

# **‘Natural’ and obsolescent change in Tofa\***

Gregory D. S. Anderson (MPI-EVA, Leipzig and University of Oregon)

K. David Harrison (MPI-EVA, Leipzig and Swarthmore College)

*altai\_sayan\_greg@hotmail.com, dharris2@swarthmore.edu*

## **1 Introduction**

In this paper, we present some findings from recent field data on Tofa, a moribund Turkic language of central Siberia. We include sociolinguistic and demographic findings, as well as descriptions of linguistic phenomena. Many of these data differ significantly from previously published materials on Tofa. In some instances, these changes appear to be ‘normal’ changes found in any number of other languages, while others may specifically reflect effects of contact and obsolescence of the Tofa language.

## **2 Sociolinguistic/Demographic Information**

Tofa, also known as Tofalar, formerly Karagas (*Ethnologue* code [KIM]) is critically endangered and moribund. Tofa is spoken in three villages, Alygdzher, Nerxa, and Gutara, scattered over a large and remote area in the eastern Sayan mountains, administratively part of Nizhneudinskij rajon, Irkutskaja Oblast’, in the Russian Federation.

The traditional economy of the Tofa people was a unique synthesis of subsistence hunting and fishing, the gathering of nuts and berries, and a Sayanic form of reindeer husbandry that differed in substantial ways from other Siberian reindeer economies. Subsistence practices are current among the population today, and indeed local Russians (and other ethnic groups of the former Soviet Union living in Tofalaria) largely engage in similar economic pursuits. Reindeer husbandry, like the Tofa language, is nearly gone, now practiced by a single extended family based in Alygdzher, the youngest members of which no longer speak the language.

While official (1989) census statistics state the number of Tofa speakers to be 309, our survey has revealed this number to be off by a factor of 10, with the actual speakers numbering somewhere around 35. The reasons for this difference are complex and pertain to heterogeneous and fluid notions of ethnolinguistic identity rather than

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\* This paper was originally presented in an expanded version as “Structural correlates of language endangerment and language contact in Altai-Sayan Turkic” at the Symposium of South Siberian Turkic Languages held in Frankfurt 3-5 July 2003. An even earlier version of the paper was presented at the LSA meeting in Atlanta, January 2003, under the title “Change in Endangered Languages: Is simplification inevitable?”. We thank participants at these venues for enlightening discussions following the paper’s presentation. All errors remain the responsibility of the authors. Research for this paper was generously provided by grants from IREX, the Wenner-Gren Foundation and Volkswagen Stiftung. This support is gratefully acknowledged. The authors would also like to thank our Tofa-speaking consultants, without whom this work would neither be possible nor meaningful.

linguistic competence.<sup>1</sup> It is thus likely that the actual number of speakers in the 1989 period was closer to 50-75 than 300.

In the following sections we examine three features of Tofa found in data collected recently by the authors and compare these with published or previously attested Tofa data. The differences so attested are examined in light of discussions in the literature relating to various dichotomized types of linguistic change, e.g. ‘internally’ vs. ‘externally’ motivated change, structural change in ‘healthy’ vs. ‘endangered’ languages, etc. The features examined include changes in the imperative system, changes in the functions of the auxiliary *ber*, and changes in the vowel harmony system.

Further, the present study also argues for the inclusion of the full spectrum of language users, including less than fully fluent ones, in linguistic research, for both meta-theoretical and socio-pragmatic reasons.

### 3 Changes in the Imperative system in modern Tofa

In this section, we examine data from the system of imperatives in Tofa. In the singular, a bare stem is used, the only such uninflected verb form in the language (1).

#### (1) Singular imperative

- |    |                     |     |                      |      |                         |
|----|---------------------|-----|----------------------|------|-------------------------|
| i. | <i>nersa-ya bar</i> | ii. | <i>suy-da if</i>     | iii. | <i>martup tep ada</i>   |
|    | Nerxa-DAT go        |     | water-LOC.PART drink |      | Marta-VSF-CV QUOT name  |
|    | ‘go to Nerxa’       |     | ‘drink some water’   |      | ‘name your child Marta’ |

In the negative singular, this consists of the stem plus the negative suffix (2). Both of these are the forms found in basically all the other Common Turkic languages.

#### (2) Negative imperative

*al-gan men 'di-ve*  
take-PST 1 say-NEG  
‘don’t say “I took”!’

The first person singular imperative or hortative in Rassadin’s materials appears in the archaic form *-eyn*, with characteristically modern Tofa morphophonology and vowel harmony; see 4 below (3).

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<sup>1</sup> In particular, the expression *rodnoj jazyk* (‘mother tongue’) in Russian used in the Soviet census is connotatively one of ethnolinguistic identity, and is not based on actual language usage. This has caused an inflation of numbers in many minority speech communities in the former USSR (Anderson forthcoming).

(3) Old first singular imperative

*al-eeyn*  
take-1.IMP  
'let me take'  
(Rassadin 1997: 379)

In our corpus, the vowel is variously diphthongized or long, but the suffix always appears with a final *-m* (4).

(4) New first singular imperative

- i.     *men*   *suy-da*                    *if-ejm*  
I       water-LOC/PART       drink-1.IMP  
'let me drink some water'
- ii.    *men*   *süt-te*                    *ber-em*     *sey-e*  
I       milk-LOC/PART       give-1.IMP   you-DAT  
'let me give you some milk'

Note that the archaic first singular imperative form in Tofa was the only form referencing a first singular person that lacked and *-m* (cf. past tense *-Im*, pronominal *men*, encliticized pronominal *-mIn*). This shift to *-m* in the first singular imperative from *-n* may represent a case of 'paradigm leveling' by analogy in Tofa. Note that a similar historical process occurred in Khakas as well (Anderson 1998).

In the non-singular (positive) first person imperative, there was formerly a range of suffixes expressing various nuanced types of collectives. One form was used exclusively as a first dual inclusive ('you and me') (5i-ii); others marked various kinds of group, *viz.* a general plural or an all-inclusive plural (5iii-iv).

(5) Older first dual inclusive and first plural

- i.     *al-aalu*  
take-12  
'let you and me take'  
(Rassadin 1997: 379)
- ii.    *di-dʒ-ææli*  
talk-RECIP-12  
'let's talk (the two of us)'  
(Rassadin 1978: 223)
- iii.   *al-aaluyar*  
take-1PL.IMP  
'let's take'  
(Rassadin 1997: 379)
- iv.    *barfaan dʒoru-uluy*  
all       go-1PL.IMP  
'let's all go'  
(Rassadin 1978: 223)

In present-day Tofa, one form is usually found. It appears to be a variant of the first dual inclusive marker, but this original functional specificity of meaning has been lost, and this one form now serves as generalized first non-singular imperative marker (6).

(6) New first non-singular imperative forms

- i. *ytf-iaen*      *tfor-ij ber-ææri*  
3-COLL      go-CV TLOC-1+  
'let's the three of us go'
- ii. *bis*    *ihi-æn*      *ol*      *hineek*      *sana-aruu*  
we    two-COLL      that    book      read-1+  
'Let's both read the book together'

In the first person plural or non-singular imperative, the negative form is not a copy of the corresponding positive imperative form as it is in the singular, but rather a borrowing of a finite form (the negative future) for this function (7).

(7) New 1<sup>st</sup> plural negative imperative

*bo*    *hineek-ti*      *sana-vas*      *bis*  
this    book-ACC      read-NEG.FUT 1PL  
'Let's not read this book'

In (8) we offer a summary of the changes that we have attested in the Tofa imperative system. These three features in present-day Tofa each reflect a complex of socio-historical and linguistic factors that typically interact to promote or further change in linguistic structure.

(8) Summary of changes in the imperative system

1. New form of hortative (first person imperative)
2. Collapse of all non-singular first person imperative forms into single form
3. The negative future takes on a new function, e.g., the first person plural negative imperative (prohibitive)

The new hortative or first singular imperative represents a case of paradigm leveling or analogical change whereby an anomalous form is brought into line with similar forms. This type of change is attested in the history of a wide-range of languages, and must be considered among the most natural of so-called 'internally' motivated changes.

The new negative imperative for first plural is an extension of an old form into a new function. It seems likely that several factors may have (equally?) strongly contributed to this development, including, possibly, the common overextension of frequently occurring forms in obsolescent languages.

Finally, the collapse of all the original first person non-singular formations into a single one is again a difficult change *per se* to pinpoint with respect to its 'primary' causality, but an extension of a common form into other domains under conditions of

obsolescence is likely to be at least partially responsible for this feature in the present state of Tofa.

#### 4 Collapses in the auxiliary verb system: new functions of *ber-* (*ver-*)

In this section we examine some data from the system of auxiliary verb constructions in Tofa. Like the other Altai-Sayan Turkic languages, a wide range of functional and formal subtypes of auxiliary verb constructions is found in the Tofa verbal system. For details see Anderson (in press).

One of the most common auxiliary verbs found in Tofa is *ber* (~ *ver*), etymologically ‘give’. Preceded by a lexical verb in the *-A/-I/-j* converb form, *ber* typically expresses any number of aspectual or *Aktionsart* categories, e.g., inchoative (9), terminative (10), sudden action (11) or generalized perfect[ive] (12).

##### (9) Inchoative/Inceptive functions of *-A/-I/-j ber*

- i. *furandl-e* *ver-gen*  
 jump.up.and.down-CV ASP-PST  
 ‘She started to jump up and down.’
- ii. *am nit-ter kor-f-i ver-gen-ner*  
 now youth-PL see-RCP-CV ASP-PST-PL  
 ‘Now the youths began seeing each other.’
- iii. *pàkka tferle-j ver-dt-vis*  
 poorly live-CV ASP-REC.PST-1PL  
 ‘We have started to live poorly.’

##### (10) Terminative functions of *-A/-I/-j ber*

- i. *men ayna-vas bol-u ver-gen men*  
 I hunt-NEG.FUT AUX-CV ASP-PST 1  
 ‘I stopped hunting.’
- ii. *soodaf-pas am bol-u ver-gen*  
 converse-NEG.FUT now AUX-CV ASP-PST  
 ‘Now they have stopped conversing (in Tofa).’

##### (11) Sudden or unexpected action functions of *-A/-I/-j ber*

*osuŋ kør-ør-de aruŋ-dan dørt uluy tfaru kørst-y ver-genner*  
 then see-P.F-LOC forest-ABL four big reindeer.male appear-CV ASP-PST-PL  
 ‘Then she looked—four large reindeer suddenly appear from the forest.’

(12) Perfective functions of *-A/-I/-j ber*

- i. *orus[t]e-y ber-gen*  
Russian[ize]-CV ASP-PST  
'They have become Russian[ized].'
- ii. *tùfa soot ùttunu-ks-e ber-di tfoyum*  
Tofa language forget-DESID-CV ASP-REC.PST HYP  
'They probably wanted to forget the Tofa language.'
- iii. *àrt-a ber-iyer bod-uu-nar-nuuy tfer-iyer-de*  
remain-CV PRFV-2PL.IMP self-3-PL-GEN land-2PL-LOC  
'Stay in your own land!'
- iv. *birææ ool-nuuy adʒa-suu aba-suu tfok bol-uu ber-gen*  
one boy-GEN mother-3 father-3 not be(come)-CV INCH-PST  
'(Once) a certain boy's parents died.'

Note that although the lexical verb generally appears in a converb form (*-A/-I/-j*) in these constructions, it may on occasion take a participial or finite verb form as well in Tofa (13).

(13) Lexical verb = finite/participial not converb

- dørt arta-r ber-di-vis*  
four remain-PRS.FUT ASP-REC.PST-1PL  
'There are four of us left.'

In its inchoative/inceptive function, *ber* is supplanting (or rather, has already nearly supplanted in present-day Tofa) a variety of other functionally similar auxiliary verb constructions (Anderson in press). Such constructions include *-Ip kir* (14) or *-Ip yn* (15).

(14) Former inchoative/inceptive variants: *-Ip kir*

- i. *kel-ɪ sal-uu kul-ɯp kir-gen*  
come-CV as.soon.as.AUX-CV do-CV INCH<sub>2</sub>-PST  
'As soon as (he) came he began to do it.'  
(Rassadin 1978: 153)
- ii. *kar jaa-vuut-kan soŋ ayna-p kir-di-m*  
snow precipitate-PRFV-PST after hunt-CV INCH<sub>2</sub>-REC.PST-1  
'As soon as it snowed, I started hunting.'  
(Rassadin 1978: 153)

(15) –*Ip yn*

- i.     *ayna-p yn-dy-m*           ii.    *if-ip yn-dy-bys*  
hunt-CV INCH<sub>3</sub>-REC.PST-1    drink-CV INCH<sub>3</sub>-REC.PST-1PL  
'I started hunting.'  
(Rassadin 1978: 154)            'We began to drink.'  
(Rassadin 1978: 154)

In the case of the former construction, doubly marked forms with *ber* were attested already by Rassadin (16).

(16) Doubly-marked inchoative/inceptive form

- oolgus øøren-up kir-e ber-di*  
boy.girl study-CV INCH<sub>2</sub>-CV INCH-REC.PST  
'The children began to study.'  
(Rassadin 1978: 153)

In the function of a generalized perfect[ive], an auxiliary verb construction with *ber* has mainly replaced a range of other constructions in conversational registers. However, former variants may be preserved in narrative registers; these latter generally reflect archaisms in Tofa.

(17) Former perfective AVC still found in traditional narratives (tales)

- boriika-nuuj kuduru-un tfy te oota denge hejtfuula-p kay-an*  
wood-grouse-GEN tail-3.ACC what EMPH very level scissor-CV PRFV-PST  
  
*bol-yan òtur-a*  
AUX-PST cut.clean-CV  
'Something had perfectly sheared off the wood-grouse's tail.'

Note that the morphological perfect[ive] is still found in both narrative (18i-ii) and conversational styles of Tofa (18iii).

(18) Morphological perfect[ive] in Tofa

- i.     *saanda fay saanda kas-ørdek tfazuun kel-ibit-er bol-yan*  
long.ago time long.ago goose-duck during.summer come-PRF-FUT AUX-PST  
'A long, long ago, geese and ducks would come...'
- ii.    *Kas-ørdek kel-ivit-ti de-yidiri*  
goose-duck come-PRF-REC.PST say-NARR  
'The geese and ducks have come! he said.'
- iii.   *ut-uvvut*  
send-PRF  
'send (it)!'

Another function of the auxiliary verb *ber* in Tofa, albeit one marked by a slightly formally different auxiliary verb construction, viz. *-Ip ber*, is to indicate an action performed for the benefit of, or otherwise primarily affecting, a non-subject (Anderson 2001).

(19) Benefactive or ‘object version’ [Action oriented towards or primarily affecting a non-subject]

- i.     *sooda-p*        ***ber-di***  
       say-CV        OVR-REC/PST  
       ‘(I) just told (you) it.’
- ii.    *bos-tar*   *bariika-nu*   *haramza-af*   *tyg-yn*    *uz-up*    ***ber-gen***  
       wild.duck-PL wood-grouse-ACC feel.sorry.for-SS    feather-3.ACC pull.out-CV OVR-PST  
       ‘The wild ducks felt sorry for the wood-grouse, so they pulled out their feathers (for him).’

As with aspectual functions of the auxiliary verb *ber*, the lexical verb may on occasion appear in the speech of certain Tofa not in the *-Ip* converb form, but rather a participial or finite verb form.

(20) Lexical verb = finite/participial, not converb

*sooda-d3-ur*   ***be-er***   *sen*  
       say-RCP-P.F   OVR-P.F 2  
       ‘You tell (me) something.’

Periodically one also encounters forms such as the following (21) in present-day, obsolescing Tofa. Formally speaking, this has the shape of the benefactive or object version auxiliary verb construction, but with a meaning that is clearly like that of the aspectual/*Aktionsart* AVC.

(21) Form = object version; Function = *Aspect/Aktionsart*

*kuufkur-up*    ***ber-di***  
       chirp-CV    ASP-REC.PST  
       ‘A [chick] started chirping.’

To be sure, the Tofa auxiliary verb *ber* has a considerable range of functions, and in the present state of the language appears to have ousted several competing constructions. In both the case of the aspectual/*Aktionsart* categories, and the benefactive/object version function, an AVC with *ber* was attested in earlier sources on the language, but has now replaced several functionally similar AVCs. There is also variation and confusion among these originally formally and functionally distinct AVCs with *ber* in modern Tofa, such that the specific converb form associated with a particular function is not as rigidly maintained, with even participial or finite forms fulfilling these

roles on the lexical verb in AVCs in individual instances. Thus, it appears that originally differentiated formal contrasts have lost coherent boundaries, and that formal and functional overlap, as well as innovation of constructions, has resulted as a consequence.

In addition, the Tofa auxiliary verb *ber* has taken over the function of a phonologically similar, though functionally quite distinct AVC in the current state of the language. For some speakers, *ber* has now taken over the function of the characteristically Turkic categories of translocative (Anderson in press). The original construction used the auxiliary *bar* ('go') preceded by a lexical verb in either the *-Ip* (22) or the *-A/j* converb form (23). Some speakers still use this construction

(22) Original Translocative [Andative]: *-Ip bar*

- i. *kulafta-p ba-ar bis*  
 go.on.foot-CV TLOC-FUT 1PL  
 'We will set off on foot.'
- ii. *aj-da-a tfil baya ol ool-nu al-up bar-yan aj-ya*  
 moon-LOC-DC demon that boy-ACC take-CV TLOC-PST moon-DAT  
 'The moon-demon took the boy up to the moon.'

(23) Original Translocative [Andative]: *-A/-I/-y bar*

*kàtte-j bar-gan*  
 pick.berry-CV TLOC-PST  
 'Died.' (literally 'Went berry-picking.')

This AVC forms a paradigmatic group with the cislocative AVC in *-Ip kel*.

(24) Cislocative [Venitive]: *-Ip kel*

*nersa-dan dediri kulafta-p ke-er bis*  
 Nersa-ABL DISC go.on.foot-CV CLOC.FUT 1PL  
 'From Nersa, we will return on foot.'

For many speakers, the AVC in *-A/j ber* has taken over the function of the translocative as well. This even is found in the characteristic Tofa euphemism for dying, 'to go off berry picking' (25iii); cf. (23).

(25) New Translocative

- i. *tfori-i ber-gen dediri er-se*  
 go-CV TLOC-PST DISC AUX.COND-COND  
 'If only he would go.'
- ii. *ihijæn tfori-j be-eri*

2-COLL go-CV TLOC-1+  
 ‘Let’s the 2 of us go.’

iii. *tødy am kätte-j ber-gen*  
 all now berry.pick-CV TLOC-PST  
 ‘They all have died now.’

iv. *men jan-a ver-gen men*  
 I return-CV TLOC-PST 1  
 ‘I set off for home.’

v. *am oŋ uyla-af uyla-af oŋ tooʒ ùh'e-j ver-di*  
 now he cry-SS cry-SS he also fly-CV TLOC-REC.PST  
 ‘Then he cried and cried and also flew away.’

Thus, to summarize the changes that we have attested in the auxiliary verb system in Tofa as it exists in its current gravely endangered state: Many of these changes attest to the collapse of various aspectual categories expressed originally by several constructions into a single construction in *-A/-I/-j ber*. In addition, we attested the replacement of translocative (andative) construction also with this same AVC in *-A/j ber-* in the speech of certain Tofa speakers, which naturally entailed a loss of transparency when *bar* ‘go’ was replaced by *ber* ‘give’. However, there is considerable variation, and even apparent innovation of the form of the lexical verb (the participle *-A/Ir*) found in AVCs with *ber*.

## 5 Recent discoveries in Tofa vowel harmony systems

Tofa has both backness (palatal) and rounding (labial) harmony, and these are best analyzed as two autonomous, though often interacting phonological systems. We begin with backness harmony which, most simply stated, requires any given word root plus any affixes to contain either all back vowels or all front vowels. Back and front vowels may not co-occur within a stem (25).

(25) Tofa words containing all front vowels

<i>høørek</i>	‘chipmunk’
<i>ibi</i>	‘domesticated reindeer’
<i>ørdek</i>	‘duck’
<i>tfyme</i>	‘thing’
<i>tyŋgyr</i>	‘drum’

(26) Tofa words containing all back vowels

<i>kuduruk</i>	‘tail’
<i>uyla-</i>	‘cry’

<i>tfaruu</i>	‘male domesticated reindeer’
<i>oruk</i>	‘road’

Vowels in suffixes also alternate to conform to backness harmony (27, 28).

(27) Tofa vowel alternations in the plural suffix

- i. *ibi-ler* ‘domesticated reindeer’-PL  
*tfaruu-lar* ‘male domesticated reindeer’-PL
- ii. *ørdek-ter* ‘ducks’  
*kuduruk-tar* ‘tails’

(28) Tofa vowel alternations in the ablative suffix

<i>kàt-tan</i>	‘from (the) berry’
<i>èt-ten</i>	‘from (the) meat’

The rounding harmony system, in its idealized form would have resembled that of Tuvan (Harrison 2000). Simply described, rounding harmony imposes two conditions. First, any high vowel that follows a rounded vowel must itself be rounded, and second, rounded vowels may never appear in post-initial syllables unless explicitly motivated by harmony. Like backness harmony, rounding harmony shows both a pervasive pattern of vowel co-occurrence in roots (29) and a robust pattern of vowel alternations in suffixes (Harrison 2003) (30).

(29) Tofa rounding harmony in roots

<i>tygyr</i>	‘drum’
<i>gøk</i>	‘grass’
<i>kuduruk</i>	‘wolf’
<i>oruk</i>	‘road’

(30) Tofa rounding harmony in suffixes

<i>tygyr-lyy</i>	‘drum’-ADJ
<i>gøk-tyy</i>	‘grass’-ADJ
<i>kuduruk-tuy</i>	‘wolf’ (lit. ‘tail’-ADJ)
<i>ot-tuy</i>	‘grass’-ADJ

As mentioned above, rounded vowels never appear in post-initial syllables unless explicitly motivated by harmony

(31) Tofa suffixes containing unrounded vowels

<i>ibi-liy</i>	‘reindeer’-ADJ
<i>fej-liy</i>	‘tea’-ADJ
<i>àt-tuy</i>	‘horse’-ADJ

This pervasive pattern of co-occurrence in roots accompanied by robust alternations in affixes is undermined in present-day Tofa by three logically independent factors:

(32) Factors undermining harmonic patterns in modern Tofa

- (i) Loanwords
- (ii) Phonological processes that can introduce a front vowel in what was formerly a back vowel environment
- (iii) Vowel mergers (in younger speakers).

We present new data of types (ii) and (iii) here.

For all speakers of Tofa, [j], [ɲ] or [ɮʲ] in certain environments may cause fronting of adjacent vowels. Importantly, speakers ignore this process, *even when the fronted vowels constitute the sole vowel of the root*, and treat these phonetically front vowels as back for the purposes of harmony.

(33) Surface front vowels function as underlying back for harmony

i.	<i>ɲef-ta</i> tree-LOC ‘on the tree’ < <i>ɲaf</i>	<i>ɲef-tan</i> tree-ABL ‘from the tree’ < <i>ɲaf</i>	<i>hiin-da</i> behind.3-LOC ‘behind it’ < <i>hujuun</i>
ii.	<i>fej-da</i> tea-LOC.PART ‘some tea’ < <i>faj</i>	<i>tfej-da</i> summer-LOC ‘in the summer’ < <i>tʃaj</i>	<i>kàhʲir-ar</i> ‘chase’-P.F ‘will chase’ < <i>kàhʲar-</i>

This ‘regular’ sound change operating on surface phonetics is perfectly natural, but its consequences for the harmony system render it hard to explain. Speakers resist reanalyzing such surface front vowels as front, and thus end up with a harmony system that is considerably more abstract and less surface true.

Another way in which greater abstractness is introduced into the Tofa harmony system is vowel mergers. For the youngest generation of Tofa speakers (aged 35-45), a restructuring in the vowel inventory has occurred, with front rounded vowels [ø] and [y] merging with back vowels [o] and [u]. These speakers, we found, continue to treat such formerly front vowels as front for purposes of harmony, even though this makes the system more abstract by introducing surface disharmony. In (34) we compare an older speaker, Speaker A (age ca. 80), who possesses the full vowel inventory, with a younger

speaker, Speaker B (age ca. 40), who has the reduced vowel inventory. Speaker B continues to treat the formerly back root vowel as front for purposes of harmony.

(34) Younger speakers treat surface back vowels as underlyingly front

<u>Speaker A</u>	<u>Speaker B</u>
<i>kør-væ-æn</i>	<i>kor-væ-æn</i>
see-NEG-PST	see-NEG-PST
‘didn’t see’	‘didn’t see’

Changes in the vowel harmony system appear to be non-simplificational changes, leading to greater abstractness in the system even as the language enters obsolescence.

At the time Rassadin collected his data, the rounding harmony system was already in a state of flux. This is reflected in his (1995) dictionary by the presence of alternative entries for many headwords. In particular, tokens with a low rounded vowel in the first syllable show alternate rounded/unrounded vowels in the second syllable (35).

(35) Lexemes from Rassadin (1995) showing rounding harmony alternates

<i>ooru ~ ooruu</i>	‘thief’
<i>ødyrek ~ ødirek</i>	‘duck’

Similarly, affixes show alternate rounded/unrounded forms (36).

(36) Affixes from Rassadin (1995) showing rounding harmony alternates

<i>øør-y ~ øør-i</i>	‘friend’-3
<i>øjn-u ~ øjn-uu</i>	‘game’-3 (< <i>ojun</i> )

Fluctuations in rounding harmony are perhaps typical in cases of the breakdown of rounding harmony systems. We believe the Tofa forms additionally reflect an obsolescence-driven dynamic, namely the appearance of extreme micro-variation. We found no Tofa speakers who *always* or *never* applied rounding harmony, indicating that no across-the-board reanalysis has taken place. Rather, each speaker showed considerable variation in applying or not applying harmony in the conditioning environment, often even within a single sentence. In (34) a single speaker applies rounding harmony differently to the same word within a single utterance.

(37) rounding harmony alternates

<i>øj-nu ~ øj-nuu</i>	‘he’-ACC
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## 6 Conclusions

Changes in Tofa may be due to external (contact) pressure or internal structural pressure (e.g. markedness, paradigm normalization, etc.) or unknown/unclear causation. To the latter two categories belong the new first person singular hortative, the new prohibitive, and use of *ber* in the translocative/andative construction in Tofa. In addition, multiple causality is likely operative in many of these changes. Similar arguments of reduction of markedness or paradigm normalization are of course widely made regarding historical change in ‘healthy’ languages as well. Thus, it is clear that the factors contributing to linguistic change in moribund languages do not substantively differ from such changes in languages not losing speakers.

Further, in the case of vowel harmony systems, from the presentation above, it is clear that we gain insights into limits of abstractness from looking at the speech of semi-speakers and passive speakers, not just those people that can be described as fluent first language speakers. These semi- and passive speakers should therefore never be ignored in doing fieldwork in endangered speech communities (if sociolinguistic conditions permit this).

### Abbreviations

ACC	Accusative	NARR	Narrative
AUX	Auxiliary	NEG	Negative
ALL	Allative	NR	Near
CL	Classifier	OBJ	Object
COMP	Complementizer	OVR	Object Version
COLL	Collective	P	Potential
CONN	Connective	PF	Perfect
COP	Copula	PFV	Perfective
CUST	Customary	P.F	Present-Future
GER	Gerund	PL	Plural
DAT	Dative	PLR	Polarity
DISTR	Distributive	PROG	Progressive
DS	Different Subject	PROL	Prolative
EMPH	Emphatic	PRTCPL	Participle
EVID	Evidential	PST	Past
GEN	Genitive	RCP	Reciprocal
HAB	Habitual	REC	Recent
HYP	Hypothetical	SBJV	Subjunctive
IMP	Imperative	SVR	Subject version
INS	Instrumental	SUBJ	Subject
INTSV	Intensive	SS	Same Subject
LOC	Locative	TLOC	Translocative
		UNCL	Unaccomplished

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