

Linguistics Colloquium, Department of Linguistics, University of Bern
9 November 2022 &
Seminar Théories et données linguistiques, INALCO, Paris
18 November 2022

**Non-canonical noun incorporation
and lexical affixation
in Northwest Caucasian
(with focus on Abaza)**

Peter Arkadiev

University of Zürich
alpgurev@gmail.com



**Universität
Zürich^{UZH}**

What is “noun incorporation”?

Mithun (1984: 847-848):

- “In [Noun Incorporation], a N stem is compounded with a V stem to yield a larger, derived V stem.”
- “Interestingly, all languages which exhibit such morphological structures also have syntactic paraphrases.”

What is “noun incorporation”?

Chukchi (Chukotkan, Russia; Muravjeva 2004: 115):

- (1) a. *gəm-nan tekicgə-n tə-pela-gʔan*
1SG-ERG **meat**-ABS.SG 1SG.S-leave-PST.3SG.O
- b. *gəm tə-takecgə-pela-gʔak*
1SG.ABS 1SG.S-**meat**-leave-PST.1SG.S
'a=b. I left the / some meat.'

Southern Tiwa (Kiowa-Tanoan, USA; Allen et al. 1984: 295):

- (2) a. *yede seuan-ide a-mũ-ban*
that **man**-SUF 2SG-see-PST
- b. *yede a-seuan-mũ-ban*
that 2SG-**man**-see-PST
'a=b. You saw that man.'

What is “noun incorporation”?

Baker (1988: 80) and later generative work (see an overview in Johns 2017):

- “The **productivity and the referential transparency** of NI suggest that it is a **syntactic** process, rather than a lexical one <...> the verb <...> and the noun root <...> combine into a single word <...> by Move-Alpha, which moves the structurally lower lexical item (the noun) to adjoin to the higher lexical item [the verb] in the syntax”

What is “noun incorporation”?

Not only generative linguists, cf. Olthof (2020: 16) in the framework of Functional Discourse Grammar:

- “In this study, we restrict the term noun incorporation to **productive, semantically transparent processes** in which a nominal and a verbal unit at R[eferential]L[evel] together form a single verbal Word at M[orphosyntactic]L[evel]. <...> More specifically, we define noun incorporation constructions as cases in which a nominal and a verbal unit that are in a **dependency relation of the form head-modifier or predicate-argument** at RL form a single verbal Morphosyntactic Word.”

What is “noun incorporation”?

Cf. also Vinyar’s (2021: 23) comparative concept (in the sense of Haspelmath 2010) of NI:

- “N(oun) I(ncorporation) C(onstruction) is an **optional** construction used to express **discoursively low-prominent** participant of an event coded by a **noun**. The noun is **adjacent** to a **verb**, cannot be **inflected** and is **not phrasal**. NIC’s primary function is to deprofile a participant whose causal chain’s segment would otherwise be a part of the verbal profile.”
(author’s emphasis)

What is “noun incorporation”?

An attempt at a definition of the “canon” of NI (in the sense of Canonical Typology, Corbett 2005, Brown et al. 2013):

- morphology:
 - compounding of noun and verb roots/stems (thus the noun cannot retain any inflectional morphology or have modifiers);
 - the result is an unequivocal verb with full morphosyntactic potential (e.g. not a non-finite form);
 - formal transparency (no change to either V or N beside regular phonology).

What is “noun incorporation”?

An attempt at a definition of the “canon” of NI (in the sense of Canonical Typology, Corbett 2005, Brown et al. 2013):

- syntax:
 - optionality (the same semantic content can be expressed by a construction without incorporation);
 - the syntactic relation of the noun with respect to the verb is direct object;
 - detransitivisation (the NI construction has one syntactic argument less than the free one).

What is “noun incorporation”?

An attempt at a definition of the “canon” of NI (in the sense of Canonical Typology, Corbett 2005, Brown et al. 2013):

- semantics:
 - the semantic relation of the noun with respect to the verb is patient;
 - semantic transparency (the incorporated construction expresses the same propositional content as the free construction);
 - the noun in the incorporated construction is less pragmatically prominent than in the free construction.

What is “noun incorporation”?

An attempt at a definition of the “canon” of NI (in the sense of Canonical Typology, Corbett 2005, Brown et al. 2013):

- productivity:
 - any noun can potentially be incorporated into some verb;
 - any verb taking a patient/direct object can potentially incorporate nouns;
 - no restrictions on the process apart from the most general semantic and pragmatic naturalness.

What is “noun incorporation”?

Not all definitions are so restrictive, though.

De Reuse (1994: 2842):

- “Noun incorporation refers to the morphological construction where a **nominal lexical element is added to a verbal lexical element; the resulting construction being a verb and a single word**. The definition cannot be made more precise than that, because there is widespread disagreement <...>”

What is “noun incorporation”?

Not all definitions are so restrictive, though.

Massam (2009: 1078):

- “[W]e adopt the broad working definition of NI as a grammatical construction where a **nominal that would canonically (either in the given language, or in languages in general) be expressed as an independent argument or adjunct** is instead in some way incorporated into the verbal element of the sentence, forming part of the predicate.”

What is “noun incorporation”?

“Non-prototypical” (or “non-canonical”) noun incorporation (cf. Mithun 2000):

- not necessarily highly productive:
 - only a subset of verbs are incorporating (Olthof et al. 2021);
 - only a subset of nouns can be incorporated
- the semantic role of the nominal root is not necessarily patient/theme:
 - incorporation of instruments;
 - incorporation of spatial modifiers.

In this talk

- The Northwest Caucasian (Abkhaz-Adyghean) languages are not mentioned in the literature on noun incorporation.
- This is not accidental: indeed, examples like (1) and (2) do not occur in NWC.

In this talk

- The Northwest Caucasian (Abkhaz-Adyghean) languages are not mentioned in the literature on noun incorporation.
- This is not accidental: indeed, examples like (1) and (2) do not occur in NWC.
- Nevertheless, focusing on Abaza, I shall argue that NWC languages not only show clear traces of historical noun incorporation, but also possess phenomena that can be analysed as (highly non-canonical) incorporation even synchronically.
- These phenomena, which form a cline from noun incorporation to “lexical affixation” (Mithun 1997), are fairly non-trivial from a typological perspective.

Northwest Caucasian languages

- One of the three indigenous language families of the Caucasus alongside Nakh-Daghestanian and Kartvelian.

Northwest Caucasian languages

- One of the three indigenous language families of the Caucasus alongside Nakh-Daghestanian and Kartvelian.
- Northwest Caucasian:
 - Circassian: West Circassian (Adyghe), Kabardian
 - Abkhaz-Abaza: Abkhaz, Abaza
 - Ubykh (extinct since 1992)

Northwest Caucasian languages

- One of the three indigenous language families of the Caucasus alongside Nakh-Daghestanian and Kartvelian.
- Northwest Caucasian:
 - Circassian: West Circassian (Adyghe), Kabardian
 - Abkhaz-Abaza: Abkhaz, Abaza
 - Ubykh (extinct since 1992)
- Arguably distantly related to the Nakh-Daghestanian (East Caucasian) family (Nikolaev & Starostin 1994, Chirikba 2016).

Northwest Caucasian languages

- Northwest Caucasian peoples and languages have severely suffered from the Russian imperial policies during the Caucasian war (1763-1864) and the ensuing expulsions and resettlements.
- A number of varieties have become extinct, and the whole linguistic landscape has been disrupted.

Northwest Caucasian languages

- Northwest Caucasian peoples and languages have severely suffered from the Russian imperial policies during the Caucasian war (1763-1864) and the ensuing expulsions and resettlements.
- A number of varieties have become extinct, and the whole linguistic landscape has been disrupted.
- Currently spoken by ca. 700-800 thousand people in Abkhazia and the Russian republics of Adygeya, Karachay-Cherkessia and Kabardino-Balkaria, as well as neighbouring regions.
- A large Northwest Caucasian diaspora in Turkey and other countries of the Middle East, exact number of speakers unknown (e.g. Boz 2021).

Northwest Caucasian languages



Northwest Caucasian languages

- Major typological traits (Hewitt 2005, Arkadiev & Lander 2020):
 - rich consonantism and impoverished vocalism;
 - weak distinction between major lexical classes;
 - head-marking and polysynthesis;
 - little (Circassian, Ubykh) or no (Abkhaz-Abaza) core case marking;
 - ergativity;
 - rich system of valency-increasing derivations, especially applicatives;
 - rich system of spatial marking in the verb;
 - complex system of clause-combining.

Northwest Caucasian languages

- Major typological traits (Hewitt 2005, Arkadiev & Lander 2020):
 - rich consonantism and impoverished vocalism;
 - weak distinction between major lexical classes;
 - head-marking and polysynthesis;
 - little (Circassian, Ubykh) or no (Abkhaz-Abaza) core case marking;
 - ergativity;
 - rich system of valency-increasing derivations, especially applicatives;
 - **rich system of spatial marking in the verb;**
 - complex system of clause-combining.

Abaza

- *abáza bəzšá* (абаза бызшва), ISO 639-3 abq
- Ca. 38 000 speakers in Russia (Karachaevo-Cherkessia), ca. 10 000 in Turkey



Abaza

- The least-described language of the Northwest Caucasian family
- Descriptive works exist (e.g. Genko 1955, Tabulova 1976, Lomtadze et al. 1989, O'Herin 2002), but are insufficient

Abaza

The Abaza verbal template:

		“preverbs” (Π)								“stem” (Σ)					“endings”				
-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7
absolutive	subordinators, negation	repetitive	potential, involuntative	applicatives	directional preverbs	locative preverbs	indirect object	ergative	negation	causative	sociative	root	directional suffixes	event operators	plural	aspect, tense	negation	past tense, modality	subordinators, force, emphasis

Abaza

The Abaza verbal template:

		“preverbs” (Π)							“stem” (Σ)						“endings”				
-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7
absolutive	subordinators, negation	repetitive	potential, involuntative	applicatives	directional preverbs	locative preverbs	indirect object	ergative	negation	causative	sociative	root	directional suffixes	event operators	plural	aspect, tense	negation	past tense, modality	subordinators, force, emphasis



locative preverbs

Locative preverbs

- Are found in all NWC languages:
 - ca. 30 in Circassian;
 - ca. 50 in Ubykh;
 - more than 100 in Abkhaz and Abaza (Avidzba 2017, Spruit 1986: 22-31)
- Express a variety a spatial and metaphorical meanings ranging from very abstract to very concrete.
- Often serve as applicatives introducing the landmark as an indirect object argument that can be cross-referenced in the verb (cf. Van Linden 2022 on similar phenomenon in Harakmbut).
- Can be simplex or complex.
- Differ in productivity.
- Obligatory in some cases, and often lexicalised.

Locative preverbs

Abaza

- (3) *a-wasa* *a-š'acara* *jə-la-wə-m-sa-n*
DEF-sheep DEF-lawn 3SG.N.ABS-LOC:mass-2SG.M.ERG-NEG-
shear-IMP

'Do not shear the sheep on the lawn.' (Klychev 1995: 145)

- (4) *a-ʒə* *ʒa-sə-k^w-χ^wχ^wa-t*
DEF-water CSL-1SG.IO-LOC:top-sprinkle-DCL

'Water sprinkled on me.' (Klychev 1995: 117)

- (5) *a-çəjs* *a-qəš* *j-kə-la-pssʒa-t*
DEF-bird DEF-window 3SG.N.ABS-LOC:narrow-LOC:mass-fly-DCL

'The bird flew through the window.' (Klychev 1995: 131)

Locative preverbs

Abaza

(3) *a-wasa* *a-š'acara* *jə-la-wə-m-sa-n*
 DEF-sheep DEF-lawn 3SG.N.ABS-LOC:mass-2SG.M.ERG-NEG-shear-IMP

Simplex preverbs

'Do not shear the sheep **on the lawn**.' (Klychev 1995: 145)

(4) *a-ʒə* *ʒa-sə-k^w-χ^wχ^wa-t*
 DEF-water CSL-1SG.IO-LOC:top-sprinkle-DCL

'Water sprinkled **on me**.' (Klychev 1995: 117)

(5) *a-çəjs* *a-qəš* *j-kə-la-pssʒa-t*
 DEF-bird DEF-window 3SG.N.ABS-LOC:narrow-LOC:mass-fly-DCL

'The bird flew **through the window**.' (Klychev 1995: 131)

Locative preverbs

Abaza

(3) *a-wasa* *a-š'acara* *jə-la-wə-m-sa-n*
 DEF-sheep DEF-lawn 3SG.N.ABS-LOC:mass-2SG.M.ERG-NEG-
 shear-IMP

Simplex preverbs

'Do not shear the sheep **on the lawn**.' (Klychev 1995: 145)

(4) *a-3ə* *ʃa-sə-k^w-χ^wχ^wa-t*
 DEF-water CSL-1SG.IO-LOC:top-sprinkle-DCL

'Water sprinkled **on me**.' (Klychev 1995: 117)

Complex preverb

(5) *a-çəjs* *a-qəš* *j-kə-la-pssʃa-t*
 DEF-bird DEF-window 3SG.N.ABS-LOC:narrow-LOC:mass-fly-DCL

'The bird flew **through the window**.' (Klychev 1995: 131)

Locative preverbs

Abaza

(3)

a-wasa
DEF-sheep

a-š'acara
DEF-lawn

jə-la-wə-m-sa-n
3SG.N.ABS-LOC:mass-2SG.M.ERG-NEG-
shear-IMP

Simplex preverbs

'Do not shear the sheep **on the lawn.**' (Klychev 1995: 145)

Landmark

wa-ʒə
DEF-water

ʒa-sə-k^w-χ^wχ^wa-t

CSL-1SG.IO-LOC:top-sprinkle-DCL

'Water sprinkled **on me.**' (Klychev 1995: 117)

Complex preverb

(5)

a-çajs
DEF-bird

a-qəš
DEF-window

j-kə-la-pssʒa-t
3SG.N.ABS-LOC:narrow-LOC:mass-fly-DCL

'The bird flew **through the window.**' (Klychev 1995: 131)

Locative preverbs

Abaza

(3)

a-wasa
DEF-sheep

a-š'acara
DEF-lawn

jə-la-wə-m-sa-n
3SG.N.ABS-LOC:mass-2SG.M.ERG-NEG-
shear-IMP

Simplex preverbs

'Do not shear the sheep **on the lawn**.' (Klychev 1995: 145)

Landmark

l-ʒə
DEF-water

ʒa-sə-k^w-χ^wχ^wa-t
CSL-1SG.IO-LOC:top-sprinkle-DCL

ʒa-sə-k^w-χ^wχ^wa-t
CSL-1SG.IO-LOC:top-sprinkle-DCL

Complex preverb

'Water sprinkled **on me**.' (Klychev 1995: 117)

(5)

a-çajs
DEF-bird

a-qəš
DEF-window

j-kə-la-pssʒa-t
3SG.N.ABS-LOC:narrow-LOC:mass-fly-DCL

Indirect
object prefix

'The bird flew **through the window**.' (Klychev 1995: 131)

Locative preverbs

- NWC locative preverbs fall into the broad class of so-called “**lexical affixes**”, i.e. morphologically bound elements that modify roots but themselves have concrete semantics resembling that of roots.
- Cross-linguistically, lexical affixes express
 - body-parts (e.g. as instruments);
 - salient artifacts or natural objects;
 - locations;
 - various other adverbial and predicative notions.

Mithun 1997; Mattissen 2004: 190-194; 2006: 297-333

Locative preverbs

- Diachronically, most locative preverbs in NWC go back to incorporated nouns, mainly denoting parts of body or other objects (Kumakhov 1964: 164-182, 1989: 200-228; Lomtadze 1983; Avidzba 2017; Arkadiev & Maisak 2018: 121-125).
- A cross-linguistically common historical path for lexical affixes (Mithun 1984: 885–887; Mithun 1997: 365-366; Kinkade 1998; Mattissen 2006).
- NWC preverbs are in many cases much more transparently related to the corresponding nouns than e.g. the “body-part prefixes” in the Panoan languages (Fleck 2006, Zariquiey & Fleck 2012).

Locative preverbs

- Locative preverbs related to nouns:

West Circassian (Kumakhov 1964: 177-179):

- (6) *ḵ^weçə* 'intestines': *ḵ^weçə-lhe-n* 'put inside smth'
ḵ^weçə-rə-čə-n 'run through smth'
- (7) *ʔ^wə* 'mouth': *ʔ^wə-c^we-n* 'stand near smth'
ʔ^wə-š'ə-n 'lead away from smth'

Locative preverbs

- Some preverbs can be treated as incorporated nouns even synchronically.

West Circassian (Rogava & Kerasheva 1966: 131):

- (8) a. *ə-že* *d-jə-λha-β*
3SG-mouth LOC:in-3SG.ERG-put-PST
- b. *že-d-jə-λha-β*
mouth-LOC:in-3SG.ERG-put-PST
a=b 'S/he put it in his/her mouth.'

Locative preverbs

- Alternations of free vs. incorporated nouns like in (8) are rare.

Kabardian (Kumakhov 1964: 181-182)

(9) *ʃhe* 'head': *ʃhe-rə-xə-n* 'take from one's head'

(10) *ʔe* 'hand': *ʔe-ʃe-xə-n* 'take from one's hands'

Locative preverbs

- Many noun+verb combinations are lexicalised:

West Circassian (Rogava & Kerasheva 1966: 131):

(11) *g^wəʃ^we-k^wəwe-maqe-r* *qə-že-de-zə-ɸ*
joy-cry-voice-ABS CSL-mouth-LOC:in-exit-PST
Lit. 'A joyful scream went out of his mouth.'

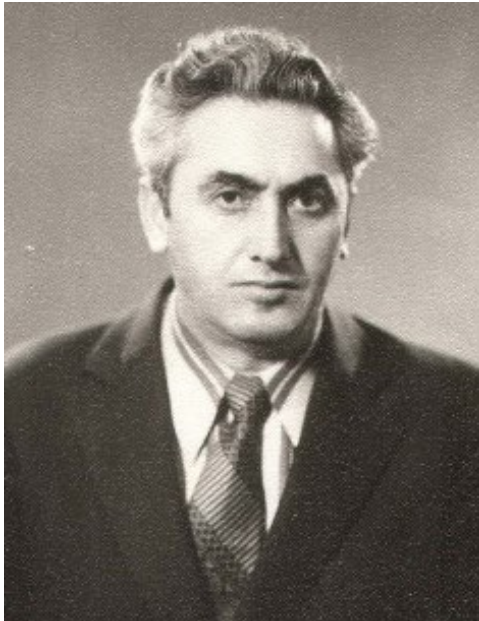
CSL – cislocative

Why Abaza?

- Abaza (and, mutatis mutandis, Abkhaz) offers much richer and varied material on noun incorporation than the rest of the family.
- Abaza locative preverbs happen to be amply documented.

Why Abaza?

- Dr. Rauf Klychev (Кълыч Рауф, 1934-1993)
- *The Locative Preverbial Derivation of Verbs in Abaza* (in Russian, Cherkessk, 1994).
- *A Dictionary of Collocations of Locative Preverbs with Suffixoids and Verbs in Abaza* (in Russian, Cherkessk, 1995). = K
- Ca. 4300 verbs with 150 preverbs.



Р. Н. КЛЫЧЕВ

СЛОВАРЬ СОЧЕТАЕМОСТИ
ЛОКАЛЬНЫХ ПРЕВЕРБОВ
С СУФФИКСИДАМИ
И ГЛАГОЛЬНЫМИ КОРНЯМИ
В АБАЗИНСКОМ ЯЗЫКЕ

*Утверждено Министерством образования
Карачаево-Черкесской республики*

КАРАЧАЕВО-ЧЕРКЕССКОЕ
КНИЖНОЕ ИЗДАТЕЛЬСТВО
ЧЕРКЕССК 1995

Incorporation in Abaza (I): body-part nouns

- Many preverbs are related to body-part nouns (Klychev 1994: 34-59).
- Some of them are clearly highly grammaticalised and desemanticised.

bva 'back, waist' > 'down' (*bva-pš-ra* 'look down', K: 53)

waça 'intestines' > 'inside a container' (*waça-ž-ra* 'to boil inside smth', K: 239)

mg^wa 'belly' > 'wrapped up' (*mg^wa-š-ra* 'to freeze being dressed up', K: 161)

qa 'head' > 'above', see (12) below

Incorporation in Abaza (I): body-part nouns

- Body-part preverbs widely differ in their productivity (data from Klychev 1995, including complex preverbs):

<i>qa-</i> ‘head, above’	> 200 verbs
<i>ča-</i> ‘face, vertical surface’	> 200 verbs
<i>š’ta-</i> ‘trace, after’	175 verbs
<i>waça-</i> ‘intestines, container’	137 verbs
<i>napə-ça-</i> ‘in the hand’	59 verbs
<i>g^wə-</i> ‘heart’	53 verbs
<i>čə-</i> ‘skin, surface’	48 verbs
<i>lakta-</i> ‘face’	17 verbs
<i>q^wda-</i> ‘neck’	15 verbs
<i>k^wa-</i> ‘bosom’	6 verbs
<i>š’q^wa-</i> ‘heel’	2 verbs
<i>š’ačə-</i> ‘toe’	1 verb

Incorporation in Abaza (I): body-part nouns

- Body-part preverbs function as applicatives and introduce the landmark as an indirect object cross-referenced by a personal prefix immediately preceding the preverb:
- *qa* ‘head’ > ‘above’:

- (12) a. *a-č'k^wən a-ʒəχ' d-a-qa-č-ṭ*
 DEF-youth DEF-spring 3SG.H.ABS-3SG.N.IO-LOC:above-sleep-DCL
 ‘The guy fell asleep over the spring of water.’ (K: 258)
- b. *anəj a-mašak^w wə-qa-sə-r.pa-ṭ*
 MED DEF-sack 2SG.M.IO-LOC:above-1SG.ERG-pull-NPST.DCL
 ‘I’ll pull this sack on you.’ (K: 255)

DCL – declarative, H – human, MED – medial demonstrative

Incorporation in Abaza (I): body-part nouns

- In some cases the same preverb retains its body-part meaning.
- Then the personal prefix refers to the possessor of the body-part.
- *qa* ‘head’ > ‘above’:

(13) *j-qəlpə* *j-qa-ŝ-əw-n*
3SG.M.IO-hat 3SG.M.IO-LOC:head-fall-IPF-PST
‘The hat fit his head well (lit. fell on his head).’ (K: 260)

IPF – imperfective, M – masculine

Incorporation in Abaza (I): body-part nouns

- Some body-part preverbs retain their lexical meaning, reference and anchoring to a possessor in almost all cases:

- (14) *a-saba* *ʃa-rə-lakta-pl-əw-n*
 DEF-dust CSL-3PL.IO-LOC:face-pour.powder-IPF-PST
 ‘Dust was pouring onto their faces.’ (K: 154)
- (15) *arqan-g’əj* *ʃ-a-q^wdə-j-χ-χə-n*
 rope-ADD CSL-3SG.N.IO-LOC:neck-3SG.M.ERG-take-RE-PST
 ‘He took the rope off its (the stallion’s) neck’ (AbTa: 142)
- (16) *a-ʒə* *jə-k^wa-ĉ-əw-n*
 DEF-water 3SG.M.IO-LOC:bosom-pour.liquid-IPF-PST
 ‘Water was pouring into his bosom.’ (K: 138)

ADD – additive, RE – reflexive

Incorporation in Abaza (I): body-part nouns

- Some body-part nouns, e.g. *napə* ‘hand’, are mostly used in combination with the more abstract preverbs, like *ç(a)*- ‘under’:

- (17) a. *a-çəjs s-napə-ç-pssʕa-t*
DEF-bird 1SG.IO-LOC:hand-LOC:under:ELAT-fly-DCL
‘The bird flew out of my hands.’ (K: 173)
- b. *də-r-napə-çə-šə-t a-haž’rat-k^wa*
3SG.H.ABS-3PL.IO-LOC:hand-LOC:under-fall-DCL DEF-robber-PL
‘[A man] was attacked by (lit. “fell under the hands of”)
robbers’ (AbLu 10:30)

ELAT – elative

Incorporation in Abaza (I): body-part nouns

- Other body-part roots can also serve as first parts of complex preverbs:

- (18) a. *a-č'k^wən ajnəž də-j-č̣a-ta-kša-ṭ*
DEF-youth DEF+giant 3SG.H.ABS-3SG.M.IO-LOC:mouth-LOC:in-hit-DCL
'The guy hit the giant in the face.' (K: 328)
- b. *a-qaça j-ɣa-j-qa-ta-ç̣a-ṭ*
DEF-man 3SG.N.ABS-CSL-3SG.M.IO-LOC:head-LOC:in-sit-DCL
'The man got angry (lit. it sat down into his head).' (K: 269-270)

Incorporation in Abaza (I): body-part nouns

- Non-incorporated expression is usually possible, in which case the body-part noun is introduced by an appropriate semantically more general locative preverb (19b) or a postposition (20b):

- (19) a. *j-ʁa-wə-lakta-ʒʒa-ṗ*
3PL.ABS-CSL-2SG.M.IO-LOC:face-spit-NPST.DCL
'They will spit you in the face.' (K: 153)
- b. *wə-lakta* *j-ʁa-ta-ʒʒ-əw-š-ṫ*
2SG.M.PR-face 3PL.ABS-CSL-LOC:in-spit-IPF-FUT-DCL
'id.' (elicited)
- (20) a. *a-kʷtaβ'* *s-naṗə-ça-p.č-ṫ*
DEF-egg 1SG.IO-LOC:hand-LOC:under-break-DCL
'The egg broke in my hands.' (K: 170)
- b. *a-kʷtaβ'* *s-naṗ-kʷa* *r-pnə* *j-p.čə-ṫ*
DEF-egg 1SG.PR-hand-PL 3PL.PR-at 3SG.N.ABS-break-DCL
'id.' (elicited)

Incorporation in Abaza (I): body-part nouns

- Other body-part preverbs are used both in the original and in the spatial meanings:
- *ča-* ‘mouth, face’ > ‘vertical surface’

- (21) a. *a-č'kʷən a-narzan j-ča-žž-wa-n*
DEF-youth DEF-mineral.water 3SG.M.IO-LOC:mouth-flow-IPF-PST
‘Mineral water was flowing into the guy’s mouth.’ (K: 313)
- b. *a-wasa-kʷa a-kaʒa*
DEF-sheep-PL DEF-slope
j-a-ča-r-pχ'aʒ-əw-n
3PL.ABS-3SG.N.IO-LOC:mouth-3PL.ERG-count-IPF-PST
‘They were counting sheep on the mountain slope.’ (K: 316)

Incorporation in Abaza (I): body-part nouns

- Other body-part preverbs are used both in the original and in the spatial meanings:

- *ʒa-* ‘cheek’ > ‘lateral surface’

(22) a. *də-j-ʒa-kš-əw-n*

3SG.H.ABS-3SG.M.IO-LOC:cheek-hit-IPF-PST

‘S/he was beating him on the cheek.’ (K: 98)

b. *a-kdə* *ʒa-r-bəl-wa-n*

DEF-stump LOC:cheek-3PL.ERG-burn-IPF-PST

‘They were burning the stump on one side.’ (K: 99)

Incorporation in Abaza (I): body-part nouns

- At least one body-part preverb occurs without the possessor prefix:

ĉa 'skin' > *ĉə-* 'skin; surface'

(23) *a-qaça* *jə-maĉ* *ĉə-j-ġ'a-t*
DEF-man 3SG.M.IO-finger LOC:skin-3SG.M.ERG-hit-DCL
'The man scratched his finger.' (K: 309)

Incorporation in Abaza (I): body-part nouns

- Additional examples from Abkhaz (Spruit 1986: 28-29):

- (24) *a-mačwaz* *lə-mβa-s-χə-jt̚*
DEF-ring 3SG.F.IO-LOC:finger-1SG.ERG-take-DCL
'I took the ring from her finger.'
- (25) *a-kʷtə* *χʷələ-s-χə-jt̚*
DEF-hen LOC:feather-1SG.ERG-take-DCL
'I plucked the hen.' (lit. "took it out of its feather")

Incorporation in Abaza (I): body-part nouns

- Some of the body-part preverbs are lexicalised rather than grammaticalised and are used in metaphorical meanings:

- (26) *j-r-a-s-h^w-wa-š*
REL.ABS-3PL.IO-DAT-1SG.ERG-say-IPF-FUT
ʃa-s-g^wa-q^wəc-ʔ
CSL-1SG.IO-LOC:heart-think-DCL
'I decided what I shall tell them (lit. "it thought in my heart").' (K: 72)
- (27) *j-s-g^wə-n-s-kał-ʔ*
3SG.N.ABS-1SG.IO-LOC:heart-LOC:in-1SG.ERG-collect-DCL
'I remembered it (lit. "I collected it in my heart").'
(Bilal Hasarokov, p.c.)

DAT – “dative” applicative

Cross-linguistic perspective (I)

- Body-part nouns are frequent targets of incorporation in the languages of the world (Mattissen 2006: 310–315; Massam 2009: 1090; Lehmann 2016: 43-47; Zariquiey 2018; Vinyar 2021; Olthof et al. 2021: 228).
- The path from body-part incorporation to applicatives is documented outside of NWC as well (Fleck 2006; Nordlinger 2019), *pace* Peterson (2007: 141).
- However, the semantic roles of incorporated body-part nouns are usually patient / theme or instrument, rather than spatial landmark.

Cross-linguistic perspective (I)

Mohawk (Iroquoian, Canada, USA, Mithun 1996: 643)

- (28) *wa-hi-kuhs-ohare-ʔ* patient
PST-1SG>3SG.M-face-wash-PUNC
'I washed his face.'

Bininj Gun-wok (Gunwinyguan, Australia, Evans 1996: 84)

- (29) *ga-bid-wayda-n* instrument
3-hand-wave-NPST
'He is waving his hand.'

PUNC – punctual

Cross-linguistic perspective (I)

- Incorporation of body-parts as locations is, however, also attested, even if rarely.

Warray (Gunwinyguan, Australia, Harvey 1996: 144)

- (30) *ngirri wang ban-nabat-nawa-m an-nebe-yang*
dog meat 1SG.O-hand-take-PFV.PST CL-hand-ABL
'The dog took the meat out of my hand.'

Oluta Popoluca (Mixe-Zoque, Mexico, Zavala 2000: 591)

- (31) *sa:rakü ta=küx-tu:t-aʔx-ü-w=aʔ min=ʔunaʔk*
Sara 1.ABS=back-put-APPL-INV-CMPL-3 2.PR=son
'Sara put your son on my back.'

ABL – ablative, APPL – applicative, CL – class marker, CMPL – completive
INV – inverse, PR - possessor

Incorporation in Abaza (II): non-relational nouns

- Ca. dozen preverbs correspond to non-relational nouns denoting salient artefacts or locations.
- Most of them retain their lexical meaning.

<i>č̣kara</i> ‘courtyard’	180 verbs
<i>ʃ^wna</i> ‘house, room’	150 verbs
<i>č̣ʃ^wa</i> ‘hearth’	125 verbs
<i>g^wara</i> ‘fence, enclosure’	55 verbs
<i>pṣ̌ça</i> ‘courtyard’	40 verbs
<i>q^wa</i> ‘ashes’	11 verbs
<i>gara</i> ‘cradle’	8 verbs
<i>č̣ə</i> ‘horse’	6 verbs
<i>çla</i> ‘tree’	1 verb

Incorporation in Abaza (II): non-relational nouns

- Such incorporated nouns can express a referential spatial landmark involved in the event.

(32) *w-g^wara-pš-ta* *w-ʕa.j.χ*
2SG.M.ABS-LOC:fence-look-ADV 2SG.M.ABS-return(IMP)
'Look in the courtyard (lit. "inside the fence") and come back.' (K: 69)

- Some occur only as part of complex preverbs:

(33) *d-q^wa-la-j-g^wa-t*
3SG.H.ABS-LOC:ashes-LOC:mass-3SG.M.ERG-lay-DCL
'He knocked him (the giant) down into ashes.' (K: 273)

(34) *sawsraǰ^wa* *d-čə-ž-pa-t*
Sosruko 3SG.H.ABS-LOC:horse-LOC-jump-DCL
'Sosruko jumped off his horse.' (K: 237)

ADV – adverbial marker, IMP – imperative

Incorporation in Abaza (II): non-relational nouns

- Like with body-part nouns, non-incorporated constructions are usually also possible:

(35) a. *a-sabəj d-gara-l-g^wa-n*
 DEF-child 3SG.H.ABS-LOC:cradle-3SG.ERG-lay-PST
 ‘She laid the child into the cradle.’ (K: 67)

b. *a-sabəj a-gara də-la-l-g^wa-ṭ*
 DEF-child DEF-cradle 3SG.H.ABS-LOC:mass-3SG.F.ERG-lay-DCL
 ‘id.’ (elicited)

(36) a. *d-č^wa-zaχ-wa-n*
 3SG.H.ABS-LOC:hearth-sew-IPF-PST
 ‘She was sewing beside the hearth.’ (K: 211)

b. *a-č^wa a-cqa d-zaχ-wa-n*
 DEF-hearth 3SG.N.PR-side 3SG.H.ABS-sew-IPF-PST
 ‘id.’ (elicited)

Incorporation in Abaza (II): non-relational nouns

Additional examples from Abkhaz:

- (37) *a-raχ^w* *ʁə-ça-h-ga-ra.w-ṗ*
DEF-cattle LOC:winter-LOC:under-1PL.ERG-carry-DEB-NPST.DCL
'We have to keep the cattle during the winter.' (Avidzba 2017: 99)
- (38) *a-nəs^wəntra* *d-χək^w-gəla-w-ṗ*
DEF-grave 3SG.H.ABS-LOC:edge-stand-PRS-NPST.DCL
'He is standing at the edge of the grave.' (Spruit 1986: 27)

DEB – debitive

Incorporation in Abaza (II): non-relational nouns

- Being referentially autonomous, most such preverbs occur without a pronominal prefix.
- Still, some can take prefixes cross-referencing the possessor.

Cf. Abkhaz:

(39) *a-ɔama* *jə-ɔ^wnə-z-b.aa.la-jt*
DEF-dagger 3SG.M.IO-LOC:belt-1SG.ERG-descry(AOR)-DCL
'I descried a dagger on him (lit. "behind his belt").' (Spruit 1986: 28)

Incorporation in Abaza (II): non-relational nouns

- Some develop more abstract spatial meanings.
- *š'kla* 'stirrup' > 'behind, following'

- (40) a. *d-rə-š'kla-šê-t̚*
3SG.H.ABS-3PL.IO-LOC:stirrup-whistled-DCL
'He whistled after them.' (K: 332)
- b. *a-h^wəs* *jə-š'kla*
DEF-calf 3SG.M.IO-stirrup
j-a-š'kla-j-h^wa-t̚
3SG.N.ABS-3SG.N.IO-LOC:stirrup-3SG.M.ERG-tie-DCL
'He tied the calf to his stirrup.' (ibid.)

N – non-human

Incorporation in Abaza (II): non-relational nouns

- Some develop more abstract spatial meanings.
- *š'kla* 'stirrup' > 'behind, following'

(40) a. *d-rə-š'kla-šê-t*
 3SG.H.ABS-3PL.IO-LOC:stirrup-whistled-DCL
 'He whistled after them.' (K: 332)

b. *a-h^wəs* *jə-š'kla*
 DEF-calf 3SG.M.IO-stirrup
j-a-š'kla-j-h^wa-t
 3SG.N.ABS-3SG.N.IO-LOC:stirrup-3SG.M.ERG-tie-DCL
 'He tied the calf to his stirrup.' (ibid.)

Here the possessor is encoded on the independent noun, which is in turn cross-referenced by the pronominal prefix on the cognate preverb

N – non-human

Incorporation in Abaza (II): non-relational nouns

- Non-relational preverbs can be used as **verbal classifiers** lacking independent reference and corresponding to a landmark expressed as a full nominal.
- Such a landmark can have the same root as the preverb, or be synonymous or hyponymous to it.

Incorporation in Abaza (II): non-relational nouns

- (41) *rə-čʕ^wa* *d-čʕ^wa-pχa-t*
3PL.IO-oven 3SG.H.ABS-LOC:oven-warm_up-DCL
'He warmed himself up near their oven.' (K: 213)
- (42) *ɑ-k'adəg^w* *wə-čkara-l-p̄*
DEF-courtyard 2SG.M.ABS-LOC:yard-enter-NPST
'You will enter the courtyard.' (AbTa: 85)
- (43) *ɑ-klub* *jə-ʕ^wna-n.χ-əj-t*
DEF-club 3PL.ABS-LOC:house-work-PRS-DCL
'They work in the club.' (K: 88)

Incorporation in Abaza (II): non-relational nouns

- Such constructions are also attested with some body-part preverbs:

(44) *naḗə-k-g'əj* *j-g'-a-naḗə-ça-m-ŝa-ṭ*
hand-INDF-ADD 3SG.N.ABS-NEG-3SG.N.IO-LOC:hand-LOC:under-
NEG-fall-DCL

'It (your ring) did not fall into anybody's hands (lit. under any hands).' (AbAl: 139)

Incorporation in Abaza (II): non-relational nouns

- Such constructions are also attested with some body-part preverbs:

(44) *naḗə-k-g'əj* *j-g'-a-naḗə-ça-m-ŝa-t*
hand-INDF-ADD 3SG.N.ABS-NEG-3SG.N.IO-LOC:hand-LOC:under-
NEG-fall-DCL

'It (your ring) did not fall into anybody's hands (lit. under any hands).' (AbAl: 139)

The non-human
possessor prefix
obviously refers to the
external noun "hand",
not to any human
possessor

Cross-linguistic perspective (II)

Mithun (1984: 874):

- Type IV noun incorporation, where “a generic N is incorporated to qualify the V, while a more specific external NP identifies the implied referent”

Caddo (Caddoan, USA; *ibid.* : 865): ‘eye’ > ‘round object’

- (45) a. *kassi'* *háh-'ič'á-sswí'-sa'*
 bead PROG-*eye*-string-PROG
 ‘She is stringing beads.’
- b. *ka'ás* *háh-'ič'áh-'í'-sa'*
 plum PROG-*eye*-grow-PROG
 ‘Plums are growing.’

Cf. Rose (2019) on the development of incorporated nouns to verbal classifiers to applicatives Mojeño Trinitario (Arawakan).

Cross-linguistic perspective (II)

Verbal classifiers (Aikhenvald 2000: 149):

- “Verbal classifiers appear on the verb, categorizing the referent of its argument in terms of its shape, consistency, size, structure, position, and animacy.”
- “Verbal classifiers **always refer to a predicate argument (usually S in an intransitive or O in a transitive clause)** and can co-occur with it.”
- “In a few languages, verbal classifiers **can also refer to peripheral arguments.**” (ibid. 162)

Cross-linguistic perspective (II)

- Mojeño Trinitario (Arawakan, Bolivia; Rose 2019: 443): verbal classifier referring to a locative argument encoded as an oblique (prepositional) phrase:

(46) *t-eja-me-re-ko* *te* *pjo* *ñi-ye'e* *estera*
3-sit-CLF:fabric-PLUR-ACT PREP DEM 3M-GPN mat
'The man is sitting on his mat.'

ACT – active, CLF – classifier, DEM – demonstrative,
GPN – generic possessive noun, PLUR – pluractional,
PREP – preposition

From incorporated nouns to affixes

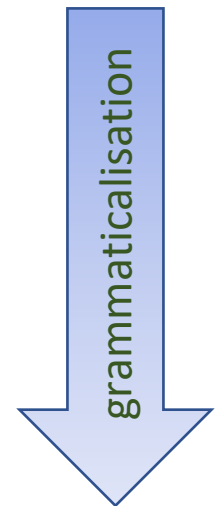
- Abaza locative preverbs form a continuum:

	have related nouns	retain lexical meaning	example
type I	yes	always	<i>lakta-</i> 'face' <i>gara-</i> 'cradle'
type II	yes	sometimes	<i>ča-</i> 'face, vertical surface' <i>ɣ^wna</i> 'house, room'
type III	yes	no	<i>qa-</i> 'head' > 'above' <i>š'kla</i> 'stirrup' > 'behind'
type IV	no	no	<i>ta-</i> 'inside', <i>ča-</i> 'below'

From incorporated nouns to affixes

- Abaza locative preverbs form a continuum:

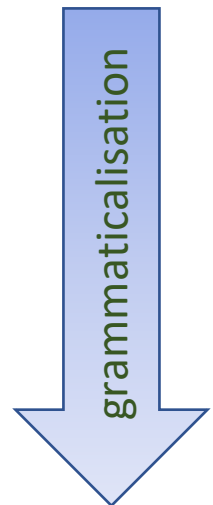
	have related nouns	retain lexical meaning	example
type I	yes	always	<i>lakta-</i> 'face' <i>gara-</i> 'cradle'
type II	yes	sometimes	<i>ča-</i> 'face, vertical surface' <i>ɣ^wna</i> 'house, room'
type III	yes	no	<i>qa-</i> 'head' > 'above' <i>š'kla</i> 'stirrup' > 'behind'
type IV	no	no	<i>ta-</i> 'inside', <i>ča-</i> 'below'



From incorporated nouns to affixes

- Abaza locative preverbs form a continuum:

	have related nouns	retain lexical meaning	example
type I	yes	always incorporation	<i>lakta-</i> 'face' <i>gara-</i> 'cradle'
type II	yes	sometimes	<i>ča-</i> 'face, vertical surface' <i>ʕ^wna</i> 'house, room'
type III	yes	no	<i>qa-</i> 'head' > 'above' <i>š'kla</i> 'stirrup' > 'behind'
type IV	no	lexical affixation	<i>ta-</i> 'inside', <i>ča-</i> 'below'



From incorporated nouns to affixes

- Grammaticalisation and affixalisation of incorporated nouns in Abaza is evidenced by their acquiring morphosemantic properties absent with nouns and characteristic of the indisputable lexical affixes.

From incorporated nouns to affixes

- Many preverbs in Abaza and Abkhaz distinguish **introvert** (essive-locative, with final *-a*) and **extravert** (elative, with apocope, final *-ə* or metathesis) forms (Spruit 1986: 16-17, Klychev 1994: 8-9, Avidzba 2017).

- (47) a. *a-ḡanž'a a-ḡwara j-ta-pssḡa-χ-t*
DEF-crow 3SG.N.IO-nest 3SG.N.ABS-LOC:in-fly-RE-DCL
'The crow flew back into its nest.' (K: 197)
- b. *a-warba a-ḡwara j-tə-pssḡa-t*
DEF-eagle 3SG.N.IO-nest 3SG.N.ABS-LOC:in.ELAT-fly-DCL
'The eagle flew out of its nest.' (K: 205)

From incorporated nouns to affixes

- Many preverbs in Abaza and Abkhaz distinguish **introvert** (essive-locative, with final *-a*) and **extravert** (elative, with apocope, final *-ə* or metathesis) forms (Spruit 1986: 16-17, Klychev 1994: 8-9, Avidzba 2017).

- (47) a. *a-ḡanž'a a-ḡwara j-ta-pssḡa-χ-t*
DEF-crow 3SG.N.IO-nest 3SG.N.ABS-LOC:in-fly-RE-DCL
'The crow flew back **into** its nest.' (K: 197) **introvert**
- b. *a-warba a-ḡwara j-tə-pssḡa-t*
DEF-eagle 3SG.N.IO-nest 3SG.N.ABS-LOC:in.ELAT-fly-DCL
'The eagle flew **out of** its nest.' (K: 205) **extravert**

From incorporated nouns to affixes

- The same distinction is attested with preverbs I have classified as incorporated nouns.
- No evidence of a similar distinction in the corresponding nouns when used independently.
- A clear sign of affixalisation of the incorporated nouns.
- Notably, can precede semantic change.

From incorporated nouns to affixes

- With incorporated body-part nouns:

- (48) a. *a-ʒə jə-q^wda-žž-wa-n*
DEF-water 3SG.M.IO-LOC:neck-pour:liquid-IPF-PST
'Water was pouring on his neck.' (K: 274) **introvert**
- b. *a-mχ^w-k^wa lə-q^wdə-l-žə-t*
DEF-beads-PL 3SG.F.IO-LOC:neck.ELAT-3SG.F.ERG-tear_off-DCL
'She tore the beads off her neck.' (K: 275) **extravert**

From incorporated nouns to affixes

- With incorporated non-relational nouns:

- (49) a. *aʃ^w* *čʃ^wa-l-ga-t̚*
DEF+trough LOC:hearth-3SG.F.ERG-carry-DCL
'She brought the trough **to** the hearth.' (K: 211) **introvert**
- b. *d-čʃ^wə-r-ga-χ-t̚*
3SG.H.ABS-LOC:hearth.ELAT-3PL.ERG-carry-RE-DCL
'They carried him **out of** the hearth.' (K: 218) **extravert**

Non-canonical noun incorporation

the noun does not retain any inflectional morphology	no (possession)
the N+V complex is a fully-fledged verb	yes
no change to either V or N beside regular phonology	no (intravert/extravert)
availability of a parallel non-incorporated construction	yes or no
the syntactic relation of the noun with respect to the verb is direct object	no (oblique)
detransitivisation	no
the semantic relation of the noun with respect to the verb is patient	no (location)
semantic transparency	yes or no
the noun in the incorporated construction is less pragmatically prominent than in the free construction	unclear
any noun can potentially be incorporated into some verb	no
any verb can potentially incorporate some noun	no
no combinatory restrictions	no

Cross-linguistic perspective (III)

Purepecha (Tarascan, Mexico, Chamoreau 2017: 683)

- Several dozen “locative suffixes” most of which relate to parts of objects (including the body) and work as “locative verbal classifiers”.
- Some of the suffixes “indicate a specific physical area”:

- (50)
- | | | |
|----|------------------------|------------------------------------|
| a. | <i>waxa-nu-x-ti</i> | ‘He sat on the patio. ’ |
| b. | <i>waxa-ru-x-ti</i> | ‘He sat in the street. ’ |
| c. | <i>waxa-k’ara-x-ti</i> | ‘He sat inside the house. ’ |

Cross-linguistic perspective (III)

Nuuchahnulth (Wakashan, British Columbia; Davidson 2002: 196-204):

- a number of directional and “well over 100” locative suffixes with very concrete meanings:

(51) *hič-k^{wi}[s]-saŋap=’aλ*

illuminate-move.away.PFV-on.beach.CAUS.PFV=TEMP

‘They startled them (the birds) off the beach with light.’ (ibid.: 197)

(52) *m̄at-ʔa·ʔa=ma=ʔa·t̄a*

cold-on.rocks=IND=HAB

‘It is always cold on the rocks.’ (ibid.: 202)

IND – indicative, HAB – habitual, TEMP – temporal specifier

Cross-linguistic perspective (IV)

- Incorporation of spatial modifiers is uncommon in the languages of the world (Vinyar 2021).

Warray (Gunwinyguan, Australia, Harvey 1996: 144)

- (53) *an-mewel* *at-windi* *at-mirral-lagi-yn*
CL-clothes 1SG.S-hang_out 1SG.S-sun-put-PST.PFV
'I hung the clothes out in the sun.'

Chukchi (Vinyar & Gerasimenko 2018: 97)

- (54) *ramaj-paṭqəntat-yʔ-e*
village-return-TH-2/3SG.S
'S/he returned from the village.'

TH – thematic suffix

Cross-linguistic perspective (IV)

- No languages have been reported so far that would **only** allow noun incorporation to target locative participants.
- Cf. Mithun (1984: 875)'s claim that all languages with noun incorporation minimally incorporate patients of transitive verbs.
- However, this can be due to the fact that definitions of noun incorporation are centered around the incorporation of the patient into a transitive verb in the first place.

Cross-linguistic perspective (V)

- Mattissen's (2004, 2017) typology of polysynthesis:
 - “compositional” / “compounding” vs. “affixal”;
 - depends on whether the polysynthetic verbal complex can contain more than one lexical root;
 - according to Mattissen (2004: 202), Abkhaz (and, mutatis mutandis, Abaza) belongs to the “affixal” type.

Cross-linguistic perspective (V)

- Mattissen's (2004, 2017) typology of polysynthesis:
 - “compositional” / “compounding” vs. “affixal”;
 - depends on whether the polysynthetic verbal complex can contain more than one lexical root;
 - according to Mattissen (2004: 202), Abkhaz (and, mutatis mutandis, Abaza) belongs to the “affixal” type.
- An obvious simplification:
 - while there is no “ad hoc” noun incorporation in NWC languages, neither is it the case that for all their affixes “lexical source[s] cannot be reconstructed” (ibid.);
 - NWC languages present a clear example of a “transitional” structural type, both from synchronic and historical perspectives;
 - Cf. Zúñiga (2017) on problems in delimiting roots from affixes.

Conclusions

- There is noun incorporation in the Northwest Caucasian languages.
- It is most robustly attested in Abaza and Abkhaz.
- It is highly non-canonical and typologically non-trivial:
 - only Mithun (1984)'s types I (V+N compound) and type IV (classifiers) without the intermediate types;
 - the class of nouns subject to incorporation is closed and the very process is no longer productive;
 - incorporated nouns invariably function as spatial modifiers, not as patients or absolutes;
 - the predominantly “spatial” profile of “lexical” affixation in NWC is an areal feature shared with other languages of the Caucasus (and beyond);

Conclusions

- There is noun incorporation in the Northwest Caucasian languages.
- It is most robustly attested in Abaza and Abkhaz.
- It is highly non-canonical and typologically non-trivial:
 - even those incorporated nouns that retain their semantics and referentiality fall into one distributional class with unequivocal locative prefixes;
 - continuum from incorporated nouns to lexical affixes;
 - evidence of several successive layers of incorporation and ensuing affixalisation.

ŝə-zɥ^wáda-χa-ɥ

2PL.ABS-healthy-INC-DCL

Thank you for you attention!

Merci de vôtre attention!



References

- AbAl 2016: *Абазашта алоккwa* [Stories from the Abazaland]. Stavropol: Alashara.
- AbLu 2013: *Ажвабыжьбзихвагw Луkла йшглайхwауа* [Gospel of Luke translated into Abaza]. Cherkessk.
- AbTa 2015: *Абаза турыккwa* [Abaza Tales]. Mineral'nye vody: Alashara.
- Aikhenvald A.Yu. 2000. *Classifiers*. Oxford: Oxford University Press.
- Allen B.J., D.B. Gardiner & D.G. Franz. 1984. Noun incorporation in Southern Tiwa. *International Journal of American Linguistics* 50(3), 292–311.
- Arkadiev P.M. & T.A. Maisak. 2018. Grammaticalization in the North Caucasian languages. In: H. Narrog & B. Heine (eds.), *Grammaticalization from a Typological Perspective*. Oxford: Oxford University Press, 116–145.
- Arkadiev P.M. & Yu.A. Lander. 2021. The Northwest Caucasian languages. In: M. Polinsky (ed.), *The Oxford Handbook of the Languages of the Caucasus*. Oxford: Oxford University Press, 369–446.
- Avidzba, A.V. 2017. *Lokal'nye preverby v abxazskom i abazinskom jazykax* [Local preverbs in Abkhaz and Abaza]. Ph.D. Dissertation, Sukhum.
- Baker M.C. 1988. *Incorporation. A Theory of Grammatical Function Changing*. Chicago, London: The University of Chicago Press.
- Boz E. 2021. The Circassians of Turkey: Others from outside. In: A. K. Gültekin & Ç. C. Süvari (eds.), *The Ethno-Cultural Others of Turkey – Contemporary Reflections: Collective monograph on ethnic and religious minorities of modern Turkey*. Yerevan: Russian-Armenian University Press, 183–209.

References

- Brown D., M. Chumakina & G.G. Corbett (eds.) 2013. *Canonical Morphology and Syntax*. Oxford: Oxford University Press
- Chamoreau Cl. 2017. Purepecha, a polysynthetic but predominantly dependent-marking language. In: M. Fortescue, M. Mithun, N. Evans (eds), *The Oxford Handbook of Polysynthesis*. Oxford: Oxford University Press, 667–695.
- Chirikba V. 2016. From North to North West: How North-West Caucasian evolved from North Caucasian. *Mother Tongue. Journal of the Association for the Study of Language in Prehistory* 21, 1–27.
- Corbett G.G. 2005. The canonical approach to typology. In: Z. Frajzyngier, A. Hodges, D.S. Rood (eds.), *Linguistic Diversity and Language Theories*. Amsterdam, Philadelphia: John Benjamins, 25–49.
- Davidson M. 2002. *Studies in Southern Wakashan (Nootkan) Grammar*. PhD Thesis, SUNY, Buffalo.
- de Reuse W. 1994. Noun incorporation. In: R. Asher (ed.), *The Encyclopedia of Language and Linguistics. Vol. 5*. Oxford: Pergamon Press, 2842–2847.
- Evans N. 1996. The syntax and semantics of body part incorporation in Mayali. In: H. Chappell & W. McGregor (eds.), *The Grammar of Inalienability. A Typological Perspective on Body Part Terms and the Part-Whole Relation*. Berlin, New York: Mouton de Gruyter, 65–109.
- Fleck, D.W. 2006. Body-part prefixes in Matses: Derivation or noun-incorporation. *International Journal of American Linguistics* 72(1), 59–96.

References

- Fortescue M. 2017. What are the limits of polysynthesis? In: M. Fortescue, M. Mithun & N. Evans (eds), *The Oxford Handbook of Polysynthesis*. Oxford: Oxford University Press, 115–134.
- Genko, A. N. 1955. *Abazinskij jazyk. Grammatičeskij očerk narečija tapanta* [*The Abaza Language. A Grammatical Sketch of the Tapanta Dialect*]. Moscow: Izdatel'stvo Akademii Nauk SSSR.
- Harvey M. 1996. Body parts in Warray. In: H. Chappell & W. McGregor (eds.), *The Grammar of Inalienability. A Typological Perspective on Body Part Terms and the Part-Whole Relation*. Berlin, New York: Mouton de Gruyter, 111–153.
- Haspelmath M. 2010. Comparative concepts and descriptive categories in cross-linguistic studies. *Language* 86(3), 663–687.
- Hewitt B.G. 2005. North West Caucasian. *Lingua* 119, 91–145.
- Johns A. 2017. Noun incorporation. In: M. Everaert & H. van Riemsdijk (eds.), *The Wiley Blackwell Companion to Syntax*, 2nd ed. Hoboken, NJ: Wiley.
- Kinkade, M. D. 1998. Origins of Salishan lexical suffixes. In: *Papers for the 33rd International Conference on Salish and Neighboring Languages*. Seattle: University of Washington, 266–295.
- Klychev, R. N. 1993. *Lokal'no-preverbnoe obrazovanie glagolov abazinskogo jazyka* [*The locative preverbial derivation of verbs in Abaza*]. Cherkessk: Adž'pa.

References

- Klychev, R. N. 1995. *Slovar' sočetaemosti lokal'nyx preverbov s suffiksoidami i glagol'nymi kornjami v abazinskom jazyke* [The collocational dictionary of locative preverbs with suffixoids and verbal roots in Abaza]. Cherkessk: Karačaevo-čerkeskoe knižnoe izdatel'stvo.
- Kumakhov, M. A. 1964. *Morfologija adygskix jazykov. Sinxronno-diaxronnaja xarakteristika. I. Vvedenie, struktura slova, slovoobrazovanie častej reči* [Morphology of Circassian languages. A synchronic and diachronic characteristic. I. Introduction, word structure, derivation of parts of speech.]. Načik: Kabardino-balkarskoe knižnoe izdatel'stvo.
- Kumakhov, M. A. 1989. *Sravnitel'no-istoričeskaja grammatika adygskix (čerkeskix) jazykov* [Historical-comparative grammar of the Circassian languages]. Moscow: Nauka.
- Lehmann Chr. 2016. Foundations of body-part grammar. Paper presented at // *International Workshop on the Typology of Amerindian Languages: The grammar of body-part expressions*. Lima, 27 – 29 October, 2016.
- Lomtadze, K. V. 1983. Osnovnye tipy lokal'nyx preverbov v abxazskom i abazinskom jazykax [Main types of local preverbs in Abkhaz and Abaza]. In Nurja T. Tabulova & Raisa X. Temirova (eds.), *Sistema preverbov i poslelogov v iberijsko-kavkazskix jazykax* [System of preverbs and postpositions in Ibero-Caucasian languages], 10–13. Cherkessk.
- Lomtadze, K. V., R. N. Klychev & B. G. Hewitt. 1989. Abaza. In: B. G. Hewitt (ed.), *The Indigenous Languages of the Caucasus. Vol. 2. The North West Caucasian Languages*. Delmar, N.Y.: Caravan, 91–154.

References

- Massam D. 2009. Noun incorporation: Essentials and extensions. *Language and Linguistics Compass* 3 (4), 1076–1096.
- Mattissen, J. 2004. A structural typology of polysynthesis. *Word* 55(2), 189–216.
- Mattissen J. 2006. The ontology and diachrony of polysynthesis. In: D. Wunderlich (ed.), *Advances in the Theory of the Lexicon*. Berlin, New York: Mouton de Gruyter, 287–353.
- Mattissen J. 2017. Sub-types of polysynthesis. In: M. Fortescue, M. Mithun & N. Evans (eds.), *Oxford Handbook of Polysynthesis*. Oxford: Oxford University Press, 70–98.
- Mithun M. 1984. The evolution of noun incorporation. *Language* 60(4), 847–894.
- Mithun M. 1996. Multiple reflections on inalienability in Mohawk. In H. Chappell & W. McGregor (eds.), *The Grammar of Inalienability. A Typological Perspective on Body Part Terms and the Part-Whole Relation*. Berlin, New York: Mouton de Gruyter, 633–649.
- Mithun M. 1997. Lexical affixes and morphological typology. In: J. Haiman, J. Bybee & S. Thompson (eds.), *Essays on Language Function and Language Type*. Amsterdam: John Benjamins, 357–372.
- Mithun M. 2000. Incorporation. In: G. Booij, Chr. Lehmann & J. Mudgan (eds.), *Morphology: A Handbook on Inflection and Word Formation*, Vol. 1. Berlin: Walter de Gruyter, 916–928.
- Muravjeva, I. A. 2004. *Tipologija inkorporacii* [A typology of incorporation]. Habilitation, Russian State University for the Humanities.

References

- Nordlinger, R. 2019. From body part to applicative: Encoding ‘source’ in Murrinhpatha. *Linguistic Typology* 23(3), 401–433.
- O’Herin, B. 2002. *Case and Agreement in Abaza*. Arlington: SIL International.
- Olthof M. 2020. *Incorporation: Constraints on Variation*. Amsterdam: LOT Publications.
- Olthof M. et al. 2021. Verb-based restrictions on noun incorporation across languages. *Linguistic Typology* 25(1), 211–256.
- Peterson, D. A. 2007. *Applicative Constructions*. Oxford: Oxford University Press.
- Rogava G. V. & Z. I. Kerasheva 1966. *Grammatika adygejskogo literaturnogo jazyka* [A Grammar of Standard Adyghe]. Krasnodar, Majkop: Adygejskoe knižnoje izdatel’stvo.
- Rose Fr. 2019. From classifiers to applicatives in Mojeño Trinitario: A new source for applicative markers. *Linguistic Typology* 23(3), 435–466.
- Spruit, A. 1986. *Abkhaz Studies*. Doctoral dissertation, University of Leiden.
- Tabulova, N. T. 1976. *Grammatika abazinskogo jazyka. Fonetika i morfologija* [A Grammar of Abaza: Phonetics and Morphology]. Čerkessk: Karačaevo-Čerkesskoe otdelenie Stavropol’skogo knižnogo izdatel’stva.
- Van Linden, A. 2022. Spatial prefixes as applicatives in Harakmbut. To appear in S. Pacchiarotti & F.Zúñiga (eds.), *Applicative morphology: Neglected syntactic and non-syntactic functions*. Berlin, Boston: Mouton de Gruyter, 129–159.
- Vinyar, A. 2021. *Noun Incorporation in Chukchi and Beyond: A Force-Dynamic Constructionist Approach*. MA Thesis, Higher School of Economics.

References

- Vinyar, A. & E. Gerasimenko. 2018. Nesintaksičeskie ograničenija na inkorporaciju v čukotskom [Nonsyntactic constraints on incorporation in Chukchi]. *Acta Linguistica Petropolitana* 14(2), 78–110.
- Zariquiey, R. 2018. Diachronic stories of body-part nouns in some language families of South America. In: H. Narrog & B. Heine (eds.), *Grammaticalization from a Typological Perspective*. Oxford: Oxford University Press, 350–371.
- Zariquiey, R. & D. A. Fleck. 2012. Body-part prefixation in Kashibo-Kakataibo: Synchronic or diachronic derivation? *International Journal of American Linguistics* 78(3), 385–409.
- Zavala, R. *Inversion and Other Topics in the Grammar of Olutec (Mixean)*. PhD Dissertation, University of Oregon.
- Zúñiga, F. 2017. On the morphosyntax of indigenous languages of the Americas. *International Journal of American Linguistics* 83(1). 111–139.