REMODUS e-learning course on *Language attrition*

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The case of Kamas

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1. Introduction

1.1. Affiliation, dialects, neighbours

Kamas is an extinct South Samoyed language (Uralic), its closest relative is Selkup. It was spoken on the Northern Slopes of the East Sayan mountains in South Siberia. The variety documented best is Forest Kamas as spoken in the nomadic community and later village of Abalokovo. Other, less well documented, varieties are Koybal and Steppe Kamas. The main groups within the Forest Kamas varieties were the Eagle (*ńigizeŋ*) and the Fat (*silizeŋ*) (cf. Listvin 2022).

Contact languages were the other Samoyed language Mator together with its varieties Karagas and Taigi (representing a distinct branch within Samoyed), the Yeniseic languages Kott and Arinic, and South Siberian Turkic, mainly Qacha (a variety of Xakas) and Tofa.

For descriptions of the language see Joki 1944, Klumpp 2016, 2022a.

1.2. Map

https://sites.utu.fi/urhia/language-maps/#samoyedic
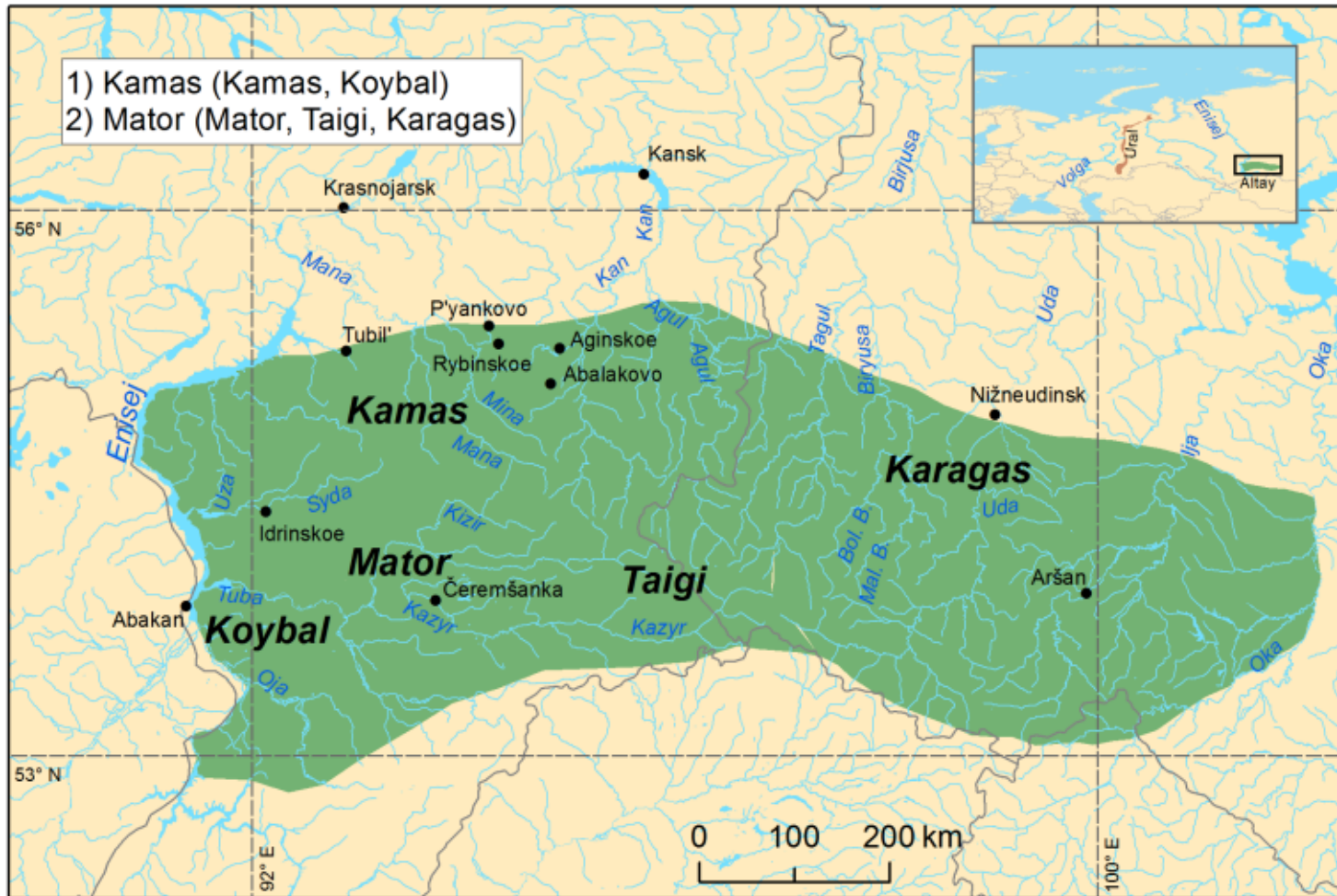
1.3. The Kamas text corpus

[1] Ca. 3,500 words (tales, riddles, prayers, 1 song) recorded by Kai Donner from two (I. Ashpurov and A. Andzhigatova) to eight speakers in Abalakovo 1912–1914; written materials published by A. J. Joki in KW (1944), new edition by H. Katz and G. Klumpp went into the Hamburg INEL Kamas corpus (Arkhipov et al. 2019, Gusev et al. 2019); + 4 fragmentarily preserved phonograph recordings, edition currently in preparation (cf. Klumpp 2013).

Avdakeja Andžigatova (*silizeŋ*),
Donner's main consultant in 1914

Klavdija Plotnikova (*silizeŋ*),
Künnap's main consultant in the 1960/70s

[2] Ca. 61,000 words recorded by Ago Künnap from two speakers (K. Plotnikova, A. Semënova) in the 1960s and early 1970s (e.g. Künnap 1991); partly published by Künnap (1976–1992); full edition only recently by Tiina Klooster and Valentin Gusev in the Hamburg INEL Kamas corpus.

1.4. "Pre- and post-shift" Kamas

Pre-shift Kamas: 18th and early 19th century sources (wordlists by Müller, Tatishchev, Spasskij, Pallas), Castrén (1847 first grammatical notes), Donner (1912/1914, texts); times when a small community held the language still in use (KW: XXXVII–XLI).

In 1912/1914 some discrepancies between grammar notes (inflectional paradigms) and actual occurences in the texts:

–dual forms for personal endings, possessor suffixes and personal pronouns in the paradigms, but (with one exception) not in the texts;

–syncretism of nominative, genitive and accusative possessive forms in the paradigms, but occurences of discrete forms in the text.

Recordings: fluent speakers, no stammering.

The variety as recorded in 1912 and 1914 is considered a (still) *healthy* variety.

Post-shift Kamas: Künnap (1960/70s)

"Donner was long believed to have been the last outsider to have heard the Kamas language spoken, as it was thought to have died out with the generation of the eight speakers whom he met. This was not so, however, for Donner had not counted some of the younger *semi-speakers*. Among them was Klavdiya Plotnikova, who was to earn the title of the 'Last Kamas'. Born in the mid-1890s she was only a few years junior to Donner himself, and it was only with her death in 1989 that the Kamas language definitely became extinct" (Pentikäinen 2014: 92)

1.2. Pre- and post-shift Kamas

Post-shift Kamas: Künnap (1960/70s): Klavdiya Plotnikova (KP) and Aleksandra Semënova (AS): *forgetters, semi-speakers, rememberers*?
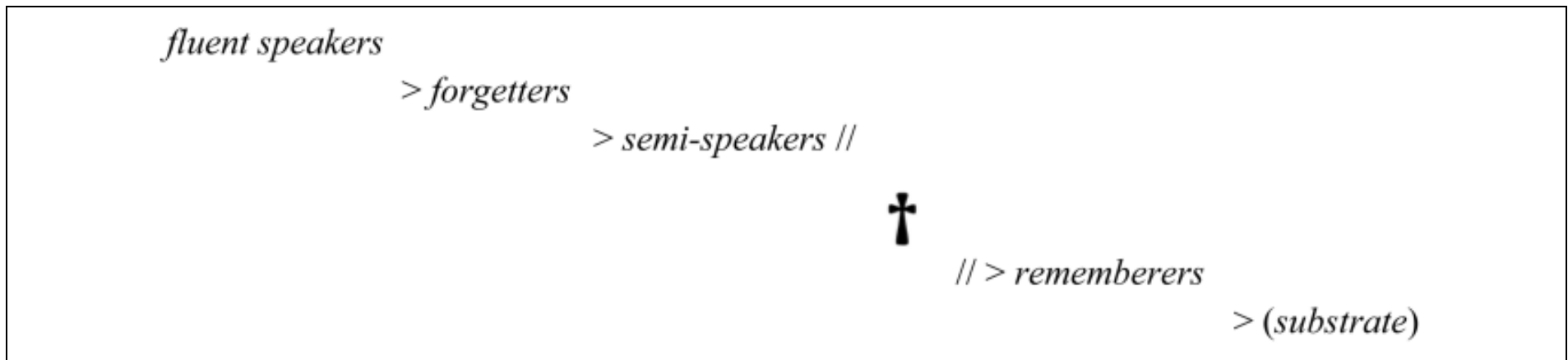

Fig. 1: Speakers of a language on the way towards extinction (Kehayov 2017: 107)

More recent notion of *Heritage Kamas* ("v ėritažnom kamasinskom jazyke", Gusev 2020: 76), i.e. heritage speakers ("a simultaneous bilingual whose weaker language corresponds to the minority language of her society and her stronger language to the dominant language", Polinsky 2018: 9) of an "indigenous heritage language" with "speakers separated from their community not by migration, but by being left over in the traditional home" (Fishman 2006: 12).

1.2. Pre- and post-shift Kamas

Post-shift Kamas: Künnap (1960/70s)

- KP had lived all her life in Abalakovo; family no. 14 of fifteen Kamas families listed in KW: XXXVIII–XXXIX

- mother Afanasija of mixed Kamas and Kott origin, = sister of Donner's main consultant Avdakeja Andžigatova; father Russian

- another aunt of KP, Matrëna, was the last person KP conversed with in Kamas; had passed away 20 years before KP was discovered by Aleksandr Matveev's toponomic expedition from Sverdlovsk University in the early summer of 1963

- KP's only sibling still alive then, her brother Vasilij, did not speak Kamas

- the only other last speaker, Aleksandra Semënova, lived in Krasnoyarsk

- Künnap initialized a reactivation process in which KP called him *tʾăbaktərzittə koŋ* 'chief of speaking' PKZ_196X_SU0212.PKZ.020

- the (early) recordings consists in short takes which give the impression that each sentence or paragraph, had been prepared, and when ready to be told, recorded.

1.2. "Pre- and post-shift" Kamas
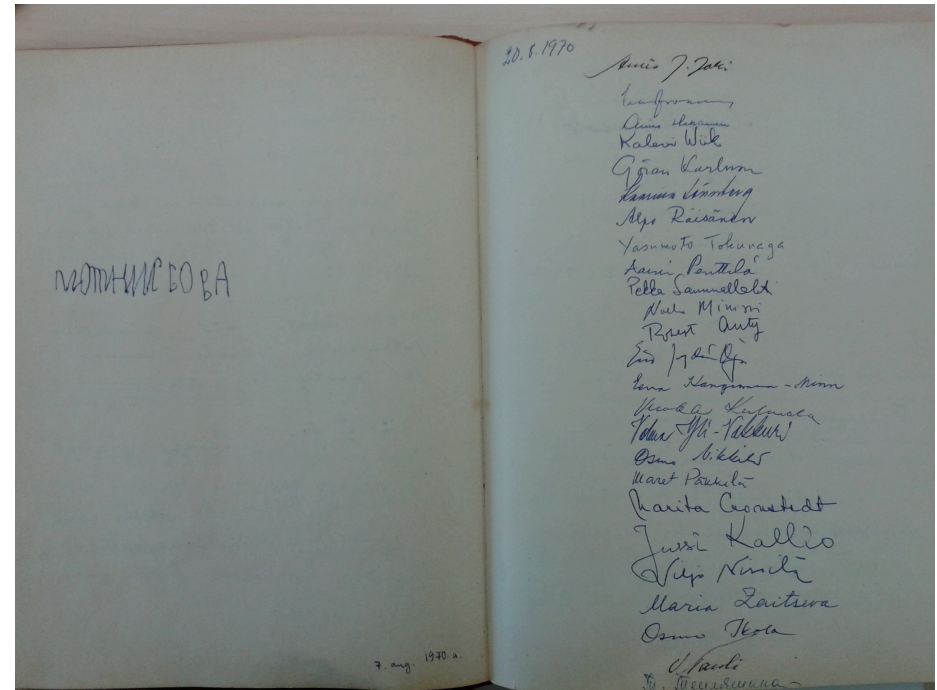
Post-shift Kamas: Künnap (1960/70s)

KP became a famous "rememberer", "performed" the Kamas language e.g. in Lennart Meri's 1970 documentary movie "Veelinnurahvas" (The Waterfowl People; watch 00:18–01:26 on https://www.youtube.com/watch?v=2Wqd54MwUto), and at CIFU 3, 1970 in Tallinn.

K. Plotnikova in "Veelinnurahvas" (1973)

K. P.'s signature in the guest book of CIFU 3 (1970)

2. Assessment

Where possible I use contrastive examples from a sub-corpus which consists of the tales 1–6, 8–11 collected by Donner in 1914 (AA_1914…, AI_1914…) and their variants as told by Klavdija Plotnikova (PKZ_196X…) in the 1960s.

Listening examples: passages of tale 8 by A. Andzhigatova (https://murdearhiiv.ut.ee/ SU0233 0:06–1:18, cf. Klumpp 2013) vs. Plotnikova (SU0222, 08:35–10:10; INEL AA_1914_Corpse_flk).

2.1. Phonetics and phonology

Basically no differences between pre- and post-shift Kamas; at least no reason to assume that P. spoke *foreigner talk* or so; no Russian accent (i.e. no palatalization of consonants in front of palatal vowels, no reduction of unstressed syllables etc.); cf. the idea of "good phonology" of heritage speakers (Montrul 2010: 5).

$\Rightarrow$ Rather forgetter/semi speaker than rememberer.

2.2. Lexicon

Unfilled gap:

(1)   a.   *dǐ*   *kem-źəʔ*   *šüškü-m*   *bar* **ťoʔbdə-bi**

           DEM blood-INS blade_bone-ACC   all   smear-PST

           'With this blood he coated the blade bone allover.' AA_1914_Corpse_flk.018

   b.   *kem-źəʔ …*   *kem-źəʔ …*   *lăpatka-m…*   **Ø**

           blood-INS   blood-INS   blade_bone-ACC

           'With the blood … with the blood … the shoulder blade…' PKZ_196X_SU0222.095

Contamination (blending):

(2)   a.   ***kuju-bə*** *săbojʔ-bi,* *paʔ-bi.*

   brain-ACC3SG take_out-PST cook-PST

   'She took his brain out and cooked it.' AA_1914_Head_flk.030

 b.   *dĭgəttə* *bar* ***šama*** *i-bi*

   then all/DP **?**   take-PST

   'Then she took [out] the [brain].' PKZ_196X_SU0225.183

Probably intended: ***ḱama*** 'bone marrow' in place of *kuju* 'brain'; explanation for the false onset consonant: contamination with ***šămaj*** 'blood sausage'. NB: The cooked brain is stuffed into a bladder for a kind of saussage.

Gap filling with Russian words:

In general, nouns are morphologically integrated (cf. Arkhipov 2023 on plural formation with Russian nouns) …

(3) a. ***so-nə***   *sar-bi-iʔ*

 raft-LAT   tie-PST-3PL

 'they tied them to the raft' AA_1914_Brothers_flk.004 (001.004)

 b. ***plot-tu***   *embi-ʔi*

 raft(Ru.)-LAT   put.PST-3PL

 'they put them to the raft' PKZ_196X_SU0228.204

Gap filling with Russian words

… but verbs appear with Russian morphology (unlike the preceding integration of verb stems borrowed from Turkic, see Klumpp 2002a):

(4)   a.   *bazoʔ*   ***šünd-lüʔ-bi-iʔ***

again   whistle-MOM-PST-3PL

'Again they whistled.' AA_1914_Brothers_flk.026

b.   *dĭ-zeŋ*   *bazoʔ*   ***svist-nu-l-i***

DEM-PL   again   whistle-MOM-PST-PL(Ru.)

'They whistled again.' PKZ_196X_SU0223.019

2.2. Lexicon

Beyond gap filling: Russian modal operators

хотеть 'want' (speaker internal deontic volition) + infinitive replaces a construction with *mo-* 'become' + participle:

(5) a. *bej-de*   *mo-lia-i?*

cross-PTCP   become-PRS-3PL

'they want to cross (the creek)' AA_1914_Mouse_flk.002

b. *dĭ χaťal   dĭ-m   bădə-śtə dagaj-źə?*

DEM want.PST.SG.M DEM-ACC cut-INF   knife-INS

'she wanted to cut him with a knife' PKZ_196X_SU0223.PKZ.050

2.2. Lexicon

Beyond gap filling: Russian modal operators

Optative particle пущай + future tense replaces 3rd person imperative:

(6) a. *ular-iʔ* *poduʔ* *mo-gu-iʔ,* *ine-iʔ* *bulan* *mo-gu-iʔ,*
    sheep-PL goat become-IMP-3PL horse-PL moose become-IMP-3PL

    tüžöj *sĭgǝn* *mo-gu-iʔ!*
    cow deer become-IMP-3PL

    'The sheep shall become goats, the horses elk, and the cows deer!'
    AA_1914_Head_flk.048

b. *ine-iʔ,* *mǎm-bi,* ***pušaj*** *izjubŕǝ-iʔ* *mo-la-jǝʔ*
    horse-PL say-PST **OPT.PTL** deer-PL become-FUT-3PL
    'The horses, she said, shall become deer.' PKZ_196X_SU0225.206

Extent of matter transfer (borrowing) in the subcorpus of pre- and post-shift tales:

	Pre-shift (1914)	Post-shift (196X)
Words alltog.	1829	1932
Russian words (tokens)	15	173
content words	2	52
function words	13	121
Russian words (lemmata)	11	50
content words	2	23
function words	8	27

2.2. Lexicon

Extent of matter transfer (borrowing) in the subcorpus of pre- and post-shift tales

Shared Russian words in pre- and post-shift tales:

1 content word (2/23)	*batpōlə* ← подпол 'cellar, space under the floor'
7 function words (8/27)	*a* ← а 'and/but'
	aĺi ← али 'or'
	da ← да 'yes; and'
	i ← и 'and, also'
	iššo ← ещё '(even) more'
	možət ← может 'maybe, perhaps'
	toĺka ← только 'just, only'

"New" (i.e. attested only in post-shift Kamas) appellative noun *urgo men* 'big dog' as a designation for wolf; in variation with *volk* (Ru.) and *kuš* (Tu.); hardly ab old hunter's taboo word like the pre-shift designation of the wolf *numa ťima* 'long tail'.

2.2. Lexicon

"New" function words not borrowed from Russian origin, i.e. possible calque-based innovations by KP:

- discourse particle *bar* < quantifier 'all' (Tu.) (or Tu. existential 'there is')

- temporal degree adverb *üďźügən* 'a little while'

- degree adverb *üďźö-üźďö* 'little by little' (cf. Russian чуть-чуть)

- interrogative *ĭmbi* 'what' in the meaning 'why' instead of *mōʔ* (cf. Russian что 'what' in this function)

- indefinite *girgit-tə kuza* 'some man' (cf. Ru. какой-то человек)

- *ońiʔ* 'single' in the meaning 'one'

Loss of semantic distinctions

E.g. equine coat colour term:

(7)   a.   ***bozera?***   *ine-zəbi*   *aləp*

             foxy_red horse-ADJ hero

             'a hero with a foxy red horse' AA_1914_Brothers_flk.020

    b.   *ine*   ***kömü***

             horse   red

             'the horse is red' PKZ_196X_SU0223.PKZ.003

South Siberian Turkic has an elaborated horse terminology, part of which had been borrowed into Kamas, e.g. coat colour terms like *bozera?*; whereas *kömü* is a general colour term.

Loss of semantic distinctions

Verbs of tying: *sar-* 'tie', *t́ikkə-* 'unbind', *šü?də-* 'tie up' > *sar-*

(8) a. *"t́ikke-?!"*   *t́ikkə-bi*.   *"i?be-?,*   *šü?də-le-m."*

    unbind-IMP2SG   unbind-PST   lie-IMP2SG   tie_up-FUT-1SG

    '"Untie me!" He untied him. "Lie down, I'll tie you up."'

    AIN_1914_Trickster_flk.036–038

  b. *"sara-?*   *mana!"*   *digəttə*   *dĭ*   *sar-bi,*   *dĭ*   *dĭ-m*   *sar-lu?-bi.*

    tie-IPV2SG   1SG.OBL   then   DEM tie-PST   DEM DEM-ACC tie-MOM-PST

    '"Tie me loose!" Then this one bound him loose, and he tied this one up.'

    PKZ_196X_SU0228.193, 195

2.3. Morphology

Nominal inflection

Instances of wrong plural marker selection in possessive declension: Kamas has two plural markers, *-iʔ* and *-zAŋ,* of which only the second one was used together with possessive suffixes:

(9)   *dĭgəttə*   *urgo*   *tuma-**ʔi**-bəʔ*   *i-bi-ʔi*

       then   big   mouse-PL-1PL   be-PST-3PL

       'We also had big mice.' PKZ_1970_F0205-02.PKZ.302

       Instead of *tumo-**zaŋ**-baʔ* mouse-PL-1PL.

Most instances of plural marking are healthy, and also integrative with Russian nouns (see Arkhipov 2023).

Pronominal inflection

Sporadic anomalies:

Insertion of *n* in *dĭ-**n**-źəʔ* 3SG-GEN[?]-INS 'with him/her' (PKZ_1964_SU0211.PKZ.006) instead of *dĭ-źəʔ* 3SG-INS due to analogy with 1st and 2nd person singular *mă**n**-źəʔ*, *tă**n**-źəʔ* 'with me, with you' (Klooster 2015: 51).

Simple lative case in pronominal inflection:

(10) *kăšt-aʔ*   **bos-kə-nə***!*

     call-IMP2SG   self-LOC.STEM-LAT

     'Call him to you!' PKZ_1964_SU0209.PKZ.160 (166)

     Instead of LAT2SG *bos-ku-**nan***.

Pronominal inflection

Avoidance of complex forms:

(11) a. *dĭ   nerö-bi-ndə*   **bos_postə-bə**   *t'ăgar-əl-də*

      DEM get.frightened-PTCP-LOC3SG   self_self-ACC3SG   stab-FUT-3SG.OC

      'In being terrified she will stab herself.' AA_1914_Corpse_flk.090

  b. *Ato*   *t'ăgar-ləj*   **bostu … …**   **bostu** … **sebja**

      otherwise   stab-FUT3SG   self/own   self/own **oneself[Ru.]**

      '(Don't go there], otherwise she will stab herself.' PKZ_196X_SU0222.136

Stem reanalysis in verbs: the verb *nu-* 'stand' forms its present tense with the marker *-GA,* which is usually in complementary distribution with other tense markers like e.g. the past tense marker *-BI:*

(12) *a   dĭn   gijen   ma-ʔi   **nu-ga**-bi-ʔi*

    and there   where   tent-PL   stand[-PRS]-PST-3PL

    'and there where the tents stood (…)' PKZ_196X_SU0224.011

However, forms like in (12) may be motivated by Turkish continous past tense formation of the type *-iyor-du-* PRS-PST.

2.4. Morphosyntax

Lost construction: preverbs based on the converb in *-i/-əj:*

(13) a.   *sagər*   *băra-bə*   **t́ikə-j**   **ńeʔbdə-bi**,

         black   sack-ACC3SG   unbind-CV   pull-PST

         bü-bə   **kămnə-j**   **baʔbdə-bi**

         water-ACC3SG   pour-CV   throw-PST

         'He **pulled** his black sack **open** (lit. opening pulled) and **poured** the water **out** (pouring threw)' AA_1914_Khan_flk.051

   b.   *dĭ*   *bar*   *băra-bə …*   *bü*   **kămnə-bi**

       DEM   DP   sack-ACC3SG   water   pour-PST

       'he his sack … poured water' PKZ_196X_SU0225.126

Instrumental case replaces nominative with translative predicative adverbials (cf. the Russian instrumental in essive and translative function):

(14) a. *dĭ*   *büźe*   **urgāba**   *mo-bīza*

        DEM   man   **bear**   become-CV:ANT

        'after the man had become a bear' AA_1914_Girl_flk.014

    b. *aba-t*   *mo-lām-bi*   **urgāba-źəʔ**

        father-3SG   become-RES-PST   **bear-INS**

        'then her father became a bear' PKZ_196X_SU0225.216

2.4. Morphosyntax

Encoding of substance: variation between instrumental, ablative and adjective.

(15) *kudaj-də* *a-bi-iʔ* **pa-źəʔ,** *dĭgəttə* **pi-gəʔ** *a-bi-iʔ*
    god-3SG make-PST-3PL wood-INS then stone-ABL make-PST-3PL

    dĭgəttə **sazən-zəbi** *a-bi-iʔ.*
    siis paber-POSS.ADJ tege-PST-3PL

    'They made idols from wood, then they made [them] from stone, then they made [them] from paper.' PKZ_1964_SU0211.PKZ.018

Cf. the only earlier attested example, which shows instrumental:

(16) *bulān* **kuba-t-śəʔ** *esseŋ-də* *maʔ* *ha-bi.*
    elk.GEN skin-3SG-INS child.PL-LAT tent make-PST

    '(…) from the elk's skin he made the children a tent.' AA_1914_Brothers_flk.039

Encoding of substance

Expression of substance and verb type:

	ABL	INS	ADJ	alltogether
dynamic verb (make, put, sew)	4	6	2	*12*
static verb (be)	6	0	3	*9*
altogether	*10*	*6*	*5*	*21*

Parataxis due to loss of syntactic converbs (participle + possessive locative):

(17) *măn üďüge   i-bi-em,   ine   i-bi   mi?*

    1SG small   be-PS-1SG   horse   be-PST   1PL

    '[When] I was small, we had a horse.' PKZ_196X_SU0210.019–020

(18) *kamen   măn amno-bia-m Tartu,   kambi-am   i-bie-m   nagur   platok-əʔjə*

    when   1SG sit-PST-1SG   Tartu   go.PST-1SG   take-PST-1SG   three   scarf-PL

    'When I was [in] Tartu I went and bougth three scarfs.' PKZ_197008_09342-2bz.PKZ.014

Instead of ***i-bi-ńə*** be-PTPC-LOC1SG 'when/because/while I was small', or ***amno-bi-ńə*** sit-PTPC-LOC1SG 'when/because/while I lived (somewhere).

2.5. Syntax

Word order

Instances of postponed possessor pronoun as in Russian,

in attributive possession:

(19) *miʔ kal-lə-bəj*   *deʔ-lə-bəj*   *nüke-l*   ***tăn***

    we go-FUT-1DU   bring-FUT-1DU woman-2SG   2SG.NOM/GEN

    'We'll go and bring your wife.' PKZ_196X_SU0222.134

in predicative possession:

(20) *ine*   *i-bi*   ***miʔ***

    horse   be-PST   1PL

    'we had a horse' PKZ_196X_SU0210.019–020

2.5. Syntax

Change in the function of operators

E.g. *bazo* 'again; another' > 'again; back again' (see Klumpp 2022b):

(21) a. *ku-bi-ndən*   *bozəraʔ ine-zəbi*   *aləp*   *šon-namna.* (…)
see-PTCP-LOC.3PL   foxy_red horse-ADJ   hero   come-DUR.PRS.3SG

     bazoʔ   *sagər*   *ine-zəbi*   *aləp*   *šon-namna*
REP   black   horse-ADJ   hero   come-DUR.PRS.3SG

     'As they saw, a hero with a foxy-red horse was coming. (…) In addition a hero with a black horse was coming.' AA_1914_Brothers_flk.020, 025

   b. *ku-lia-ʔi:*   *šonə-ga*   *kăldun*   *onʲiʔ,*   *ine*   *kömə.* (…)
see-PRS-3PL   come-PRS.3SG   wizard   one   horse   red

     bazoʔ   *šonə-ga …*   *sagər*   *ine-t-śiʔ*   [*oʔ- baš- šide*]*šide-git*   *kăldun.*
REP   come-PRS.3SG   black   horse-3SG-INS   one other   two two-ORD   wizard

     'They see: there comes a wizard, the horse is red. (…) Again comes one… with his black horse, a […] second wizard.' PKZ_196X_SU0223.003, 011–012, 019

2.5. Syntax

Change in the function of operators

E.g. *bazo* 'again; another' > 'again; back again'

(22) a. ***pü?də***   *mĭ-lie*

     back   give-PRS.3SG

     'gives it back' (Koybal, Sp. 35b <пюдюмля>)

   b. A hand mill was stolen from a farm. The rooster reassures:

i-?	*ťor-ga?!*	*măn*	*kalla-m,*	*det-li-m*	***bazo?***	*ši?ńile?.*
NEG-IMP.2SG	cry-IMP.2PL	1SG	go.FUT-1SG	bring-FUT-1SG	REP	2PL.ACC/LAT

     'Don't cry, I'll go and bring it back to you again.' PKZ_196X_SU0191.228–233

2.5. Syntax

Change in the function of operators

E.g. connective adverbial *dĭgəttə* 'then' in apodosis (consequent main clause in a conditional construction):

(23) a.   *ńi*   *i-bi-ndə*   *ine-n*   *olďa*   *ku-lə-j,*

        boy be-PTCP-LOC3SG   horse-GEN   clothing see-FUT-3SG

        koʔbdo   *i-bi-ndə*   *ne-n*   *olďa*   *ku-lə-j*

        girl   be-PTCP-LOC3SG   woman-GEN   clothing see-FUT-3SG

        'If he's a boy he will find horse gear, if he's a girl she will find women's clothing.' AA_1914_Girl_flk.030

  b.   *koʔbdo-n*   *olďa-t*   *măndə-ləj,*   **dĭgəttə** *koʔbdo*

        girl-GEN   clothing-3SG look-FUT3SG   **then**   girl

        a   *ine-ʔi-nə*   *măndə-ləj*   *ĭmbi*   *i-zittə*   *dăk,*   *dĭ*   *ńi.*

        but horse-PL-LAT   look-FUT3SG   what   take-INF.LAT   CORR   DEM boy

        'If he will look at girl's clothing, then he's a girl, but if he will look what to buy for horses, he's a boy.' PKZ_196X_SU0226.010–011

3. Creolization

"Modern Kamassian can be regarded as a potential language" (Künnap 1965a: 52)

"Speakers rarely desert their language or change it for another; they only optimize their expression in order to be successful in communication" (Kehayov, Introduction)

"The last speakers produce linguistic structure by rote" (Kehayov, Introduction).

But what if the communicative task imposed on the attrited language is merciless? I.e. if a last speaker, in isolation, is forced to express oneself in the attrited language only? As in the case of Klavdija Plotnikova.

3. Creolization

Creolization in the sense that Russian and Kamas matter and pattern is used for gap filling in order to fulfil the unavoidable task of expression. Filling of lexical, morphosyntactic and syntactic gaps (see above).

(24) джебактырлаппом мби попало

      ťăbaktər-laʔbə-m ĭmbi popalo

      speak-DUR.PRS-1SG what happen.PST.N(Ru.)

      'I tell whatever (comes to my mind)' (Matveev 1965: 35).

Creole: "a pidgin which has acquired native speakers and undergone non-contact-induced expansion, where the expansion process **"repairs" the reduction** which occurred during pidginization" (Trudgill 2011: 67–68; Kehayov 2nd lecture), Sasse (1992: 59): a receding language can be revitalized only by means of **drastic creolization** (ib.).

"The main property (principle) of language decay in linguistic structure is the reduction without compensation" (Kehayov, Introduction). Compensation on an individual base possible if there is no speech community left who would reject forms unheard before.

5. Conclusions

1) Speech tempo, pauses, false starts, errors clearly show that the post-shift texts were produced by speakers who's command of the language was affected by language decay.

2) Integration of Russian material and structure as well as reinterpretation of Kamas material cleary shows that gaps had to be filled; first of all by using the main language (Russian) as a ressource, consciously and unconsciously.

3) Gaps are due to attrition of the *forgetter* type, i.e. forgotten material and structure, and to the *semi-speaker* type, i.e. never acquired material and structure.

4) Possibly we deal with a variant of Kamas as spoken by the younger generations already in 1914, which has never been recorded because considered decayed, supplemented in the 1960s by controlled improvisation.

5) All observations and classifications refer to isolated speakers only; we have no data on how new structures were establishing themselves in the community; mostly it can not be decided if changes occurred in the process of language reactivation, or if they had already occured in the reduced community of last speakers in the 1920ies and later, i.e. a possible variant of Kamas as spoken by the younger generation not recorded by Donner in 1912/1914.

6) Besides the labels *semi-speaker* and *forgetter*, KP also qualifies as an "indigenous heritage speaker" (Fishman 2006), i.e. a heritage speaker who lost their community not by moving, but by being left over in the traditional home. The other speaker, AS, is different, she had moved to Krasnoyarsk.

7) In sum, Kamas is a special case: a speaker (KP) with a restricted ressource—we don't know to what degrees this restriction was caused by incomplete language acquisition on the one hand and forgetting on the other—starts out to communicate (mostly narratives, but also hearer-addressed imperatives, comments) in the restricted language, using her main language (Russian) as a source of completion. This process can be compared to creolization, i.e. a new version Kamas had started to develop.

8) A closer inspection of changes from pre- to post-shift Kamas is necessary; what fills gaps due to forgetting and what gaps due to incomplete language acquisition? And are gaps really gaps?

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