions governed by certain verbs: *t-eqqel waš...* ‘she was looking to see whether...’ (Kossmann 1997: 322). If one allows that *waš* can be segmented into two elements, *wa*-²⁰ and *-š*, the second element could be analyzed as a representative of *k(a)*. This would be further proof of this particle’s wide array of uses.

In Zenaga, the element *k* appears in the global formulaic question:²¹ *k-äyd? taʔK-äyd?* ‘what is/what did?’, where one recognizes the interrogative *taʔK* ‘what?’ followed by the demonstrative *äyd* (Taine-Cheikh 2008: 293).

Also in Zenaga, the element *k* appears in the reinforcing discourse marker *äk/äk* (one must note in this case however the presence of the initial vowel *ä*-):

- (39) *niʔK äk aḍmā-g äyš ...*
 I indeed think.PRIV-1SG COMP
 ‘As for me, I think that...’

In Ouargla one finds uses comparable to those of Zenaga *äk(k)* and more particularly to those of Tamazight *is*. Delheure (*ibid.*:137, 182) indicates that in Ouargla there are two particles which can be used with the

¹⁹ For Lipiński (*ibid.*: 483), *ka-* is first and foremost a «deictic and asseverative particle».

²⁰ One should note that Figuig *wa*, which is a component element of *wala* ‘even..., ...as well’, is also a shortened form, as is *la* (Kossmann 1997: 344-5).

²¹ In this case it is often preceded by the element *taʔ* which raises the question of whether this dental consonant element is akin to Figuig and Ouargla (*ma*)*ta*.

presentative meaning ‘as for X’: both *akk* and *amm^wa*.²²

B/ Parallel to these uses which tend to serve to structure information and for modality, the element *k-* also serves as a component in indefinites having the meaning ‘each’ (e.g. Tuareg *ak* and Zenaga *äkki*) or ‘every’ (e.g. Kabyle *ak^w*).

When coupled with the particle *m(a)-*,²³ it provides various expressions. They can be interrogative as in the Tahaggart pronoun *manëkk* ‘what [is]?’ or manner phrases as in the Tawəlləmət lexeme *əmmək* ‘manner of being, nature...’. They can also be both at once, as in the adverb ‘how?’ which is expressed by *amek* in Kabyle, *mək/amək/mam(ə)k* in Ouargla, *maka/maša* in Tamazight and *maneš* in Figuig.²⁴

C/ It is another coupling between *m(a)* + *k(a)* which serves as the conditional particle in the various Berber varieties. Although the apodosis particles seem to be akin to the others,²⁵ the forms remain distinct: voicing and/or a more marked tendency to palatalize *k* (>š) locally create this difference.

In Tamazight for example, the potential and realizable hypothetical particle is *mek* and more crucially *meš* (Bentolila *ibid.*: 318-9, Taifi 1991: 414) — a form which is both similar to and distinct from *ma* ‘is it that?’ and *maka/maša* ‘how?’.²⁶ Inversely, in Ouargla, the reduced vowel form *mək* means ‘how?’ while the form containing the vocalism *-a-a* has the meaning ‘if, in the case that’ (Delheure *ibid.*: 187):

- (40) *maka* *d* *nətta,* *uħu*
 if PRED him no
 ‘If it is him, I refuse (no).’

We will return shortly to a possible etymology for *makan*, the second variant found in Ouargla, even if the origin of *kagella* ‘if’, to which we shall now turn, appears highly similar to that of *makan*. *kagella* is a variant of *kan* noted (along with *ouilla*) by Laoust (1912: 77) in the Algerian Chenoua variety. It could be composed along the same lines as *mayəlla* and essentially only differ in its replacement (before the existence

²² *amm^wa* is considered a borrowing from Arabic, but this does not exclude parallel developments. Cf. the presence of *amma* in western Rifain (Kossmann 2000: 170) and more importantly of *uma* in Tamazight (Taifi *ibid.*: 398).

²³ This can however also be the case for the indefinite, cf. *makk* (*ma akk* ‘that which all’) ‘each’ in Ouargla (Delheure, *ibid.*: 137).

²⁴ Cf. Foucauld 1951-1952: 1163, Prasse & al. 2003: 533, Dallet 1982: 494, Delheure 1987: 187, Taifi 1991: 414, Kossmann 1997: 204.

²⁵ See Lipiński (*ibid.*: 548), *contra* Taifi (1993: 219). For the latter, the š in Tamazight *meš* is the truncated form of *ka* / *ša* which means ‘thing, something’ and which stems from *kra*, the form used with the same meaning in Tashlhit and Kabyle. The hypothesis is interesting, but could be due to coincidence (the evolution from *kra* to *ka/ša* being triggered through influence from the original particle *k-*). Indeed, in Ouargla, for example, ‘if’ is expressed by *maka*, and the lexeme ‘thing’ *šra* has indeed retained its *r* (Delheure *ibid.*: 324-5).

²⁶ *maka/maša* is also used in Tamazight with the meaning ‘but, however’ — as is *maša* in Rifain (Kossmann 2000: 194).

verb *yalla*) of *ma* by *ka*.

Based on this hypothesis, let us now consider the case of the preposition *gayr/gir* ‘except’. This preposition is a borrowing from Arabic, and can be used as a preposition, as in Ouargli (*ibid.*: 249). In Chenoua, in contrast, the exception particle is *gerka* ‘only if’ (*ibid.*: 78):

- (41) *hezda* *gerka* *sen-at* *n* *tsebbat*
 3F.SG.crush.PRV only two-F of F.AS.grain.PL
 ‘She crushed only two grains.’

In Chenoua, the recurrence of the element *ka* thus seems to establish a particular link between conditional and exception particles.²⁷

Table 4. Particles with *k* (or *k > š*) in Berber

	condi- tional	direct question	indirect question	excep- tion	deictic/ presen- tative	indefinite /interro- gative
(a)k/ka	–	+	–	+	+	+
waš	–	+	+	–	–	–
maka...	+	–	–	+	–	+
kagella	+	–	–	–	–	–

5. *kan* in the eastern varieties

In Berber, and more particularly in the eastern varieties, *kan/kān* is often used as an introductory particle — for, among other uses, the conditional. Originally it was the Arabic existence verb *kān(a)* which, in the various Arabic dialects, has been grammaticalized with different uses, and became an invariable form (cf. Taine-Cheikh 2014).

A/ In Arabic, *ka(a)n* is very commonly found introducing the protasis of conditionals, either alone or in more complex units (*lukān*, *in kān...*). The same is true in Berber.

i) The phrase *in kān* is close to the canonic Arabic form where the particle ([?])*in*, of deictic origin, is followed by the verb *kān(a)* in the perfective (always frozen in Berber). The use of *in* before *kān* is rare however, and the only other trace of it we were able to find was in the Libyan Sokna variety (Sarnelli 1925).²⁸

ii) The phrase *lu(u)ka(a)n* (composed of *kān* preceded by a presentative

²⁷ This same element appears to be present (in the form *ka > ša*) in *haša* ‘except’ in Kabyle (Dallet *ibid.*: 302). One also finds *mak d* (*d* being the predicative) ‘nothing but, only that’ in Ouargla (Delheure *ibid.*: 187).

²⁸ For example p. 33, § III, ln 12.

particle) is also borrowed, more or less as such, from the Arabic.²⁹ It is found in Kabyle (where it is in competition with *limmer*), in the Algerian Chenoua variety (for past irrealis) and as far away as in Rifain, in the abbreviated form *luk*. It most often occurs however in Libyan varieties. In the Nefousa variety, the variant *lūkân* coexists alongside others, with closely related origins and etymologies: *liākân*, *liâ*, *ídā kân* (Béguinot 1931: 94, 127).³⁰ In contrast, in the Augila variety, *luka(a)n* is the only conditional particle of Arabic origins — the others being *endu/úndu* and *amur* (Paradisi 1960: 174). In Zuara, the *l* in *lukan* can be omitted (Mitchell 2009: 112):

- (42) *(l)ukán wətšá fli-ġ dída = s,*
 if NEG go.NEG.PRIV-1SG with = PR.3SG
w = ətthəşşlə-ġ = tí sġər = s
 NEG = got.NEG.IPRV.1SG = PR.OBJ.3M.SG from = PR.3SG
 ‘If I hadn’t gone with him, I wouldn’t have got it from him.’

iii) In Ouargla, the originally Arabic element *kan* is preceded by the Berber particle *ma*. It is thus a mixed form, half Berber, half Arabic, and is semantically equivalent to both *inkan* or *lukan* and *mayəlla*, and perhaps even to *kagəlla* (Delheure 1987: 187):

- (43) *makan d iʕzam, i-ʕəzzəm mʕa = s*
 if PRED M.FS.study.SG 3M.SG-study.IPRV with = PR.3M.SG
 ‘If it is about studying, he studies with him.’

iv) Lastly, as in a certain number of Arabic dialects, one finds uses of *ka(a)n* on its own. This is the case in El-Foqāha, in the Fezzan region (Paradisi 1963: 121). It is also the case in Siwa Oasis Egyptian (Laoust 1931: 137):

- (44) *kan la hsiṭ g us = əd dída = i*
 if NEG want.PRIV.2SG POT [2SG].come.PRIV = PROX with = PR.1SG
ga h-aġ iman = ənn^a = o
 POT go.PRIV-1SG M.soul.SG = of = PR.POSS.1SG
 ‘If you do not want to come with me, I will go alone.’

B/ *ka(a)n* (or one of its variants: *la-kân*, *ləkkân*, *(yä)kûn...*) is used at times in Arabic, to express exceptions or restrictions. It is quite frequently found in the Maghreb, particularly in the eastern varieties — from western Algeria to Libya.

In Berber, a comparable use of *kan* ‘except, only’ has sometimes been noted in this same eastern region.³¹ For the Tunisian Sened variety, Provotelle (1911: 114) considers *ġir* and *kân* equivalents: [...] *ġir idjet/kân*

²⁹ On this particle in Semitic, see namely Lipiński (*ibid.*: 482-3). Furthermore, this raises the question whether the particle *l-*, which one finds for example in Kabyle in *limmer*, is not its Berber equivalent.

³⁰ An older document provided a more Berber form: *ma* ‘si’ (Motylinski 1898: 36).

³¹ It has also been noted in Kabyle (Mettouchi, *personal communication*).

idjet ‘[...] except only one’. In Zuara, *kan* on its own is noted by Mitchell (*ibid.*: 108):

- (45) *ʿaddwa* *w = attitš-ʿan = ti* *kan*
 medicines NEG = give.NEG.IPRV-3PL = PR.OBJ.3M.SG except
i = mammu *d = máḍun*
 to = someone PRED = sick.man
 ‘They only give medicines (lit. medicines they give them only) to someone who is ill’, i.e. ‘only the sick man takes medicines’.

C/ In Arabic, the particle which introduces direct questions is often also used to introduce conditionals: *ida*, *(ʔ)in*, *(ʔ)in ka(a)n*, more rarely *kān* alone, contrary to *(a)kān* in the Sudanese Šukriyya variety, and to *(yā)kān* in Mauritanian ḥassāniyya.

In Berber, it would seem that Siwi — a variety under strong Arabic influence — is alone in using the particle *kan* in this same context (Laoust 1931: 137):

- (46) *la* *ssen-aḡ* *kan* *g* *us = ad*
 NEG know.PRIV-1SG if POT [3M.SG].come.PRIV = PROX
 ‘I do not know if he will come.’

Table 5. The particle *kan* in Berber

	conditional	indirect question	exception	existence verb
<i>kan</i>	+	+	+	+

6. *kud* and its variants in the southern central area

The different varieties in the Tuareg area are characterized, like Libyan Ghadamès Berber, by the use of a particle based on *ku-*. This particle, which shows a certain degree of regional variation, is partially used in free variants (*kud/kūd/nkūd/kud-anta/kunta*). In substance, it has comparable uses to those discussed above.

A/ In its most frequent use, *kud* introduces the first clause in complex sentences.

kud can be used as a temporal subordinator, possibly with causal connotations, as in the Ghadamsi example in (47) (Lanfry 1973: 242):

- (47) *nkūd* *ferren-n-et* *ane^f* *aḡḡed-n-et*,
 if riddle.IPRV-3PL-F or grind.IPRV-3PL-F
 ‘While they riddled and ground (grain)...’

This use is also found in Tamazight, where *kud* (or *kkud*, cf. Taifi 1991: 322), has also been noted with the meaning ‘at the same time as, as long as’ (Bentolila *ibid.*: 335):

(48) *kud* *i-Tḥasab,* *i-TrTab*
 while 3M.SG.count.IPRV 3M.SG-set.the.amount.of.tax.IPRV
 ‘While counting (cattle livestock), he sets the amount of tax.’

(49) *kud* *i-Tḡar,* *Tḡar-n-t*
 as 3M.SG-dry.IPRV dry.IPRV-3PL-F
 ‘As (the snail) dried, (the warts) dried (also).’

However, it is only in the southern central area that *ku-* and its variants have specialized as conditional particles. For Prasse (2005: 169), the particle *kud*, *kudet* ‘if’ which introduces the potential conditional stems from Arabic:

«*kud* provient très probablement de la conj[onction] maghrébine *kūn*, *kū* ‘vu que, parce que, puisque; car’ qui provient du classique *kawn* ‘existence; événement, incident’ (*li-kawni-hi* ‘parce qu’il’ etc.). *kūn* s’abrège souvent en *kū* qui a pu être emprunté par le touareg et élargi de *əd* (‘dans l’incident que’).»³²

According to this hypothesis, the etymology of *ku(d)* would be akin to that of *kān*: the same Arabic root KWN, but a form derived from a noun phrase rather than from a verb form.³³ In Ghadamès, the initial nasal consonant in *nkūd*, a variant of *kūd*, does not *a priori* bear any relation to the *n* in (*i*)*inkan*, unless one imagines a mixed form reflecting dual origins (*li-kawni-hi* on one hand, (?)*in-kān(a)* on the other). Be that as it may, the particle regularly introduces conditional protases,³⁴ as can be seen in the following example (Lanfry *ibid.*: 242):

(50) *nkūd* *y-ūtef* *wī* *meqqūr-en*
 if 3M.SG-enter.PRV PR.DEM.M.SG be.older.PRV-PTCP.SG
i = tali = yi
 to = F.room.SG = DEM.SG
 ‘if (when) the elder entered the room...’

In Tuareg, *kud* is the most frequently occurring form. However, in Tahaggart, one also finds *ku* and *kudit* (Foucauld 1951-1952: 742) and, further to the south-west, a suffixed variant *-nta*: *kunta* in the Tadraq of Kidal and *kud-ənta* in the Tamaghit of Oudalan (Sudlow 2011: 356).

B/ The above-studied element *k(a)* is not entirely unknown in southern Berber. In Ghadamsi, *ak* has supplanted *wel* as a negation particle in independent or main verb clauses (Lanfry *ibid.*: 143, 388). In

³² *kud* very probably derives from the Maghrebin *kūn*, *kū* ‘given that, since, because’ from the Classical Arabic *kawn* ‘existence, event, incident’ (*li-kawni-hi* ‘because he’ etc.). *kūn* is often shortened to *kū* which may have been borrowed by Tuareg and expanded into *əd* (‘in the incident that’).

³³ In Maghreb Arabic, *kwn* means ‘action of being, existing, such or such a state’; ‘because, given that, because’; *lkwnh kbīr* ‘because he was big’ (Beaussier 1958: 886).

³⁴ Lanfry (*ibid.*: 180-1, n° 0893) also translates the particle (*i*)*lām* by ‘if’, however this particle, the etymology of which is highly mysterious (could there be some relation to the two particles *l-* and *m-*?), appears in a specific structure, of a correlative type: (*i*)*lām*... (*i*)*lām*...

Tuareg, it is less a negation particle, except perhaps in *kala* ‘no’ (Motylinski 1908: 51) than one of interrogation, as well as, more originally, one of insistence.³⁵ In Mali Tamashek for example, *ák* is one of the «[c]lause-initial particles for polar (i.e. ‘yes-no’) interrogatives» (Heath 2005: 649).³⁶

It is possible that the existence of this element *k(a)* or *ak* played a role in the morphogenesis of the indirect question particle. Whatever the possible effect, this particle’s form is currently identical to that of the conditional, namely *kud* or one of its variants.

In Ghadamès, one finds examples of dependent interrogatives following verbs such as *elləm* ‘look’ or *essən* ‘know’, illustrated in (51) (Lanfry *ibid.*: 345 n° 1483):

- (51) *essən* *nkūd* *əllān* *āman* *ğeşşuf=i*
 know.IMP.SG if be.PR.V.3PL M.water.PL Rassouf = in
 ‘Go see if there is water at Rassouf.’

In Tuareg also, *kud* «a développé des sens atténués [et] est devenue la marque de l’interrogative dépendante» (Prasse 2005: 147).³⁷ This is illustrated in the following example in Tahaggart (*ibid.*: 335):

- (52) *ed = saggād-än* *däg* *tädägdäqq = ənn = et*
 POT = look.IPRV-3PL at F.AS.armpit.SG = of = PR.POSS.3F.SG
 kud *hän = tät* *imžad-än* *meğ* *käla*
 if be.in.PR.V.RES.3PL = PR.OBJ.3F.SG M.AS.hair-PL or not
 ‘They begin to look at his armpit [to see] if there is hair or not.’

C/ In Ghadamès, exceptions are expressed using *ħalef* ‘except’ (Lanfry *ibid.*: 137 number 0661). In Tuareg, they are often expressed using *(a)sel/(a)selid* or using *ar*, a particle which probably shares its origins with the preposition ‘until’ (pronounced *ar* or *har* depending on the dialect, cf. Heath 2005: 618).³⁸

However, with the meaning ‘except if, unless, only if’, Tuareg also uses expressions where one recognizes the particle *kud*: «Une forme plus pleine se trouve dans la préposition/conjonction *kundāba* ‘si ce n’est, excepté; à moins que’ = *kudāba* = *kud-ba-t*» (Prasse 2005: 169).³⁹ (53) is an example of *kundāba* in Aïr Tuareg (Kossmann 2011: 172):

³⁵ This is true for the particle *ak* ‘there, then’ which, in Niger, is frequently suffixed to the personal pronouns in the 2nd person (Prasse & al. 2003: 351).

³⁶ *ák* also has wider uses as an «appetizer» (Heath *ibid.*) «in clause-initial position before a topicalized NP, followed by a WH-interrogative» but «it can be glossed contextually as ‘or rather’, introducing a self-correction».

³⁷ has developed bleached meanings and has become the dependent question marker

³⁸ About *mäššār* ‘except’ in Zenaga and its possible link with *ār*, cf. Taine-Cheikh 2011: 546-7.

³⁹ a fuller form can be found in the preposition/conjunction *kundāba* ‘if not, excepted, unless’ = *kudāba* = *kud-ba-t*

- (53) *kundāba* *t-əg-äm = i* *tasəgbəs-t*
 unless 2-do-PRV.PL = PR.1SG F.EL.underskirt-SG
a *he = din = əzzäbbe*
 PR.N.SG POT = ABL = descend.AOR.[1SG]
 ‘It is only if you give me an underskirt that I will descend.’

The fact that the Tuareg exception particle also shows a certain amount of convergence with the conditional and indirect question particles indicates that the previously observed similarities are not due simply to homonymy.

Table 6. The particle *kud/nkūd* in Berber

	conditional	indirect question	exception	temporal subordinator
<i>kud/nkūd...</i>	+	+	+	+

CONCLUSION

The study of the particles used in Berber to express conditions shows that there are true convergences, albeit with some variation.

These convergences have a spatial dimension: five regions each show a preference for one of the variants (or group of variants): *ad* in Mauritania, *is* in southern Morocco, *ma*, *(a)k/ka* and *maka* in the northern dialects (in Morocco and Algeria), *kan* in the eastern dialects and lastly *kud* in the southern dialects. This highlights how innovations tend to spread from one group of speakers to another, in keeping with the wave propagation model.

Convergences are also to be found in the meanings of the particles. Particles which serve to introduce the protasis of a conditional are often more or less closely linked to, on one hand, those which (directly or indirectly) introduce interrogative clauses and, on the other hand, those used to express exceptions.⁴⁰

Table 1 summarizes these results in a simplified manner (all variants are not noted, e.g. complex particles such as *in kan* or *lukan*). The other uses of these same particles are listed on lines 6 to 9.

⁴⁰ These polygrammaticalizations are comparable to those of the French *si* (‘if’).

Table 7. Uses of all particles

	<i>ad</i>	<i>is</i>	<i>as</i>	<i>ma</i>	<i>(a)k</i> <i>/ka</i>	<i>maka</i>	<i>kan</i>	<i>kud</i>
conditional	X	X	X	X		X	X	X
direct question		X		X	X			
indirect question	X	X		X			X	X
exception			X		X	X	X	X
deictic/presentative	X	X			X			
existence verb							X	
complementizer	X	X	X					
temporal subordinator			X					X

In the *World Lexicon of Grammaticalization*, the conditional is only listed as a source of grammaticalization for the concessive. However, Heine and Kuteva note four possible sources for the conditional (2002: 329): «conditional < (1) copula (2) s-question [marker of polar (yes-no) questions] (3) say (4) temporal».

If one adopts these hypotheses, Berber shows three of the four sources: (1) *ad* and *is*; (2) *(a)k* and *ma*; (4) *kud*. The case of *kan* does not fit this framework, but could be explained by the deletion, preceding the existence verb, of the particle (²)*in*, of deictic origins.

Looking at the table, one sees another trait shared by *ad* and *is/as*: that of being used both to introduce the protasis of conditionals and as a complementizer.⁴¹ However, *ad* and *is/as* are not radically different from the other particles: they all appear to have originally been used more for discursive purposes than for morphosyntactic ones. This is well illustrated by the marker *is*, which continues to be optional in direct questions, although it is not alone in this.⁴²

Originally, the primary role of particles was to introduce an element or clause, to question or on the contrary reaffirm its reality (even when only in a fictive mode). Thus grammaticalization affected specific linguistic tools such as demonstratives, presentatives, topicalizing and focalizing particles, and existence verbs.⁴³ There is no single grammaticalization path, but rather several, partially parallel, paths (leading, in several cases, to morphemes with mixed origins). Among the chosen grammaticalization paths, some are highly frequent crosslinguistically. Others, more rare,

⁴¹ According to Frank Lichtenberk (*personal communication*), this two-fold grammaticalization happens very frequently in the Oceanic languages: such is the case for *bu* in Bukawa, of *naka* in Tawala, of *ta* in Kokota, of *we* in Sakao, of *be* in Raga, of *ma* in Ponapean and of *pē* in Samoan.

⁴² Provotelle (1911: 77) notes that in Sened, the conditional ‘if’ is not translated.

⁴³ On these morphemes’ polysemy and the plurality of factors entering into their grammaticalizations, see e.g. the articles published in Robert 2003 and Bril 2010.

found in some Arabic varieties, belong at least in part to the domain of borrowings.

Specific abbreviations

AS	annexation state
FS	free state
HAB	habitual particle
POT	potential particle
PRED	predicative particle
RES	resultative

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