Person variations in Akhvakh verb morphology: functional motivation and origin of an uncommon pattern

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ABSTRACT. *In the Nakh-Daghestanian language family, person agreement is considered a recent innovation of a few isolated languages. Person variations in Akhvakh verb morphology are limited to the perfective positive and follow a typologically rare pattern, in which the same couple of verbal endings encodes a 1st person vs. 2nd/3rd person contrast in declarative clauses, and a 2nd person vs. 1st/3rd person contrast in questions. A comparison of the verb forms concerned by this distinction with other Akhvakh verb forms not involved in this mechanism suggests that, in Akhvakh, the emergence of this atypical pattern resulted from the reanalysis of a TAM distinction.*

KEYWORDS. *Akhvakh, North-East Caucasian, conjunct/disjunct person agreement, grammaticalization, perfect, evidentiality.*

1. Introduction

Akhvakh (*ašoƛi mič'i*, Russian *axvaxskij jazyk*, Azerbaijani *axax dili*) is a North-East Caucasian (or Nakh-Daghestanian) language belonging to the Andic branch of the Avar-Andic-Tsezic family, spoken in the western part of Daghestan and in the village of Axaxdǝrǝ near Zaqatala (Azerbaijan). This paper is based on the author's field work carried out in Axaxdǝrǝ.[1]

Akhvakh clause structure is characterized by flexible constituent order and ergative alignment, in case marking as well as in gender-number agreement between the verb and its core arguments.

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[1] Judging from Magomedbekova 1967 and Magomedova & Abdulaeva 2007, the variety of Akhvakh spoken in Axaxdǝrǝ is very close to the varieties of Northern Akhvakh spoken in the Akhvakhskij Rajon of Daghestan. Nearly all affixes identified in these two sources occur in Axaxdǝrǝ Akhvakh with identical forms and functions, or with slight differences only, and most words have exactly the same form too. I have been able to find no precision about the date when Akhvakh migrants began to settle in Axaxdǝrǝ, but there are still in Axaxdǝrǝ old people who were born in Daghestan, and whose parents migrated to Azerbaijan at the end of the second world war, when the economic situation in Daghestan was particularly difficult.

Akhvakh distinguishes three genders in the singular: human masculine (M), human feminine (F), and non-human (N). In the plural, the masculine *vs.* feminine distinction is neutralized, resulting in a binary opposition human plural (HPL) vs. non-human plural (NPL).

Independent verb forms are inflected for TAM, polarity and gender-number agreement (see section 2); person variations, which constitute the main topic of this paper, occur in one tense only.

Noun morphology involves number inflection and case inflection. Except for 1st and 2nd person singular pronouns, whose absolute form is characterized by a non-void ending *-ne*, the absolute form of nouns (used in the extra-syntactic function of quotation or designation and in S/P roles) has no overt mark. Case suffixes may attach to a stem identical with the absolute form, or to a special *oblique stem*. The formation of the oblique stem may involve synchronically unpredictable changes in the ending of the noun stem, or the addition of a formative *-ṣu-* (M) / *-ƛi-* (F/N) / *-lo-* (HPL) / *-le-* (NPL).

2. Agreement or verbs in gender and number

In Akhvakh, gender-number agreement of verbs involves both prefixes and suffixes, with two different kinds of conditioning. The presence of gender-number *prefixes* in verb forms involves no grammatical conditioning. Verbs divide into two classes, those having an initial slot for gender-number concord, and those devoid of it. The verbs belonging to the first subset always begin with a gender-number prefix referring to the S/P argument (i.e., to the argument encoded by an NP in the absolute case), those belonging to the second one never take such a prefix.[2] By contrast, the presence of gender-number *suffixes* referring to the same S/P argument is conditioned by the grammatical nature of the verb form. The rules governing the presence of gender-number suffixes in verb forms are complex. In some verb forms, they do not occur at all; in others, they are obligatory; in a third group of verb forms, gender-number suffixes are optional, and when they are present they may appear as distinct segments, or merge with other formatives.

Ex. (1) and (2) illustrate gender-number agreement with intransitive and transitive verbs. The verbs appearing in these examples obligatorily bear one of the gender-number prefixes *w-* (M) / *j-* (F) / *b-* (N) / *b(a)-* (HPL) / *r-* (NPL), and they are in a tense (the perfective negative) in which an optional gender-number marker *-we* (M) / *-je* (F) / *-be* (N) / *-ji* (HPL) / *-re* (NPL) may follow the TAM suffix *-iƛa*, or merge with it according to the following rules :

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[2] The assignment of individual verbs to these two subsets is arbitrary. They are roughly of equal importance, and there seems to be no evidence of a historical explanation of this situation, which is found in other Andic languages too.

-iƛa-we → iƛo (M)
-iƛa-je → iƛe (F)
-iƛa-be → iƛe (N)
-iƛa-ji → iƛi (HPL)
-iƛa-re → iƛe (NPL)

Ex. (1) & (2) are given with gender-number suffixes merged with the perfective negative suffix, but variants of these forms with an agglutinated gender-number suffix, or devoid or gender-number suffix, would be equally acceptable.

(1) a. *ek'wa / de-ne / me-ne w-oq'-iƛo*
      man   1SG-ABS   2S-ABS   M-come-PFVNEG$_M$
      'The man / I (masc.) / You (sing.masc.) did not come'

    b. *jaše / de-ne / me-ne j-eq'-iƛe*
      girl   1SG-ABS   2SG-ABS F-come-PFVNEG$_F$
      'The girl / I (fem.) / You (sing.fem.) did not come'

    c. *χwe / mašina b-eq'-iƛe*
      dog   car   N-come-PFVNEG$_N$
      'The dog / The car did not come'

    d. *mik'eli / iƛi / iṣi / ušti b-eq'-iƛi*
      child.PL   1PLI   1PLE 2PL HPL-come-PFVNEG$_{HPL}$
      'The children / We (incl.) / We (excl.) / You (pl.) did not come'

    e. *χwadi / mašinadi r-eq'-iƛe*
      dog.PL   car.PL   NPL-come-PFVNEG$_{NPL}$
      'The dogs / The cars did not come'

(2) a. *ek'wa-ṣw-e jaše j-ič-iƛe*
      man-O$_M$-ERG   girl   F-push-PFVNEG$_F$
      'The man did not push the girl'

    b. *ek'wa-ṣw-e mašina b-ič-iƛe*
      man-O$_M$-ERG   car   N-push-PFVNEG$_N$
      'The man did not push the car'

   c. *jašo-de   ek'wa   w-uč-iλo*
      girl$_O$-ERG   man   M-push-PFVNEG$_M$
      'The girl did not push the man'

   d. *de-de   me-ne   j-ič-iλe*
      1SG-ERG   2SG-ABS   F-push-PFVNEG$_F$
      'I (masc. or fem.) did not push you (fem.)'

The same mechanism of gender-number agreement operates in all tenses. The variations concern the possibility to have gender-number prefixes or suffixes, depending on lexical and grammatical factors, but not the rule of agreement itself: when gender-number marks are present in a verb form, their value is always determined by the S/P argument, represented by an NP in the absolute case.

As illustrated by the above examples, in most tenses, verb agreement is strictly limited to gender and number, and verb morphology does not reflect person distinctions.

3. Person variations in Axaxdərə Akhvakh verb morphology

3.1. The morphological material

In Axaxdərə Akhvakh, the perfective positive is the only tense in which, in addition to gender-number agreement with their S/P argument, verbs show variations reflecting person distinctions. In assertive clauses, this tense (designated as *prošedšee očevidnoe* by Magomedova & Abdulaeva) implies that the speaker has a direct knowledge of the event, in contrast to the indirective past (*zaglaznoe prošedšee* in Magomedova & Abdulaeva's terminology), which does not concern us directly here. It is typically used in autobiographical narratives.

There are two possible endings for the perfective positive: *-ada* (glossed PFV$_{1D/2O}$) and *-ari* (glossed PFV). The details of the rule accounting for the choice between these two endings will be described in section 3.2, but note immediately that the glossing of *-ari* as PFV and of *-ada* as PFV$_{1D/2O}$ reflects a difference in markedness: *-ada* necessarily implies the presence of a 1st/2nd person A argument in transitive clauses, or of a 1st/2nd person S with intransitive verbs showing person variations, whereas intransitive verbs that do not show person variations invariably take the ending *-ari*, irrespective of the person of their S argument.

A segmentation of these suffixes as *-a-da* and *-a-ri*, with a common element *-a-* as the tense marker proper, is probably justified in a diachronic perspective (see section 4), but in a synchronic morphological analysis, it is not confirmed by the possibility to isolate the same formatives with the same meaning in other forms.

Morphologically, the two suffixes of the perfective positive show the following variations:

– the initial *a* of these two endings may merge with an underlying *i* belonging to the stem according to the rule *a* + *i* → *ē* (for example, the perfective positive of *gūruλa* 'do', whose root has the underlying form |*gwi(j)*|, is *gw-ēri* ∼ *gw-ēda*);[3]
– with stems that select nasalized variants of affixes, the perfective positive endings occur as *-ani* and *-ãda* ;
– if the S/P argument is human plural, the obligatory merging of a gender-number agreement mark results in variants of these endings *-iri* and *-idi* ;[4]
– *-ari* never shows variations due to gender-number agreement with S/P arguments other than HPL; by contrast, with S/P arguments other than HPL, *-ada* has the optional variants *-ado* (M) and *-ade* (F, N, or NPL) resulting from the optional merging of a gender-number suffix.

In addition to that, with verbs that have stem allomorphy,[5] agreement with a human plural S/P argument triggers not only the choice of the endings *-iri* and *-idi,* but also the choice of the 'long' allomorph of the stem.

In ex. (3), the forms of the first column illustrate the variations of *-ari,* whereas those in the second column illustrate the variations of *-ada.* In ex. (3a), *biχuruλa* 'grasp' illustrates the case of a verb whose stem |*-iχ-*| undergoes only phonologically conditioned changes in contact with certain prefixes. Ex. (3b) and (3c) illustrate the behavior of two verbs with stem allomorphy, *čōruλa* (stem |*ča(b)-*|) and *gūruλa* 'do' (stem |*gwi(j)-*|). Occurrences of the long allomorph of the stem are in bold print.

(3)　a.　　　　-ari　　　　-ada

M	*w-uχ-ari*	*w-uχ-ada* ∼ *w-uχ-ada-we* ∼ *w-uχ-ado*
F	*j-iχ-ari*	*j-iχ-ada* ∼ *j-iχ-ada-je* ∼ *j-iχ-ade*
N	*b-iχ-ari*	*b-iχ-ada* ∼ *b-iχ-ada-be* ∼ *b-iχ-ade*
HPL	*ba-χ-iri*	*ba-χ-idi*
NPL	*r-iχ-ari*	*r-iχ-ada* ∼ *r-iχ-ada-re* ∼ *r-iχ-ade*

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[3] The underlying *i* responsible for this variation is apparent in the imperative form *gwij-a.*
[4] When realized as a distinct segment, the 'human plural' suffix appears as *-ji.*
[5] In Akhvakh, all verb forms without exception end with a non-void inflectional suffix, and most verbs build all of their forms from a unique stem invariably ending with a consonant. There is however a set of non-derived verbs characterized by an alternation between a 'long' stem ending with a consonant and a 'short' stem characterized by the loss of the final consonant, and the same kind of alternation concerns also the derived transitive verbs formed by means of a causative suffix whose underlying form is |*-a(j)-*|. Since all of the verb suffixes of Akhvakh begin with a vowel, the selection of the short form of such verb stems implies interaction between the last vowel of the stem and the initial vowel of the suffixes attached to it. The division of verb suffixes into those selecting the long form of alternating verb stems, and those selecting the short form, is not correlated with any phonological or semantic property, and must be considered as synchronically arbitrary.

	b.	-ari	-ada
M		č-āri	č-āda ~ č-āda-we ~ č-ādo
F		č-āri	č-āda ~ č-āda-je ~ č-āde
N		č-āri	č-āda ~ č-āda-be ~ č-āde
HPL		**čab**-iri	**čab**-idi
NPL		č-āri	č-āda ~ č-āda-re ~ č-āde

	c.	-ari	-ada
M		gw-ēri	gw-ēda ~ gw-ēda-we ~ gwē-do
F		gw-ēri	gw-ēda ~ gw-ēda-je ~ gw-ēde
N		gw-ēri	gw-ēda ~ gw-ēda-be ~ gw-ēde
HPL		**guj**-iri	**guj**-idi
NPL		gw-ēri	gw-ēda ~ gw-ēda-re ~ gw-ēde

3.2. The choice between *-ari* and *-ada*

Magomedbekova's description of the choice between the two endings of the perfective positive in Northern Akhvakh can be summarized as follows:

(a) Magomedbekova describes a contrast between *1st person* (*-ada* and its variants) and *2nd/3rd person* (*-ari* and its variants); she illustrates this contrast by declarative clauses only, without mentioning the existence of contexts in which the choice of *-ada* would mark 2nd person.

(b) According to Magomedbekova, the choice between *-ari* and *-ada* reflects the person of A (the argument in the ergative case) with transitive verbs, and of S (the argument in the absolute case) with intransitive verbs.

(c) According to Magomedbekova, this mechanism of person agreement is optional: the presence of a 1st person S/A argument is a necessary condition for *-ada* to be selected, but it does not automatically trigger the choice of this ending; *-ari* is the only possible ending in the presence of a 2nd/3rd S/A argument, but it may occur in the presence of a 1st person S/A argument too.

Magomedova & Abdulaeva 2007 say nothing about the distribution of the two suffixes of the perfective positive, but the data they provide is consistent with my own observations on Axaxdərə Akhvakh. In particular, their examples confirm the use of *-ada* with 2nd person agents in questions. However, according to indications provided by Indira Abdulaeva (p.c.), the choice between *-ari* and *-ada* might well be more grammaticalized in Axaxdərə Akhvakh than in the varieties of Akhvakh spoken in the

Akhvakhskij Rajon of Daghestan, in the sense that there would be less possibilities of semantically motivated fluctuations. This question would deserve further investigation.

Whatever the precise situation in other varieties of Akhvakh may be, my own observations on Axaxdərə Akhvakh can be summarized as follows:

(a) With verbs that accept both endings, the choice between *-ari* and *-ada* expresses a *1st person* (*-ada*) vs. *2nd/3rd person* (*-ari*) contrast in declarative clauses, but *2nd person* (*-ada*) vs. *1st/3rd person* (*-ari*) contrast in questions.[6]

(b) This mechanism follows active rather than accusative alignment: transitive verbs invariably select *-ada* with 1st person A arguments and *-ari* with 2nd/3rd person A arguments in declarative clauses, *-ada* with 2nd person A arguments and *-ari* with 1st/3rd person A arguments in questions, whereas intransitive verbs divide into two semantically motivated classes, those for which the S argument triggers the choice of *-ada* in the same way as the A argument with transitive verbs (accusative alignment), and those that do not show person variations and invariably end with *-ari* in the perfective positive (ergative alignment).

(c) The choice of *-ada* in Axaxdərə Akhvakh is not optional: transitive verbs obligatorily take the ending *-ada* in declarative clauses in which a 1st person A is expressed or understood, and in questions in which a 2nd person A is present or understood; with most intransitive verbs, the choice of the ending *-ada* is, either obligatory in the same conditions as with transitive verbs, or impossible; I have observed a few cases of hesitation or fluctuation, but they can be analyzed as semantically motivated – see section 3.3.

Ex. (4a-d) illustrate the choice between *-ari* and *-ada* in declarative and interrogative transitive clauses in which A is a speech act participant, and ex. (4e) shows that *-ari* is invariably selected (in declarative clauses as well as in questions) if A is not a speech act participant.

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[6] In my field work on Akhvakh, I immediately noticed that, contrary to what I expected from Magomedbekova's description, *-ada* was used with 2nd person S/A arguments too, but my first hypothesis was that the choice between *-ari* and *-ada* simply reflects the *1st/2nd person vs. 3rd person* distinction, and it took me a long time to discover the exact conditioning of the choice. The reason is that all the examples occurring in the first texts I collected involved, either 1st person S/A arguments in declarative clauses, or 2nd person S/A arguments in questions, and I did not pay sufficient attention to the possible relevance of this distribution, and to its possible connection with the hesitations and inconsistencies I observed in the answers of the informants whenever I tried to elaborate the data in elicitation. The point is that declarative clauses referring to past events with 2nd person S/A arguments and questions referring to past events with 1st person S/A arguments are natural in marked contexts only, and consequently are relatively infrequent in spontaneous discourse. A priori, the information provided by declarative clauses referring to past events and involving a 2nd person S/A is already known to the addressee, since (s)he took part the event in question, and for the same reasons, the information asked for by questions referring to past events and involving a 1st person S/A is normally already known to the speaker. But when such marked configurations began to appear in texts (for example, in rhetorical questions whose function is not to ask for some information, but to contest an assertion previously made by the addressee), it turned out that they quite consistently follow the pattern illustrated by ex. (4).

(4) a. *eX̌'-ada*   *"di-λa   q̇'abuλ-ere goλa", me-de-la*   *eX̌'-ari*   *"di-λa-la"*
say-PFV$_{1D/2Q}$ 1SG-DAT agree-PROG   COPNEG$_N$ 2SG-ERG-ADD   say-PFV   1SG-DAT-ADD
'**I said** "I don't agree", and **you said** "Neither do I"'

    b. *de-de   čūda eX̌'-ari   ha-be?*
2SG-ERG   when   say-PFV   DEM-N
'When **did I say** that?'

    c. *me-de   čugu eX̌'-ada   ha-be?*
2SG-ERG   why   say-PFV$_{1D/2Q}$ DEM-N
'Why **did you say** that?'

    d. *me-de   čūda b-ex-ada   hu   šãλ'e? –šuni   b-ex-ada*
2SG-ERG   when   N-buy-PFV$_{1D/2Q}$ DEM   dress   yesterday   N-buy-PFV$_{1D/2Q}$
'When **did you buy** this dress? –**I bought** it yesterday'

    e. *hu-s̲w-e   čūda b-ex-ari   hu   mašina? –šuni   b-ex-ari*
DEM-O$_M$-ERG when   N-buy-PFV   DEM   dress   yesterday   N-buy-PFV
'When **did he buy** this car? –**He bought** it yesterday'

Ex. (5) illustrates the behavior of an intransitive verb agreeing with S in the same way as a transitive verb with A, whereas (6) illustrates the case of an intransitive verb invariably taking the *-ari* ending, irrespective of the nature of S.

(5) a. *mene   čūda w-ošq̇-ada?   –šuni   w-ošq̇-ada*
2SG-ABS   when   M-work-PFV$_{1D/2Q}$ yesterday   M-work-PFV$_{1D/2Q}$
'When **did you work**? –**I worked** yesterday'

    e. *hu-we   čūda w-ošq̇-ari?   –šuni   w-ošq̇-ari*
DEM-M   when   M-work-PFV   yesterday   N-buy-PFV$_{1D/2Q}$
'When **did he work**? –**He worked** yesterday'

(6) a. *mene   čūda h̄-ēni?   –šuni   h̄-ēni* [7]
2SG-ABS   when   recover-PFV   yesterday   recover-PFV
'When **did you recover**? –**I recovered** yesterday'

    e. *hu-we   čūda h̄-ēni?   –šuni   h̄-ēni*
DEM-M   when   recover-PFV   yesterday   recover-PFV
'When **did he recover**? –**He recovered** yesterday'

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[7] *h̄-ēni* is the realization of the underlying form |*h̄ī(j)-ari*|.

3.3. The two classes of intransitive verbs

As illustrated by examples (5) and (6) above, the S argument of some intransitive verbs triggers the choice *of -ada* in the same conditions as the A argument of transitive verbs, whereas others never take *-ada*. This division of intransitive verbs into two classes belongs to a well-known type of split intransitivity,[8] since it reflects the degree of control of the participant encoded as S. The sample of intransitive verbs given in (7) shows that intransitive verbs with S representing a relatively active participant mark the person of the S argument in the same way as transitive verbs mark the person of their A argument, whereas those with a clearly patient-like S argument do not show person variations. Note that, among the components of the notion of prototypical agentivity, control is more important here than volition, since verbs describing involuntary bodily processes that however allow for some degree of control (such as *hīk'unuλa* 'hiccup' or *ʕōruλa* 'cry')[9] belong to the first subset.

(7)   a. Intransitive verbs taking the ending *-ada* in the same conditions as transitive verbs:

badaλuruλa 'laugh', *baχwaduruλa* 'play', *baʔuruλa* 'speak', *beq'uruλa* 'come', *beʁuruλa* 'stand up', *bešq̇uruλa* 'work', *beturuλa* 'run', *bišuruλa* 'win', *bišuruλa* 'gather', *boχuruλa* 'walk', *buq̇uruλa* 'fight', *bužuruλa* 'believe', *c'iriλilōruλa* 'get vexed', *čak̇'uruλa* 'urinate', *čōruλa* 'wash', *damaλilōruλa* 'wonder', *(ʁa)duk'uruλa* 'sit down', *hīk'unuλa* 'hiccup', *ħečuruλa* 'sneeze', *ħulōruλa* 'scream', *ič'eχ'uruλa* 'dress', *kasuruλa* 'jump', *kočilōruλa* 'move', *k'ōnuλa* 'lie down', *k'usuruλa* 'squat down', *ʕōruλa* 'cry', etc.

b. Intransitive verbs whose perfective positive invariable ends with *-ari*:

āλ'aχuruλa 'perspire', *āq̇'ažuruλa* 'be thirsty', *aq'uṣuruλa* 'suffocate', *bač'aq'uruλa* 'be late', *baλ'araλuruλa* 'lose weight', *baqaroλuruλa* 'become old', *baχiλilōruλa* 'get jealous', *baχuruλa* 'be surprised', *beçoλuruλa* 'get blind', *beguλuruλa* 'get drunk', *beχuruλa* 'be glad', *biλ'uruλa* 'die', *buχuruλa* 'fall down', *buχuruλa* 'feel cold', *čakōnuλa* 'get sick', *čaraλuruλa* 'get fat', *goč'uruλa* 'wake', *hūnuλa* 'recover', *λūruλa* 'be afraid', *makwačunuλa* 'be hungry', etc.

The few cases of hesitation or fluctuation I have observed confirm the semantic motivation of these two classes of intransitive verbs. For example, according to the

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[8] See in particular Van Valin 1990, Mithun 1991.
[9] The ambiguous status of such verbs from the point of view of agentivity is apparent in the fact that, out of context, their imperative positive (e.g., *Cry!*) sounds somewhat strange, whereas their imperative negative (e.g., *Don't cry!* or *Stop crying!*) sounds perfectly normal.

judgment of my main informant, *x̌'ūk'unux̌a* 'sleep' may take the *-ada* ending in the perfective positive, but *dene x̌'ūk'ada* tends to be interpreted as 'I lay down in order to sleep', whereas *dene x̌'ūk'ani* must be used if the intended meaning is 'I dozed off unwillingly'.

3.4. The functional basis of the choice between *-ari* and *-ada*

The statement that *-ada* marks agreement with a 1st person A or S_A argument in declarative clauses, and with a 2nd person A or S_A argument in interrogative clauses, describes the distribution of the two verbal endings encoding the TAM-polarity value 'perfective positive' correctly, but raises the following question: what is the property shared by 1st person arguments in declarative clauses and 2nd person arguments in questions that may justify this apparent inversion of person marking between declarative and interrogative clauses?

However, this property is not difficult to identify: in declarative speech acts, the speech act participant in charge of the assertion is the speaker, whereas in questions, the speech act participant in charge of the assertion is the addressee. In other words, the choice of *-ada* encodes that an A or S_A argument is identical with the speech act participant in charge of the assertion.

Consequently, this mechanism, known as *conjunct-disjunct system* in the literature,[10] can be described as person agreement at a superficial level only, and would be more conveniently characterized as *assertive agreement*. Its functional motivation is not to encode a person contrast as such. It has in common with person agreement proper that it encodes a particular alignment of argument roles and speech act roles, but the relevant distinction at the level of speech act roles cannot be formulated in terms of person only.

In some sense, marking the identity between an A or S_A argument and the speech act participant in charge of the assertion can be viewed as the grammaticalization of a particular type of evidentiality. A participant having played a particularly active role in a past event qualifies to report on the event in question better than anyone else, and *-ada* can consequently be characterized as encoding that the speech act participant in charge of the assertion has a direct knowledge of the event by having played an active role in it.

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[10] Morphological variations of verbs involving a binary choice with a 1 vs. 2/3 person contrast in declarative clauses and a 2 vs. 1/3 person contrast in questions have been labeled *conjunct/disjunct systems* by Hale 1980, and have been first described for Tibetan, Newari, and a few other Tibeto-Burman languages (Hale 1980, DeLancey 1986, DeLancey 1990, DeLancey 1992, Genetti 1994, Hargreaves 2005, Bickel 2008, Tournadre 2008). Similar patterns have also been found in the Mehweb dialect of the Nakh-Daghestanian language Dargwa (Magometov 1982), in Awa Pit, a Barbacoan language spoken in Colombia and Ecuador (Curnow 2002), and in the Papuan language Oksapmin (Loughnane 2007).

4. Person agreement in North-East Caucasian languages, and the puzzle of Akhvakh

Gender-number agreement is common in North-East Caucasian languages, and is considered an ancient feature of this language family. The affixes involved in gender-number agreement in Akhvakh are quite obviously cognate with functionally similar affixes, not only in the other Andic languages, but also in languages belonging to various branches of North-East Caucasian.

By contrast, person agreement is not common in North-East Caucasian languages, and is considered a recent and isolated innovation of the few languages that have it.[11] In particular, Akhvakh is the only Andic language having person variations in verb morphology. It seems that a pattern similar to that of Akhvakh (i.e., with an inversion of person marking between declarative and interrogative clauses) exists in the Mehweb dialect of Dargwa,[12] but there is no evidence that there could be any historical connection between Akhvakh and Mehweb Dargwa person marking.

In languages already having person agreement, the development or renewal of person agreement morphology can be the result of various reanalysis processes.[13] However, regarding the emergence of person agreement in languages previously devoid of it, it is commonly assumed that the grammaticalization of bound pronouns is the only possible evolution by which person distinctions may develop in verb morphology.

In some of the East Caucasian languages that have person distinctions in verb morphology, we find the situation expected in languages in which such an evolution took place in the relatively recent past, with a multivalued feature of verbal person closely reflecting the person-number distinctions expressed by independent pronouns, and person markers still recognizable as cognate with the corresponding independent pronouns.

The situation in Akhvakh is strikingly different: in this language, person marking involves a binary choice and does not interfere with number (whereas plural pronouns have forms entirely different from those of singular pronouns). In addition, the hypothesis of a pronominal origin of the verbal endings involved in person distinctions is hardly compatible with the fact that the same suffixes encode *1st person* vs. *2nd/3rd person* in declarative clauses and *2nd person* vs. *1st/3rd person* in questions.

If one accepts the idea that person variations in verb morphology constitute a recent innovation of Akhvakh (and it is reasonable to accept it, given that no traces of a similar mechanism have been recognized in any other Andic language), the only possible conclusion is that the person distinction in Akhvakh verb morphology cannot result from the grammaticalization of pronominal clitics, and must have another explanation. In other words, Akhvakh is an exception to the universal of language change according

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[11] Helmbrecht 1996, Hewitt 2004, van den Berg 2005.
[12] Magometov 1982.
[13] On the evolutions affecting person marking, see Siewierska 2004:246-281.

to which the grammaticalization of pronominal clitics is the only way by which languages previously devoid of person distinctions in verb morphology can acquire such distinctions.

This conclusion was already proposed by Helmbrecht 1996, who analyzed several East Caucasian languages having a binary person distinction in verb morphology, and quite correctly pointed out that, in all cases, the form selected by 1st person subjects was a participle. However, the scenario he put forward ('petrification' of a gender-number marker and switch from gender-number to person indicating function) remains quite vague. The point is that the data Helmbrecht had at his disposal included nothing about person marking in interrogative clauses, which is crucial for a correct understanding of the question.

In the following section, I argue that taking into account the functional aspects of the *-ari* vs. *-ada* contrast makes it possible to elaborate a more precise and more plausible hypothesis.

5. Solving the puzzle: a possible origin of the person distinction in Akhvakh verb morphology

The historical explanation I propose relies on an internal reconstruction elaborated on the basis of a comparison of the two endings that mark person distinctions in the perfective positive with identical or partially identical endings found in other verb forms in which they are not sensitive to person distinctions.

First, as already indicated, the form of the perfective positive used in independent clauses to encode identity of the A or S_A argument with the speech act participant responsible for the assertion is homonymous with the perfective positive participle. In other words, as illustrated by example (8), *-ada* has two possible values:

- in verb forms heading independent declarative or interrogative clauses, in addition to the TAM value (perfective positive) it shares with *-ari*, *-ada* encodes that the A or S_A argument is identical with the speech act participant in charge of the assertion (i.e. the speaker in declarative clauses, or the addressee in questions), contrasting with *-ari* used if the A or S_A argument is different from the speech act participant in charge of the assertion, or in intransitive constructions involving an S_P argument – (8a-b);
- but *-ada* also characterizes the participial form of the perfective positive, independently of any person distinction – (8c-d).[14]

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[14] The same homonymy is observed in the variant of Akhvakh described by Magomedbekova, but she does not recognize it explicitly in her description.

(8) a. *ek'wa-ṣw-e   kitabi   ž-āri* [15]
     man-O$_M$-ERG   book   read-PFV
     'The man read the book'

   b. *de-de   kitabi   ž-āda* [16]
      1SG-ERG   book   read-PFV$_{1D/2Q}$
      'I read the book'

   c. *ek'wa-ṣw-e   ž-āda   kitabi*
      man-O$_M$-ERG   read-PFV$_{PTCP}$ book
      'the book read by the man'

   d. *de-de   ž-āda   kitabi*
      1S-ERG   read-PFV$_{PTCP}$ book
      'the book read by me'

The fact that the suffix of the imperfective positive participle is *-ida* (see below), and that most adjectives (including those that are not synchronically recognizable as derived from verbs) end with *da*, suggests that *-ada* was originally a complex suffix, consisting of a tense marker *-a-* and of a participle marker *-da*.

Another important observation is that Akhvakh also has two verb suffixes *-iri* and *-ida*. Synchronically, the parallelism with *-ari* and *-ada* is limited to form. Functionally, in independent clauses, *-iri* and *-ida* mark two different tenses, irrespective of person distinctions:

– the form ending with *-ida* (glossed IPFV) is an imperfective form referring to habitual events, or permanent facts, or events obligatorily occurring under certain conditions; this is in particular the verb form commonly used in proverbs and riddles – ex. (9);[17]

(9) a. *rač'iχe   č'-ēda   č'-ēda   č'or-ida*
      iron   burn-IPFV$_{PTCP}$ burn-IPFV$_{PTCP}$ strike-IPFV
      'One strikes the iron when it is hot'

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[15] *ž-āri* is the realization of the underlying form |*ža(b)-ari*|.

[16] *ž-āda* is the realization of the underlying form |*ža(b)-ada*|.

[17] Note that, in ex. (9a), the same imperfective form occurs also in a participial use; the variant *-ēda* of the imperfective *-ida* ending results from the amalgamation of an underlying *a* belonging to the stem |*č'a(b)*| (this verb is quoted in the infinitive as *č'-ōruλa*, with a similar phenomenon affecting the infinitive ending, whose basic form is *-uruλa*).

b. *bek-oǧe   xwaj-ida,   xwan-oǧe   ūk-ida   (ǧaliǯa)*
snake-like   crawl-IPFV   horse-like   eat-IPFV   scythe
'It crawls like a snake, it eats like a horse (the scythe)'

– the form ending with *-iri* (glossed IRR for 'irrealis') is an old present, still used in other varieties of Akhvakh with the TAM value expressed in Axaxdərə Akhvakh by the form with the ending *-ida*, and designated as *nastojaščee obščee* (general present) by Magomedova and Abdulaeva 2007; in Axaxdərə Akhvakh, this form has two types of uses difficult to relate in a strictly synchronic perspective, but which can be subsumed under the label 'irrealis': it is mainly found in fiction narratives, as illustrated by the anecdote 'The duck soup' reproduced in (10), but also has modal uses, in particular in the type of questions illustrated by ex. (11).

(10) a. *moḻa   če   žo-λi   miǧ'o   qedo   w-āno   **w-uk'-iri***
Molla   one   day-O$_N$.ESS   road$_O$ behind   M-go.PROG$_M$ M-be-IRR
'One day Molla was travelling.

b. *miǧ'o-ge   baλ'i-ǧe   če   īhwara   **harigw-iri,***
road$_O$-ESS   side$_O$-ESS   one   lake   see-IRR
*īhwara   geλ-i   ſodak'a   **harigw-iri.***
lake   inside-ESS   duck$_{PL}$ see-IRR
Near the road he saw a lake, in the lake he saw ducks.

c. *hu-re   harigw-eλi, če-be   b-ix-uruλa   λ'e   īhwara   geλ-a   **kas-iri.***
DEM-NPL   see-POST   one-N   N-catch-INF   say-CVB$_N$ lake   inside-LAT   jump-IRR
Having seen them, he jumped into the lake to catch one of them.

d. *kas-eλi   qedo ſodak'a r-iʁ-ere   **r-īni***[18]
jump-POST   after   duck$_{PL}$ NPL-fly-CVB$_{NPL}$ NPL-go.IRR
As he jumped, the ducks flew away.

e. *qe   moḻa-sw-e   ſodak'a-li-ga   eǧaj-e   taχi-gunu   īgora b-eχ-e,*
then   Molla-O$_M$-ERG   duck$_{PL}$-O$_{NPL}$-LAT   look_at-CVB$_N$ pocket-EL   bread N-take-CVB$_N$
Then Molla looked at the ducks, took some bread from his pocket,

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[18] *mūnuλa* 'go' shows in certain forms a stem |-āʔ-|, but in most of the forms of this verb, no segment representing the stem can be isolated, and the only manifestations of the stem are the lengthening of the first suffixal vowel and the nasalization of affixes.

f. *īhora   geƛ-i   tūk-e   tūk-e   īgora   q̇'-ōnuλa   **w-ašl-ēri**.
   lake   inside-ESS dip-CVB_N dip-CVB_N bread   eat-INF   M-begin-IRR[19]
   dipped it into the lake, and started eating.

g. *miq̇'o-gu   m-ĩda   ãdo-lo-gu   če-ṣw-a   **harigw-iri,**
   road_O-EL   HPL-go.IPFV_PTCP person_PL-O_HPL-EL one-O_M-DAT see-IRR
   *moḻa-ṣu-ga   **eƛ'-iri:***
   Molla-O_M-LAT   say-IRR
   One of the persons walking on the road saw that and asked Molla:

h – *čugu   me-de   hušte   q̇'-āne   goda?*
   why   2SG-ERG so   eat-PROG COP_N
   – Why are you eating in this way?

i *moḻa-ṣw-e-la   **eƛ'-iri:** – ha-be ʕodek'e-λi čupa goda.*
   Molla-OM-ERG-ADD say-IRR   DEM-N   duck-GEN   soup COP_N
   And Molla said: – That's duck soup.

j *ħepi,   čiḵ'wada   žahuda godi.*
   unfortunately a little   cold   COP_N
   Unfortunately it is a bit cold.'

(11) a. *me-de   či   eƛ'-eλi   iṣ-e   īc̣'o   **aχ-iri?***
    2SG-ERG what say-POST 1PLE-ERG door   open-IRR
    lit. 'We must open the door when you say what?'

   b. *du   miq̇adi   čuge   **q̇'el-ēri?***
    2SG_O moustache_PL how   dress-IRR[20]
    (a barber to his customer) 'How must I dress your moustache?'

Consequently, within the frame of a synchronic morphological analysis, it would not be correct to consider the four suffixes *-ari*, *-ada*, *-iri*, and *-ida* as involving two binary choices *-i-* vs. *-a-* and *-ri* vs. *-da*. However, the form with the *-ida* ending is also the imperfective participle (in which case I gloss it IPFV_PTCP). It already appeared in this use in ex. (10g) above, and ex. (12) provides an additional illustration. The participial use of the verb form with the imperfective positive *-ida* ending provides additional evidence that such a segmentation was probably correct at some stage in the history of Akhvakh.

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[19] The variant *-ēri* of the irrealis ending *-iri* is due to the amalgamation of an underlying *a* belonging to the stem |-ašla(j)-| 'begin': the underlying representation of *wašlēri* is | *w-ašla(j)-iri*|.

[20] The variant *-ēri* of the ending *-iri* has the same explanation as in ex. (10f) above; the underlying representation of *q̇'elēri* is | *q̇'ela(j)-iri*|.

(12)   *de-de*   *ruša*   *b-uq̓'-ida*   *ʕãžite*
          1SG-ERG   tree   N-cut-IPFV$_{PTCP}$ axe
          'the axe with which I am cutting the tree'

We must therefore explain the lack of semantic parallelism, in the present state of the language, between the two apparently parallel couples of verbal endings *-ari* / *-ada* and *-iri* / *-ida*. A plausible explanation of this mismatch is that it results from divergent evolutions undergone by forms that originally were analyzable as a combination of two binary distinctions, *-a-* (perfective) *vs. -i-* (imperfective) and *-ri* (finite) *vs. -da* (participle). At that stage, it is reasonable to suppose that, when forms ending with *-da* were used as heads of independent clauses, the *-ri* vs. *-da* contrast involved TAM distinctions, not only in combination with *-i-*, but also in combination with *-a-*. More precisely, given the evidence that *-da* was originally a participle marker, a plausible hypothesis is that the independent use of forms showing this ending implied the kind of TAM values typically expressed by participles integrated to the paradigm of verb forms heading independent sentences: perfect in the case of the perfective participle *-a-da*, progressive in the case of the imperfective participle *-i-da*.

The evolution leading to the destabilization of this system was probably the emergence of the two analytic forms that, in present-day Akhvakh, express the meanings of perfect (*general converb + copula*) and progressive (*progressive converb + copula*). Starting from that, the simple forms of the perfective and the imperfective were affected by divergent evolutions:

– the two simple forms of the imperfective (*-iri* and *-ida*) were maintained with different TAM values (the narrative use of *-iri* resulting probably from the maintenance of its former use as a 'historical present');
– by contrast, the development of the analytic perfect resulted in blurring the TAM distinction originally expressed by the choice between *-ari* and *-ada*.

Most often, the loss of the semantic distinction between two grammatical forms belonging to the same paradigm results in the elimination of one of the two competing forms. But another possible evolution is a reanalysis leading to the maintenance of the formal distinction with a new function. This is precisely the hypothesis I propose to explain the emergence of person distinctions in Akhvakh verb morphology: the participle originally used with a perfect meaning was retained in clauses involving an A or S$_A$ argument identical with the speech act participant in charge of the assertion, whereas the finite form of the perfective was retained in clauses involving an A or S$_A$ argument different from the speech act participant in charge of the assertion, and in clauses involving no A or S$_A$ argument.

This hypothesis may seem surprising, since in the domain of evidentiality, perfects formed on resultative participles are rather known for their propensity to evolve towards a meaning of indirect knowledge. But the relationship between resultativity and

indirect knowledge is natural only in clauses referring to events in which the speech act participant responsible for the assertion was not involved. In assertive clauses referring to events in which the speaker has played an active role, and in questions referring to events in which the addressee has played an active role, the unmarked situation is that the speech act participant responsible for the assertion keeps the event in memory. At the same time, the meaning of present relevance characteristic of perfects may favor the use of perfect forms in reference to events in which the speaker was involved, even if they took place in the remote past, since from a subjective point of view they form part of his/her own personal experience. Consequently, the interaction between TAM and person may explain that an ancient perfect formed on a resultative participle specializes in situations characterized by the particular alignment between roles in the event and speech act roles encoded in Akhvakh by *-ada*.

6. Similar developments in other languages

In addition to morphological evidence, the plausibility of the hypothesis put forward in section 5 is reinforced by the fact that a similar evolution is attested in the Turkic language Azerbaijani. The difference with Akhvakh is however that, in Azerbaijani, this evolution did not result in the emergence of person distinctions in verb morphology, since person agreement already existed, but only to a renewal of person agreement morphology.

Azerbaijani has two synonymous perfect markers, *-mIş* and *-(y)Ib*,[21] with the following distribution: in the 1st person, *-mIş* is the only possibility; in the 2nd and 3rd persons, both *-mIş* and *-(y)Ib* are possible, but in the 3rd person, there is a strong tendency to prefer *-(y)Ib*:

(12)   The Azerbaijani perfect

bax-mış-am	'I have looked'
bax-mış-san ~ bax-ıb-san	'You (sing.) have looked'
bax-ıb (~ bax-mış-dır)	'(S)he has looked'
bax-mış-ıq	'We have looked'
bax-mış-sınız ~ bax-ıb-sınız	'You (pl.) have looked'
bax-ıb-lar (~ bax-mış-lar)	'They have looked'

This paradigm clearly results from the fusion of two originally distinct paradigms: in other Turkic languages, the choice between *-mIş* and *-(y)Ib* does not involve person distinctions, and the verb forms in which these suffixes occur differ in their TAM

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[21] *I* represents an underspecified high vowel with 4 possible values (*i*, *ü*, *ı*, and *u*) determined by vowel harmony.

meaning or syntactic distribution.[22] The situation of Azerbaijani is not entirely comparable to that of Akhvakh, since the available descriptions mention no *declarative vs. interrogative* contrast in the use of the two variants of the perfect, but the fact that the suffix *-mIş* obligatory with 1st person subjects is also a participle marker (as in *mühazirəyə qulaq as-mış tələbələr* 'the students having listened to the lecture'), whereas the form preferred with 3rd person subjects has no participial use, is reminiscent of the situation observed in Akhvakh.

This coincidence may well involve areal convergence, but direct influence of Azerbaijani on Akhvakh is not a plausible explanation: the speakers of the Axaxdərə variety of Akhvakh are all bilingual in Akhvakh and Azerbaijani, but the speakers of the Daghestanian varieties of Akhvakh have no direct contact with Azerbaijani. In addition to that, the hypothesis of a transfer of the Azerbaijani pattern could not explain the inversion of person marking between assertive clauses and questions observed in Akhvakh. In fact, more information about the situation in Southern Avar dialects would be necessary in order to evaluate the hypothesis of an areal phenomenon.[23]

7. Conclusion

In a language already having person agreement, like Azerbaijani, the establishment of a person-driven distribution of two synonymous TAM markers does not necessarily create new morphological distinctions and new rules of syntax: it may just affect the expression of TAM and person distinctions, creating a paradigm in which person manifests itself, not only in the choice of the personal ending, but also in the choice of the affix filling the TAM marker slot. But in a language originally devoid of verbal affixes expressing person, one can easily imagine that the same type of evolution may be responsible for the emergence of new distinctions involving person, including atypical patterns whose functional motivation has to do with evidentiality or mirativity marking rather than argument indexing, and the evidence examined in the previous sections suggests that this is precisely what occurred in Akhvakh.

ABBREVIATIONS

1D/2Q : 1st pers. in declarative clauses, 2nd pers. in questions
1SG : 1st pers. sing. pronoun
2SG : 2nd pers. sing. pronoun

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[22] For example, in Turkish, *-mIş* is an indirective past marker, and *-(y)Ib* occurs only in a non-finite verb-form (converb).
[23] Standard Avar has no person marking on verbs. Southern Avar dialects are known for having developed person marking, but nothing precise has been published about the particular patterns of person marking they may have.

1PLE : 1st pers. pl. (excl.) pronoun
1PLI : 1st pers. pl. (incl.) pronoun
2P : 2nd pers. pl. pronoun
ABS : absolute
COP : copula
COPNEG : negative form of the copula
CVB : general converb
DAT : dative
DEM : demonstrative
EL : elative
ERG : ergative
ESS : essive
F : singular human feminine
GEN : genitive
HPL : human plural
INESS : inessive
INF : infinitive
IPFV : imperfective
IRR : irrealis
LAT : lative
M : singular human masculine
N : singular non-human (neuter)
NP : non-human (neuter) plural
O : oblique stem
PFV : perfective
PFVNEG : perfective negative
PL : plural
POST : posterior converb
PROG : progressive
PTCP : participle

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