

Univerbation via liaison and the evolution of lexicon and grammar in Northern Akhvakh

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1. Introduction

Akhvakh (*aš^waī mič'i*, Russian *axvaxskij jazyk*) belongs to the Andic group of languages included in the Northeast Caucasian (or Nakh-Daghestanian) family. Four dialects are traditionally recognized. One of them is designated as Northern Akhvakh, whereas the other three are grouped under the label of Southern Akhvakh. Northern Akhvakh is spoken in four villages of the Axvaxskij Rajon in the western part of Daghestan (Tadmagitl', Lologonitl', Kudijab-Roso, and Izani), in recent settlements in the lowlands of Daghestan (Kamyškutan, Sovetskoe), and in Axaxdərə near Zaqatala (Azerbaijan). The Southern Akhvakh dialects are spoken in one village each (Cegob, Tljanub and Ratlub), all situated in the Šamil'skij Rajon of Daghestan.

As already noted by Magomedbekova in her description of Akhvakh,¹ one of the most striking particularities of Northern Akhvakh is the pervasiveness of a phonological process for which I use the term *liaison*, traditional in French linguistics. This phonological process blurs word boundaries, possibly resulting in various lexicalization and grammaticalization phenomena.

In this paper, after describing the phonological process and discussing its conditioning (Section 2), I examine its role in the evolution of the lexicon (Section 3), the emergence of new grammatical forms (Section 4), the development of infixation (section 5), and changes in the valency properties of Akhvakh verbs (Section 6). Section 7 puts forward some conclusions.

2. Liaison and its conditioning

2.1. The phonological process

Liaison as a phonological process is very simple to describe:²

¹ “К очень распространенным фонетическим явлениям в ахвахском языке принадлежит соединение слов в одно целое и выпадение слогов при встрече двух слов.” (Magomedbekova 1967:20)

² Note however that, in cases when liaison is not attested in synchrony but reconstructed as a historical process, the forms of the two words that merged may have changed since the time when the merging occurred, and consequently the form resulting from the historical process may be slightly different

- at the boundary of two words, the initial consonant of the second word is deleted;
- this deletion obligatorily brings two vowels into contact, since no Northern Akhvakh word ends with a consonant;
- the vowels brought into contact by the deletion of the consonant merge into a long vowel whose quality may be identical to that of one of the two underlying vowels, or combine features from both.

Ex. (1) illustrates the effect of liaison on the analytic verb form *beq'ida bik'wari* 'would have come (N)', in which an inflected form of the auxiliary *bik'urula* 'be' combines with an imperfective form of the auxiliated verb *beq'urula* 'come'.³

- (1) *beq'ida**̄** b**̄**ik'wari* → *beq'id**̄**ek'wari* (...a *bi*... → ...*ē*...)
 b-eq'-ida b-ik'^w-ari
 N-come-IPF N-be-PF₁
 'would have come (N)'

If the deleted consonant is *m*, the vowel resulting from fusion retains the nasality feature, as in (2):

- (2) *ha**̄** mi**̄**ša* → *h**̄**ē**̄**ša* (...a *mi*... → ...*ē*...)
 ha miša
 PROX place
 'this place'

If the first vowel is labial and the second one non-labial, they merge into a non-labial vowel, but the preceding consonant is labialized, as in (3):

- (3) *beq'**u** ma**̄**ča* → *beq'**w**ā**̄**ča* (...u *ma*... → ...*wā*...)
 b-eq'-u ma-č-a
 H'-be-INF H'-be.found-IMP
 'let them come!'

As can be expected, a process of liaison limited to the fusion of two vowels may also occur in sequences in which the second word has no initial consonant, as in (4).

- (4) *il**̄**a**̄** ima* → *il**̄**ē**̄**ma* (...a *i*... → ...*ē*...)
 ila ima
 mother father
 'parents'

from the form that would be predicted by applying the synchronic rule to the forms attested in present-day Akhvakh.

³ Akhvakh verbs are quoted in the long form of the infinitive. The infinitive suffix has a short allomorph *-u* and a long allomorph *-urula*. The two allomorphs are syntactically and semantically equivalent. The choice of the short allomorph depends exclusively on prosodic factors, and the long allomorph is always possible in slow speech. Note that, with stems underlyingly ending with ...*aj*, the underlying sequence ...*aj-u(rula)* surfaces as ...*ō(rula)*.

2.2. Evidence that liaison really blurs word boundaries

Evidence that the process described in 2.1 really blurs word boundaries is provided by its effect on nasality spreading. Several suffixes include an *r* alternating with *n* if the stem to which they attach includes an *m* or a nasal vowel. As illustrated by Ex. (5), in which liaison affects a sequence consisting of an auxiliated verb in converbial form followed by the infinitive or the auxiliary *bik'urula* 'be', the *r* of the infinitive suffix is not nasalized by a nasal vowel included in the first word, but is converted into an *n* if liaison occurs.⁴

- (5) $\bar{L}^{\bar{r}}\bar{O} \text{ wuk'urula} \rightarrow \bar{L}^{\bar{r}}\bar{u}k'unula$
 $\bar{L}^{\bar{r}}\bar{O} \quad \text{w-uk'-urula}$
 sleep-ADV.M M-be-PF₁
 'sleep (M)'

2.3. Lack of grammatical conditioning

Liaison is not conditioned by the morphological status of the segments involved in the process. The last vowel of the first word may be the last segment of a lexeme, as in (4), but it may also be the last segment of a suffix, as in (1), or represent by itself a suffix, as in (3) or (5). The first syllable of the second word may be the first syllable of a stem, as in (2), but it may also result from the combination of a consonantal prefix and of the first vowel of a stem, as in (1) or (5).

There is no direct syntactic conditioning either, in the sense that liaison is not limited to a particular type of syntactic construction. Provided the syntactic link between a word beginning with a deletable consonant and the preceding word is such that they are normally uttered within the same intonational phrase, even in relatively slow and careful speech, liaison seems to be always possible, and tends to be usual if for some reason the two words in contact constitute a usual collocation. This formulation accounts in particular for the fact that the boundary between the head of a phrase and a grammatical word having this phrase under its scope is one of the contexts in which liaison tends to operate.

2.4. The phonological conditioning of liaison

Liaison is restricted by the nature of the initial consonant of the second word involved in the process. The consonants with which liaison commonly occurs are *w*, *b*, *m*, *j*, and *r*, and liaison can also be observed (but less frequently) with *d* and *h*.

It is interesting to observe that the five consonants with which liaison is particularly widespread are precisely those occurring as gender-number prefixes: *w-* (M), *j-* (F), *b-* ~ *m-* (N & HPL), *r-*. It would however not be correct to analyze liaison in terms of gender-number prefix deletion, since:

⁴ Note that, from a theoretical point of view, a formalized account of this phenomenon in frameworks such as Lexical Phonology would be somewhat problematic, since it involves a word-internal process operating after a process affecting word boundaries.

- as illustrated by ex. (2) above, liaison is also attested with words in which the consonants in question cannot be segmented as representing a gender-number prefix,
- as illustrated by ex. (6), liaison also occurs at least with *h* and *d*, which can never be isolated as prefixes.

(6) $dan\bar{e} \text{ } d\bar{i}B\bar{o}r\bar{u}La \quad \rightarrow \quad dan\bar{e}B\bar{o}r\bar{u}La$
 dan-ē diB-ōruLa
 pull-ADV.N stretch-CAUS.INF
 ‘stretch’ lit. ‘pull and stretch’

2.5. On the optionality of liaison and its historical significance

As a synchronic process, liaison is clearly optional rather than context-dependent, in the sense that there is no context in which a sequence of two words that can undergo the liaison process would obligatorily appear in fused form.

However, for reasons that I am not in a position to state more precisely, for some individual word sequences or types of word sequences, the form resulting from the liaison process tends to be particularly usual, and the awareness of the underlying sequence may eventually blur in the speakers’ mind. For example, the first Akhvakh consultant with whom I worked in Axaxdərə (Azerbaijan) used only the fused variants of several of the constructions presented in this paper and was not aware of the existence of the analytic variants in the idiolect of other speakers. Forms resulting from liaison may thus cease to be synchronically analyzable as the optional realization of an underlying word sequence.

3. Liaison and the lexicon

With particularly frequent word combinations, in particular with lexicalized word combinations whose meaning is not entirely predictable from the meaning of each word taken individually, liaison may result in the transformation of initially transparent word combinations formed according to the rules of syntax into more opaque lexical units. The examples in Sections 3.1. to 3.7 illustrate the variety of word combinations from which liaison may yield forms analyzable as emerging lexemes.

3.1. Noun + noun → noun

(7) $k'eha \text{ } mi\bar{s}a \quad \rightarrow \quad k'eh\bar{e}s\bar{a}$
 k'eha miṣa
 eye nose
 ‘face’

3.2. Adjective/participle + noun → noun

- (8) *ilada mik'e* → *iladēk'e*
ilada mik'e
 orphan child
 'orphan'

3.3. Demonstrative + noun → deictic noun

- (9) *ha miša* → *hēša*
ha miša
 PROX place
 'this place'

3.4. Adjective + adjective → adjective

- (10) *ĩk^wa ĩk'a* → *ĩk^wēk'a*
ĩk^wa ĩk'a
 small big
 'big or small'

3.5. Adverb + verb → verb

- (11) *geĹa bašurula* → *geĹāšurula*
geĹ-a ba-š-urula
 inside-ALL H⁺-gather-INF
 'withdraw (H)'

3.6. Converb + verb → verb

Liaison in lexicalized combination of two verbs with the first verb in converbial form, already illustrated by Ex. (5) & (6), is particularly common. Ex. (12) provides an additional illustration.

- (12) *jeĹē jik'ōrula* → *jeĹīk'ōrula*
j-eĹ-ē j-ik'-ōrula
 F-leave-ADV.F F-be-CAUS.INF
 'abandon (F)'

3.7. Noun + verb → verb (incorporation)

As illustrated by Ex. (13) & (14), liaison is particularly common in lexicalized combination of a verb and a noun too. As far as the original *noun + verb* construction subsist with the same meaning, the result of liaison can be viewed as a case of morphological incorporation.

(13) *rik'a bequrula* → *rik'āqurula*
 rik'a b-eq-urula
 lump N-form-INF
 'form a lump'

(14) *q'eli biḡurula* → *q'elīḡurula*
 q'eli b-iḡ-urula
 mouth N-hold-INF
 'fast'

4. Liaison and grammaticalization

In this section, I present forms resulting from the liaison process that can be viewed as emerging grammatical forms, with suffixes resulting from the blurring of some of the original boundaries between adjacent formatives. In some cases, those emerging grammatical forms have no equivalent among the traditional grammatical forms, but it may also happen that liaison yields a functional equivalent of an already existing form.

4.1. Participle + *riḡi* → temporal converb

In Akhvakh, temporal subordination can be expressed by means of participial clauses modifying *riḡi*, locative form of *ri* 'moment. In this construction, liaison yields forms that can be characterized as emerging temporal converbs – Ex. (15).

- (15) a. *w-oq'-ā ri-ḡi* → *w-oq'-ēḡi* 'when he came'
 M-come-PF₂ moment-N_o-LOC M-come-PF.CVB
- b. *m-ač-ida ri-ḡi* → *m-ač-idēḡi* 'when he tells'
 N-tell-IPF₂ moment-N_o-LOC N-tell-IPF.CVB
- c. *b-uḡ-idi ri-ḡi* → *b-uḡ-idīḡi* 'when they fall'
 H⁺-fall-IPF₂.H⁺ moment-N_o-LOC H⁺-fall-IPF.H⁺.CVB
- d. *ũ-k-īl-a ri-ḡi* → *ũ-k-īl-ēḡi* 'when he has not eaten'
 M-eat-NEG-PF moment-N_o-LOC M-eat-NEG-PF.CVB
- e. *g-o-la ri-ḡi* → *g-o-l-ēḡi* 'when there is not'
 COP-N-NEG moment-N_o-LOC COP-N-NEG-PF.CVB

4.2. Negative converb + *bik'urula* → negative infinitive

In Northern Akhvakh, the negation of the infinitive can be formed analytically by combining the negative form of the general converb with *bik'urula*, infinitive of 'be', but this combination is commonly realized with liaison, yielding a form that could be reanalyzed as including a complex suffix, as indicated in the gloss of Ex. (16).

- (16) *k'eha b-it-il-ē b-ik'-uruLa* → *k'eha b-it-il-ē-k'uruLa*
 eye N-put-NEG-ADV.N N-be-INF eye N-put-NEG-N-INF
 'not to put the evil eye'

4.3. Infinitive + *miča* 'let it be found' → optative

In addition to a synthetic form of the optative marked by a suffix *-ā̄'a* resulting from the grammaticalization of the imperative of the verb 'say', Northern Akhvakh has an analytic form of the optative consisting of the infinitive of the auxiliated verb combined with *miča*, imperative of *mičunula* 'be found'. This combination is however commonly realized with liaison, yielding a form that could be reanalyzed as including a new optative suffix *-ča* preceded by a gender-number agreement marker – Ex. (17).

- (17) a. *b-ik'-u m-ič-a* → *b-ik'^w-ī-ča* 'let it be!
 N-be-INF N-be_found-IMP N-be-N-OPT
- b. *b-eq'-u ma-č-a* → *b-eq'^w-ā̄-ča* 'let they come!
 H⁺-come-INF H⁺-be_found-IMP H⁺-come-H⁺-OPT

4.4. Infinitive + *mičala* 'if it is found' → 'if only'

In Northern Akhvakh, an analytic verb form expressing 'if only' can be obtained by combining the infinitive of the auxiliated verb with *mičala*, conditional of *mičunula* 'be found'. Here again, the realization with liaison is very common, yielding a form that could be reanalyzed as including a suffix *-čala* 'if only' precede by a gender-number agreement marker – Ex (18).

- (18) a. *rašil-āhe j-ik'-u j-ič-ala* → *rašil-āhe j-ik'^w-ī-čala*
 have_time-ADV.F F-be-INF F-be_found-COND have_time-ADV.F F-be-F-if_only
 'if I only had time (F)'
- b. *rašil-ēhi ba-k'-u ma-č-ala* → *rašil-ēhi ba-k'^w-ā̄-čala*
 have_time-ADV.F H⁺-be-INF H⁺-be_found-COND have_time-ADV.H⁺ H⁺-be-H⁺-if_only
 'if we only had time'

4.5. Liaison in analytic verb forms involving a tense auxiliary

Liaison is common in analytic verb forms involving inflected forms of *bik'uruLa* 'be' in tense auxiliary function, yielding forms that could be reanalyzed as new synthetic tense forms with a complex suffix including a reflex of the former tense auxiliary – Ex. (19).

- (19) a. *j-eq'-ida j-ik'^w-ari* → *j-eq'-id-ē-k'^wari* 'I would have come (F)'
 F-come-IPF₂ F-be-PF F-come-IPF₂-F-PST

b. *w-oq'-ida w-uk'-ari* → *w-oq'-id-ō-k'ari* 'I would have come (M)'
M-come-IPF₂ M-be-PF M-come-IPF₂-M-PST

4.6. Converb + *boĪurula* 'occur' → terminative aktionsart

Liaison may affect an analytic verb form consisting of the general converb of the auxiliated verb combined with *boĪurula* 'occur, finish' in phase auxiliary function, yielding forms that could be reanalyzed as synthetic terminative verb forms – Ex. (20).

(20) *č'aj-ē b-oĪ-urula* → *č'aj-ōĪ-urula* 'finish burning'
burn-ADV.N N-occur-INF burn-TERM-INF

4.7. Adjective + *boĪurula* 'become' → adjective-to-verb derivation

Akhvakh has a verbalizing suffix *-ĭ-* resulting from the grammaticalization of a former verb reconstructed as **ĭ-* 'become', used to derive verbs from adjectives (and marginally nouns), but liaison might result in the creation of another suffix with the same function originating from *boĪurula*, already encountered in section 4.6. in phase auxiliary function. *boĪurula* is a polysemous verb also used in combination with nouns or adjectives in predicate function with the meaning 'become', and in this construction, liaison yields forms that could be reanalyzed as verbs derived from nouns or adjectives by means of a new verbalizing suffix *-oĪ-* functionally equivalent to the old verbalizing suffix *-ĭ-*. The meaning 'become big' expressed in Ex. (21) by this emerging suffix is traditionally expressed in Akhvakh by the form *ĭk'a-ĭ-urula*, which in contrast to the emerging form in (21) includes no agreement marker.

(21) *ĭk'-idi b-oĪ-urula* → *ĭk'-id-ōĪ-urula* 'become big' (H')
big-H' H'-become-INF big-H'-VBZ-INF

4.8. *buĪurula* 'fall' → obligative marker

buĪurula 'fall' has a grammaticalized use in which it expresses obligation in combination with the infinitive of the auxiliated verb. In this construction, liaison is common, resulting in the emergence of an obligative marker *-ūĪ-* inserted between the verb stem and the inflectional suffixes – Ex. (22).

(22) *m-iq'-u b-uĪ-ida* → *m-iq'-ūĪ-ida* 'it must be enough'
N-be_enough-INF N-fall-IPF N-be_enough-OBLG-IPF

4.9. *bit'urula* (causative auxiliary) → causative marker

Intransitive verbs whose stem underlyingly ends with *...aj* (i.e., intransitive verbs whose infinitive ends with *-ō(rula) < aj-u(rula)* (see Footnote 2) cannot be causativized by means of the causative suffix *-aj-* (reflex of the Proto-Andic causative suffix) used with other intransitive verbs. They occur in an analytic causative construction in which the auxiliated verb is in the short form of the infinitive, and the

causative auxiliary function is fulfilled by *bit'urula* 'become straight, straighten, direct'. However, liaison is particularly common in this construction, resulting in the emergence of a causative suffix whose underlying form could be analyzed as *-ut'* – Ex. (23).⁵

- (23) *bič'ilō bit'urula* → *bič'ilōt'urula* 'make understand'
 b-ič'ilaj-u b-it-'urula bič'ilaj-ut'-urula
 N-understand-INF N-cause-INF understand-CAUS-INF

4.10. *baL'ige* 'at the edge of' → spatial case

'At the edge of' can be expressed in Akhvakh by combining nouns with of a spatial form of *baL'a* 'edge'. In this combination, contrary to the productive rules of Akhvakh syntax, at least some nouns occur in the nominative, and if liaison occurs, the resulting form can be viewed as including an emerging spatial case ending:

- (23) *qu baL'ige* → *q^wāl'ige* 'at the edge of the field'
 qu baL'i-g-e q^w-āl'ig-e
 field edge-CFG₁-LOC field-at_the_edge-LOC

5. Liaison as a possible source of gender-number agreement markers in unusual positions

In the Nakh-Daghestanian language family, gender-number agreement is reconstructed as originally expressed by prefixes, but lexicalization and grammaticalization processes may be responsible for the development of forms with gender-number agreement markers in word-internal position. In particular, as illustrated by several of the examples above, liaison may result in the emergence of words with suffixed agreement markers, or even with agreement markers in typologically unusual positions.

5.1. The development of agreement markers inserted between a root and a derivative suffix

Cross-linguistically, derivative affixes tend to stand closer to the root of morphologically complex words than agreement markers and other inflectional affixes. However, Ex. (21), repeated here as (24), shows that liaison may be responsible for the emergence of grammatical forms including an agreement marker inserted between the root and a derivative suffix.

- (24) *ik'-idi b-oL-urula* → *ik'-id-ōL-urula* 'become big' (H')
 big-H' H'-become-INF big-H'-VBZ-INF

⁵ The frequency of verb whose stem ends with ...aj in the lexicon of Akhvakh is largely due to the existence of a very productive suffix *-ilaj* used to 'naturalize' Avar verbs. For example, *bič'ilōrula* comes from Avar *b-ič'ize* 'understand'.

which the noun is not incorporated still subsists, this can be analyzed as an optional synchronic process of ‘nominative absorption’ that does not contradict the principle of obligatoriness of the nominative term. But if the analytic variant ceases being used, the verb historically resulting from the incorporation of the nominative term triggered by liaison can be expected to show an exceptional valency frame including no slot for a nominative NP. Haspelmath (1993: 178–180) describes this process in Lezgi.

There is thus an apparent contradiction between the fact that many Akhvakh verbs can be suspected to originate from the univerbation of *noun + verb* compounds that cannot be used as such anymore, and the fact that verbs with exceptional valency frames including no nominative term are quite rare in Akhvakh. The only possible explanation is that the predictable effect of the univerbation of *noun + verb* compounds on the valency system of Akhvakh must be counterbalanced by a tendency to eliminate exceptional valency frames.

6.2. A case study: etymology and valency properties of *hādaḡurula* ‘listen’

Both internal reconstruction and comparison with other Andic languages provides evidence that such a ‘regularization’ process is responsible for the fact that, in Akhvakh, *hādaḡurula* ‘listen’ shows the regular valency frame <NOM, ALL>.

The point is that, in several Andic languages, the verb ‘listen’ has the exceptional valency frame <ERG, ALL> (Tindi *aniḡiḡa*, Chamalal *woḡuk’la*, bagvalal *aḡtila*), whereas Godoberi expresses ‘listen’ by means of a light verb construction *hāt’uk’ja rikki* whose literal meaning is ‘hold one’s ears toward’ (compare with expressions such as English *prick up one’s ears*, French *tendre l’oreille*, etc.). Formally, the light verb construction used by Tindi to express ‘listen’ follows the regular valency pattern <ERG, ALL, nom>, in which the noun forming a lexicalized combination with the verb occupies the nominative slot. Consequently, the evolution of such a compound is probably responsible for the fact that several Andic languages have a verb ‘listen’ with the exceptional case frame <ERG, ALL>.

In Akhvakh too, in spite of the fact that *hādaḡurula* ‘listen’ has the regular case frame <NOM, ALL>, ‘hold one’s ears towards’ is the obvious etymology of this verb: compare *hādaḡurula* ‘listen’ with *hāde* ‘ear’ and *biḡurula* ‘hold’. Compare the Akhvakh sentence in (27a) with its Godoberi equivalent (27b) – Saidova 2006: 117.

(27) a. *waša imo-g-a hādaḡ-u w-uḡ-ida.* (Akhvakh)
 son father_o-CFG₁-ALL listen-INF M-must-IPF₂
 ‘The son must listen to his father.’

b. *wašu-di imu-ḡ-i hāt’uk’ja r-ikk-i r-ukk-ida.* (Godoberi)
 son_o-ERG father_o-CFG-LOC/ALL ear N⁺-hold-INF N⁺-must-IPF
 ‘The son must listen to his father.’

It is therefore reasonable to think that:

- originally, ‘listen’ was expressed in Akhvakh by a light verb construction that, transposed into present-day Akhvakh, would be *hādelā riḡurula* ‘hold the ears’, with the valency pattern <ERG, ALL, nom>;
- the univerbation of the light verb compound triggered by liaison yielded a verb with the exceptional valency frame <ERG, ALL>;
- after the original light verb construction ceased to be used as such, the valency frame of the subsisting synthetic variant of the construction was regularized as <NOM, ALL>.

7. Conclusion

The importance of univerbation (defined as the conversion of a word sequence into a single word) in language change is unanimously acknowledged by historical linguists. However, in most languages, univerbation as a synchronic process is sporadic, and consequently cannot be the subject of a systematic account within the frame of synchronic description. The originality of Northern Akhvakh is the existence of a synchronically productive process of liaison resulting in that free variation between sequences of two words and single words is an extremely common phenomenon in this language. It is therefore possible to observe in Northern Akhvakh an exceptionally wide variety of lexicalization and grammaticalization phenomena at an early stage at which the original constructions still co-exist with the emerging lexemes or grammatical forms resulting from their conversion into single words.

Abbreviations

..._o: oblique stem; ADV: adverbial agreement; ALL: allative; CAUS: causative; COND: conditional; COP: copula; CVB: converb; F: feminine; H⁺: human plural; IMP: imperative; INF: infinitive; IPF: imperfective; LOC: locative; M: masculine; N: non-human; N⁺: non-human plural; NEG: negative; OBLG: obligative; OPT: optative; PF: perfective; PROX: proximal; PST: past; TERM: terminative; VBZ: verbalizer

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