

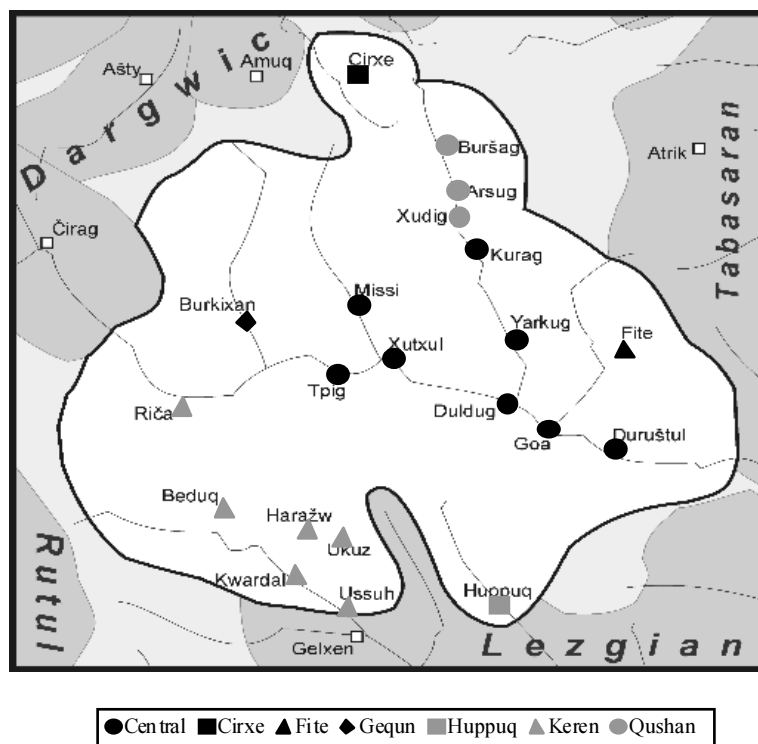
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Preverbs in Agul: an elaborate system of locative prefixation

1. Agul and its verbal derivation

1.1. Basic facts about Agul (Aghul)

- Lezgian branch of the East Caucasian (Nakh-Daghestanian) family
- About 30,000 speakers
- 20 mountain villages in the Agul district and the Kurah district of Daghestan, Russia (+ those resettled on the lowlands)
- Seven dialects:
 - (i) CENTRAL AGUL,
 - (ii) CIRXE (TSIRKHE),
 - (iii) FITE,
 - (iv) GEQUN (BURKIKHAN),
 - (v) HUPPUQ,
 - (vi) KEREN,
 - (vii) QUSHAN.
- The QUSHAN dialect is hardly understandable by speakers of other varieties.
- Below, the HUPPUQ dialect is the default one.



1.2. Suffixes and prefixes in inflection and derivation

- *Nominal inflection*: rich system of cases (absolute, ergative, dative, genitive, comitative and ~20 locative cases); plural marking – all suffixal
- *Nominal derivation*: a few suffixes, not very productive
- *Verbal inflection*: mostly suffixal (non-finite and non-indicative forms) or periphrastic forms (in the indicative); prefixal negation (negative and prohibitive markers)
- *Verbal derivation*: rich system of locative prefixes, and also (in southern dialects) a repetitive prefix (almost inflectional); productive pattern of complex verbs

1.3. Verbal derivation

- Simplex, or non-derived, verb stems constitute the minor part of the verbal lexicon (less than 150 verb roots?) – like in other Lezgc languages.
- Most verbs are complex and belong to the following pattern –
 A COVERB (or “nominal part”) + A LIGHT VERB:
 - *ʔüsse xas* ‘to get old’ (← *ʔüsse* ‘old’ + *xas* ‘to become’)
 - *un xas* ‘to hear’ (← *un* ‘sound’ + *xas* ‘to become’)
 - *un aq’as* ‘to call’ (← *un* ‘sound’ + *aq’as* ‘to do’)
 - *masa ic’as* ‘to sell’ (← *masa* ‘for pay’ + *ic’as* ‘to give’), etc.
- This is the only way to derive a verb from a noun or adjective. This is also the most productive way of introducing new verbal lexemes on the basis of the Russian infinitives, cf.
 - *arganizawat: aq’as* ‘to organize’ (← Rus. *organizovat’* ‘to organize’ + ‘to do’)
 - *staracia xas* ‘to try hard, to do one’s best’ (← Rus. *starat’sja* ‘to try, to seek’ + ‘to become’)
- To derive verbs from verbs (verb stems), locative and repetitive prefixation is used.

2. Verbal prefixes and prefixal slots

2.1. Locative prefixes

- Two sets of locative prefixes (here, only the basic allomorphs are given):
 - LOCALIZATION:

<i>(ʔ)</i> - ‘IN’	<i>q</i> - ‘POST’	<i>k</i> - ‘SUB/CONT’
<i>ʔ</i> - ‘INTER’	<i>f</i> - ‘APUD’,	(< <i>k</i> - ‘CONT’
<i>h</i> - ‘ANTE’	<i>al</i> - ‘SUPER’	+ <i>k</i> :- ‘SUB’)
 - DIRECTION, or orientation (optional slot):

<i>-č</i> - ‘LATIVE’	<i>-ʔ</i> - ‘UP’
<i>-at</i> :- ‘ELATIVE’	<i>-a</i> - (<i>da</i> -) ‘DOWN’

(1) *sa-d=ra hučat.a-j-dewa.* < *hu-č-at-*
 one-S=ADD {ANTE-LAT}let.IPF-CONV-COP:NEG ANTE-LAT-let-
 ‘(The horse) doesn’t let anyone come close’.

- Locative prefixes are attested in all dialects, with some variation in the form/meaning of affixes – especially in the DIRECTION slot.
- Prefixes of the LOCALIZATION slot are historically the same morphemes as locative case markers in nominal inflection.
- Locative prefixes are not fully productive: the combinability with verbal roots is restricted, many derived prefixed verbs have idiomatic meaning (see below).

2.2. Negative prefixes

- Two prefixes:
 - *d-* (*da-*) NEGATION (non-finite and some non-indicative forms)
 - *m-* (*ma-*) PROHIBITIVE (= a special form of negative imperative)
- Negative markers are attested in all dialects (and go back to the Proto-Lezxic).
- They are unrestrictedly productive (with non-stative verbs).

(2a) *d-ak.a-s*
NEG-say.IPF-INF
'not to say'

(2b) *d-ak.a-j*
NEG-say.IPF-CONV
'without saying'

(2c) *d-up.u-na*
NEG-say.PF-CONV
'without having said'

(2d) *d-up.u-raj*
NEG-say.PF-JUSS
'let [him] not say!'

- Prohibitive is not based on the imperative morphologically.

(2e) *m-ak.a!*
PROH-say.IPF
'don't say!'

(2f) *up!*
say(IMP)
'say!'

- In most TAM forms (which are periphrastic or going back to periphrastic forms), the negation is marked on the auxiliary.

2.3. Repetitive (refactive) prefix

- *q-* (*qa-*, *qu-*, *qi-*) – attested only in southern dialects, the Huppuq dialect (spoken in 1 village) and the Keren dialect (spoken in 6 villages).

(3a) *ak.a-s*
say.IPF-INF
'to say'

+ RE >

(3b) *q-ak.a-s*
RE-say.IPF-INF
'to say again, to tell more'

- The default meaning is repetitive proper – 'again' (one-time repetition of an event involving same participants); with motion verbs, it usually conveys the reditive meaning 'backwards'; for details, cf. Maisak & Merdanova 2011.

(4a) *qa-fac.u-ne*
RE-seize.PF-AOR
'seized again'

(4b) *qu-hat.a-s-e*
RE-send.IPF-INF-COP
'will send back'

2.3.1. Repetitive and ‘Post’

- Repetitive *q-* is close in form to the ‘Post’ localization prefix *q-*, but synchronically they clearly represent two distinct morphemes and can co-occur in one and the same derivative verb:

(5a) <i>q-árx.a-s</i> {POST}get.to.IPF-INF ‘fall behind’	+ RE >	(5b) <i>qa-qárx.a-s</i> RE-{POST}get.to.IPF-INF ‘fall behind again’
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2.3.2. Contact-induced nature of the Repetitive

- A prefix/infix with similar form (*q-/χ-*) and function exists in Lezgian, where Repetitive is “so regular that it could even be considered an inflectional category of the verb” (Haspelmath 1993: 174).
- Southern Agul dialects having the Repetitive prefix are in a tight contact with neighboring Lezgian-speaking villages; most speakers of these dialects have a good command of Lezgian (a dominant language of the Kurah district of Daghestan).
- It is most plausible to assume that in southern Agul dialects the repetitive marker was borrowed from Lezgian.
- If the Lezgian Repetitive marker goes back to the ‘Post’ localization (which is plausible), the two cognate morphemes *q-* ‘Post’ and *q-* ‘Repetitive’ in Agul are “etymological doublets”.

2.4. Prefix ordering

- In Huppuq, the order of prefixes is very transparent: the locative prefixes are close to the root, and the negation prefixes are the most “external”.

NEGATION [REPETITIVE [LOCALIZATION (DIRECTION) [ROOT]]]

(6a) <i>da-q-lat:arx.a-guna,</i>	<i>hal exir čara a-dawa...</i>
NEG-RE-{SUPER-ELAT}get.to.IPF-TEMP	now at.last way.out {IN}be-PRS:NEG
‘As he doesn’t leave (them) in peace, there is no way out...’	

(6b) <i>da-q-lat:arx-</i>	<	* <i>da-</i>	<	<i>q-</i>	<	<i>al-</i>	<	<i>at:-</i>	<	<i>arx-</i>
NEG-		[RE-		[SUPER-		ELAT-		get.to]]-		
‘not again get off (~ get from on smb.)’										

- While in Huppuq cases when NEG/PROH or RE follow the locative prefixes are exceptional, in the Keren dialect it is normal to place them after locative prefixes:

(7) <i>quča-qa-da<m>ark.a!</i>
{POST-LAT}-RE-<PROH>move.IPF
‘Do not approach me again!’ (~ close to me + again + don’t move)

- In other dialects (not having RE), NEG/PROH is also placed after locative prefixes, which seems to be the original situation diachronically. Cf. some Burkikhan forms:

(8a) *alča<d>arx.u-na* (< NEG + *al-č-arx-*)
 <NEG>meet.PF-CONV SUPER-LAT-get.to-
 ‘not having met’

(8b) *qat<d>ik’.e-s* (< NEG + *q-at-ik’-*)
 <NEG>steal.INF-INF POST-ELAT-thrust.in-
 ‘not to steal’

- The position of NEG and RE before the locative prefixes in Huppuq can be regarded as a comparatively recent “externalization” of these affixes.

3. Locative prefixes and prefixal verbs: a closer look¹

3.1. Localization prefixes

- These 7 (8) prefixes specify a particular spatial domain of a Ground where a Figure is located.
- NB: most Agul dialects distinguish between *kʀ-* SUB vs. *k-* CONT (both in verbal prefixes and in the nominal paradigm); the merger of these two localizations is characteristic only of southern Agul varieties, especially of Huppuq.
- Apart from this syncretism, the system is the same in all dialects.

label	allomorphs	meaning
IN	∅-, <i>a-</i>	‘inside a container’
INTER	<i>ʃ-</i> , <i>ʃa-</i>	‘inside liquid or substance’ or ‘between’
APUD	<i>f-</i> , <i>fa-</i>	‘(temporarily) near a Ground’
ANTE	<i>h-</i> , <i>hu-</i> , <i>hi-</i>	‘in front of a Ground’
POST	<i>q-</i> , <i>qa-</i> , <i>qi-</i> , <i>qu-</i>	‘behind a Ground’
SUB/CONT	<i>k-</i> , <i>ke-</i> , <i>ki-</i> , <i>kü-</i>	‘below’/‘attached to a Ground’
SUPER	<i>al-</i> , <i>l-</i>	‘on the horizontal surface of a Ground’

- All prefixes have allomorphs with a subsequent vowel when they occur before a consonant; the distribution of allomorphs partly depends on the phonological context, and partly is morphologically or lexically conditioned. Also note:
 - IN: originally, the glottal stop *ʔ-*, but its realization in the onset is always zero, according to a general rule that glottal stop is not pronounced before vowels.

¹ See also Maisak & Merdanova 2002 on locative prefixation in the Huppuq dialect; for some data on the dialectal variation of locative prefixes, cf. Sulejmanov 1993: 159–173.

- SUB/CONT: the marker is palatalized and triggers fronting of the next vowel (/a/ > /e/, /u/ > /ü/).
- SUPER: the only prefix with the VC structure; the first vowel of the prefix is unstressed usually dropped when it is not the nucleus of a closed syllable /•al•/
cf. *l-ík'as* 'to put on' < a•lí•k'as,
but *al-ɤ-ík'as* 'to pull on, to draw on' < al•bí•k'as

3.2. Verbs with localization prefixes

- Stative verb root ('to be' and 'to stay, remain') co-occur only with localization prefixes; the prefixal derivatives have stative ('essive') meaning.
- Dynamic verb root with localization prefixes and without direction prefixes still have directive ('lative') meaning.

Localization prefix	Stative verb, root 'to be'	Dynamic verbs, root 'to put' (no direction prefix)
IN	<i>áa</i> (Ø- <i>áa</i>) 'is inside (a container)'	<i>íxas</i> (Ø- <i>íxas</i>) 'to put inside (a container)'
INTER	<i>ɣáa</i> 'is inside (a substance)'	<i>ɣ-íxas</i> 'to put inside (a substance)'
SUPER	<i>áldea</i> 'is on'	<i>al-íxas</i> 'to put on', 'to build', 'to appoint'
SUB/CONT	<i>kéa</i> 'is under'/'is in contact'	<i>k-íxas</i> 'to put under', 'to hang', 'to light (fire)'
ANTE	<i>háa</i> 'is in front'	<i>h-íxas</i> 'to put in front'
POST	<i>qáa</i> 'is behind'	<i>q-íxas</i> 'to put close to', 'to turn on (the light)'
APUD	<i>fáa</i> 'is near'	<i>f-íxas</i> 'to put near'

3.3. Direction prefixes

- These 4 prefixes mark direction (or "orientation") in which a Figure moves.
- The orientation slot is optional, so there may be verbs with a localization prefix only, but no verbs with an orientation prefix only.

label	allomorphs	meaning
LAT	-č-, -čá-	'motion towards'
ELAT	-át-, (-áj-)	'motion from'
UP	-ɤ-, -ɤá-	'motion up (to)'
DOWN	-á-, -dá-	'motion down (from)'

- Unlike with localization prefixes, there is considerable dialectal variation in the direction subsystem, both in the inventory and form of prefixes.
 - E.g. in the Qushan dialect, there is no LAT.

- Unlike localization prefixes, direction prefixes are NOT related to the direction/orientation markers found in nominal locative cases (ELAT *-as*, LAT *-di*). Probably, they represent a heterogeneous group, and are not members of a single locative “paradigm” historically.
- The LAT marker is probably related to the lative suffix *-č* found in demonstratives, cf. *mič, tič, lič, gič* ‘here, there’ (a special lative form, absent from the nominal paradigm).
- The UP marker stands apart from other direction markers, as:
 - there are some verbs denoting vertical body posture, which seem to contain just this prefix without any localization marker:

(9)	<i>kajšas</i>	<i>kuzas</i>
	‘to get up, rise’	‘to stand still’
	<i>kuťas</i>	<i>kahadas</i>
	‘to stand upright’	‘to lift, raise (from ground)’

- in some dialects, it can even occur in a separate prefixal slot, being not mutually exclusive with the LAT/ELAT markers:

- (10) *fa-ta-k-uč’.a-s*
 {APUD-ELAT-UP}climb.INF-INF
 ‘to rise – of sun, moon’ (Magometov 1970: 166; the Keren dialect?)

3.4. Verbs with “localization + direction” prefix combinations (cf. the table)

- The meaning of derivatives is often compositional, at least with verb roots with locative semantics (motion, causation of motion). It can also be quite idiomatic.

3.5. The derivational “paradigm” of locative verbs

- There are 35 potential derivatives from one verb root, i.e. 7 derivatives with localization prefixes + 28 (= 7*4) derivatives with “localization + direction” combinations.
- There are no roots with all 35 derivatives (see below), and the frequency of combinations is very different (cf. the table).
 - the frequency hierarchy for direction prefixes is:
no direction > LAT > ELAT > UP > DOWN
 - the frequency hierarchy for localization prefixes is:
SUPER > SUB/CONT > IN > POST > INTER > (rare) ANTE > APUD

- Prefixal derivatives from the bound root *-ix-* ‘to put’ (~ ‘класть, ставить’)

Localization prefix	Dynamic verbs (LAT direction)	Dynamic verbs (ELAT direction)	Dynamic verbs (UP direction)	Dynamic verbs (DOWN direction)
IN	<i>a-č-íxas</i> ‘to bring inside’, ‘to hit, slap’	<i>át:-íxas</i> ‘to take from inside’	<i>a-κ-íxas</i> ‘to put up and inside’	<i>a-dá-jxas</i> ‘to throw down from inside’
INTER	<i>ʃa-č-íxas</i> ‘to put in (a substance)’, ‘to hit, slap’	<i>ʃ-át:-íxas</i> ‘to take from (a substance)’	<i>ʃa-κ-íxas</i> ‘to rise in the throat, to choke’	<i>ʃ-á-jxas</i> ‘to pull down (the pants)’
SUPER	<i>al-č-íxas</i> ‘to put on (the upper surface)’	<i>al-át:-íxas</i> ‘to take from (the upper surface)’	<i>al-κ-íxas</i> ‘to put above oneself’	<i>al-á-jxas</i> ‘to throw down from (the upper surface)’
SUB/CONT	<i>ki-č-íxas</i> ‘to put under’	<i>k-ét:-íxas</i> ‘to take from under/from a surface’	<i>ke-κ-íxas</i> ‘to raise (along a surface)’, ‘to raise (a person)’	<i>k-é-jxas</i> ‘to throw down from under/from a surface’
ANTE	<i>hi-č-íxas</i> ‘to put in front’	<i>h-át:-íxas</i> ‘to take from the front’	–	<i>h-á-jxas</i> ‘to throw down from the front’
POST	<i>qi-č-íxas</i> ‘to put behind’	<i>q-át:-íxas</i> ‘to take from behind’	–	<i>q-á-jxas</i> ‘to throw down from behind’
APUD	<i>fā-č-íxas</i> ‘to slap (in face)’	<i>f-át:-íxas</i> ‘to throw away’, ‘to lie down flat’	–	<i>f-á-jxas</i> ‘to put down’, ‘to humiliate’

- The number of verbs with different prefix combinations:

	–	LAT	ELAT	UP	DOWN	sum
IN	10	11	11	13	8	53
INTER	17	11	9	3	1	41
SUPER	23	12	13	13	7	68
SUB/CONT	23	12	11	9	2	57
ANTE	9	10	7	–	1	27
POST	26	9	10	3	1	49
APUD	6	7	5	–	1	19
sum	114	72	64	41	21	314

3.6. Prefixes and verb stems

- There are about 120 dynamic verb roots discovered in the Huppuq dialect, and only about a half of them has prefixed derivatives.
- Among these, only about 30 roots have more than one prefixed derivative.
- On the whole, more than 300 derived dynamic prefixed verbs have been found. (There are also 14=7+7 stative prefixed verbs derived from two roots, ‘to be, be located’ and ‘to stay, remain’.)
- The most productive verb roots are bound, i.e. they do not occur outside prefixal derivatives. The leader is *-ix-* ‘to put’ with 32 derivatives (see table above); other roots with more than 10 derivatives include:

-at- ‘to let, leave’

-arx- ‘to get (in)to, find oneself in’

-aq- ‘to pour, scatter’

-uč’- ‘to get into (with effort), climb’

-ik’- ‘to put (with effort), thrust’

-ik- ‘to drive, turn out’

-iš’- ‘to jump, twitch’

-dark- ‘to turn, spin’

du- || *d_o-* ‘to pull, drag’

ŕ- || *uš’-* || *ad-* ‘to go/come’

3.7. Prefixes and locative cases

- Localization markers in the nominal paradigm are historically identical to localization prefixes in verbs.
- The structure of locative prefixation in verbs is parallel to the structure of locative case forms, which also consist of two (suffixal) slots – one for localization and one for direction; cf. a paradigm of the noun *cil* ‘wall’.

	ESSIVE (-Ø-)	LATIVE (- <i>di</i>)	ELATIVE (- <i>as</i>)
IN	<i>cil.i-ʔ</i>	<i>(cil.i-ʔ-di)</i>	<i>cil.i-ʔ-as</i>
INTER	<i>cil.i-ŕ</i>	<i>cil.i-ŕ-di</i>	<i>cil.i-ŕ-as</i>
SUPER	<i>cil.i-l</i>	<i>cil.i-l-di</i>	<i>cil.i-l-as</i>
SUB/CONT	<i>cil.i-k</i>	<i>cil.i-k-ti</i>	<i>cil.i-k-as</i>
ANTE	<i>cil.i-h</i>	<i>cil.i-h-ti</i>	<i>cil.i-h-as</i>
POST	<i>cil.i-q</i>	<i>cil.i-q-ti</i>	<i>cil.i-q-as</i>
APUD	<i>cil.i-w</i>	<i>cil.i-w-di</i>	<i>cil.i-f-as</i>

- The locative prefixes and the locative case markers tend to go together, as it is typical for a verb with a localization prefix to subcategorize for a noun phrase in a corresponding locative form, cf.:

- (11) *ruš.a gardan.i-q šarf qix.i-ne*
 girl(ERG) neck-POST scarf {POST}put.PF-AOR
 ‘The girl put a scarf on her neck.’
- (12) *šünük;.i-l jurkan alčaq!*
 child-SUPER shawl {SUPER-LAT}pour(IMP)
 ‘Cover the child with a shawl!’
- (13) *gada-ji lak ketik’.i-naa jurkan.i-k-as.*
 boy-ERG leg {SUB/CONT-ELAT}thrust.PF-PRF blanket-SUB/CONT-ELAT
 ‘The boy stuck his leg out from under the blanket.’

- This sort of head-dependent “locative agreement” helps to identify locative prefixes in non-obvious cases, i.e. in lexicalized verbs with non-locative meaning.

- (14) *za-l sa idemi alčarx.u-ne*
 I-SUPER one man meet.PF-AOR
 ‘I met a man’ (< SUPER-LAT-get.to)
- (15) *zun wa-q qux.a-dawa*
 I you.SG-POST believe.IPF-PRS:NEG
 ‘I don’t believe you’ (< POST-???)

3.8. Idiomatic and lexicalized prefixal verbs

- Many prefixal verbs have idiomatic meanings, although the underlying locative metaphor is usually more or less clear, cf.:
 - *ačaqas* ‘to button’ < IN-LAT-‘to pour’
 - *at:aqas* ‘to unbutton’ < IN-ELAT-‘to pour’
 - *akatas* ‘to curse, swear’ < IN-UP-‘to let’
 - *uq:as* ‘to fight’ < IN-‘to stick to’
 - *fačixas* ‘to slap, hit’ < INTER-LAT-‘to put’
 - *qik’as* ‘to lock’ < POST-‘to thrust, put with effort’
 - *quč’as* ‘to copulate’ < POST-‘to climb, get into’
 - *qučuč’as* ‘to start’ < POST-LAT-‘to climb, get into’
 - *qat:ik’as* ‘to steal’ < POST-ELAT-‘to thrust, put with effort’
 - *ališas* ‘to entreat, beg’ < SUPER-‘to jump’
 - *alaŕas* ‘to boil over’ < SUPER-DOWN-‘to go’
 - *alajkas* ‘to clear up (of weather)’ < SUPER-DOWN-‘to drive’
 - *küč’as* ‘to confess’ < SUB/CONT-‘to climb, get into’

- In most cases, the identification of locative prefixes in a verb stem is straightforward. However, there are some (at least three dozen) verbs for which it is not immediately clear whether they contain a prefix or not, e.g.:
 - *híšas* ‘to run away’ – the ANTE prefix?
 - *húrχas* ‘to ask’ – the ANTE prefix?
 - *řarák:as* ‘to beg, tramp’ – the INTER prefix?
 - *kixít:ras* ‘to give a start’ – the SUB/CONT prefix?
 - *át:uzas* ‘to pour out’ – the IN-ELAT prefix combination? etc.

3.9. What is a ‘canonical’ prefixal verb (in Agul)?

- In the ideal case, a locative prefixal verb should have the following properties:
 - it has a locative prefix (or at least the initial segments of the verb stem look like those of locative verbs)
 - it has stress on the prefix or root, but not on the thematic stem vowel (cf. *áqas* ‘to pour into’ vs. *akás* ‘to say’)
 - its stem has more than one syllable
 - it is a member of a derivational paradigm (with at least two derived verbs with the same root)
 - it subcategorizes for a noun phrase in the locative with the same localization marker, as the prefix
 - its meaning includes a locative semantic component (corresponding to the meaning of locative marker)
- For verbs like *qúχas* ‘to trust, believe’, it is possible to show that the link between the first stem consonant of this verb and the POST marker is non-arbitrary (cf. the stress and the subcategorization in (15)).
- For verbs like *χut:úřfas* ‘to look’ it is not so easy, as there is no such prefix χ-, and the subcategorization frame is not “suspicious” (who: ABS; at what: DAT, cf. (16)). However, the comparative dialectal data help to discover a locative prefix here: cf. Central Aghul *qu-turřanas* or Burkikhan *qa-durřas* ‘to look’ (17) with an etymological POST prefix and with the POST argument marking.

(16) *jak-di me ze řibin.i-s χuturř.a-ři zun.*
 day-ADV DEMM my pocket-DAT look.IPF-PST I
 ‘I (ABS) was looking at my pocket (DAT) all day long.’

(17) *mur sa sa-i-q qadurř.u-naj.*
 DEMM:PL one one-S-POST look.PF-AOR
 ‘They looked at each other – lit. one (ABS) at another (POST).’

References

- Alekseev M. E. 1985. *Voprosy sravnitel'no-istoričeskoj grammatiki lezginskix jazykov*. Morfologija. Sintaksis. Moskva: Nauka.
- Haspelmath M. 1993. *A Grammar of Lezgian*. Berlin: Mouton de Gruyter.
- Magometov A. A. 1970. *Agul'skij jazyk: Issledovanija i Teksty*. Tbilisi: Mecniereba.
- Maisak T., Merdanova S. 2002. Sistema prostranstvennyx preverbov v agul'skom jazyke. In: V. A. Plungian (ed.), *Issledovanija po teorii grammatiki, 2: Grammatikalizacija prostranstvennyx značenij v jazykax mira*. Moskva: Russkie slovari, pp. 251–294.
- Maisak T., Merdanova S. 2011. *Repetitive prefix in Agul and its areal/genetic background*. Paper presented at the Conference on Caucasian languages, Max Planck Institute for Evolutionary Anthropology, Leipzig, 13-15 May 2011. [http://lingvarium.org/maisak/publ/Maisak_Merdanova-Leipzig2011.pdf]
- Sulejmanov N. D. 1993. *Sravnitel'no-istoričeskoe issledovanie dialektov agul'skogo jazyka*. Maxačkala: DNC RAN.