GERHARD
DOERFER

KHALAJ MATERIALS

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KHALAJ MATERIALS

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FOREWORD

1.1 The investigation of Khalaj. The present volume is the first of several projected works concerned with Khalaj. Khalaj (Käläǰ), a Turkic language spoken in central Persia, constitutes an independent branch of the Turkic group of languages. It cannot be included, for example, among the southwestern Turkic languages (the Oghuz group: Turkish, Azerbaijani, and Türkmän) nor among any other Turkic group.

In 1939 the Persian scholar M. Moġäddäm made a trip to Ạšteyạn and to other Persian districts south of Teheran primarily to gather material of the local Persian dialects. But he also gathered material of the Azerbaijani local dialect and of a Turkic language unknown up to this time: Khalaj. Since he was no Turcologist (but an Iranist), he did not realize the importance of his discovery. Furthermore, since his book was written in Persian — and modern Persian scientific books normally are disregarded in European countries (Iranica non leguntur) — his discovery remained unknown to Turcologists. Nearly the same academic disregard holds true for Minorsky's material, gathered much earlier but presented only in a short article (cf. bibliography, Chapter 4). Although Minorsky's report was written in English and published in an accessible journal, the material was much too sketchy to make a sensation; also, as Minorsky was no Turcologist, he failed to recognize the real value of Khalaj. Furthermore, of the three native informants upon whose speech Minorsky based his study, two spoke Khalaj well while the third, the head of Pougerd in 1917, mixed Khalaj terms with Azerbaijani

(a mixture of Khalaj-Azerbaijani was at that time spoken in Pougerd; Khalaj is now extinct there). As Minorsky relied most heavily on the speech of his Pougerd informant, Minorsky's Khalaj texts had a striking Azerbaijani character. Thus Menges 1951. 278-9 qualified Khalaj ("in diaspora in the districts of Sultānābād and Sāva, SW of Tehrān") as "Āzerbājdžān-Turkish." [Menges informs us that Khalaj "will probably be investigated by Dr. Borecký of Tehrān University (formerly at Prague University)." To my knowledge, Mr. Borecký never has published anything about this topic.]

Thus investigation of this field came to an end for a time. In 1967, when I had to write an article for Current Trends in Linguistics, Volume VI, and had to consult Iranian material about Turkic languages in Persia, I found a short note in Afshar 1961, No. 4027, about Moġäddäm's work. By the special kindness of Dr. Abbas Zaryab (Library of the Senate, Teheran) I received this book. Since the importance of this material was apparent, I began publishing several articles about Khalaj (cf. bibliography). Although I would have liked to go to Khalajistan during summer vacations, I was unable to, as I had accepted a visiting professorship at Indiana University in Bloomington, Indiana. Therefore I arranged for my three doctoral candidates— Wolfram Hesche, Hartwig Scheinhardt (both Germans) and Semih Tezcan (a Turk) — to go there with the following instructions:

(1) To define the frontiers of the Khalaj linguistic area by visiting as many villages as possible;

(2) To record some language material. To accomplish this end we planned to use as a basis for interrogations one of two lists: (a) Moġäddäm's long list, which described the Khalaj dialect of Tälxab and which contained many Persian loanwords. This list we planned to use only in the more important villages; (b) a shorter list of words extracted from Moġäddäm's list (we kept

only those words thought to be Turkic, not Persian), which we supplemented with other important words such as numerals. This list comprised the standard form of our language investigations.

The material which we gathered in the short period of one month is necessarily limited, but it is, I think, an important contribution to Turcology. This material (and material collected in subsequent expeditions) will be the subject matter of a projected four-volume work, of which this volume is the first. I hereby extend my special thanks to the editor of this volume.

The authors of specific sections of this book are as follows: Hesche, Scheinhardt, Tezcan (Chapters 1.2, 2, 3.1); Doerfer, Hesche, Parviz Radjabi, Scheinhardt, Tezcan (Chapter 5); and Doerfer (the remainder).

1.2 Contents of the tape cassettes. In the following section we describe briefly the contents of the tape cassettes, indicating the names of the authorities insofar as we could learn them. For statistics concerning the villages visited, consult Chapter 3. The term "Word List 1" used below refers to the short list in Chapter 5.3 entitled "Materials of Mänṣur-ạbạd and Xält-ạbạd"; "Word List 2" refers to the long list in Chapter 5.2 entitled "Material of Tälxạb." The figures I A, I B, II A, etc., refer to the tape cassettes.

I A

Mänṣur-ạbạd

Conversation with Ġolạm Reżạ, thirty-eight-year-old head of the village, upper teeth show gaps

Life in Mänṣur-ạbạd (same authority, easy to understand)

Numerals

Several words

Parts of the body
Conjugation (kål- 'to come,' vạr- 'to go')
Several words
Animals
Fruits and vegetables
Terms of relationship
Several verbs
Some short sentences
Word List 1 (beginning)

I B

Mänṣur-ạbạd

Word List 1 (continuation). Authority: Ġolạm Reżạ
Ordinal numbers with examples (+minči not found)

II A

Mänṣur-ạbạd

A short phrase (hard to understand)
Ġolạm Reżạ speaks with his wife (very hard to understand).
Hinz, i.e., Walther Hinz, Persisch. Leitfaden der Umgangssprache, Berlin, 1959. 234-8 (last word: dár-jāft kardän). Authority: Ġolạm Reżạ. Only such words are asked which are thought to exist and to be important in Khalaj; such words as Benzin, Banane are omitted.
Hinz 238-46 (last word chåstän). Authority: Ruḥollạh, fourteen-year-old nephew (?) of Ġolạm Reżạ. Sometimes his uncle (?) interferes.

Mouǰạn

Word List 1
Conjugation

Reżą, son of the head of the village (Äṣqär) tells a fairy tale (although spoken rather swiftly, it is understandable. Reżą is a pupil of the eighth grade.)

ʿÄli (from the same village) tells of something which happened the day before (rather easy to understand). In this story the form -ġalï occurs. When he had finished his story, we asked him what this form meant. He explained:

bäna šäydik varġalï	:	bäna kärdim räftän
bäna šäydik kälgeli	:	bäna kärdim amädän
bäna šäydik hayġalï	:	bäna kärdim goftän

Conjugation

Hinz 39-41 (list of the most important verbs)

Hinz 19-21 (interrogative pronouns, demonstrative pronouns, indefinite pronouns. Here kimdilä 'with whom' is striking; 'with whom,' Persian ba-ké, is not found in Hinz. It was asked by chance. Concerning kimdilä, cf. Xärrąb bizdičä, etc.)

Conjugation (kärdän, Hinz 31)

Hinz 246 (only some words)

II B

Moujan

Word List 2

Some sentences

Some sentences constructed with -ġuluq (future participle): biz burda varġïlïq äk, vardïq balïqqa tuz alġïlïq äk

Conjugation

Hinz 247-69

Sorxädé

Word List 1

A short adventure

A complaint about poverty and the hard conditions of life (short, about one minute)

Kärrạb

Word List 1 (beginning). Authorities: ʿEzzätollạh, head of the village, and Yädollạh, ʿEzzätollạh's father, about sixty-five years old

III A

Kärrạb

Word List 1 (continuation). Here we find such numerals as äkki hottuz 'sixty,' üč hottuz 'ninety.'

Some words attached to Word List 1: smell, to put on clothes, figure

An adventure (some passages cannot be easily understood, but the story shows some long and straightly constructed sentences and some very important words, e.g., yätkär-.)

Somebody else tells a story about Shah ʿÄbbạs (not easy to understand).

Conjugation, several verbs

A fairy tale. Authority: Ḥosäin ạġạ-ye Ạqạli, sixty years old ("äkki hottuz")

Somebody else tells what he will do this evening.

Several sentences (Hinz 68-9)

Explanation: Khalaj buzladï = Azerbaijani buz oldi 'it became cold'

Numerals (especially üč hottuz 'ninety,' yätti hottuz 'two hundred ten,' etc.)

üšlü kün 'the day before yesterday'

A story about Shah ʿÄbbạs (not easy to understand). Authority: ʿẠlämdạr, sixty-five years old

An adventure. Authority: Äḥmäd ạġạ-ye ʿÄräbgol, thirty-one

years old (easy to understand but rather mixed up with Persian)

III B

Mäzräʿä-ye Nou (Märzạno)

Word List 1. Authority: the head of the village, name unknown, about thirty-six or thirty-eight years old, has been two years in his position, has lost one of his upper teeth

Ordinal numerals (+minči)

uǰa = boländ 'high'

Several sentences

Tähranda kälgilik (or kälgili) är

O här Tähranda kälgilik daġ

Conjugation

Proverbs

Several sentences and words

Hinz 278 backwards up to 269 (first word darîdän, last word bālâ raftän)

A story (spoken swiftly but easy to understand)

Several sentences

IV A

Mäzräʿä-ye Nou

Music played by ʿÄli Ḥäidäri and his companions

Several sentences

Kardeyạn

Word List 1

Colors

Some words

Explanation: Khalaj tilki = Azerbaijani tülkü 'fox'

Conjugation (several verbs and several forms)
Some sentences and words
Enumeration of villages in which the Khalaj live

IV B

Mäzrä'ä-ye Nou

Continuation of the enumeration of Khalaj villages
Some sentences

Xorąk-ąbąd

Ordinal numerals
Word List 1

Heząr-ąbąd

Word List 1
gilk 'marrow' < yilik
Colors
Conjugation
Numerals
Ordinal numerals (+minči)
An adventure (impossible to understand)

V A

Heząr-ąbąd
Dialogue (hard to understand)

Xärrąb

Mosäiyeb 'Äräbgol speaks about the Khalaj language.
He replies to several questions of ours.

He tells about the festivals of Nouruz (New Year).

He tells about some plays put on during Nouruz (plays in the form of sport):

(1) čartaġi

(2) koląhbärdąr (biryäk kötürmä)

(3) ič taš (< üč taš 'three stones')

ʿÄräbgol tells how weddings are celebrated by the Khalaj.

He also describes the festival of circumcision. (Note: the conversation of ʿÄräbgol is exceptionally easy to understand but he mixes Khalaj up in a rather exaggerated way with Persian; of course, he uses some Khalaj words which do not occur in the other texts.)

Sentences constructed with -gili and -gilik (ʿÄräbgol)

A short poem by ʿÄräbgol (four misras)

Sentences constructed with -gili and -gilik (ʿÄräbgol)

ʿÄräbgol enumerates the Khalaj villages belonging to Ąšteyąn.

Fäiż-ąbąd

Word List (only the beginning)

The house-lord (brother of the head of the village, who was absent) is afraid of us and tries to drive us away (in a polite way), but this same man tells us in which of the circumjacent villages Khalaj can be found.

V B

Fäiż-ąbąd

Continuation of enumeration of Khalaj villages

Our authority explains that the majority of the inhabitants of Iran consists of Turks (information which is false, by the way).

Noudeh

Word List 1. Authority: ʿÄli Äṣqär Wäfại, the head of the village, has been two years in his position

We are told about Nouruz and are urged to remain for eating.

Yängiǰé

Word List 1

Several words

A short story

Conversation. Authority: Räḥimollạh Yängičä-ye Qäräxạni, thirty-five years old

VI A

Xält-ạbạd

Word List 1 (the beginning is missing). Authority: unknown, anterior upper teeth missing

Conjugation

Tälxạb

Word List 2. Authority: Moḥämmäd-e Tälxạbi, fifty-two years old

VI B

Tälxạb

Word List 2 (continuation)

Some words attached to it: bod 'figure,' boda- 'to color,' yid 'smell,' yitti 'was lost,' odan- 'to awake,' odat- 'to awaken (somebody else),' tašqar 'outside,' ičkär 'inside,' hay- 'to say'

Conjugation

Numerals

üšlu kün, taqïsï üšlü kün
Ordinal numerals (+minči not found)
yint- 'speak, say' (this word exists in other villages, too, < ?)
Hinz 39-41 (verbs; especially interesting: bošar- = Persian tawânestän 'to be able'< baš 'head'?)
Hinz 44 (conjunctions)
A long story about Shah ʿÄbbąs (spoken very swiftly but not hard to understand). Authority: Moḥämmäd (Xąn-)e Tälxąbi
Terms of relationship
Tree names: seyät 'willow,' tüt 'mulberry tree,' ġadäm 'almond'
Some words

Wąšqąn

Word List 1
Story (hard to understand)

VII A

Wąšqąn

Continuation of the story. Authority: Äḥmäd-e Wąšqąni, thirty-five-year-old head of the village
ʿÄli-ye Wąšqąni, twenty-two years old, tells about Nouruz
Moḥämmäd Ḥäsän (Äsär?), fifty-two years old, originally a native of Wąšqąn but living now in Qïzïilǰa, tells a story (relatively easy to understand, but —Azerbaijani!)
Some sentences constructed with -ġalï and -ġïlïq/-gülük

Ḥäsän-ąbąd

Word List 1. As the man we asked turned out not to be Khalaj, we stopped in the middle of the sample.

Säfid-ạb

Word List 1. Authority: ʿÄli Reżạ, head of the village

VII B

Säfid-ạb

Several words

The mother of the head of the village complains of the hard conditions of life.

Bon-čenạr

Word List 1. Authority: Ḥạǰi Moḥämmäd, forty-year-old (about) head of the village, son of Ḥosäin

Some words attached to this list: käd- 'to put on clothes,' bod 'figure,' yid 'smell,' sanadum 'I counted'

Numerals

Zär-nušé

Word List 1

Several verbs and other words

Numerals

Several words

Verbs, conjugation (var- 'to go')

Several words

ʿÄbdollạh, forty-year-old head of the village, tells how Khalaj weddings are celebrated

A man whose name we did not learn tells about Nouruz.

VIII A

Zär-nušé

Village problems: lack of water

Dạrestạn

Word List. Authority: the petrol attendant Ḥäbibollạh-e Dạrestạni
Numerals
Conversation

Wenạreǰ

Word List 1
käčgili yil 'last year'
Numerals
Phrase. Authority: ʿIsạ, twenty-four years old

Xärrạb

Poem, song by ʿÄräbgol
Music: näy (a kind of flute) is played

VIII B

Xärrạb

A speech is given by ʿÄräbgol on the occasion of the New Year festival (Nouruz), beginning with the words Xärrạb xalqï! Kišilär, härlär! 'People of Xärrạb! Women and men!'

Säläfčegạn

Word List 1
Numerals

Qäré-Su

An adventure
ʿÄli Ḥạǰi, nine years old (!), tells a fairy tale.

Bạġ-e yäk

Word List 1. Authority: Mortäżạ Wäfại, head of the village

Numerals
A poem
The Persian traduction thereof
About Nạder Shah and the Khalaj

Seft

Word List 1. Authority: Ḥosäin Wäfạ'i, head of the village
Several words (same authority)
Life in the village (same authority)

Ispit

Several words

IX A

Čạhäk

Word List 2. Authority: Näṣrollạh Päimi, head of the village
Some words (same authority)
Hinz 39-41 (verbs), 19-21 (interrogative pronouns, demonstrative pronouns)
Numerals
Ordinal numerals (+minči)
Several words: äta, ini, äkä, hala, dädä, tata

Mehr-e Zämin
Word List 1. Authority: twenty-year-old son of Adî Ḥämid, head of the village
Several words: yattïq ~ yattuq, bod, yid, tük, tiel ('curl')
Terms of relationship

IX B

Mehr-e Zämin

Continuation thereof

Firuz-ąbąd (Qashqai!)

Word List 2. Authority: Iskändär J̌ąhedi, the teacher of English in Firuz-ąbąd

Qashqai poems

REPORT OF OUR EXPEDITION

For the Khalajistan expedition undertaken in March and April 1968 the Universitätsbund Göttingen placed DM 5000 at our disposal and the Societas Uralo-Altaica of Hamburg, DM 1800.

Contrary to our original intention to go the route of Göttingen-Teheran by train and bus and afterwards to rent a car in Persia, we bought a used Opel Caravan (1963), which the Opel agency of Göttingen thoroughly overhauled. The reason for this change of plan was, among other things, a letter from Deutsches Archäologisches Institut in Teheran informing us that this institute could not place a car at our disposal and that it would become very expensive to rent one.

We started our trip on February 28 from Göttingen. In the late evening hours of March 2 we arrived at Ankara. There we were delayed somewhat because of bad weather conditions and because of some necessary formalities (customs, visas). On March 6 we continued our journey via Samsun, Trabzon, Gümüşhane, Erzurum and Doğubeyazit. On March 9 we arrived at Tebriz, on March 11 at Sạvé, a town about seventy miles south of Teheran. Finally, on the morning of March 12, we caught sight of Dästgerd, administrative center of Khalajistan.

As soon as we arrived at this town, the vicegerent of the head of the district came to see us, inquired about the aim of our stay, and asked us to come to the office of the head of the district. There we explained our purposes and produced the letter of recommendation which the ambassador of Iran in the Federal Republic of Germany had given us. We wish to express to His Excellence our most respectful gratitude for his special kindness.

The vicegerent, himself a Khalaj, informed us about the circumjacent villages, even indicating the names of the village heads. On later occasions he was also helpful and amiable.

In Dästgerd itself we found no Khalaj. (The previously-mentioned vicegerent, Mr. Mosäiyeb ʿÄräbgol, was a native of Xärrab.) We then went around the villages with Khalaj population by turns, always asking for further villages still unknown to us. As almost no facilities of communication exist in this region, we were, more than once, very glad that we had brought with us a car from Germany. But traveling the wild ways or mule tracks with an Opel Caravan often was rather painful. As our trip was only a provisional expedition, we may propose to use a more appropriate cross-country vehicle for the main expedition. Almost without exception we were entertained very kindly in the thirty-four villages which we visited. The Khalaj appreciated our work and their amiability contributed substantially to the success of our trip. Here is a short résumé about the Khalaj.

The Khalaj live between 49° and 51° longitude and between 34° and 35° latitude in about 46 villages. According to the data of our investigations, they number about 17,000 persons. But this number surely will diminish in the near future, as many Khalaj are leaving their native villages because of a bad water supply. Above all, most of the younger able-bodied people work in the surrounding towns; in the Khalaj villages predominantly old people and children reside. The region is rather secluded; only a few Persians and Azerbaijanis live among the Khalaj. The people are very poor. Only a few of them have landed property of their own; most of them do not possess even a small field to cultivate for themselves. The majority of the people work for the big landed proprietors. To a limited extent, goats and sheep are bred. In some villages the traditional carpet knotting is cultivated. This is the task especially of women and children. Every larger village has a school; the teachers are Persians, many of whom

have to absolve their probationer time there. Scarcely any of the Khalaj — not even the heads of the villages — can read or write. Although the Khalaj are Shiites, they are tolerant towards professors of other religions. In political contrast to other Turkic nations in Iran, such as the Azerbaijani and the Qashqai, the Khalaj have always been loyal subjects of the Persian crown. Physically the Khalaj are a marked anthropological type (see the photographs at the end of this volume).

The linguistic situation is unique: the Khalaj speak (as Doerfer shows in this study) the most archaic of all existing Turkic languages (with the exception of, perhaps, Chuvash). Khalaj cannot be classified among the known six groups of Turkic languages, but is a seventh independent group. Although the material gathered by us has not yet been fully examined, some distinct features are an additional proof of the important position of Khalaj in Turcology. We were able to distinguish two main dialects of Khalaj: the northern and the southern dialects. In some especially secluded villages we found interesting words which do not exist any more in other Turkic languages. Khalaj is not a literary language. The oral traditions are scarce and presumably are often formed according to Persian or Azerbaijani patterns. The Khalaj (only the men?) are preponderantly bilingual or trilingual, i.e., apart from their native language they also master Persian and Azerbaijani. Many of them, though not able to speak Azerbaijani, understand it rather well. For this reason we had hardly any difficulties in making ourselves understood. Women in general master Khalaj better and speak it more purely than men. The western part of the Khalaj territory in particular is strongly Iranized; children there speak only Persian (though they still understand Khalaj).

We brought with us on our expedition nine tape cassettes, each lasting ninety minutes. Mr. Josef Ecker of the Hannover firm Philips Ltd. was so kind as to place at our disposal a Cassette

Recorder EL 3302 (battery operated) which stood the test very well during the whole expedition. As no electrical current exists in the region, battery-operated recorders are indispensable to Khalaj expeditions.

We tried to learn something about the history of the Khalaj, but the people were informed (to some extent) only about the immediate past. They could say nothing about their origin. To be sure, they are aware of being a special group. Hence they precisely distinguish Persians, Turks, Kurds, and Khalaj. After we had explored the territory defined in our mission, we decided to examine a reference to a Khalaj-speaking population south of Shiraz (cf. Garrod 1946.294-6). The head of Bạġ-e yäk, a very educated man, told us that he himself had been there and had met Khalaj population.

On March 30 we arrived at Firuz-ạbạd. This town is situated about sixty miles south of Shiraz. Firuz-ạbạd is the largest town in the Qashqai territory. The Khalaj sought by us were said to live in the tribal territory of the Qashqai. During the past years, the Qashqai have engaged in several guerrilla skirmishes against the government troops. The road from Shiraz to Firuz-ạbạd is, even today, closed to civil traffic after nightfall. In the daytime the road is guarded. When we arrived at Firuz-ạbạd in the late afternoon, we immediately were apprehended by the police, were thoroughly questioned, and, since it was impossible to send us back at so late an hour, were finally lodged in an empty house. Because of the hostile atmosphere, it was impossible to search for the Khalaj. We also were not able to get information about them anywhere. However, accompanied by a kind officer, we succeeded in making some trips to points nearby. With his help we were allowed to stay two more days in Firuz-ạbạd. During this time we occupied ourselves with the language of the Qashqai, a language which has been little explored. Then we made an important discovery. An amateur poet brought us a manuscript

containing many Qashqai poems. He recited some of them on our tape recorder. Unfortunately, we could not acquire this manuscript. It indeed has been known that the Qashqai have poets, but none of their poems up to this time had been discovered. We wish only briefly to mention that the Qashqai might be interesting for ethnographs, too, for instance of women's clothes and the utensils of nomadic life.

In Khalajistan the car had been overexerted and hence was in so bad a condition that it was not capable of making the trip back to Germany. Moreover, our financial situation was more than alarming. The extension of the expedition to Firuz-ābād was possible only through the kindness of Mr. Schmidt-Dumont, vicegerent of the Cultural Attaché (Kulturattaché) and chief of the press (Pressechef) of the German embassy in Teheran, who had given us a personal loan. Among other things, the money for gasoline was lacking, as the DM 1,800 promised by Societas Uralo-Altaica had not yet arrived. As foreigners are not allowed to sell cars in Teheran or in Turkey, the only possibility of selling the Opel was in Afghanistan.

But while we were still in Iran, we had an accident. A truck ran into our car, which was considerably damaged. Thanks to the kind support of the Iranian police station, we succeeded in inducing the driver of the truck to make amends for the damage. However, the repair forced us to a longer stay in the town of Babol. Therefore we did not arrive at Kabul until April 12. Fortunately we at once found a buyer for the car, in spite of the still visible damage. The formalities of customs, etc., took several days. On April 21 we flew from Kabul via Tashkent to Moscow. As all the train tickets to Berlin were sold out, we could not leave Moscow by train until April 24. We arrived at Berlin on April 25, at Göttingen on April 26.

DISTRIBUTION AND ETHNIC MIXTURES OF THE KHALAJ

3.1 Distribution of the Khalaj. The Khalaj live, roughly speaking, in central Persia, about 120 miles SW of Teheran, cf. Chapter 2 and the maps at the end of this volume. Some Khalaj, emigrants from the same region, live now among the Qashqai of southern Persia, according to Garrod 1946; but it is unclear whether they still speak Khalaj or whether they have been assimilated by their Qashqai-speaking neighbors (the latter seems to be more likely. Garrod, speaking about the Amaleh tribe of the Qashqai, says on page 296, "the dialect differs slightly from that of the Khalaj").

I include here three lists of the distribution of Khalaj population, cf. maps at the end of this volume. In the first two lists I use the spelling of Minorsky and of Räzmạrạ respectively (the sign ~ marks variants found in the works of the authors themselves.)

List A. Khalaj villages according to Minorsky 1940. (1) Kondūrūd, (2) Seft, (3) Sefīdale, (4) Aḥmadābād, (5) Nūrābād, (6) Khärrāb, (7) Espī, (8) Moshäkye, (9) Särärūd, (10) Räzābād (~ Räzäbād), (11) Khoräkābād (~ Khoräkäbād), (12) Mo^{u}jūn, (13) Kārdiyān (~ Kardejan), (14) Märzīnū, (15) Nädrābād, (16) Khorche, (17) Härīrān, (18) Sorkhedeh, (19) Āsiyābād, (20) Manṣūrābād, (21) Fo^{u}jerd (~ Po^{u}gerd), (22) Alīgān, (23) Chömänäk, (24) Tāj-Khātūn, (25) Kafshgarān.

List B. Khalaj villages according to Räzmạrạ 1327. Points of reference are D = Dästgerd (or Dästǰerd), 64 kilometers west of Qom (we give the indications in kilometers because they are

so given in Räzmarą), and K = Kähäk, 18 kilometers south of Qom. (1) Änąnǰerd (~ Nungerd) 18 km S D, (2) Bąġ-e Nämäk 20 km E D, (3) J̌ondąb 24 km S D, (4) Čąhäk 29 km N D, (5) Čämbunäk 14 km N D (= Minorsky 23), (6) Xärąb 12 km SW D (= Minorsky 6), (7) Xorąk-ąbąd 18 km SW D (= Minorsky 11), (8) Dästǰerd [in which, according to our investigations, Khalaj is not spoken (anymore?), cf. Chapter 2], (9) Rąhǰerd (~ Rąhgerd) 24 km SE D, (10) Zouwąreyąn (~ Säwąreyąn) 17 km SE D, (11) Ṣąleḥąbąd 18 km SW D, (12) Kordiǰąn 17 km SW D (= Minorsky 13), (13) Mäzrä'é-ye Nou 18 km SW D (= Minorsky 14), (14) Mušäkeyé 18 km N D (= Minorsky 8), (15) Mehr-e Zämin 33 km NE D, (16) Niǰé 24 km E D, (17) Wenąräǰ (or Wenąrǰ or Wenąreǰ) 15 km NE K, (18) Häząr-ąbąd 18 km SW D (= Minorsky 10). We see that correspondence between the lists of Minorsky and of Räzmarą is only partial.

List C. Khalaj villages according to Doerfer and associates. This list is divided into two sections: the Khalaj villages which we visited and those which we did not visit. The order of the first section is chronological; that is, the villages are listed according to the order in which we visited them. The first entry of each village name is a form originally written down by us (which may reflect the popular pronunciation); the second entry is a purified form based on the Persian script of Räzmarą. In parentheses is Räzmarą's Persian script followed by references to the preceding Khalaj distribution lists of Minorsky and Räzmarą. After the parentheses is a rough estimate of the number of inhabitants and the names of the heads of the villages (insofar as we could learn them).

(1) Mansurabad = Mänṣur-ąbąd (منصورآباد = Minorsky 20), 400, head: Ġoląm Reżą

(2) Maudschân = Moujạn (موجان = Minorsky 12), 500; head: Äṣqär

(3) Surchade = Sorxädé (سرخده Minorsky 18), 360; head: Moḥämmäd ʿÄli

(4) Charrâb = Xärrạb (خراب = Minorsky 6, Räzmạrạ 6), 550, head: ʿEzzätollạh

(5) Märzâno = Mäzräʿä-ye Nou (مزرعه نو = Minorsky 14, Räzmạrạ 13), 400, head: ʿÄli Moḥämmäd

(6) Qardiân = Kärdeyạn (کردیان = Minorsky 13, Räzmạrạ 12), 800

(7) Chorâkabad = Xorạk-ạbạd (خوراك آباد = Minorsky 11, Räzmạrạ 7), 120, no head of village

(8) Hizârabad = Hezạr-ạbạd (هزار آباد = Räzmạrạ 18; another name of this village is Râzabad, Rez-ạbạd?, = Minorsky 10), 400

(9) Faizabad = Fäiż-ạbạd (فیض آباد), 400?

(10) Nûdeh = Noudeh (نوده), 450, head: ʿÄli Äṣqär Wäfại

(11) Jengidsche = Yängiǰé (ینگیجه), 120, no head of village

(12) Hâltâbâd = Xält-ạbạd (خلت آباد), 450, head is a Persian whose name remained unknown to us

(13) Talkhâb = Tälxạb (تلخ آب), 2000, head: Ḥạǰi Qorban ʿÄli Näẓäri

(14) Wâschghân = Wạšqạn (واشقان), 1300, head: Äḥmäd-e Wạšqạni

(15) Hasanabad = Ḥäsän-ạbạd (حسن آباد), 20, no head of village

(16) Sefidâb = Säfid-ạb (سفید آب), 300, head: ʿÄli Reżạ

(17) Sarâband, Sarahband = Sär-e bänd (سر بند), 300, head: Ḥạǰi ʿÄli Äkbär

(18) Qâschä, Kâse = Kạšé, Qạšé ? (Persian script not found in Räzmạrạ), 300, head: Moḥämmäd Mirzại

(19) Buntschenâr = Bon-čenạr (بن چنار), 650, head: Ḥạǰi

Moḥämmäd Ḥosäin

(20) Mussiabad = Musi-ąbąd (موسی آباد), 200, no head of village

(21) Saghardschoq, Sïgïrdschoq - Säqärǰuq (سقرجوق , Khalaj pronunciation something like Sïgïrčuq), 600, head of village, Ḥąǰi Reżą, on pilgrimage

(22) Zarnusheh = Zär-nušé (زر نوشه), 550, head: Äbdolląh

(23) Daristân = Dąrestąn (دارستان), 550, no head of village

(24) Muhsinabad = Moḥṣen-ąbąd (محسن آباد), 120, head: Ġoląm Reżą

(25) Nâdirabad = Näder-ąbąd (= Minorsky 15?), 1100, head: ʿÄbdolląh Ḥosäini J̌äʿfäri

(26) Wenaredsch = Wenąreǰ (or perhaps ä in the last syllable, وارج , = Räzmąrą 17), 550

(27) Salafschigân, Salafchegan = Säläfčegąn (Persian script not found in Räzmąrą, Minorsky mentions on p. 436 "Säläfchegān"), 700

(28) Qarasuv = Qäré-Su (قره سو), 100?, head: Ebrąhim Xošąmädi

(29) Bâghyek, Baġ-e yek = Bąġ-e yäk? (Persian script not found in Räzmąrą), 120 (i.e., men?), head: Mortäżą Wäfąi

(30) Seft = Seft (سفت = Minorsky 2), 200, head: Ḥosäin

(31) Isbit, Ispit = ? (Persian script not found in Räzmąrą, = Minorsky 7?), 200, head: Ąġosé ("Āghossé"?)

(32) Tschâhâk, Çehâk = Čąhäk (چاهك , = Räzmąrą 4), 400, head: Näṣrolląh Päimi

(33) Mehr-e Zämin = Mehr-e Zämin (مهر زمین = Räzmąrą 15), 450, head: Hämid ("Hamit" ?)

(34) Dirmenik = Dermänek? (درمنك , to be pronounced as "dormonak" according to the indication in Latin script given by Räzmąrą), 100

Here is a list of villages which we did not visit but the population of which is, according to the people of villages nearby,

Khalaj. We include an estimated number of inhabitants and indicate the nearest village known to us (the number in parentheses refers to this list of villages). Our reasons for not having visited these villages were either lack of time, impassable muddy roads, proximity to villages already visited, or obscure location.

(35) Daghân = Dąǵąn? (Persian script not found in Räzmąrą), 700, 200 of which are Khalaj, close to Wenąreǰ (26)

(36) Ahmedabad = Äḥmäd-ąbąd (احمد آباد = Minorsky 4), number of inhabitants unknown, close to Seft (30)

(37) Sefidâle = Säfid-ąlé? (Persian script not found in Räzmąrą, = Minorsky 3), this village together with Äḥmäd-ąbąd (immediately above) may have 300 inhabitants, close to Seft (30)

(38) Muschäkiye = Mušäkeyé (موشکیه = Minorsky 8, Räzmąrą 14), 150, close to Ispit (31)

(39) Sararûd = Sär-e Rud? (Persian script not found in Räzmąrą, = Minorsky 9), number of inhabitants unknown, close to Xärrąb (4), on the way to Heząr-ąbąd or Rąz-ąbąd (8)

(40) Bachtsche Weswâr = Bąǵčé Weswąr? (Persian script not found in Räzmąrą), number of inhabitants unknown, close to Mušäkeyé (38)

(41) Tisgân = Zizgąn ? (Persian script not found in Räzmąrą), 600, head: Ḥosäin-e Bąbąi [information taken during the second expedition], close to Mouǰąn (2) and Dästgerd

(42) Schahqulu, also Schagallu = Šąh-qąlu (Persian script not found in Räzmąrą), number of inhabitants unknown, close to Qom (Qum)

(43) Qurqur = Qurqur, Qorqor? (Persian script not found in Räzmąrą), number of inhabitants unknown, close to Qäré-Su (28)

(44) Aliâbad = ʿÄli-ąbąd (علی آباد), 300? close to Xält-ąbąd (12)

(45) Dschalilabad = J̌älil-ąbąd (جلیل آباد), northern suburb of Xält-ąbąd (12)

(46) Husseinabad = Ḥosäin-ạbạd (حسین آباد ; the form of the name is obvious, for villages having this name are spread throughout Persia), only a few inhabitants, close to Qäré-Su (28)

There are altogether forty-six villages with a population of about 17,000 persons; twenty-six of the villages have been investigated linguistically (cf. Chapter 1, contents of the tape cassettes). We must assume that even more villages exist, because in Lists A and B we find names of villages not mentioned in List C. It may be that the names of some of the villages listed in Minorsky and Räzmạrạ should be canceled because the villagers do not speak Khalaj (as we have seen, in Dästgerd, Räzmạrạ 8, Khalaj was never spoken, or at least no longer is); other names may be canceled because some villages have double names or have changed their names (without special information we should not know, for instance, that Minorsky 10 = Räzmạrạ 18, see List C, 8). However, it remains possible that Lists A and B indicate accurately the existence of other villages with Khalaj population, e.g., Pougerd (Minorsky 21), situated far from the Khalaj villages which we visited (cf. the map).

Here is a short list of Khalaj villages not found in our List C: Minorsky 1, 5, 7(?), 15(?), 16, 17, 19, 21, 22, 23, 24, 25; Räzmạrạ 1, 2, 3, 5 (= Minorsky 23), 8 (?, very doubtful, cf. above), 9, 10, 11, 16. We know that Räzmạrạ 1, 9, 11 must be canceled, for our group visited these villages on the first expedition and found that the villagers do not speak Khalaj. On the second expedition (in March 1969) we found that Minorsky 21, 24 and Räzmạrạ 3 must also be canceled (because there only Azerbaijani is spoken). Even omitting all unclear indications these make eleven more Khalaj villages. This would mean that the total number of Khalaj villages is fifty-seven. Furthermore, we have to assume an unknown number of Khalaj villages in the Qashqai reg

3.2 Mixture of Khalaj with other language groups. Above all, the western part of Khalajistan is under a strong foreign (mostly Persian) influence, cf. Chapter 2. Here we will include some special notes about this influence. Xält-ạbạd (12) looks very Iranized. Ḥäsän-ạbạd (15) has one Khalaj family living together with a few Persian and Azerbaijani families. Sär-e bänd (17) has half Khalaj, half Persian population. Moḥsen-ạbạd (24) has half Khalaj, half Azerbaijani population. Wenạreǰ (26) has besides 500 Khalaj about 200 Persians. Mehr-e Zämin (33) has half Khalaj, half Azerbaijani population. Dạġạn (35) has only 200 Khalaj living among many Persians. ʿÄli-ạbạd (44), according to the information of the head of Xält-ạbạd, has only old people still speaking Khalaj. Dermänek (34) has a Persian majority, with only about 100 Khalaj.

The facts indicated above — that the Khalaj language is best preserved by women, that children have forgotten their mother tongue, that many Khalaj have emigrated to adjacent towns, that the teachers are Persian — show obviously that Khalaj is a dying language. Therefore more expeditions to this country are indispensable.

The strong foreign influence is reflected by the loanwords. The situation is as follows:

(a) The Persian local dialects have influenced Khalaj to a great extent; Azerbaijani has influenced it to a lesser extent.

(b) Azerbaijani has influenced both Khalaj and the Persian local dialects.

(c) Khalaj has influenced neither the Azerbaijani nor the Persian local dialects.

Concerning (a), compare my remarks in 1968. 107-8. The Persian influence is visible, for example, in the pronunciation [ạ] instead of [a] (whereas the Azerbaijani local dialect has preserved [a]); KhT. 26 Ǵạ̄ᵃš 'eyebrow' = Az. gạš, 47 KhT. tạ̄lạ̄q 'milt' =

Az. dalağ, etc. Both Azerbaijani and Khalaj have borrowed some (local) P. terms, such as KhT. 191 Kh. Az. kàm < local P. kàm, cf. Doerfer 1968. 94. But it seldom occurs that Azerbaijani borrows a Persian word in cases where Khalaj has an original Turkic word, as in KhT. 190 hà^ilàk 'sieve' <Tu. älgäk, but Az. qälbir <P. (which is, however, an older loan, not a recent one from a local dialect). On the other hand, it often occurs that only Azerbaijani has preserved the original Tu. term whereas Khalaj has borrowed a local P. loanword, e.g., 93 som 'hoof' <P. som (Az. sïrnaqx); 128 hynd^uvanä 'watermelon' < P. hendované (Az. garpuz); 157 a·sma·n 'heaven' (Az. göğ, göi); 86 xirs 'bear' <P. xers (Az. ayi), etc. See Chapter 10 for more examples.

Concerning (b), a good proof of the close contact of Khalaj and Azerbaijani are the two terms for affinity by marriage: 17 kyràkàn 'son-in-law' <Az. küräkän<Mo. kürägän; 19 qa^inarvady 'sister-in-law'<Az. gayïn-arvadï (Az. gayïn<Tu. qādïn, which, quite normally, has become qā^adyn in Kh., cf. KhT. 19, KhM., X. 57). It is well known that terms of relationship by marriage in particular are easily exchanged during contacts. See TM I. 296, 340: Mo. quda 'brother-in-law,' kürägän 'son-in-law' have become familiar in many Tu. dialects. Mo. qadum 'relative by marriage' surely is a loanword<Old Bolgar *qâdŏm (= Tu. qâdïn); also C. xuń is an old loanword from Tatar qayïn (<qâdïn), via the transitions qayïn>xayïn>xoyăn> xuyn>xuń (cf. Doerfer 1967. 64-5; this is the reason why we do not find the word in the expected form: *xurăm <*qâdăm). Finally this quotation from Puşcariu 1943. 351 is relevant: "Wenn [Rumanian] nevastă 'junge Frau, Ehefrau' slavischen Ursprungs ist, so stammt dieses Wort aller Wahrscheinlichkeit nach aus der Zeit, in der die Rumänen anfingen, sich mit Slavinnen zu verheiraten. Mi-am luat o nevastă bedeutete also anfänglich nicht 'ich habe mir eine Frau genommen', sondern 'ich habe mir eine nevastă, d.h. eine

slavische Frau, genommen'." To this the editor of the German version, H. Kuen, gives the following note: "So hat jedenfalls grödn. fotər 'Schwiegervater' (aus tirolisch-deutsch fotər 'Vater') zuerst den Vater der deutschen Frau des Grödners, und vgl. bertain, friaul. brut, westrätoroman. brüt, franz. bru 'Schwiegertochter' (aus german. *brūþi 'junge Frau') zuerst die junge germanische Frau des (romanischen) Sohnes bezeichnet, bevor sie die allgemeine Bedeutung angenommen haben." As to Ąšteyąni qąyenä, see below. We also find some other loanwords from Az., such as 250 kǫ̣k 'thick' < Az. kök (only in Az. Tu. kök 'root, basis' has taken the meaning 'thick'). For further examples see Doerfer 1968 and Chapter 5 of this work.

The Tu. loanwords in the local P. dialects never show a typically Khalaj form. These are Wa., Aš., Ka., Am., Za., Ga. (cf. Chapter 5); we also consulted Keyą 1335. We find three categories of Tu. loanwords in the local P. dialects (cf. the material in Doerfer 1968):

(a) Words which are found not only in the local P. dialects but also in the written language. They often seem to be not Azerbaijani, but to be derived from an earlier period (Chagatay, etc.).

(b) Words where the Kh. and the Az. forms are identical.

(c) Obviously Az. loanwords (but never obviously Kh. loanwords).

Here is a list of Tu. loanwords in the local P. dialects (extracted from Moġäddäm, cf. 5.2): 15 'bride' Ga. ąlen <gälin? (cf. TM III headword 1700); 18 'brother-in-law' Wa. bąǰąnąq, Ka. bąǰenąq (TM II. 682); 28 'nose' Ga. burnaq (← burun, with suffix); 74 'cat' Za. peši, 108 'owl' Wa. baⁱquš, Za. bąⁱqoš (TM II. 715); 126 'shrub' Wa. butä, Aš. Am. bottä, Za. bötä (TM III. 779); 151 'snow-rain' Am. ąlącärpo, Za. ąlącelpo; 179 'room' Wa. Aš. Ka. Za. oṭąq, Am. oṭąqx (TM II. 189); 192 'pot, kettle' Wa. qązänä, Aš. qezqąn, Am. qäzqõn, Za. qäzqąn (TM III. 1390); 200 'bed' Aš. Ka. došäk, Za. dušäk (TM II. 697);

213 'turn' Ga. qäti (TM III. 1373); 222 'collar' Wa. Aš. Ka. Za. yäxä, Am. yexä (TM IV. 1802); 244 'beautiful' Wa. Aš. Za. qäšäng (TM III. 1498); 250 'thick' Wa. kök; 272 'stale' Wa. Aš. Ka. Za. beyąt, Am. biyąt (known in P., erroneously omitted in TM); 285 'soft' Wa. Aš. Ka. Am. Za. yomušaq. Compare even 'frog' Wa. qorbąqe, Aš. qormąqe, Za. qurbąqä (TM III. 1449), not found in our list, and other words in Moġäddäm's book. Some of these words are obviously or presumably of Az. origin, such as 74 (rather = Az. pišik than = Kh. pušuq); 151 (a typical Az. word); 222 < Az. yäxä <yaxa, not <Kh. yaqqa; 250 kök 'thick,' a typically Az. change of meaning. I shall deal with the local Az. dialect in an article in a Širaliev-Festschrift (to appear in 1969).

Keyą 1335, too, has many Tu. words. Some of them are obviously Az., e.g., 122 qąyenä 'mother-in-law' (<Az. ġayïn, not <Kh. qą̄ᵃdun); qąyen bąwą 'father-in-law'; 128 qutu, qotu 'box' < local Az. ġutu (whereas in written P. we find only qūṭī, qūtī, cf. TM III. 1569).

On the whole, we see that Azerbaijani and the local Persian dialects show mutual influences, whereas Khalaj plays no active role; Khalaj, then, has been influenced by Azerbaijani and Persian but has not influenced either of these languages.

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Abbreviations

Am.: local Persian dialect of Ạmoré

Aš.: local Persian dialect of Ạšteyạn

ATu.: Ancient Turkic

Az.: Azerbaijani

C.: Chuvash

CTu.: Common Turkic (all Turkic languages except for Chuvash and sometimes Yakut and Tuvinian)

Ga.: local Persian dialect of Ġärbät

K.: al-Kāšġarī, according to Divânü lûğat-it-türk, ed. Besim Atalay I-III, 1140-3 (Ankara): volumes of Tercümesi

Ka.: local Persian dialect of Kähäk

Kh.: Khalaj

KhM.: Khalaj, dialect of Mänṣur-ạbạd (shorter: M.)

KhT.: Khalaj, dialect of Tälxạb (shorter: T.)

KhX.: Khalaj, dialect of Xält-ạbạd (shorter: X.)

Mo.: Mongolian

P.: Persian

PTu.: Proto-Turkic

QB: Qutadğu Bilig, according to Reşid Rahmeti Arat, Kutadgu Bilig I, 1967, Metin (Istanbul) and to Tekin 1967

RTu.: Runic Turkic

T.: Türkmän (Turkmen, Turcoman)

Tu.: Turkic

Tuv.: Tuvinian

Wa.: local Persian dialect of Wäfs

WOD.: Western Osman (Anatolian) dialect according to Korkmaz 1953

Y.: Yakut

Za.: local Persian dialect of Zänd

Grammatical signs

. before a nominal inflectional suffix

: before a verbal inflectional suffix

+ before a nominal derivational suffix

- before a verbal derivational suffix

5

MATERIALS OF THREE DIALECTS

5.1 Introduction. In this chapter we present the materials of three dialects: Tälxąb, Mänṣur-ąbąd, and Xält-ąbąd.

(a) A word list in the dialect of Tälxąb. Since material about KhT. had been published by Moġäddäm previous to our expedition, we thought it would be useful to ask our authorities to verify Moġäddäm's word list. As the reader will see, our list gives many corrections of Doerfer 1968, e.g., 74 pụšụq 'cat' (not pụšụk), 95 pụf^{i}läk 'urinary bladder' (not pufläk), 188 qąrġọ 'reed' (not qąrq), 218 ī^{e}m 'trousers' (not īm), etc. This dialect belongs to the northern group, having preserved ö, ü.

(b) A shorter word list of the dialects of Mänṣur-ąbąd and Xält-ąbąd. The first of these dialects belongs to the southern group, the second to the northern group (though ö, ü is not so fully labial as in KhT., but slightly delabialized. We indeed find many transitions in the Kh. dialects, but we did not think it useful always to write ọ^{6}, ụ^{6} in the KhX. material, especially as the delabialization is very slight). Tu. *kūn 'day,' for example, is kụn in KhT., kụn (or kụ^{6}n) in KhX., kịn in KhM. Northern dialects, that is, those which have preserved ö, ü (or which have delabialized these vowels slightly as in ọ^{6}, ụ^{6}, which are respectively ẹ^{5} ~ ị^{5}, ị^{5}, but not ẹ ~ ị, ị) are, apart from KhT. and X., those of Mehr-e Zämin and Ispit (but not, for example, those of Wąšqąn nor of Čąhäk). According to Minorsky, Kondurud also has preserved ö, ü (e.g., tört 'four,' yüz 'one hundred,' hürün 'white'); also Pougerd (e.g., hürün; but Xorąk-ąbąd has e, i, not only according to our material but even according to

Minorsky's: Kondurud has hatïmï hündüm 'I mounted my horse,' whereas Xorąk-ąbąd has hatï hindim 'I mounted the horse,' cf. 14.7, headword ûn-).

The following lists were compiled during the summer semester of 1968 by one of my classes. The members of this class were the members of the expedition plus one other participant, Mr. Parviz Radjabi, an instructor of Persian. We compiled the lists in the phonetic laboratory by listening to the tape cassettes and writing down and comparing what we heard. We checked our results again and again, so that for compiling only 541 words we had to work for a total of twenty-four hours.

5.2 Material of Tälxąb. For the etymologies cf. 14.6 and Doerfer 1968; the items enclosed in slashes (/ ... /) are less sure alternatives which our authorities identified as being Khalaj terms, but only after our investigators suggested them.

No.	Persian	German	English	KhT.	(Moġäddäm
1	pedär	Vater	father	baba, dàdà	(bąbą)
2	mądär	Mutter	mother	nànà	(nänä)
3	berądär	Bruder	brother	lala	(lälä)
4	xąhär	Schwester	sister	bą̄ǰu̯	(bąǰi)
5	pesär	Sohn	son	ǫġu̯l	(oqlan)
6	doxtär	Tochter	daughter	qī̤ʲz, pᵉīz	(qïz)
7	nävé	Enkel	grandchild	nàvà	(nävä)
8	nätiǰé	Urenkel	great grandchild	——	(nätiǰé)
9	bäčé	Kind	child	qą̄l	(kąl)
10	pedär-e bozorg	Großvater	grandfather	tą˙tą˙, bą˙bą˙	(tątą)
11	mądär-e bozorg	Großmutter	grandmother	àbà	(äbä)
12	märd	Mann	man	hàr	(här)

13	zän	Frau	woman	kịšị[5]	(kši)
14	šouhär	Gatte	husband	——	(här)
15	ʿärus	Braut	bride	kàlịn	(kälîn)
16	ʿärusi	Hochzeit	wedding	kụdàn	(kùdän)
17	dąmąd	Schwiegersohn	son-in-law	bàʌ̂, bàg, bàG /kụràkàn/	(kùräkän)
18	bąǰänäq, hämriš	Schwager	brother-in-law	bą̇ǰanax	(bąǰänąq)
19	ǰąri	Schwägerin	sister-in-law	qaʌ̂narvadụ, qą̄ᵃᵘdụn kịssị	(qäyn-ąrvą-di)
20	hävu	Frau desselben Mannes	wife of the same husband	——	(kùni)
21	pedär-e zän	Schwiegervater der Frau	wife's father-in-law	kịšị babasụ	(äbä)
22	madär-e zän	Schwiegermutter der Frau	wife's mother-in-law	——	(äbǟ)
23	sär	Kopf	head	bo̤ š	(boš)
24	čäšm	Auge	eye	kǫ̈[2]z	(kòz)
25	možé	Wimper	eyelash	mǫžä, kịprịk	(kiprik)
26	äbru	Braue	eyebrow	Ǫą̄ᵃᵘš	(qąš)
27	guš	Ohr	ear	Gụlą̄q, Gụlą̄qʿ	(quląq)
28	bini	Nase	nose	bụrụn	(burun)
29	läb	Lippe	lip	à̇ rịn/ànnẹ/	(änne)
30	kąm	Gaumen	palate	qą̄m	(kąm)
31	zäbąn	Zunge	tongue	tịl	(til)
32	dändąn	Zahn	tị̇ š	(tiš)
33	čąné	Kinn	čą̇ nà	(čänä)
34	riš	Bart	sàqqàl	(säqqäl)
35	säbil	Schnurrbart	sịbịl	(säbil)
36	mu	Flaum	tụ̄ʷ̈k,qịl	(tùk)
37	gis	Haar	sąč	(sąč)
38	zolf	Locke	bịʳčàk	(birčäk)

39	gärdän	Hals	neck	bọyụn	(boyun)
40	gälu	Kehle	throat	bọġụz	(boquz)
41	siné	Brustkorb	chest	tọ̄ö·š, Dọ̄ö·š	(tös)
42	pestạn	Busen	bosom	mämäk	(mämäk)
43	šekäm	Bauch	bellow	qạ·rụn	(qạron)
44	nạf	Nabel	navel	kụndụk	(köndük)
45	rudé	Darm	bowels	bọġạrsạ·q	(boqạrsạq)
46	ǰegär	Leber	liver	ǰịgär	(ǰegär)
47	seporz	Milz	milt, spleen	tạ̄lạ̄q	(tạlạq)
48	kämär	Taille	waist	bị̄·e l	(bil)
49	kir	Penis	penis	čụlụk	(čuč)
50	kos	Cunnus	cunnus	hạ̄ạm	(hạm)
51	kun	Anus	anus	kọt	(köt)
52	däst	Hand	hand	ä·l	(äl)
53	bạzu	Arm	arm	(cf. 223)	(qul)
54	ạrenǰ	Ellbogen	elbow	tị·rsäk	(tirsäg)
55	moč	Handgelenk	wrist	moč, mụrč, zụmrụq, ḋụmrụq	(moč)
56	ängost	Finger	finger	bạrmạq	(bạrmạq)
57	šäst	Daumen	thumb	šạ̄bạrmạq	(šạbạrmạq)
58	nạxon	Fingernagel	nail	tị2rnaq	(tirnạq)
59	pạ	Fuss	foot	hạdạq	(hạdạq)
60	rạn	Schenkel	thigh	bụ̄ut	(but)
61	zạnu	Knie	knee	tị̄z	(tiz)
62	sạq-e pạ	Unter-schenkel	shank	hạdạqị̃ ạ6sDọ /qịč/	(qič)
63	qạb-e pạ	Knöchel	ankle	tạ̄ạpạ̄n, tọpụq	(topoq)
64	ru-ye pạ	Spann	instep	hạdạqị̃ ịụzụ	(usdö)
65	käff-e pạ	Fusssohle	sole	hạdạqị̃ ạsDọ	(ạsdo)
66	pust	Haut	skin	tärị	(täre)
67	gušt	Fleisch	flesh	ät	(ät)
68	pih	Fett	fat	pị̄ /yạ·ġ/	(pih)

69	šąš	Urin	urine	sīdȧk	(sidäk)
70	goh, än	Exkrement	excrement	hąrq	(hąrq)
71	äsb	Pferd	horse	hąt	(hąt)
72	xär	Esel	donkey	ȧšGä	(äškä)
73	säg	Hund	dog	ị̄t	(it)
74	gorbé	Katze	cąt	pụšụq	(pùšùk)
75	muš	Maus	mouse	sị̣čg̱ą̄n [g̱ almost ġ]	(sičqąn)
76	gąv	Kuh	cow	sị̣ ġ̣ị̣ r	(sïqïr)
77	gusfänd	Hammel	wether	yị̣lqï	(yilqä)
78	miš	Schaf	sheep	Ꝗụ°n	(qun)
79	bärré	Lamm	lamb	bụzụ (sic!)	(quzû)
80	boz	Ziege	goat	ȧ^k^čị̣	(äče)
81	bozġ̣ą̄lé	Zicklein	kid	_____	(oqlą̄q)
82	ą̣hu	Gazelle	gazelle	ǰä^i^lą̣ n [-l- hardly understandable; may be r, d]	(ǰeyrąn)
83	xärguš	Hase	hare	tą̣vụšġ̣ą̣ n	(tą̣vušqą̣n)
84	xuk	Schwein	pig	tọ̣ṇg̱ụz	(dunquz)
85	gorg	Wolf	wolf	bị̄^e^rị̣	(bere)
86	xers	Bär	bear	xị̣rs	(xers)
87	rubą̣h	Fuchs	fox	tụ̈lkụ̈	(tùlkó)
88	šir	Löwe	lion	šị̄r	(šir)
89	bäbr	Tiger	tiger	bȧbr, pȧlȧṇG	(bäbr)
90	päläng	Leopard	leopard	palaṇG	(päläng)
91	päšm	Wolle	wool	yụṇ^k^	(yùnk)
92	dom	Schwanz	tail	qụd^u^rụq	(qudruq)
93	som	Huf	hoof	sọm, sụ̈m	(som)
94	pehen	Mist	dung, manure	pẹ̣ị̇n	(pehen)
95	šą̣šdą̣n	Harnblase	urinary bladder	pụ̈f^i^läk	(pufläk)
96	äfsą̣r	Halfter	halter	afsą̣r	(ą̣fsą̣r)

97	morġ	Huhn	hen	kịtʿịkʿ	(kitik)
98	xorus	Hahn	cock	xọrọ˙s	(xorus)
99	ǰuǰé	Küken	chicken	ǰụǰä, ǰịrịk, fàrịk [the first word means 'pullet'; the best word is said to be ǰịrịk]	(ǰirik)
100	käbutär	Taube	dove	kọ̄ˆ̈kàrčịk	(kùkạrčik)
101	käbk	Rebhuhn	partridge	qạ˙q˙ˆ̈lụq	(kạkuluk)
102	kälạġ	Rabe	raven	Ꞡạ̄ᵃq	(qạq)
103	gonǰešk	Spatz	sparrow	Ꞡụš	(quš)
104	sạr	Star	starling	qaraġạ˙ġ, sïġïrčïn, sïġïrčịġọ, sïġïrčịụọ	(sạr)
105	hodhod	Wiedehopf	hoopoe	hụpapaq	(hupạpạk)
106	bạl	Flügel	wing	qànàt	(pär)
107	pär	Vogelfeder	bird's feather	yàlàk/ pàr/	(yäläk)
108	ǰoġd, bum	Eule	owl	baʲġụš, baiᵃġụš	(bạyquš)
109	mägäs	Fliege	fly	quḍᵘġụ	(sičäk; mis print: must be mičäk)
110	päššé	Mücke	gnat	paššа	(päššé)
111	kerm	Wurm	worm	Ꞡụ̄ᵘt	(qurt)
112	mạr	Schlange	snake	yịlạ̄n	(ilạn)
113	deräxt	Baum	tree	hạġạč	(hạqạǰ)
114	čub	Holz	wood, timber	hạġạč	(hạqạǰ)
115	sib	Apfel	apple	ạ⁶lụmlạ	(älomlạ)
116	golạbi	Birne	pear	amrụ̄ᵘt	(ạmrut)
117	ạlu	Pflaume	plum	ạ˙lụ	(ạlu)
118	zärdạlu	Aprikose	apricot	àrịk	(ärik)
119	šäftạlu	Pfirsichart	a kind of peach	šäftạ˙lụ, hụlụ	(holu)

120	holu	Pfirsichart	a kind of peach	———	(holu)
121	ängur	Weintraube	grape	hụ̈dụ̈m [d̄ almost y, like -d- in Danish gade]	(hụ̈zụ̈m)
122	gerdu	Walnuss	walnut	yaġāq	(yạqạq)
123	fondoq	Haselnuss	hazelnut	fịndïq, fịndị^{4}q	(fondoq)
124	pesté	Pistazie	pistachio	pẹstä	(pesté)
125	bạdạm	Mandel	almond	gā^{a}dạ̄m (sic)	(gạdạm)
126	buté	Strauch	shrub	pụ˙ta	(bottä)
127	kạläk	Zuckermelone	sweet melon	qạ˙läk	(kạläk)
128	hendovạné	Wassermelone	watermelon	hụnd^{u}›vạnä	(hendovạné)
129	xeyạr	Gurke	cucumber	xịyạr	(xeyạr)
130	kädu	Kürbis	pumpkin	qụdụ	(kädu)
131	ǰuy	Bạch	rivulet	aĢĢạ˙r, aqĢ ạ˙r	(ạqạr)
132	kärt	Beet	bed (of a garden	qardụ	(kärdu)
133	estäxr	Teich	pond, pool	gȫ^{ö}l, gȫ^{ö}l	(gụ̈l)
134	xärmän	Schober	stack, rick	xarman	(xarman)
135	dạs	Sichel	sickle	hō̄ġraq^{c}, hō̄ġrax	(hurạq)
136	gạvạhän	Pflugschar	coulter	gạ˙vạiịn	(gạväyen)
137	čärx-e xärmänkub	Dreschgöpel	a kind of threshing machine	———	(čạn)
138	xiš	Pflug	plough	xịš /ạvǰạr/	(ạvǰạr)
139	yuġ	Joch	yoke	bụnd^{u}›rụq, bọ̄ndïrụq	(bundroq)
140	čärm-e yuġ	Jochleder	yoke leather	lā̄yụn /lā̄yịn/	(lạhin)

141	čähạr-šạx	Heugabel	pitchfork	yạ̄vašịn	(yạväšin)
142	xạk	Erdboden	ground, soil	tụrpạ̄q'	(turpạq)
143	säng-e bozorg, kämär	Fels	rock	tạ̄ᵃš	(tạš)
144	kuh	Berg	mountain	tạ̄ᵃġ	(tạq)
145	däšt	Steppe	steppe	dȧšt	(däšt)
146	ạb	Wasser	water	sụ·ᵛ, sụ·v	(su)
	täšné äm	ich bin durstig	I am thirsty	sụᵛsụzȧm	cf. 269
147	rudxạné	Fluss	river	čạ̄ᵃi	(čạy)
148	bärf	Schnee	snow	Ꝗạ̄ᵃr	(qạr)
149	bạrạn	Regen	rain	yạ⁶ġụš	(yạquš)
150	tägärg	Hagel	hail	tụᵒlọ	(tolo)
151	šolạb	Schneeregen	snow-rain	hạ·lȧčȧlpạᵍ, ạ·lȧčȧlpạᵍ	(ạläčärpo)
152	äbr	Wolke	cloud	bụlụt	(bolut)
153	bạd	Wind	wind	yẹ·l	(yel)
154	ạtäš	Feuer	fire	hụ̄ᵒt	(hot)
155	ạhän	Eisen	iron	tȧmịr	(tämer)
156	mes	Kupfer	copper	mịs	(mes)
157	ạsmạn	Himmel	heaven	ạ·smạ·n /kọ̄ọ̄k/	(ạsmạn)
158	xoršid	Sonne	sun	kụn	(kụn)
159	mạh	Mond	moon	hạ̄ᵃi	(hạy)
160	mähtạb	Mondschein	moonshine	hạ̄ᵃi ịšqị⁴	(hạy išekä
161	setạré	Stern	star	yụldụZ	(yuldus)
162	ruz	Tag	day	kụn /kụndụz/	(kụndụz)
163	šäb	Nacht	night	kị̄ᵉčä	(kečä)
164	sạl	Jahr	year	yịl, ịil	(yil)
165	emruz	heute	today	bẹ́iin	(boyn)
166	diruz	gestern	yesterday	ȧ́ngịr	(ängir)
167	dišäb	gestern Nacht	last night	ȧ́ngịr kị̄ᵉčä	(ängir keč

168	färdą	morgen	tomorrow	sębę	(sebe)
169	pąrsąl	letztes Jahr	last year	bı̨́ldı̨r	(bildir)
	sąl-e digär	nächstes Jahr	next year	yę̨ı̨ngı̨	———
170	säfidé-ye ṣobḥ	Morgenröte	dawn	ṭę̄zdä	(sebe tezdä)
171	ẓohr	Mittag	midday	čąšt	(čąšt)
172	ʿäṣr, ġorub	Abend	evening	kụn bątàr	(ʿäṣr, ġorub)
173	šärq	Osten	east	kụn čąlàr	(kụnčąląr)
174	ġärb	Westen	west	kụn bątàr	(kụnbątąr)
175	šemąl	Norden	north	qọllı̨ṣı̨yą̄ˑ	(kolessiyą)
176	ǰänub	Süden	south	qı̨ˑ[4]blä	(qeblä)
177	xąné	Haus	house	hàv	(häw)
178	ḥäyąṭ, ḥeṣąr	umfriedeter Hof	patio	hàsąˑr	(häsąr)
179	oṭąq	Zimmer	room	ọtaĠ	(oṭąq)
180	där	Tür	door	ī[e]ˑšı̨k	(išik)
181	diwąr	Mauer, Wand	wall	dụvąˑr	(duụąr)
182	pänǰäré	Fenster	window	pänǰàrä	(pänǰäré)
183	surąx	Loch	hole	tọ̈plụ̈k	(tòblik)
184	pošt-e bąm	Dach	roof	dą̄[a]m ı̨stụ̈	(dąm)
185	pelläkąn	Leiter	ladder	pàläkąˑn	(päläkąn)
186	ḥouż	Bassin	basin, pool	haụụz	(ḥäuż)
187	lulé	Röhre	tube,pipe	lụˑlä	(lulä)
188	näy	Schilfrohr	reed	qąrġọ	(qąrq)
189	ląnǰin	Tontrog	earthen trough	nąˑnǰı̨ˑn (sic)	(ląnǰin)
190	ġärbąl	Sieb	sieve	hà[i]làk	(häyläk)
191	kàm	Siebrand	wooden border of the sieve	kàm	(käm)
192	dig	Topf, Kessel	pot, kettle	ą̄šbà? [last consonant hardly understandable; may be č or x̄] yę̨kàlàk	(qązqąn)

193	dizi	Kochtopf	cooking pot	čǫ̈lmȧk	(čȕlmäk)
194	sepąyé	Dreifuss	tripod	ȧštȧdą˙q	(äštädąq)
195	oǰąq	Herd	hearth	hū^{o}čąq (sic)	(hučaq)
196	kuré	Ofen	stove	kụ˙rä	(kuré)
197	tänur	Backofen	oven	tụnnụ˙r	(tänur)
198	xąkestär	Asche	ash	kụ̈l	(kȕl)
199	čerąġ	Lampe	lamp	čịrąġ	(čerąġ)
200	došäk, tušäk	Bett	bed	dǫ̣šȧk	(tȕšäk)
201	leḥąf	Decke	blanket	yǫrġą̄n	(yorqąn)
202	bąleš	Kissen	cushion	yą˙sDụq	(yąsdoq)
203	nämäd	Filz	felt	käčä	(käčä)
204	gelim	Teppich	carpet	gịlị˙m	(gelim)
205	ǰąru	Besen	besom	sụ̈pụ̈rǵä	(sȯpȕrgä)
206	nąn	Brot	bread	hịkmȧk	(hikmäk)
207	nämäk	Salz	salt	tū^{u}˙Z	(tuz)
208	ąš	Suppe	soup	ą̄š	(ąš)
209	šir	Milch	milk	sṻ^{ü}˙t	(sȕt)
210	xąmé	Rahm	cream	xą˙matǫ, qą̄^{a}naq (šir-e poxté')	(xąmätu, qąnäq)
211	käré	Rahmbutter	cream butter	———	(kärä)
212	pänir	Käse	cheese	pẹnị˙r	(penir)
213	mąst	saure Milch	sour milk	qątụq	(qątoq)
214	käšg	Trockenmilch	dried milk	tụ̄^{o}˙rąq (sic)	(torąq)
215	räxt	Kleidung	clothing	kȧsịk	(käsik)
216	qäbą	langes Männergewand	long clothes of men	kȧsịk /a^{r}xąlụq, arqąlụq/	(ąrxąloq)
217	pirąhän	Hemd	shirt	tụ̄^{o}n	(toụn)
218	ǰälvąr	Hose	trousers	ī^{e}˙m	(im)
219	ǰourąb	Strumpf	stocking	ǰǫ˙rą˙b	(ǰourąb)
220	koląh	Hut	hat	bǫ̈^{ö}˙k	(bȕrk)

221	käfš	Schuh	shoe	ṵrsṵq, ḥaḍaq qāᵃbo	(ḥaḍaqqabo)
222	yäqé	Kragen	collar	yaqqa	(yäxä)
223	astin	Ärmel	sleeve	quᵒl	(qul)
224	damän	Saum	seam	hàtàk	(hätäk)
225	astär	Futter	lining	astàr	(astär)
226	näx	Faden	thread	bīᵉšⁱmi	(boyšimä)
227	risman	Schnur	cord	qatma	(yiplik)
228	tänab	Seil	rope	tàna·f, tàna·B	(tänaf)
229	tišé	Beil	hatchet	kàsàr	(käsär)
230	ärré	Säge	saw	harra	(harra)
231	mätté	Bohrer	drill, borer	mättä, miyä	(miyä)
232	täxté	Brett	plank	taxDa	(täxté)
233	tišé-ye xar-käni	Axt	axe	tavarčuqʿ	(tavarčuk)
234	malé	Kelle, Spatel	ladle, trowel	ma·la	(malé)
235	bil	Schaufel	shovel	biᵉl	(bil)
236	xešt	Ziegel	brick	xišt	(xešt)
237	paru	Ruder	kürǵàk, küryàk		(kürgäk)
238	xub	gut	good	havul	(havol)
	xub nist	ist nicht gut	is not good	havul daᶜ6ġ	———
239	bäd	schlecht	bad	———	(pis)
240	rast	gerade	straight	toġru	(rast)
241	käǰ	krumm	crooked	äyri	(käǰ)
242	roušän	hell	bright	i⁴ši⁴q	(išiq)
243	tarik	dunkel	dark	qarãlux	(qaraloq)
244	xušgel	schön	beautiful	qàšàṇG	(qäšäng)
245	zešt	hässlich	ugly	pīs	(pis)
246	när	männlich	male	hi·rkàk	(hirkäk)
247	madé	weiblich	female	tišì	(tišé)
248	pir	alt	old	———	(qarri)

249	ǰävạn	jung	young	ǰävạ˙n /ǰạ˙hịl, ǰạ˙ịol/	(igit)
250	čạq	dick	thick	kọ̈k	(kȯk)
251	lạġär	dünn	thin	harqạ̄n, ịdbạ˙r	(hạrqạn)
252	kučäk	klein	small	balla	(bạllạ)
253	bozorg	gross	big	bidik, yäkGä [hardly understandable]	(yekgä)
254	säbok	leicht	light	yụ̈ngụ̈l	(yụ̈ngụ̈l)
255	sängin	schwer	heavy	qụ^{r}s	(qurs)
256	tär	feucht	wet	họ̈^{ö}·l	(hȯl)
257	xošg	trocken	dry	qụrrụġ	(qurruq)
258	tiz	scharf	sharp	tụnt, yịtDị	(yitti)
259	kond	stumpf	blunt	kụnt, kụ̈nt, kọnt	(kond)
260	derạz	lang	long	ụzạ̄q	(uzạq)
261	kutạh	kurz	short	qïsqȧ	(qïsqä)
262	bạrik	schmal	narrow, thin	nạ˙zụq /hȧnsịz [said to be Az. by an authority]/	(häniz)
263	pähn	breit	broad	hȧnlị^{Ġ}	(hänlix)
264	täng	eng	narrow, tight	tạ̄^{a}r	(tạr)
265	dur	fern	far	?ịrạ̄q [anlaut hardly understandable]	(yirạq)
266	näzdik	nah	near	yọġụq	(yuvoq)
267	sir	satt	satisfied, having eaten one's fill	tọx, tọq	(toq)
268	gorosné	hungrig	hungry	ạ̄^{a}č	(ạǰ)
269	täšné	durstig	thirsty	sụ˙^{v}sụz	(susus)
270	tạzé	frisch, neu	fresh, new	tạ˙zä	(tạzé)

271	kohné	alt	old	kọ˙na	(kohné)
272	beyạt	altbacken	stale	bẹyāt	(beyạt)
273	sur	salzig	salty	šọ˙r, hā^{a}čụx	(hạčöx)
274	širin	süss	sweet	šịrịn	(širin)
275	čärb	fett	fat	yā^{a}ġlụx	(yạqlo)
276	tälx	bitter	bitter	hā^{a}čụx	(hạčöx)
277	tond	gewürzt, scharf	bitingly seasoned	tụnt	(tond)
278	torš	sauer	sour, acid	tụ^{r}š, tụš	(turš)
279	särd	kalt	cold	bū˙^{u}z	(buz)
280	gärm	warm	warm	hịssị^{y}	(hisdi)
281	xonok	kühl	cool	sàrịn, bū˙^{u}z	(xonok)
282	säxt	hart	hard	sọụụq	(säxt)
283	seft	stark	strong	bàk	(bärk)
284	šel	schwach	weak	čọlạq	(boš)
285	närm	weich	soft	narm /yụm^{u}šạq/	(yomušạq)
286	por	voll	full	tụ^{o}la	(tolạ)
287	ǰelou	vorn	before	yịlǵàr [ǵ spoken almost as y]	(ilgär)
288	ʿäqäb	hinten	after	hạ˙ġạ	(hạqạ)
289	säfid	weiss	white	hụ̀rụ̀n	(hùrùn)
290	seyạh	schwarz	black	Ꞡạra	(ạrạ)
291	zärd	gelb	yellow	sā^{a}rụx	(sạrox)
292	säbz	grün	green	yā^{a}šụl	(kùk)
293	ạbi	hellblau	light-blue	———	(ạbi)
294	käbud	blau	blue	kū̄^{ö}˙k (cf. 157)	(gùy)
295	sorx	rot	red	Ꞡị^{4}rmìzị^{4}	(qìrmìz)
296	benäfš	lila	violet	bàna^{f}š	(benäfš)
297	bạlạ	oben	above	kō̄^{ö}˙k, ụǰạ /yọqqạr/	(yoqqạr)
298	pạʾin	unten	beneath	ī^{e}˙nä	(enä)

299	yäk	eins	one	bī
300	du	zwei	two	àkkü
301	se	drei	three	ǖš
302	čähar	vier	four	tȫ·rt
303	pänǰ	fünf	five	bī·eš
304	šäš	sechs	six	altą
305	häft	sieben	seven	yätti
306	häšt	acht	säkkiz	
307	noh	neun	nine	toqquz
308	däh	zehn	ten	uo·n
309	yązdäh	elf	eleven	on bī
310	bist	zwanzig	twenty	yiirmi
311	si	dreissig	thirty	hotDuz
312	čehel	vierzig	forty	qi·4rq
313	pänǰąh	fünfzig	fifty	àlliy
314	šäst	sechzig	sixty	altmuš
315	häftąd	siebzig	seventy	yätmiš
316	häštąd	achtzig	eighty	hàštą·d, seisàn [hardly understandable; may be sexsàn]
317	näväd	neunzig	ninety	nàvàd, Doxsan
318	säd	hundert	a hundred	yüz
319	häzar	tausend	a thousand	min

5.3 Materials of Mänsur-ąbąd and Xält-ąbąd.

No.	Persian	English	Mänsur-ąbąd	Xält-ąbąd
1	seyąh	black	Qąra	———
2	boz	goat	àčči	àkk'ü
3	däst	hand	à·l	àl
4	sib	apple	ą6lumlą	ą6lomlą
5	diruz	yesterday	à'ngir	à'ngür
	dišäb	last night	à'ngir kī·ečä	à'ngür kī·ečä

6	läb	lip	à·rin	làb, lo^{u}
7	bud	it was	———	———
8	äsb	horse	hạt	hạt
	xär	donkey	àšGä———	àškä, àšGä
9	sepạyé	tripod	àštàdạq	àštädạq
10	xodạ	God	xụdạ	———
11	gorg	wolf	bī^{e}ri^{1}	bī·ri^{1}
12	kämär	waist	bī^{e}·l	kàmàrbànd /bī^{e}·l/
13	rudé	bowels	bọġạrsụq	ru·dạ
14	gärdän	neck	bọġụZ	bọġzụm, bọġụz
15	sär	head	bạ·š	bạ·š
16	emruz	today	bé̯iin	bü̯i^{ü}·n
17	näx	thread	bī^{e}·šmi	bē^{i}š·mi
18	kolạh	hat	bi·riàk	biriäk
19	xub nist	is not good	hạ^{6}vụl dạġ	hạvụl dạġ
20	tälx	bitter	hā^{a}čụ^{q}x	zà·r (<P. zähr) [in the discussion we heard hā^{a}či^{q}x dạġ, širiṇ är]
21	deräxt	tree	hạġạč	diräxt/hạġạč, hü^{o}tụn [the last word explained as čub 'wood']
22	pạ	foot	hạdạG	———
23	lạġär	meager, slack	idbạ·r	idbạ·r, lạ·ġär
24	ärré	saw	hạrrạ	àrrä
25	äsp	horse	———	hạt
26	xub	good	hạvụl	hạvụl
27	goftän	to say	hạ·^{i}d^{u}lạ^{6}r	hạ^{i}maq (sic)
28	bạrik	narrow	nạ·zụq	nạ·zụq [hànsiz explained as ụzā̆q dạġ 'not long']
29	pähn	broad	kī^{e}·n^{k} /hànli^{g}x/	———
30	xạné	house	hàv	hö^{ü}
31	ġärbạl	sieve	hàlyäk´	hä^{i}làk

32	sạxtän	to make	ī·ettilä[1]r, ī·etiräk	———
33	nạn	bread	hịk'mäk'	hịkmạk
34	gärm	warm	hịssị	hịssị[g]
35	ạtäš	fire	hū·ot	hū·ot
36	tär	wet	hī·el	hī·el
37	oǰạq	hearth	hū·očạ·q	kạlạk
38	dạs	sickle	dạsgạlä	dạsgạlä, dạsgạlä[5]
39	säfid	white	hịrịn	hụrụn
40	ǰelou	before	ịlyä[1]r	ị[1]lgär
41	där	door	ī·ešịk	ī·ešịk
42	ferestạdän	to send	sịrd·ilä[1]r	yọ·llạ[6]maq /sụrmạk/
43	šälvạr	trousers	ī·em	ī·em
44	bäčé	child	qạ̄l	qạ̄l
45	nämäd	felt	———	———
46	ʿärus	bride	kạlịn (and kịdạịi 'bridegroom')	kạlụn
47	šäb	night	kī·ečä	kī·ečä
48	nạf	navel	kịndịkʿ	kụndụk
49	čäšm	eye	kị[1]z	kọz
50	suxtän	to burn	kị·endị	kọ·nmäk
51	säbz	green	kī·ek	kọ̄·ök
52	xoršid	sun	kịn	kụn
53	pạru	oar	kịryäk	pạ·rọ
54	ʿärusi	wedding	kịdạn	kụdạn
55	käbutär	dove	gạ[5]uạ[r]čịn [?, almost gạlạ[r]k'ịn]	kạftạr
56	zän	woman	kịšị (and hạr 'man')	kịšị
57		affinity by marriage		
	pedär-e zän	husband's father-in-law	kịšịm dạdạsị	kịšị babasi

	mạdär-e zän	husband's mother-in-law	qā̰ᵃdịn ȧbȧ	qā̰ᵃdïn ȧbȧ, qā̰ᵃdụn ȧbȧ
	berạdär-e zän	husband's brother-in-law	qā̰ᵃdụn	kịšị lalasï
	xạhär-e zän	husband's sister-in-law	———	kịšị dȧdȧsị
	pedär-e šouhär	wife's father-in-law	———	hȧrị babasï
	mạdär-e šouhär	wife's mother-in-law	———	qā̰ᵃdïn bạbạ
	berạdär-e šouhär	wife's brother-in-law	———	qā̰ᵃdïn hȧrịm
	xạhär-e šouhär	wife's sister-in-law	———	———
58	deräxt-e bozorg	big tree	bịdịk hạġạč	———
59	ẓolm	angry	bȧdịẹtmä, ạzậˑb	———
60	kodạm	which	qā̰ᵃnị	qā̰ᵃnị
61	zạmé	cream	xạˑmȧtụ, ~~qā̰ᵃ-~~naq [for the last word ru-ye šir was also given, as was sīlt 'milk']	xạˑmȧtụ, qā̰ᵃnaq
62	šekäm	bellow	qạˑrụn	qạˑrïn
63	pir	old	qạrrị	———
64	sạq-e pạ	shank	mụ ʳč	———
65	doxtär	daughter	qī̤ ⁴z	———
66	kutạh	short	qụlạ (cf. 90)	———
67	dom	tail	qụrdụq	dọm [another person interferes: qụrdụq]
68	bạzu	arm	qọl	qọˑl
69	guš	ear	qụlạq	qọlā̰qʿ
70	miš	sheep	qọn	qọˑn
71	xošg	dry	qụrrụġ	qụrrụġ
72	gonǰešk	sparrow	Ꞡụš	Ꞡụš

73	zärd	yellow	čạqụr	sā^{a}rọ^{ġ}, sāroǧ
74	mägäs	fly	qụdġị^{4}	màgàs
75	šạš	urine	sị˙ däk	sị˙ däk
76	muš	mouse	sịčġāạn	sị^{4}čġāạn
77	gạv	cow	sị^{4}ġị^{4}r	sïgïr
78	ạb	water	sụ˙v	sụ̄
79	kuh	mountain	tàBà	tāạ^{a}ġ
80	täng	narrow	tāạ^{a}r	tāạ^{a}r
81	xärguš	hare	tọvụšġāạn	tọ^^{u}ụšġāạn
82	zäbạn	tongue	tị˙l	tị̣l
83	käšg	dried milk	tụ^{o}˙rạ˙q	tụ^{o}˙rạ˙q
84	pirạhän	shirt	tụ̄^{o}˙n	tụ̄^{o}˙n
85	siné	chest	k^ẹ^{i}^^{i} [hardly understandable]	tọ̈˙ụ̈š
86	xạb räftän	to (go to) sleep	yāạtma	yạtmïš, ụ̄čạ, ụ̄qạ ƀạrmị̣š
87	piyạdé	on foot	ī˙^{e}nà^{k}	———
	sävạr šodän	to mount	hīnàk	———
88	gärdu	nut	yọġạ˙q	yaġạ˙q
89	sạl	year	yị˙l	yị˙l
	emsạl	this year	———	bụ̄ị̣l
	sạl-e digär	next year	———	kàlàn yị̣l
	sạl-e goẓäšté	last year	———	kàšgülị̣ (? kà^{t}šgülị̣) ị̣l, büldür
90	dur	far	hịrāq	türkä^{r} [? 'is far'], yịrāq
	näzdik	near	qọlạ^{i}^ (cf. 66)	yọ˙^{u}q
91	yäk	one	bị̄	bị̄
92	do	two	àkkị̣	àkkị̣
93	se	three	ị̄č	ụ̄š
94	čähạr	four	tị̄˙^{e}rt	tọ̈˙^{ö}rt
95	pänǰ	five	bị̄˙^{e}š	bị̄˙^{e}š

96	šäš	six	ạltạ, ạ^{6}ltạ	ạltạ
97	häft	seven	yätti	yätti
98	häšt	eight	säkkiz	säkkiz
99	noh	nine	toqquz	toqquz
100	däh	ten	ūon	o·n, ^{o}ōn
101	yạzdäh	eleven	o^{2}·n bī	on bī
102	bist	twenty	yī^{i}·rmi	yigirmi
103	si	thirty	hottuz	hottuz
104	cĕhel	forty	qi^{4}rq	qirq
105	pänǰạh	fifty	ạ́lli	ạllí^{g}
106	šäst	sixty	ạ^{1}tmiš	ạltmiš /ạkk^{i}-ottuz/
107	häftạd	seventy	yätmiš	hạftạ·d /ạkk^{i}-ottuz-o·n/
108	häštạd	eighty	sa^{i}san	hạštạ·d
109	näväd	ninety	to^{q}xsan	nạvạd
110	säd	a hundred	yi·z	yüz
111	häzạr	a thousand	min^{k}	———

This list includes, of course, the mistakes so typical of first investigations of languages. For example, KhT. 63 tạ̄^{a}pạ̄n presumably is not 'ankle' but 'sole'; KhT. 65 hạdạqī ạsDo presumably is not 'sole' but 'shank'; KhT. 184 dạ̄^{a}m istü presumably is not 'roof but 'on the roof' or 'the upper side of the roof'; KhT. 284 čolạq presumably is not 'weak' but 'cripple'; KhX. 14 boġzum is not 'neck' but 'my neck' or even 'my throat'; KhX. 57 seems to contain many misunderstandings; KhX. 86 ūčạ is not 'to sleep' or 'to go to sleep' but 'in sleep, during sleep'.

6
MOġÄDDÄM'S MATERIAL

On the following facsimile pages we publish Moġäddäm's Khalaj material (only this, not the whole book), since it can be obtained only with difficulty, yet will always have some historical value in the development of our knowledge of Khalaj. For the transcription, (German) translation, etc., cf. Doerfer 1968. We omitted the list of misprints, because it contains very few Khalaj corrections, already noted and considered in Doerfer 1968. We have rendered: (1) Moġäddäm's remarks about his stay among the Khalaj (p. 22); (2) Moġäddäm's explanation of his transcription and the dictionary itself (pp. 25-92; we do not include the whole dictionary, which continues giving verbs up to p. 108, but here Moġäddäm's record of Khalaj words has stopped); (3) Moġäddäm's remarks about the difference between Azerbaijani and Khalaj (pp. 152-156).

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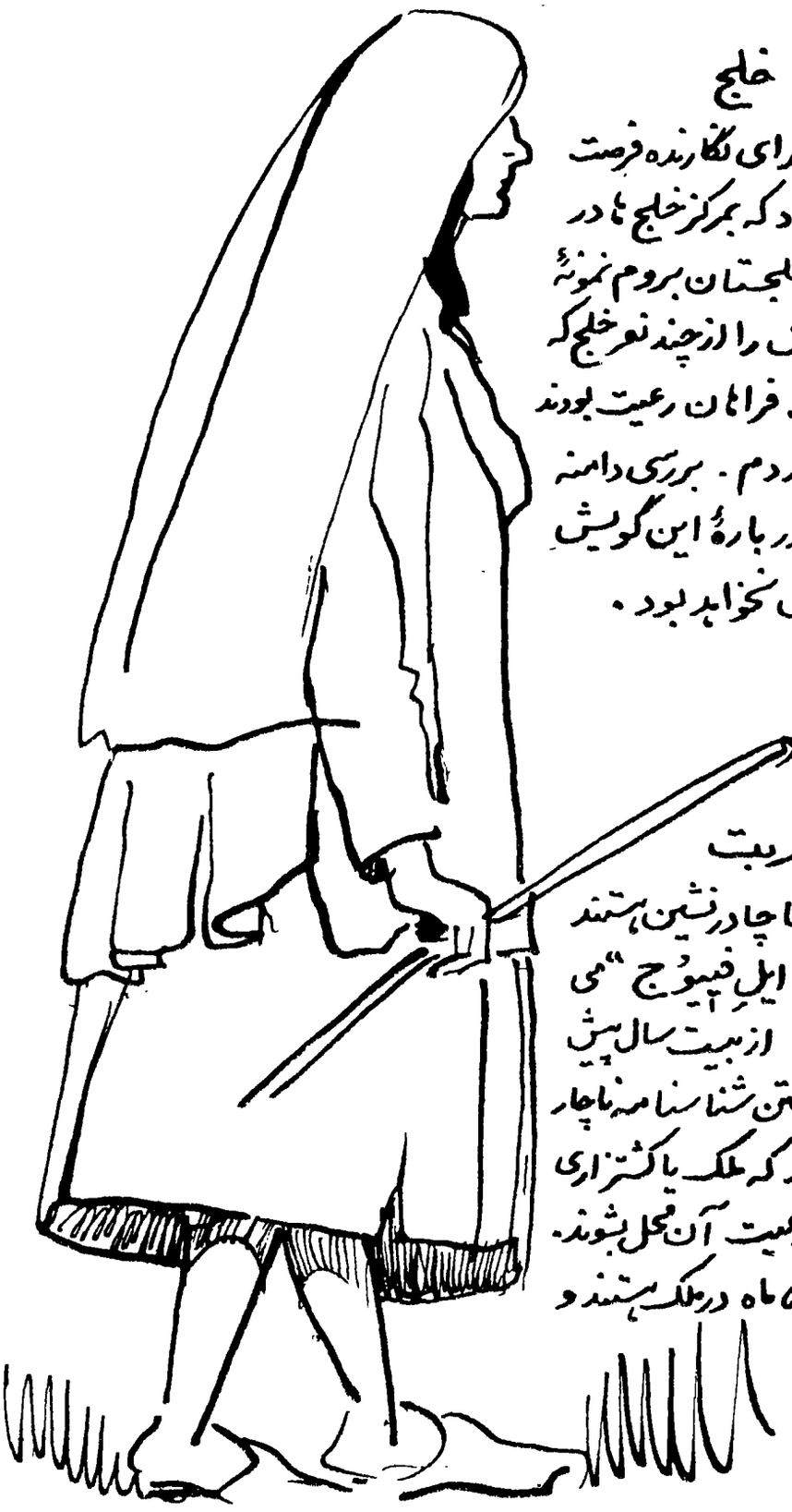


خلج

چون برای نگارنده فرصت دست نداد که بمرکز خلج ها در قاصی خلجستان بروم نمونهٔ این گویش را از چند نفر خلج که در تلخاب فراهان رعیت بودند بدست آوردم. بررسی دامنه دارتری در بارهٔ این گویش بی ارزش نخواهد بود.

غربت

غربتها چادرنشین هستند وخودرا "ایل فیوج" می خوانند. از بیست سال پیش برای گرفتن شناسنامه ناچار شده اند که ملک یا کشتزاری بخرند و رعیت آن محل بشوند. اکنون ۵ ماه در ملک هستند و

هفت ماه دوره گردی
میکنند. غربتها بمردم دیگر
دختر نمیدهند ولی از دیگران
زن میگیرند. دسته ای که
به آنها در خنجین برخوردیم
۱۲ خانوار بودند و اصل
خود را از شیراز میدانستند.
مرکز آنها در اُشُف در
بلوک چَرّا (یا شَرّا) میان
همدان و اراک است.
غربتها در ایران بنامهای
گوناگون شناخته میشوند.
در بیشتر جاها آنها را کولی یا
غربیل بند یا قِرِشمال مینامند.
در مازندران آنها را جوکی
و در شیراز غربتو و لولی
میخوانند.
لولیان در سراسر جهان
به خنیاگری شهرت دارند.
(حتی لیست Liszt موزیک
ملی مجار را از اصل لولی میداند)
از اینرو در برخی جاها آنها را
چنگی و چنگیان و چنگنه یا

چگانه (چغانه ؟) مینامند. در ترکیه و یونان بهمین نام خوانده میشوند و این واژه بصورتهای Tsigane و Atzigan و Czigany و Zigeuner و Zingari به کشورهای بالکان و مجارستان و آلمان و ایتالیا و فرانسه رفته است. (کولیها در اروپا خود را رُم میخوانند.) بررسیهائی که در اروپا انجام گرفته بستگی گویش کولیهای اروپا را با گویشهای هندی آشکار ساخته است.

کار کولیها در اروپا مانند ایران غربیل بندی و بافتن توری و دام و آهنگری و مسگری است و زنان کولی برای جادو و سحر و کف بینی شهرت دارند.

کولی های ایران دیگرانرا "تاتای" میخوانند و بگفتهٔ دُمرگان جوکیهای استراباد دیگرانرا "مُنِش" مینامند.

چند نشانه که در جدول واژه ها بکار رفته

= بجای واژه در ستون هر گویش نشان میدهد که در آن گویش همان واژهٔ فارسی را بکار میبرند.

X بجای واژه در ستون هر گویش نشان میدهد که آن واژه را در آن گویش ندارند و بکار نمیبرند.

— بجای واژه در ستون هر گویش نشان میدهد که آن واژه در آن گویش پرسیده نشده است.

رقم های پیش از واژه های فارسی در هر ردیف نشان میدهد که آن واژه در "واژه نامهٔ طبری" (شمارهٔ ۹ ایران کوده) آمده و خواننده باید به آن شماره در "واژه نامهٔ طبری" برگردد.

نشانه هائی که درجدول واژه ها بکار رفته

کخ میان ک و خ خوانده شود. (درگویش آمره شنیده میشود.)

قخ میان ق و خ خوانده شود. (درگویش آمره و ترکی شنیده میشود.)

ق مانند ق (=غ) فارسی خوانده شود.

غ فقط درگویش ترکی بکار رفته وصدای آن به و نزدیک میشود.

چ میان ج و چ خوانده شود. (درگویش آمره شنیده میشود.)

و مانند و کردی وعربی ودرفارسی در "جو" و "نو". (س روی حرف مانند فارسی خوانده شود.)

زبر (اَ) و زیر (اِ) وپیش (اُ) مانند فارسی خوانده شود. نشانهٔ پیش (و) هرگاه زیر حرف باشد (اِو) اُخوانده شود با میل بسوی اِ (مانند ö آلمانی).

آ (اول) و ا (آخر) کشیده ومانند فارسی (آب - با) خوانده شود.
ا (آخر) همان صوت است کشیده ولی بُریده ودرگویش ترکی شنیده میشود

اِ اِ ی کشیده ومانند فارسی (بی - نیز) خوانده شود. ی ی ی همان صوت است کشیده ولی بریده و درگویش ترکی شنیده میشود.

وُ سوُ کشیده ومانند فارسی (او - بو) خوانده شود. وِ سوِ همان صوت کشیده است با میل بسوی زیر (مانند ü آلمانی).

آُ مانند آ فارسی کشیده ولی باکمی غنّه ومیل بسوی اُ خوانده شود.

خط — روی صوت نشانهٔ اینست که روی آن صوت باید درنگ بیشتری بشود.

حرفها ونشانه های دیگر مانند فارسی خوانده شود.

		دفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۱۹۰.	پدر	بُوَ (باد)	پُوا / شُوُوَ	پِپَ	شِپَ	بُوَ	بُهانگ	بابا	دَدَ
۷۰۷.	مادر	نَنَ	نِنَ / نا	مُو	نا	نَنَ	ناقِس	نَنَ	نَنَ
۱۰۵.	برادر	بِرا	بِرا / آق	بِرا	بِرا	بِرا	بِرانگ	لَل	قارداش
۳۲۳.	خواهر	خاک	خوُواک	خاک	خوُواخ	خوُوَشک	خاهانگ	باجی	باجی
۳۹۸.	پسر	لاز / لیل	پوُر / لاز / پوُر	لیل / پوُر	پوُر	کُر	پُتر	اُغلان	اُغلان
۳۴۰ و ۶۳۱.	دختر	کِل	دِت	دِت	دِنگ	دوُوَت	دیهِر	قیز	قِز
	نوه		رُوُوَزا	رُوُوَزا	نَوَ	—	نَوَ	×	نَوَ	نِوَ
	نتیجه		رُوُوَزاوَزا	رُوُوَنِد	=	—	—	×	=	=

۷۸۰.	بچه	زارۆ	لاۆک	رَندَ	رۆوَندَ	چقِلَ	جادَ	کال	اوشاق
۶۳۹.	پدربزرگ	باپۆرَ	بابا ژان / بابا مسدر	پپی مسدر	پپی مسدر	بۆگۆرَ	بهانگ بهانگ	تاتا	بابا
۱۵۲.	مادربزرگ	خان‌نَنَ	نَنِ ژان / نَنِ مسدر	نامامسدر	نامسدر	دای	ناقپِ ناقپِ	اَبَ	خانَ
۵۰۸.	عمو	آمۆ	آمۆ	آمۆ	آمۆ	اَمۆ	لامۆ	—	اَمِ
۱۶۴.	عمه	اَمَّ	اَمِّ	اَمَ	اَمَّ	پپی	X	—	اَمَّ / بی بی
۵۴۳.	دائی	دای	دائی	دائی	دای	خالۆ	X	—	دائی
۷۱۶.	خاله	لالِ / دِیزِ	خالک	خالک	خۆیاخِما	پپی	لاخَ	—	خالَ
۷۱۸.	مَرد	مِرۆَ	مِرۆَ (مِرۆ)	مِیرۆِ	مِرۆَ	پیاک	مک	هرَ	کیشی
۴۰۷.	زن	زِن / زِنِ	زِنی	زِن	زِنَ	ژِن	نِدۆ	کشی	آرواد

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۴۹۷. شوهر	شوُ	شوُ	شوُ	شوِ	شوِ	مک	هرَ	آرْ
۵۰۶. عروس	وِیْوَ	آروُسْ	اَروُسَ	اَروِسَ	وِیْوِ	آلِنْ	گلینْ	گلینْ
۸۰۱. عروسی	توُوِیْ	آروُسِی	اَروُسِی	توُوِیْ	اَروُسِی	آلِندِی	کوُدَنْ	تُیْ
۴۱۲. داماد	زاوا	زاما	زاما	زما	داماد	×	کوُرکَنْ	کوِرکَنْ
باجناق (همریش)	باجَناق	هَمباجناق / هَمباچ	باجناق	—	هامباچ	—	باجَناق	باجاناق
جاری	هِیوَرزَنْ	هَماروُسْ	هَماروُسْ	—	هامْ وِیْوِ	—	قینارْوادی	قاینْ خاتونی
هَوُ	هَوَ	خَوَ	خَوَ	خوُیَ	هَوِ	دُرْنا	کوُنی	گوِنی
خواهرشوهر	وِیسپِ	—	—	—	خوُوِشکَ شوُ	×	—	یزَنَ

	پدرزن	—	—	پیی زن	شیی زنر	بوژن	بهانگ ندو	اب	قاین آتا		
	مادرزن	—	—	موزن	ازنر	دالک ژن	اقس ندو	اب	قاین نن		
	کله سر	سرگ / گل / (گودوء)	= / =	گل / من	=	= / =	کلور	بش	باش		
۲۸۴.	چشم	چم	=	=	=	چو	نهور	کز	گز		
۷۱۳.	مژه	رز	موچشم	مجی	مچ	مج	×	کپرک	کپرک		
۱۰۷.	ابرو	انرو	=	=	ابرو	=	×	قاش	قاش		
	پیشانی	=	=	=	پیشی	پوشانی	×	—	آن + آل		
	گوش	=	=	=	=	=	کن	قولاق	قلاق		
۸۱۱.	بینی	وپنی	وپنی	داناق	وپنی	لوت	بورناق	بورون	بورن / بورون		
۶۹۸.	لب	لو	لو	لو	لو	لج	×	ان	دداق		

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۳۷۳. دهان	دان	=	دوون	دن	دم	دهنا	–	آغز / آغز
کام (سق دهان)	ساک	ساک	ساق	ساکخ	ساق	×	کام	ساق
زبان	زوویان	زوویان	زوویان	زن	زوویان	×	تیل	دیل
دندان	دندان	دندان	=	دندن	دیان	دندری	تیش	دیش
۵۵۱. زنخ (چانه)	چان	چان	=	زنخ	چن	×	چن	چن
ریش	=	=	=	=	=	والی	سقل	سقل
(۲)۱۱۰. سبیل	سفیل	=	=	=	سیول	×	=	بغ
مو	=	=	=	مو	مو	پتکائی	توک	توک

		وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
	جگر	=	=	جیگر	=	جگر	×	=	جیگر
۸۰۰.	قلوه (گرده)	وِک	وَک	قُلب	وَک	گرچال	×	—	گرنبک / گردال
	سپرز	اِسبز	اِسبرز	اِسفرز	اِسبز	سپل	×	تالاق	دالاغ
	کمر	=	=	کمر	=	=	×	بیل	بل
۳۰۴.	کیر	کر	کر	کر (بل)	کر	=	گرگون	چوچ	سیک
۵۷۳.	کس	=	=	= (وک)	=	=	هرّ	هام	آم
۶۳۲.	کون	کون	=	فون	اِفن	کپنگ	نیک	کت	گت
۸۴.	دست	=	=	=	=	=	خت	ال	ال

	گیس	گیس	=	=	کاکل	کوکل	والی	ساچ	کوکول ساچ
	کاکل	=	=	=	=	=	والی	بیرچک	بیرچک
	زلف	=	=	=	زلف	=	والی		
	گردن	=	=	=	گردن	ول	×	بیون	بین
۶۵۶.	گلو	گل گل	گلو	نو	نا	گلو	×	بقوز	بغاز
	سینه	سین	=	=	سین	سینک	سینکی	تش	دش
	پستان	چز	=	=	ننک	ممک	×	ممک	امجک
۳۷ ، ۱۲۲.	شکم (دل)	تل / اشکم	اشکم	اشکم	تلک	زک / دل	پیتو	قارن	قارن / قارن
۶۳۵.	ناف	نافَ	=	=	=	نوک	×	کندوک	گیک
۳۸۹.	روده	نوواَل	=	=	=	رود	×	بقارساق	باقرساق

	بازو	=	=	=	=	بال	×	قول	قل
۴۵.	آرنج	کپلیزن	=	کل دست	=	نارنج	×	تیرسنگ	دیرسنگ
	مچ	مرچ	مرچ	مرچ	مرچ	مچ	×	مچ	بیلک
	کف دست	=	=	=	=	=	×	×	اوج
۵۶.	انگشت	انگشت	انگشت	انگشت	انگشت	کلک	×	بارماق	بارماق
	شست	شانگشت شاهنگشت	شاانگشت	=	شاهنگشت	=	×	شابارماق	بیک بارماق
	ناخن	=	=	=	نخن	ناخن	×	تیرناق	درناق
۷۰۵.	پا	=	=	=	=	=	پاقلم	هاداق	ایاق
۳۹۷.	ران	ران	=	=	رن	=	×	بوت	بود

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۴۰۹. زانو	ارزان	=	=	=	زانو / کشکک	×	تیز	دیز
۴۱۷. ساق پا	قلمب	قلم	ساق پو	قلم پا	قلم	×	قیچ	قلم / لول
(قوزک) قاب پا	قاب پای	قاب پا	قاپک	قافک	قاپو	×	تپق	تپق
۵۳۸. پاشنه	=	=	=	پشن	=	×	—	دیان
روی پا	دپو پای	ابری پا	پشت پو	دم پا	بان پا	×	اوشد [رو]	ایاق اوزی
کف پا	زر پای	—	زیر پو	—	=	×	آشد [زیر]	ایاق آشتی
پوست	پوشد	=	پوشدی	=	پوش	چمی	تر	دری
گوشت	=	=	=	=	=	دهوت	ات	ات
پیه (چی)	=	=	پچی	=	=	×	=	=

	رگ	رپی	=	=	رگ	=	x	—	داتار
	خون	=	=	=	خون	خون	لیپن	—	قان
	عرق	اراق	=	=	ارق	=	x	—	ترک
۵۷۵.	شاش	پیشو / زراب	چر	چر	چر	میز	شلوک	سپدک	اپشک
۶۶۸.	گه (ان)	گو / چر	ان	گو	ان	گو	گار	هارق	پخ
	قی	قیپیان	—	=	=	قیان	x	—	قیان
۴۰۴.	آب بینی	اودپنی	سک	سک	سک	سک	x	—	برن سویی
۵۹۳.	سرفه	کلکل	=	کل کلک	گه	کوویک	لرف	—	اشگرم
۵۱۰.	عطسه	سزن	=	—	—	پشم	پک / زپ	—	آشقرم / آقسرم

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۳۷۴. دهان دره	دانزپل	دهانزر	دودنزر	دهندر	آژاژکی	×	—	آنکسمک / آشماق
جان	گان	=	=	گپی	گیان	جونکام	—	=
تن	بدن / جان	=	=	لش	×	—	—	بدن / جان
۳۸۵. (دیم) صورت	دیو	دیم	دیم	دیم	سورت	م	—	اوز
تخم (خایه)	خای / تخم خای	تخم	خای / ترمق	تخم آیم [تخم آدم]	×	—	—	داشاق
اسب	=	=	=	=	=	گرا (اسب) / ناقندی (مادیان)	هات	آت
خر	=	=	=	=	=	گیر	اشک	اشک

۵۷۳. کرّه	کُرّ	=	=	کُرّ	کُرّی	جادَ	—	کُرّ / تولون [اسب] / قدق [خر]
کرّه الاغ یکساله	ہُولی	ہُولی	ہُولی	—	ہُولی	کُرگی	—	ہُولی / سپا [دوساله]
قاطر	=	=	=	=	=	×	—	=
سگ	اَسْبَ	اِسْبَ	اِسْبِی	اِسْبَ	=	سُنْقتا	اپت	کیک / اپت
توله	=	=	تولِی	تولَ	تونک	تُلقا / جادَ	—	تِل
۸۶. گربه	کوگ	کوء	کوء	مالک	پشی	×	پوشوک	پیشیک
۶۵۱. موش	=	=	=	موش	موش	×	سپچقان	سپچان
شتر	اُشتُر	اُشتُر	=	اُشتُر	=	×	—	دَوَ
شتر نر	—	—	—	—	لوک	—	—	لک
شتر ماده	—	—	—	—	آروان	—	—	آروان

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
بچه شتر	—	—	—	—	دِیلاق	—	—	دِیلاق
شتر جوان نر	—	—	—	—	لوچ	—	—	لوچ
شتر جوان ماده	—	—	—	—	مجی	—	—	مجی
شتری که هنوز بار نکشیده	—	—	—	—	—	—	—	کشک
شتر سواری	—	—	—	—	جامباز	—	—	—
۶۵۹. گاو	گا	گا	گاه	گا	گو	تیرنگ	سقر	سقر
۶۶۴. گوساله	گول	=	گوواز	=	=	جادتیرنگ	—	بزو
۲۷۱. گاو جوان	اپوان گا	نوبند	جوان (نر) نوبر (ماده)	جوان	جووان	×	—	دان جنگ
گوسفند	چرا	=	چرای	گو	بز	لپور	پیلق	داوار
میش	میش	=	میش	میش	میی	×	قون	قین

۷۹۰. (برّه) گوسفند یکساله	وَرَ	وَرِّ	وِرِی	وَرِّپِیَ	بَرَخ	لِپوَرْ	قوُزو	قوُزی
۲۱۹. (تقلی) « یکساله	—	تُقَلِي	تُقَلِي	—	تُقَلِي	×	—	تُخَلی
۴۷۸. (شیشک) « دوساله	شِیشَکَ	شِیشَکَ	—	شِیشَکَ	شَکَ	بَگَلْ	—	شِیشَکَ
« سه ساله (نر)	اُوْگَجَ	اُوْگَجَ	اُوْگَجَ	اُوْگَجَ	اُوْگَجَ	×	—	اِوْگَجَ
« چهارساله ؟	اَرْگَجَ	—	—	—	—	×	—	—
« پنجساله (نر)	اَزْمَانْ	آزْمَانْ	اُزْمَانْ	اَزْمَانْ	آزْمَانْ دُزّی مِیَ	×	—	آزْمَانْ
« شش ساله ؟	دِیزْمَانْ	دِیزْمَانْ	—	دِیزْمَانْ	دِیزْمَانْ سِزی مِیَ	×	—	دِیزْمَانْ
۱۱۲. بُز	بِزَ	=	بِزِی	بِزَ	بِزِنْ	×	اَچِ	گِچی
۱۱۳. بزغاله	بِزْلَ	=	بِزْقالِی	—	کَرَّ	لِپوَرْ	اوْقْلاقْ	اُوْلاقْ بَچی

		وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
	آهو	=	=	=	=	=	×	جیران	جیران
	خرگوش	=	خَرْوِش	=	=	=	×	تاوشقان	دوشان
۳۳۳.	خوک	=	=	=	خوگ	گراز	×	دونقوز	دنقز
۷۸۲.	گراز	=	=	=	=	=	×	—	قابان
۷۸۵.	گرگ	وَرْگ	وِرْگ	=	وُرْگ	=	سُنْقَابَرا	بِرِ	قورت
۳۶.	خرس	=	=	=	=	=	×	=	آیی
۶۹۶.	روباه	لوواش	روبا	روبو	روبا	روئی	×	تولک	تولکی
	شیر	=	=	=	=	=	×	=	=
	ببر	=	=	=	=	=	×	=	=
	پلنگ	=	=	=	=	=	×	=	=

پشم	پَزَمَ	=	=	=	خُرِي	پِتکائي	يوُنک يوُنک
چرم	=	=	قِيش	=	=	×	— { کُن قِيش [بند چرمی]
دُم	=	=	=	دِمب	دو	×	قوُدرُق قوُيرُوق
دنبه	دُمبِ	دُمبِ	دُمبِي	دِنبَ	دو	×	— قوُيرُوق
سُم	=	=	سُمب	سِمب	=	×	= سِرناخ
پهن	پَرّ	پَقَرَ	پَگَرِ	پَقَرَ	پَهِن	خَشمَک [سوخت]	= پِيسِن
شاشدان	چُرداَن	چُرداَن	چُرداَن	شاشدُون	مِيرزلداَن	×	پوُفلک قوُق
کوهان	کُوَ	=	کوُکاَن	=	کوُدِاَن	×	— کِوَن
پالان	=	جُل	جُل	جِل	جِل	جُلکا	— { = جِل

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۶۷. افسار	اُوْسارْ	اُوْسارْ	اُوْسارْ	اِوْسارْ	اُوْسارْ	×	آفسارْ	اُوْسارْ / تخت
مِهتر	مِترَکْ	=	مِترَکْ	مِترَکْ	مِیترَکْ	×	—	مِترَکْ
۵۶۵ و ۶۳۶. چوپان	=	=	=	چوپُونْ	شوُوآنْ	×	—	چُپانْ / چُپانْ
آخور	آهُرَ	آخُرَ	آخُرِیْ	اُوْخُرَ	=	×	—	اُخُرْ / اُوْخُرْ
۲۸۷ و ۵۹۵. طویله	تُوْلَ	=	پاگا	تَوپلَ	تَوپلِ	×	—	تُوْلَ
۵۶۷. مرغ	کرَگ	کرَگ	کرَگ	کرَگ	نامِز	چُماری	کپتیک	تیق / تیوق
۲۲۴. خروس	=	=	=	=	=	چُماری	=	خرُوزْ

۳۰۵. جوجہ	جُوجِیَ	جیجِیَ	لیچَ	جوجَ	جوجَک	×	چرپک جوجَ
۶۱۸. کبوتر	کُتوُرْ	کُفرِ	=	کُفرِ	کُفرَ	×	کوکارچیک گلگرچین
۶۲۵. کبک	کُوکَ	کُوکَ	کُوکَ	کُوکَ	کُوکَ	×	کاکولوک کلیک
۵۹۱. کلاغ	قالاقَ	قِلاقْ	قِلاقْ	قِلاقَ	قِلاقْ	×	قاقْ قارقَ
۷۴۲. گنجشک	مَلوچَ	میلیچ	مِلیچوءِ	مِلیچِیَ	مَلوچک	×	قوش سرچَ
۴۸۱. سار	سیلَ / مَلوچکا	=	سیاوراق	سیاملیچ	مَلوچک سیَ	×	= سیقرچین
دارکوب	دارشکلَ	—	—	دارتوق	—	×	— دَرِدوندوک
۴۹۵. (شانہ سر) ہدہد	شانَ سَلَ / بوبوکلَ	—	—	ہدہد	مَلوچ کوکلی	×	ہوپاپاک / بوبوبوک / بوتوو
بال	پالْ	پالْ	پالْ	پالْ	=	×	پرک قنت

	وخش	آشیان	کهک	آمره	زند	غربت	خلج	ترکی
پر	=	=	=	=	=	×	یلک	یارپاق / پرش
۷۲۰. تخم (مرغ)	کرکاخا	ترمق	تخم کرگ	ترمق	تخم مامر	ککری	—	یومورتا
۱۸۸. (بوم) جغد	بیقوش	=	بوو	بوء	بایقش	×	بایقوش	بایقوش
۷۰۹. مگس	مس	مقس	مقس	مقس	پخش	×	میچک	میلچک
۶۸۴. پشه	=	=	=	=	پخش کور	×	=	میلچک / پشش
کیک	کک	کک	کک	کک	کیک	×	—	بیرا
کنه	کن	کن	گرا	کن	کن	×	—	کن
صاص	ترخک / انگن	انگن	انگن / جیو	انگن	انگن	×	—	جوجو

۲۳. شپش	اِشبِز	اِشبِز	اِشپِچ	اِشپِچ	سپی	چپکا	—	پیت
سن	سپن	=	سن	سن	=	×	—	=
ملخ	ملق	ملاق	ملق	ملق	ملق	×	—	=
۱۳. کرم	کرم	=	=	=	=	×	قورت	قورد
۷۳۹. مار	=	=	مور	=	=	رسکائی	اپلان	اپلان
۷۹۸. قورباغه	قرباق	قرماق	دزدزاق	وزوزاق	قورباق	×	—	قرباق
۶۶۶. جعل	ماچس	بل‌چون	—	چسنی	رودچولک	×	—	چسن
۳۳۵. درخت	دار	=	=	=	=	رخت	هاقاج	آقاج

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۳۰۰. چوب	چوُوَ	چوُوَ	چوُءِ	چوُ	چوُ	هوُتَرا	هاتاج	آقاج
۳۱۲. شاخه	=	=	شاخِی	شاخَ	=	×	—	شَقَّ / گلک
۶۵۲. برگ	وَلگ	وَلگ	وَلگ	وَلک	بَلگ	×	—	یارپاق
گُل (بمعنی عام)	=	=	گُلِ	گُل	=	×	—	گوُل
گُل (بمعنی خاص) گل سرخ (ورد)	وِلَ	=	=	وِلَ	=	×	—	گوُل
۵۲۱. بید	وپی دار	وپد	وی	وپد	=	×	—	وسگد
۶۲. نارون	نارُوَند / وِرَم	=	نارَبَند	نارِبند	=	×	—	=
چنار	شاچنار	=	=	=	=	×	—	شاچنار
۴۴۸. سرو	=	=	=	=	=	×	—	=
کاج	=	=	=	=	=	×	—	=

ارژن (بادام وحشی)	ارژچن	ارژچن	ارژچ	ارژچن	ارژچن	×	—	ارژچن
میوه	میوَ	=	میوَ	میوَ	میوَ	×	—	میوَ
۷۲۸. مو	میوَ	موَ	میی	میوَ	می	رِدَختِ بزرگ	—	میو
باغ میوه (بجز انگور)	چالَ	—	—	—	—	×	—	—
باغ	رَز	رَز	باغچی	رَز	=	باکوداز	=	=
۴۵۴. سیب	سیوَ / سیی	سیی	سیی	سوءَ	سیف	لیب	اَلمُلا	آلمَ
۲۲۷ و ۷۵۰. گلابی	گلوپی	=	=	=	گلوی	×	آمروت	آرموت
۴۲۲. آلو	آلوَ	=	=	آلوی	آلو	×	=	آلِ
زردالو	شیلان	شیلانک	شیلانو	شیلنک	زردالو	×	اَریک	اَریک

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
آلوبالو	آلوچ	سوز	گیلاسک	آلوولک	آلبالو	آلبالو	×	—	آلبالو
۱۷۲. شفتالو	اشتالوی	—	هلو	هولوء	آلوچرگک	×	هلو	—
۱۷۲. هلو	هلوی	خلک	هلو	هولوء	هلو	×	هلو	هول
۵۷. انگور	انگور	انگور	اینگور	انگور	انگور	ترک	هوزوم	اوزوم
۴۱. (گوز) گردو	دیز	گردک	گردک (قال)	گردک	گردو	آقوز	یاقاق	قز
فندق	=	=	=	=	فندق	×	=	فندق
پسته	=	=	پستی	=	پس	×	=	پست
بادام	وا	وام	ویم	وام	بایم	×	گادام	=

بادامستان	داوزار	دامزار / دامستان	ویمستان	دامزار	بامستان	×	—	بادام لیک / بادام لق
سنجد	شینجی	سنجی	سینجی	سنجی	سرنجک	×	—	ایدر
۸۰۶. زالزالک	جبلوء	—	—	—	—	×	—	گیوبج
هسته	تندِ	تخم	تندمی	خست	تند	×	—	دند / چنج
۶۱۶. بوته	بوت	بت / لنگ (درخت)	درمب	بت	بت	×	بت	بتِ
۵۴۵. (خربزه) کالک	کالک	کالک	کالک	کلاک	خربز	خنگ	کالک	قون
۳۳۱. هندوانه	هندوان / همدوان	هندوان	همدیان	هندیون	شامی	×	=	قارپوز
خیار	خیار	=	=	=	باذرنگ	×	=	=
۵۳۵. کدو	کدوی	کدو	کوتوء	کودوء	کدو	×	=	کودی

		وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۸۳.	باقلا	باقالی	باقالی	باقالی	بقالی	باقالی	×	—	باقال (گاهی به لوبیا گفته میشود)
	ماش	=	=	=	ادس	=	×	—	=
۷۱۵.	عدس	=	نشک	=	مرجوو	نژو	×	—	مرجی / نوجی
	نخود	نخو	نخی	نخوء	نخو	نخ	مرجنگی	—	=
۳۷۱.	برنج	=	=	=	=	=	رزم	—	دوگی
	گندم	گندو	=	گم	گندم	گنم	داهان	—	بغد
	جو	یو	=	جو	ج	جوو	کورز	—	آرپ
	خوشه	هوش	=	خوش	خوش	خوش / سنبل	×	—	سالخم / ساخلم

	پنجه	=	=	پنجی	پنج	پنج	هشش	—	پنج
	حاصل	=	=	=	=	=	×	—	اکرن (کشته)
	چمن	چمن	=	چمند	چمن	چمن	×	—	چمند
۲۸۲.	چراگاه	—	=	—	—	=	×	—	چرانگا
	گرمسیر	گرمسیر	گرمسیر	گرمسیر	گلمسیر	گرمسیر	×	—	قشلاق
	سردسیر	ییلاق	سردسیر	سردسیر	ییلاق	ییلاق	×	—	یایلاق
۳۳۲.	چشمه	خانپی	=	چشمی	چشم	=	×	—	بولاق
۴۵۳.	قنات	گرپز	=	قنات	گرپز	=	×	—	گرپز
۵۹۸.	جوی	مو	جوء	نهر	جوء	جو	×	آقار	آرخ

	وخی	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۶۷۸. کرت	کرد	کرد	کرد	کرد	=	×	کردو	کرد
دیم	=	=	=	=	=	×	–	دیم
۸۳۹. استخر	استل	استل	استل	استل	استک	×	گول	گل / استل
۶۱۵. خرمن	=	=	خرمن	خرمن	=	برسن	خارمان	=
درو	درک	=	درو	=	درو	رگو	–	بیچین
۳۷۲. داس	داهره / داخر / داخ	دکنالی	دکنالو	دکتالی	دکتال	×	هوراق	اراق
۱۹. گاوآهن	گوئن / گسن	گوئن	گوئن	گوهن	گواهن	×	گاوین	گوهان
چرخ خرمن کوب	جلجک	چان	چرخ	چون	چان	×	چان	چان / جنجک

خیش	اُوْجارْ	اُوْجارْ	اُوْجارْ	اِوْجارْ	اُوْجارْ	×	آوْجارْ	اُوْجارْ / هیشْ
یوغ	وِیْ / وِیْ	یُوْ	یُوْ	یُوَ	یُوْ	×	بُونْدُرُقْ	بِیْنْدُرُقْ
چرم یوغ	لائِیْنَ	لائِیْنْ	لائِیْنْ	لائِیْنَ	یُوْجِیْنْ	×	لاهِیْنْ	لائِیْنْ
مالهٔ تخته‌ای که بگمری بندند و بکشند	کُوْلِکْ / کُوْلِیْ کِرِشْ	مالَ	پِیْمالَ	مالَ	—	×	—	—
چهارشاخ	یَوْاشِیْنَ	یُوْرِشْنَ	یَوْرِشْنَ	یُوْاشِنَ	یَوْاشِیْنْ	×	یاوَشِیْنْ	یاوْاشِیْنْ / یابا
گواز (گاوران)	وَلِیْنَ	گُوْرانْ	گُوْرانِ	گُوْرُوْ	گُوْرانْ	×	—	گُوْرانْ
۳۵. آسیاب	آهْرِ	آسُوْءِ	آسِیُوْ	آسْدِیُوْ	آسِیُوْ	×	—	دَگِرْمانْ / دَیِرْمانْ
آسیب دستی	دِسْتاهْرِ	دَسْتارْ	دَسْتارَ	دَسْتَرَ	دَسْتَرْ	×	—	دَسْتارْ
۱۰۶. رعیت (برزگر)	بَرْزِیگَرْ / اَکارِ	=	زارِپکارْ	=	=	×	—	=

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۱۳۷. زمین	زَوِپْ	زِپْ	=	=	زِیْو	چِکلی	—	پِرْ
خاک	خا	=	خای	خاکَخ	=	چِکلی	تورپاق	تُرپاقْ
گرد	گرْدَ	=	=	گرْتْ	گرْتْ	×	—	تُزْ
سنگ بزرگ (کمر)	کَوَرْ	کَمَرْ	کِمَرْ	کَمَرْ	کَمَرْ	کُلیُقْ	تاش	داش [سنگ] قی [کمر] جاو [سنگ بزرگ]
قلوه سنگ	لُرْدَ آلْ	-	—	—	—	—	—	چاقِلْ [تلاشه]
سنگ کوچک (ریگ)	ری رِیَ	رِیگْ	رِیگْ	رِیگَ	رِیخْ	×	—	رِقیرْ
شن	= یَشَنْ	=	=	شِنَ	شِنَ	×	—	قُمْ [ماسه]
کوه	کُوْ	کُوْ	کُوءِ	کُوْ	کُوءَ	×	تاق	داغْ

۵۵۸.	تپه	تپل	تپ	تپی	تپ	موډر	کوټی	–	قالاق [پښتو]
۵۴۴.	دره	دَرَ	دَرَ	دَرِی	دَرَ	دَرِگ	×	–	دَرَ
	دشت	=	=	=	=	=	×	=	=
۸۴۶.	هامون	هِمْوارَ	–	هَمْوارَ	هِمْوارَ	هامارَ	×	–	هامارَ
	راه	=	=	جَدِ	را	ری	واتی	–	یُل
	جاده	جَدَ	جَدِ	جَدِ	را	جَدِ	واتی	–	جَدَ
۵۹.	آب	اَوْوَ	اوْوَ	اوْوَ	اُوْوَ	اُوْ	میوْ	سوُ	سوُ
	رودخانه	رُوخانَ	رُوخانَ	رُوخانِی	رُخْنَ	رُوخانَ	×	چای	چای
۷۸۴.	برف	فَرْفَ	وَرْفَ	وَرْفَ	وَرْفَ	=	×	قار	قار

		وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۷۷۳.	باران	واران	واران / وشند	واران	وارون / وشند	=	×	یاتوش	یاقش
۴۴۳.	تگرگ	تیرس / تیرسی	تیرک	گردلک	تیرس	تگر	×	تل	دلی / تلی
۴۸۲.	شلاب	ویلی	ورفل	ورفل	آلاچپ	آلاچپ	×	آلچپ	آلچلپ
۷۳۸.	ابر	اوور	اوور	=	اور	اور	×	بلوت	بلوت
۷۷۰.	باد	وا	واد	باد	وات	=	×	یل	یل
۲۱۲.	آتش	آیر	=	=	=	آگر	سنگل	هت	ات
	آهن	=	=	=	=	آهن	لوی	تمر	دمر
	مس	=	=	مشت	مشت	=	×	=	=

آسمان	آسوان	=	=	آسمون	=	×	= گگ / گی
۳۲۴. خورشید (آفتاب)	خر	آفتو	آفتو	آفتو / تیغ	خور	×	کون گون
ماه	ما	ما	مو	ما	مانگ	×	های ـ آی
مهتاب	مفتو	مافتو	=	مافتو	مانگشو	×	های اپک آیدپن
ستاره	اشتاخر / اشتاخر / اشتارخ	=	=	اشتار	=	×	یولدوس اولدوز
روز	=	=	=	=	روز	رات	کوندوز / گونوز / گونوز
(۴۸۵). شب	شو	شو	شو	شو	شو	لیل	کچ گچ
سال	سال	=	سال	سال	=	×	پل اپل
۲۲. الآن (ایسا)	اتن	الان	الان	ایسا / الآن	—	هالاشتی	— اپندی

		وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
امروز		آهْرُوْ / آخْرُوْ / آرْخُوْ	=	اَمْرُوْزْ	اَمْرُوْ	=	اِمْرَاتْ	بُنْتْ	بُوگُونْ
دیروز	۳۸۷ .	هَزْپِرِيْ	هِزْپِرِيْ	هِزَّرِ	هِزْرِ	دوْوَکْ	دِپْرَاتْ	اَنْگِپْرْ	دوْنَنْتْ
پریروز	۱۶۹ .	پَرَیْ	پَرِیْ	پَرِ	پَرِ	پِپْرَکْ	پَرِپْرَاتْ	—	اِپْرَلیگُونْ
دیشب	۳۸ .	هَزْپِرِيْشُوْ	هِزْرْشُوْ	هِزْرْشَوَ	هِزْشُوَ	دوْوَشُوْ	دِپْلِیْلْ	اَنْگِپْرْکِچْ	دوْنَنْتْ گِچْ
فردا		سُوْاَیْ / سُوْبِيْ	سُوْا	سُوْا	سُوْا	سُبْ	×	سِبْ	سَهَرْ / سَابَا
پس فردا		پَسْ سُوْاَیْ	پَسْ سُوْا	پَسْ سُوْوْا	پَسْ سُوْا	دُسُبْ	×	—	بِپْرِیْ گُونْ
امسال		اِنْسَالْ	=	اَمْسَالْ	اَمْسَالْ	=	×	—	بُوئِیْلْ
پارسال		پَارْ	=	پَارِ	پَارَ	پَارَکْ	پَارَاتْ	پِیلْدِپْرْ	پِیلْدِیْرْ

سفیدۂ صبح	سپید	سپید	سپیدی	سپید	سب زو	×	سب ترڈ ارت
۵۰۲. صبح	سبی	سباہی	سوائی / سبی	سبی	سب	سکال	— / سہر / سابا
ظہر	چاشت	چاشت	زور	ترمو	زر	×	چاشت گون ارت
عصر - غروب	نوشاوان / نوواشان	نمازیگر	=	=	=	×	= / آقام گون باتن
شرق (مشرق)	=	=	=	=	خوورداگ	×	کونچالار گون چخر
غرب (مغرب)	=	=	=	=	خوورقروب	×	کونباتار گون باتر
شمال	کلپا	=	=	کلپا	کلپیا	×	کلپیا کلپا
جنوب	قبل	=	=	=	قبل	×	قبل قبل

	وخی	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۴۲۳. خانه (کده)	کِ	کِیَ	کِیِ	کِیَ	ئال	دِیلَ	هوَ	اِوْ
حیاط (حصار)	هَسارْ	هَسارْ	هِسارْ	هَسارْ	هَسارْ	لِقا	هَسارْ	هَسارْ / هَیاتْ
عمارت	یُرْتْ / رُتْ	–	اُمارَتْ	–	اَمارَتْ	×	–	اَمارَتْ
فضا، جا	رُتْ	یُرْتْ	جا	یِرْدْ	مِیدانْ	تاگا	–	یِرْ
اطاق	=	=	=	اُتاقْ	=	دِیلَ	=	اُتاقْ
در	بَرَکْ	بَرَکْ	بَرَکْ	بَرَکْ	=	دُدَرَکی / بَرَکی	اِشیک	قاپی
دیوار ۵۵۰.	دُوِیارْ	=	دُوِیارْ	دُوِیارْ	دِیوارْ	×	دُوِیارْ	دُوِیارْ
پنجره	=	=	پَنجَرِ	=	=	×	=	=
شیشه	=	=	شِشی	=	=	×	–	شوشَ

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
(سجر) نرده	مَنْجَرَ	مَنْجَرَ	مَنْجَرَ	مَنْجَرَ	مَنْجَرَ	×	–	مَنْجَرَ
۱۶۳. پرچین	=	=	=	پَرْدِوْ	=	×	–	=
نردبان	سِرْدَ	نَرْدُوْاَنْ	نَرْدُوْاَنْ	مِرْدُوْنَ	نَرْدَوْاَنْ	لاباجا	–	پِلِکَانْ
ناودان	سوْلَ	اوْسْتوْلِپارْ	نُوْداَنِ	اوْسْدوْلَ	نُوْداَنْ	×	–	نُوْخَ / نُوْجَ
حوض	=	=	=	هَیوْزْ	=	×	=	=
لوله	=	لوْلَ	=	لوْلَ	لوْلَ	×	لوْلَ	لوْلَ
۶۸۵. نی	=	=	=	=	=	×	قارْقُ	قَمِیشْ
حمام	=	=	هُمّامْ	هَموْمْ	هَموْمْ	کوْسِنی	–	هاماْمْ
۲۹۴. چاه	=	چا	=	چا	چا	چائوْتا	–	قوْئی

سطل	سَلْتَ	=	=	=	سَلْتْ	×	—	سَتِلْ
۵۹۰. کوزه (بزرگ) (سبو)	یُوْنَ	سُوْ	سِوْ	نوسِوْ	—	×	—	بَشْتُوْ / بَشْتِ
کوزه (کوچک) (تنگ)	دوْرَ	=	کوْزَ	کوْزَ	کوْزَ	×	—	تونگ / کوْزَ
۲۸۰ و ۷۰۰. سید	گَلَگَ / سُیَ [بزرگ] / تیزَ [پهن]		سَفَتْ	=	سوپی [بزرگ] / بِرِشیالْ [کوچک] سَوَاتَ	×	—	سَبَتْ
سینی	لَنْگِرِي	لِنْگِرِي	لِنْگِرِي	=	=	×	—	سِپِنِ
لانجین	تَکْدِ	سِپِلِ	=		اوشدونِي =	×	=	=
غربال	هَلْبالْ	کَمِ	=		آزدوْجَ	بِیژِنگْ	پَرُوْنِي	هَیلَکْ قلبِرْ
کَم	کَوَ	کَمِ	کَمَ	کَمَ	=	لَگَرْ	=	=
۶۹۳. دیگ	قازانَ	قِزْقانْ	تِپیانْ	قزْقانْ	قزْقانْ	×	قازْقانْ	قازانْ

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
دیزی	دیزِ	دیزپی	تینگورو	دیگ	دیز	×	چولمک	چلمک
۳۸۲. سه‌پایه	دیزوان	دیزندان	=	دیزندو	=	×	اشتداق	=
۵۹۶. اجاق	کلک	اژاق	گلک	کلن	کوواک	×	هوچاق	=
کوره	کورَ	=	کورَ	کورَ	کورَ	×	=	کورَ
۲۳۷. تنور	تندَ	تورِ	تنَ	کلَ	تنورَ	×	=	تندِرَ
۸۴۷. هیزم	هیزو	چوب	ایزم	هوزم	ستن	خشمک	—	اودن
۳۸۸. ذغال	=	=	=	=	زغال	×	—	=
جرقه	برقل	=	—	—	بورک	×	—	جرق

	دود	دُو	دُو	دُو	دُو	دُوذ	×	—	تُوتُون
	دوده	=	=	دُودُوْ	دُوءَ	دُودَ	×	—	دُودَ
۵۱۸ و ۶۰۱.	خاکستر	هُلَ	=	خاکیسِرَ	خاخَرَ	خاشگرَ	چِکلِي	کُولْ	کُولْ
	انبر	=	=	اَنْبُرُ	اَنْبِرَ	=	×	—	مَقّاش
	چراغ	چِرا	چِرا	چِرا	چِرا	=	لِراقْ	=	چِراقْ
	شمع	شَوَ	شَمْ	شَمِي	شَمْ	شَمْ	جَلَوَنْدَنِي [سوناندنی]	—	شَمْ
۱۲۷.	شعله	شُلَ	=	شُوْلِ	شُلَ	شُوْلِ	×	—	اَلُوْ
	دُشک (توشک)	نالي	دُشک	دُشک	نالي	دُوشک	×	تُوشک	دُشک
۳۶۴.	لحاف	جُوِانْخا	لاهاف	لُوْف	حُومَخُوْ	لاف	پُوش	یُرقان	یُرقان

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
بالش (۴۳۲).	بالشم	بالشم	بالشم	بالشم	بالشت	×	یاسدق	یاسقق / یاسق
نمد ۶۸۹.	نو	=	=	=	=	×	کچ	کچ
گلیم	گلیو	=	گلیم	گلیم	=	لگیم	=	=
جارو ۴۱۸.	سپزد	=	جاروء	=	=	×	سپورگ	سوپورگ
غذا	=	نان	غذای	=	=	تپیاک	–	=
صبحانه	زف / زف قلیان	زف قلیان	زف قلیان	زف قلیان –	زف قلیان	×	–	قیلان آشتی / ناشتالیک
نهار (ناهار)	=	=	نور	=	=	×	–	=
شام	=	=	=	شم	=	×	–	=

نان	=	=	کۆڕان	=	ڕنا	هێکمک	چڕک
خمیر	هەوێر	خمێر	=	=	خێر	بەمێر	—	=
نمک	نۆک	=	=	ئمک	خوێآ	شوڕکا	توز	دوز
۷۶۹. آش	=	=	=	=	=	پەرێش	=	=
۷۳۲. کشمش (مویز)	کشمیش	=	=	میوج	کشمیش	ڕێو	—	کشمیش / یمیش
(دوشاب) شیره	دوشا	دوشو	دپشو	دوشو	شیر	شیلدا	—	شیر
شیرهٔ انگور نیم پخته	باقالی	—	—	—	—	—	—	—
شراب	شردی	=	شراب	شراب	شردی	لراب	—	=
شیر	=	=	=	=	=	شفت	سوت	سوت
خامه	خاوا تو	خام تو	توج	خم تو	خام تو	×	خام تو / قانوق	خاما تو

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
کره	=	=	کَرَ	کَرَ	کَرَ	رَکَ	کَرَ	کَرَ
۳۹۳. روغن	رُنْ	=	=	روُغَنْ	روُنْ	تیلْ	—	یاغْ
پنیر	=	پِنیرْ	=	=	=	لَپیرْ	پِنیرْ	پِنْدِرْ
ماست	=	=	=	=	=	قَتی	قاتُقْ	قاتُوخْ
۳۶۳. دوغ	دوُ	دوُ	دوِءِ	دوُ	دوُ	دوُکی	—	اِیْرانْ
۱۵۵. کشک	=	=	=	=	=	کِلالی	تُراقْ	قوُروُتْ
۴۲۴. زج (قرقوروت)	رِسزَ	رِسزَ	رِسجَ	زِجّ	تَرُفْ	×	—	قَرَقوُروُتْ
مزه	مَزَ	مِزَ	مَزَ	مَزّ	مَزَ	×	—	دادْ
طعم (تَعْمْ)	تاوِ	=	=	=	=	×	—	تامْ

درد	=	=	=	=	=	×	—	آقرِ
۱۰۸. گریه	بِرَمَ	بِرَمَ	بِرَمَ	بِرَمَ	گیرِوسْ	شِنگَ	—	آقلماق
۴۰۶. ناله	=	=	نالَ	=	=	ناسِنگنا	—	×
(۴۰۶). زاری	=	=	=	نالیَ	=	×	—	=
عزا	شیوَنْ	=	=	=	شیوَنْ	×	—	یاسْ
آفت	=	=	=	=	=	×	—	×
زخم	=	=	=	=	=	×	—	یارَ
۴۶ و ۱۲۹ و ۲۸۶. ورم	واشْ	واذْ	=	—	باذْ	×	—	شِشْ
۲۴۰. تب	=	توکَ	توِیَ	تویَ	توکَ	ناسِنگنا	—	اِپستَمْ
سردرد	سَرِدرَدْ	سَرِدرَدْ	سَرَدرَدْ	—	سَرِشي	(کلوزدَکْ)	—	باشْ آقری
دلدرد	دِلِدَرْدْ	دِلِدرَدْ	دِلَدرَدْ	—	دِلِشي	(پیتودَکْ) [درد سکینه]	—	اورگ آقری

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
آبله	اُوِّلَ	اُوِّلِ	اُوِّلِی	اُوِّلَ	اُوِّلَ	×	–	چیچک
دوا (دارو)	دَوِّا	دَوِّا	دَوِّای	دُوْا	درمان	رادی	–	دَوائی / دارِ
رخت	=	=	=	=	=	پوش	کَسِک	پالتار / ارتک
۱۷۱ . قبا	قَوِّا	قَوِّوا	قاوِّا	قَوِّا	قَوِّا	×	آرخالق	دُن
۲۶۶ . پیراهن	شِتی	شِپوی	پیرهن	شِپوی	کِرِواس	پیرفتا	تُون	کینک
شلوار	پَوَوار / پَوَر / شلوار	شلوار	شلوار	شلوار	شوِوال	دُلنکا	اِم	تُمان / دپزدنی
جوراب	گورِوَ	=	=	گورِوِوَ	جُرِوِ	×	=	جُراب
۵۸۹ . کلاه	=	=	کُلِوِ	=	کُلِوِ	لُکا	بورک	بِرک
۶۲۳ . کفش	لاق (نعلین)	کُوِش	کُوِش	کُوِش	–	چَلکپن / پیلری	هاداق قاب	آتوخ قابی (باتشاق)

	گیوه	هاموءَ —	گپوَ	گوءَ	گپوَ	×	—	کلاش
	یقه (یخه)	یَخَ	یَخَ	یَخَ	یَخَ	×	یَخَ	یَخَ
۱۷۶.	جیب (کیسه)	جپو	کپسَ	کپسَ	کپسَ	گپرفان	برک	—	=
۶۸.	آستین	اَنگَلَ	اِشتوویَ	اوشدپیَ	اوشدپیَ	بال	×	قول	قل
۶۹۰.	دامن	داوان	داماں	دامان	دموں	دوان	×	هتک	اتک
	آستر	آشدر / آشتار	=	=	=	اَسترَ	×	=	آشتار
	پنبه	چلَ / لوکَ (زده)	=	گندو / لوکِ	گندپیَ / لوکَ	پمک	×	—	پمبق
	پارچه	جنس	=	پارچَ	پارچَ	پارچَ	×	—	پارچَ
	کرباس	جادَ	=	=	=	جوو	×	—	ریز
۳۴۸.	سوزن	دِرزِن	-	-	-	-	×	-	اپن

	وخش	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۱۹۴. نخ	دِسِ	ریسمان	ریسمان	اِیوا	دَرزِک	رِشکائی	تیشیم	اپلیک
۳۹۲. ریسمان	ریس =	=	=	ریسم	بن	رِشکائی	پیلیک	اپ
طناب (رسن)	رَسَن	رَسَن	رَسنی	رَسِن	گُریس	رِشکائی	تناف	تنف
۲۴۵. تار	تان اَرِشک =	=	تان	تُن	تان	رِشکائی	–	اَرِش
۱۸۳. پود	پوء =	=	پو	پوء	پو	رِشکائی	–	آرقاج
کارگاه	دارباز =	=	کارگو	دارباز	دارکول	جلال	–	دارباز
نجار (درودگر)	دلوگر =	=	=	=	=	×	–	=
۱۹۶. تیشه	تِرِشد تِرِشت =	=	=	تیش	=	تیشکی	کسر	تیش
۸۳۶. اره	وِشد وِشت =	=	اری	ارّ	ارّ	ارکی	هارّا	ارّ

۷۱۴. متہ	مِیَ	مَتَہ	مَئِیْ	مِیَ	مَتَ	×	نِیَ	مِیَ
میخ	مِخْ	=	=	=	=	×	–	مِخْ
۶۷۷. تختہ	تَخْتَ	=	=	=	=	×	=	تَخْتَ
تیشۂ خار کنی (تبر)	تُرَ	تَوَرَ	تَوَرَ	تِوَرَ	–	×	تاوارچوک	–
۲۴۱. تبر	دارَنجَنْ دارَزَنْ	نَرْتَوَرَ	نَرَتَوَرَ	تَرَپِرْ	تَوَرَ	×	–	تِوَرَ
مالہ	تالَ تالا	=	تالِیْ	تالَ	=	×	=	تالَ
بیل	بَہْرَہَ بَجْرَ بَرَخِ	=	بالَ	بِیلَ	=	×	=	بِلْ
۲۵۴. گِل	=	=	گِلِ	=	=	چکلی	–	پالْچوخْ پالْچُوخْ
۵۴. کاگل	=	=	کُوْگِلْ	=	کِیْگِلْ	×	–	سوُوِاخْ
۶۰۵. کاہ	=	کا	کا	کا	کِیْ	تمنا	–	سامان

	دفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
خشت	هِشْتَ	=	خِشْتَ	خِشْتَ	=	×	=	کرپیچ
گچ	گَرَچْ	=	=	=	=	×	–	=
آهک	=	=	=	=	=	×	–	=
خدا	=	=	=	=	=	پاوِری	–	تاری
دُعا	=	=	دُوْ	=	=	×	–	دوُوا
۱۴. نفرین	دوُوانِ	نُفْرِنْ	نُفْرِنْ	نُفْرِنْ	نِپْرِفِنْ	ناسِنگِنا	–	قارْقِش
نماز	نوُوازْ	نُمازْ	مَنَ	نُمازْ	=	شوُوْدا	–	=
روزه	روُزَ	=	روُزَ	روُجَ	=	شوُوْدا	–	اُرُجْ
دوست	=	=	=	=	=	آشکی	–	دُسْ
دشمن	دِشْمِنْ	=	دُشْمِنْ	دِشْمِنْ	=	ناکِنا	–	دِشْمَنْ

۸۴۹. فحش	شوردن	=	فوش	شمارذن	فاش	گالپیون	–	سیکش
دعوا	دوا	دوا	دوا	جنگ	جنگ	کالوتئی	–	اَلشماخ
مهمان	مهمان	=	مهمان	ممن	میوان	گجا	–	قناخ
شکارچی	اشکارزن	شکارزن	شکاروان	اشکارچی	شکاروان	×	–	اوچی
۶۷۰. لاشه	لاش	لش	لش	لش	لش	×	–	لش
قبر	=	=	=	گور	قور	×	–	گر
۲۳۱. خار، تیغ	تیک	تیک	تیک	تیکخ	درک	×	–	تیکان
زنجیر	زنجیر	زنجیر	زنجیل	زنجیر	=	خشگرو	–	زنجیر
۵۲۲. پارد	فیی	=	=	=	=	×	کورگک	کورک

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۸۰۹. آواز (صدا)	= / سزا	= / (=)	=	آواز	اُوِواز	دَهاس	—	اُواز / سَس
فریاد	هاواز	سدا	داد	فریاد	داد	دادتا	—	داد
خبر	خَوَر	=	=	=	خَوَر	×	—	=
فرمان	=	=	=	فرمون	فرمن	×	—	=
۵۳۷. بازی	کاوا	وازی	وازی	وازی	=	×	—	اُین
چادر	—	—	—	—	چاپر	خلو	—	چادر
سایه	سایِن	=	سایی	سای	سای	×	—	کِلک
همسایه	همسیا	=	=	همای	هوسا	همسوک	—	قُنشی
رنگ	=	=	رنگ	=	=	رنگتا	—	=
بو	بوء	=	بوء	بوء	=	قح	—	قحی، ایش

۱۹۱. پول	=	=	=	پول	پول	گما	—	=
گدا	=	=	=	=	گیا	منگنا	—	دیلنجی
پیمانه	کپل	کپل =	پیمانو / کپل	پیمون	کپل =	×	—	کپل
۱. ذرع	زر	زر	زر	گز	گز زر	×	—	آرشین
۷۴۶. مشت	مشت	چنگ	=	مشت	=	×	—	اوج
بار	=	=	=	=	=	پور	—	یوک
۳۸۴. دکان	=	دوکان	دوکان	دکون	=	×	—	دکان
نانوا	=	=	=	نونوا	نانوو	مناپک	—	ننوا
قصاب	قسو	=	=	=	قسو	دهوت میتون	—	=
خط	=	=	=	=	=	×	—	جزق
نقطه	نخت	=	=	نقت	نخت نکت	×	—	نقت

	دفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۲۲۱. تُک (نوک)	=	=	=	تِک	=	×	—	اوُج
۱۳۴. بیخ (بُن)	بِن	=	=	=	تَ	بِنجَام	—	دیب
حَدّ	=	=	=	=	هَدِسَدّ	×	—	=
نصف (نیم)	نیوَ	= (=)	نِسْمَ	نِسْم	=	نِسْمُوتا	—	یاری
(۸۴۰). جفت	=	—	—	=	=	داهات	—	جوت
عجب	=	اَژَب	=	=	=	×	—	{= پَ
یکهو	یِیرای	یِهوَ	یِهوَ	یِدوَ	یِهوَ	یِی بیلی	—	بیرَدَن
۳۱۱. خوب	نَخ	=	=	نیچکخ	{= خاس	دَخ	هاوُل	یاخچی
بد	گَکَت	=	{= پِسر	پیش	=	ناچکو	پیش	پیش
راست	=	=	رُوِشت	=	راس	دَخ	—	گرکچک
۳۵۰. دروغ	دُروُ	دُروُ	دُروُ	دُروُ	دُروُ	نادَخ	—	یالان

راست	=	=	رُوْست	=	=	×	=	دُوْز
۸۰۵. کج	هُل	=	=	خُلِّ	=	×	=	اُیْرِ
روشن	روُشِپْن	روُشِن	روُشِن	روُشِن	روُشِن	×	اپشِق	اپشِق
تاریک	=	=	=	=	=	×	قارالق	قَرَنْقلوق
پاک (پاکیزه، تمیز)	=	=	=	=	= تَمِش	دَخیا	—	= تَمِش
چرک	=	=	=	=	چِرْکِن	ناکِنا	—	چِرْک
نجس	نَجِسْ	=	=	نَجِسْ	=	ناکِنا	—	نَجِس
۳۱۳. خوشگل	قَشَنگ	= قَشَنگ	رَشید	نیچَک	قَشَنگ	دَخیا	قَشَنگ	گُنچَک / گُرزان
زشت	گَشْت	=	=	زِج	بَد	ناچکو	پیش	پیش
نر	نِر	=	=	=	نِر	×	هِرْکِک	اَرْکِک
ماده	= نایِل	=	نادِی	نایِ / نایِی	نا	×	تِپِش	دِپشی

		دفس	آستیان	کهک	آمره	زند	غربت	خلج	ترکی
	پیر	=	=	=	=	=	پیرقات	قاری	قج
	جوان	=	جوُوان	=	جاهل	=	×	اپگیث	جاهال
	چاق	کُک	=	=	=	=	بَرْدُوْ	کُک	کِک
	لاغر	= بے پا	=	=	=	= بیپا	×	هارقان	آرُوق
۳۲۵.	کوچک	دیلخ دیجیل مَزَن	کَسْتَرَ کَسْتَرَ	خوُرْدِ	کوُسْتَرَکْخ	بوُچک	قِلیل	بالا	کوچک
۶۳۸.	بزرگ	مَسْدَرَ	مَسْدَرَ	مَسْدَرَ	مَسْدَرَ	قیوَ	تِلوُ	تِکَ	بیک
	سبک	سُک	سَوُک	=	=	=	×	یونگول	یونگول
	سنگین	=	سَنگین سَقَت	سَنگین	سَقَت	=	اپول	قورس	آقر قرس
	تر	=	=	=	=	=	×	هل	یاش
۱۰۱.	خشک	هُشک	=	=	=	=	×	قورُوق	قوری

۱۹۹.	تیز	=	=	تُنْد	تیج	تیژ	×	پیتی	اپتی
	کند	=	=	=	=	=	×	=	کِنْد
	دراز	بُلَنْد	=	دُرُوز	بُلَنْد	دیرپژ	رِداز	اوزاق	اوزاخ / اوزون
۵۸۷. (۲۱۱)	کوتاه	کوتا / کل / کپل	کوتا / کل / کپل	کوتا / کوتول	کلک	کوتا	×	قِسق	قِسَ
	باریک	=	=	=	=	—	×	هَنْسِز	اینج
۶۷۵.	پهن	فراخ	=	فراخ	پِن	پیَن	×	هَنْلیخ	اَنْلِ
	نازک	=	=	نازک	=	نازِک	ناتِک	—	نازیک
	تنگ	=	=	تنگ	=	=	×	تار	دار
۳۸۱.	دور	=	=	=	دور	دور	×	پیراق	ایراق
	نزدیک	=	نزدیک	=	نزپیک	=	×	یوودق	یاخون / یاوق
	زود	زو / زوی	=	=	زو	زو	زوکم	—	تِز

		دفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
	گم	ناک	=	=	گمپیا	=	مخ	–	اپت
۳۷۹.	پیدا	دیار	=	=	دیار	دیار	×	–	بل
۳۲۲.	خواب	خو	خو	خو	خو	خو	نوف	–	یخی
۸۱۵.	بیدار	=	=	=	=	=	×	–	آیوخ / آیاقخ
	سیر	=	=	=	=	=	رپ	تق	تخ
۷۹۵.	گرسنه	گشن	=	گشن	گشن	برسی	بکا	آج	آج
۲۱۵.	تشنه	تشن	=	تشن	تشن	تنگ	×	سوسوش	سوسوز
	ناشتا	=	=	=	=	=	×	–	آناشت
	خوش	=	=	=	=	خوش	×	–	=
	مست	=	=	=	=	=	×	–	=
	خام	خاو	=	=	خوم	نیرشیاک	×	–	بیش‌ممیز

پخته	پِتَ	—	—	پِتَ	وِرشیاک	پکوئید	—	بیش میش
تازه	=	=	تازی	تازَ	=	×	=	ینگی
کهنه	کَفرْ	=	کوئی	کوئی	وکن	×	=	وکین
بیات	=	=	=	بیات	=	×	=	=
شور	=	تَلْ	=	=	=	×	هاچخ	شُرْ
شیرین	=	=	=	=	=	شیلدا	=	شیرین
چرب	چرپ	=	چرب	=	چوز	×	یاقل	یاقلی
تلخ	تلک	تلک	تلْ	تلک	=	×	هاچخ	آجی
تند	=	=	=	تند	تن	×	=	تند
ترش	=	=	=	ترش	=	×	توزش	ستوزش
سرد	=	=	=	یخ	=	سیلک	بوز	سیخ
گرم	=	=	=	=	=	×	هیدی	اپسی

۲۲۲.

۲۷۴.

		وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
	خنک	هُنُک	خُنِک	خُنِک	کپی	خُنِک	×	=	سَرین
۷۹۲.	وِلَرم	وُلُرْم	=	وُلُرْم	=	—	×	—	مُخت
	سخت	=	=	=	=	=	×	=	بَرَک
	سفت	= قَرْوِس	=	=	سَخت	=	×	بَرَک	بَرَک
	سفت بمعنی کشیده	تِرِنگ	تِرِنگ	سِفت	—	سِفت	×	—	تِرینگ
	شُل (روان)	چُول	چُول	چُول	شُل	=	×	—	دوری
(۶۸۰.)	شُل (لخت)	شِل	=	=	شُل	=	×	بُش	شِل بُش
	نرم	=	=	=	=	=	×	یُموشاق	نَرِم
۶۸۰.	سست	سِست	=	=	سِست	شُل	سُسوتا	—	شُل
۸۴۱.	خسته	ماندَ	ماندِ	ماندَ	مُندِ	سپینگ	×	—	یُرولمیش
	بیمار (ناخوش)	ناخُش	= ناخُش	ناخُش	ناخُش	= ناخُش	ناسِنگنا	—	ناساز ناخُش

۶۸۷ . تنبل	=	کَشِم	=	تَنبِل	=	×	—	تَلَکَنْد
۱۹۵ . تنها	تِنای	=	=	تِینا	تَنیا	تَنهوتا	—	یالقوز یالقوز
۶۶ . آبستن	اُوِستَن	اوُوِست	اُستَن	اُوِستی	اُوِسن	بَرَد	—	بُخاز ایکی جانلی
۵۱۷ و ۵۲۸. نازا	قِسر نَزا (برای حیوان) نَجا (برای مردم)	نَزا قِسر	قَسر	نَزا قِسر	نَزوک قِسر نَزا	×	—	قِسر دُغمیس
خراب	خَراوِ	=	خِراب	=	خَروِ	نادَخ	—	یِخلمیش
آباد	اُوِدان	=	=	=	=	دَخیا	—	اُوادان
گران	=	=	=	گِروُن	=	رِگوُن	—	باها
ارزان	=	=	=	اَرزوُن	=	×	—	اوُجوز
سفت	=	=	=	سِفت	=	سُفتوتا	—	سِفت
بیشتر	وِپشتَر	وِپشتَر	=	وِپشتَر	—	اپویل	—	آرتُخ

		دفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۷۲۴.	پُر	پِرْ	=	=	=	پِرْ	رُپْ	ثُلا	دُلی
	سرازیر	سَرازیرَ	=	سَرازیرِ	سَراشوءَ / سَرادِم	بُرودخوُوَری	×	–	باش آشاغی
	سربالا	سَرابالا	سَربالا	رُوبیالا	سَرابالاکی	بُرودُژری	×	–	باشیخاری / یُقش
	جلو (پیش)	پِرْدانَ	=	=	=	جِلوکَ	پیشتام	ایلگر	قاباقخ
۳۶۰.	عقب (پس)	دُمْبَ	دُنبالْ	دُمَ	پِشْتْ	دُنبالْ	×	هاقا	دالْ
۳۰.	سفید	اپْسپی	=	=	اپْسپیکخ	چرکِگ	سپغین	هورون	آق
۴۶۰.	سیاه	سپیا	سپیا	سپیا	سپیا	سپی	سوت	آرا	قَرَ
	زرد	=	=	=	=	=	×	سارخ	ساری
۴۴۹.	سبز	سُوزْ	=	=	سُوزْ	سَوزْ	×	کوک	یاشل
	آبی	=	=	=	=	=	×	=	=
۵۳۴.	کبود	کوکَ	کِبوت	کَبوت	کِوْ	کوکَ	×	گوی	گی / گک

سرخ (قرمز) بنفش	سورْ = بنوْش	= بنفش	= بنوْش	قرمز بنوْش ×	×	قرمز =	قرمزی بنوْش
من	اَزْ / مَنْ	اَزْ / مَنْ	اَزْ / مَنْ	مِنْ	خُکیمْ	—	=
تو	تَ / اَشْتَ / اَشْدَ	تَ	تِ	تِنْ	خُکیتْ	—	سَنْ
او	آنْ / تانْ / تانی	آنْ	اوْنِ	یُ	اَوِ	اوْرِی	اُ
ما	آوانْ / تاوانْ	اَیمَ / تانْ	اَیما	ما	اَیمَ	خُکیامونْ	بیزْ
شما	سوانْ / سوْوانْ	اَیشمَ	اَیشما	=	اوْوِ	خُکیاتونْ	سیزْ
ایشان	آنْ / تانانْ	آنگلَ	آنندَ	اِنگلَ	اَوانا	اوْرِیا	اُلا / اُلرْ

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
(اَ)م	{(اَ)م (اُ)م}	{(اَ)م (اُ)م}	(اُ)م	(اُ)م	(اِ)م	(اُ)م	–	(اِ)م
(اَ)ت (اِ)	(اِ)ی	=	=	(اِ)ت	(اِ)ت	(اِ)ت	–	(اِ)ین
(اَ)ش (اِ)	(اِ)ش	(اِ)ش	=	=	(اِ)ی	=	–	اِ
(اِ)مان	(اُ)وان	=	=	(اِ)مون	=	(اُ)مون	–	(اِ)میز
(اِ)تان	(اِ)یان	=	=	(اِ)تون	=	(اِ)تون	–	(اِ)یز
(اِ)شان	(اِ)سان	(اِ)سان	=	(اِ)ش	(اِ)یان	(اِ)شون	–	لری
خود (خویشتن)	اِشتن	خشتن	خشتن	خ	خ	خک	–	اِز
همه	هَویی	=	=	هَم	گشت	هَمشدیک	–	هامی
هر	=	=	=	=	=	×	–	=

		وفس	آشتیان	کهک	آمر	زند	غربت	خلج	ترکی
	اینجا	اینْدی / اینْدیَن	اِنّا	اینْدیَ	اِنْدُوْ	گِرَ	اینْتال	–	بُرَ / بورَ
	آنجا	آنْدی ، آنْدیَن	اُوْنا	اوت	اُوْنَ	وِرَ	اوُنْتال	–	اُرَ
۲۶۷.	بالا	=	=	= [باغشه]	=	بآنْ	لابا	یُقارْ	یُخاری
۲۶۰.	پائین	زِرْ	=	=	هاچال / هادِمْ	خوُوارْ	پائینْتامْ	اِنَ	آشاقی
	زیر	زِرْ	=	=	واشتو	زیرْ	زیرْتامْ	–	آشت / آلت
	رو	سرَ	=	دِمْ	وَسَرَ	بآنْ	مُ	–	اوزْ / اوستْ
۳۷۸ و ۱۱۱.	بیرون	برَ	برَ	=	برَ	دِیشْت	بَرا	–	یازی / دیشخاری
۳۵۱.	درون	نانَ / نانتِلِ	اَندَرُونْ	=	بِ	نُوْ	تُکامْ	–	اِچری
۳۵۶.	میان	نانَ	میانْ	میانْ	نیوُمْ	نُوْراسْ	×	–	اِچْ
۷۸۱.	کنار	=	کُلْ	=	=	=	×	–	قِراقْ

این	=	یاَنْ	یَنْ	یُ	ئُیَ	اپری	-	بُ / بوُ
آن	=	=	اوُنْ	اِنُوْ	اَوَ	اوُری	-	اد
کدام	کاُنْ	کاُمِنْ	=	کیمی	کاُرِنْ	کُدُری	-	هاُنسی
که (کی)	کِ	کی	کِ	کی	کمی	کپرپز	-	کیمْ
چه (چی)	چی / چیزْ / چیزی	جیشی	چیچی	چی	چَ	چکمْ	-	نَمَ
۳۰۳. چرا (واسهٔ چی)	چیرا	=	=	=	=	×	-	یاوُوزْ
برای (واسهٔ)	ـرا	بُرا	داشدی	وا	آبِر	تَکی	-	رچنْ
کو	=	=	=	=	کوُءَ	کوُریزْ	-	هاُنی
کجا	کاُی / کاُندیا	کوُنا	کُبِ	کِ	کوُرَ	کُتاُلْ	-	هاُرَ
چندبار	چنْ پکدا	=	چنَ دَفَ	چنَ را	چنْ دَفَ	چنْ ولیکْ	-	ربخ پی / ربخ یلْ
اگر	=	=	=	=	=	×	-	اَگَ

	وفس	آشتیان	کهک	آمره	زند	غربت	خلج	ترکی
۱۱. دیگر	هِتی	هِنی	دیگ	هِنی	دیت / دیر	دیگ چیگ	–	داها / داه
۷۱۲,۲۰. از	=	=	جِ	جِ	لَ	اَ	–	...دَن
بی	=	=	=	=	=	=	–	...سِز
با	...را	=	= / هَمرَدِ	بِ / هَمپا	= / وَل	=	–	...نَک
۷۵۱. نه	=	نی	=	=	=	نَئیک	–	نُخ
بله (آری)	لا	لا	لا	لا	اَری	هَوی	–	هَین / هَی

		وفس	آشتیان	کهک	آمره	زند	غربت	ترکی
۶۰۶ . کردن	بکن / کرد	×	هاکرَ / هارِش کرد	بکَ / بِش کرد	بکَ / بِش کرد	بکَ / کرِد	بِناز / هِناشت	اِلماق
۷۸ . گفتن	بگو / گفت	واتن	بَوازْ / بِش واتَ	بوواز / بِش واتْ	بوواچ / بِش واتْ	بُتا / بِش واتْ	بوژ / وِت	دیماق
صدا کردن یا زدن (بانگ زدن)	صداکن / صداکرد	×	وانگ زنَ / وانگِش زَ	وانگزی کَ / وانگزیش کرد	دول بزن / دولش بزی	دیلزِ / دیلش زِنا	بجر / جرِی	تاکابوین / تاکاوِیدْ	شش لزماق (لماق)
۸۱۷ . دیدن (۳۸۵)	ببین / دید	دیین	بوین / بِش دی	= / بِش دی	بین / بِش دی	بوی / بِش دی	بون / دی	برق / رَقید	گرماق
۱۲۰ شنیدن	بشنو / شنید	×	بشنو / بِشنَفت	= / بِشنَفت	بشنو / بِشنَفت	= / شنفت	بلان / سلاند	اِشتماق

بجا : برو (۹۷) .
عربی "جاءَ" : آمد ، هزوارش [illegible] : آمدن .
سنسکریت گا = جا ، اوستا [illegible] = [illegible] از ریشهٔ [illegible]
بمعنی آمدن و رفتن .

بمیت : بمیر ؛ بمیتون : بکش (۹۶) .
هزوارش [illegible] : کشتن .

پسوند هات ، هد ، هت ... برای عددها (۸۹ و ۱۴۸) .
این پسوند در عدد ۱ در عربی دیده میشود : اَحَد ، وَحَد
(اوستا [illegible] - [illegible]) + پسوند "هد" . (نیز نگاه کنید به ایران کوده
۴ : ص ۱۷ .)

گویش خلج

[دربارهٔ گویش خلج در ایران تنها چیزی که بنظر نگارنده
رسیده نمونه هائی از واژه ها و جمله های خلج است که مینورسکی
گردآورده و ذیل عنوان "گویش ترکی خلج" نشر داده است :
The Turkish Dialect of the Khalaj,
by V. Minorsky, Bulletin of the School
of Oriental Studies, Vol. X, Part 2.
گفتار مینورسکی بیشتر در پیرامون حدسی است که دربارهٔ اصل خلج ها
و کوچ کردن آنها زده است (ص ۴۲۴ تا ۴۳۷) . نمونه های جمله ها
و چند واژهٔ خلج و بررسی آنها را در صفحه های ۴۲۴-۴۱۸ داده است .]

۱۵۳

اینجا درباره گویش خلج فقط از نظر همبر کردن آن با گویش ترکی بلوک وخش چند نکته را یاد آور میشود.

واژه‌های بسیاری در خلج در برابر ترکی بکار میرود که همریشه نیست. واژه‌های ذیل برای نمونه داده میشود:

خلج	ترکی	صفحه	خلج	ترکی	صفحه
لَلَ	قارداش	۲۶	قارق	قمیش	۶۲
کال	اوشاق	۲۷	هیکمک	چرک	۶۷
اَبَ	خان	۲۷	تراق	قوروت	۶۸
هَز	کیشی	۲۷	گسپک	ارتیک	۷۰
کشی	آروادْ	۲۷	تون	کینک	۷۰
کوردن	ئی	۲۸	اِم	دیزدنی	۷۱
اَن	دداق	۲۹	کسر	تیش	۷۲
کام	ساق	۳۰	هادل	یاخچی	۷۸
چوچ	سیک	۳۲	قاری	قچ	۸۰
سیدک	ایشک	۳۵	هل	یاش	۸۰
هارق	~~پخ~~	۳۵	هنیز	اینج	۸۱(؟)
پیلق	داوار	۳۸	بوز	~~سیخ~~	۸۳
بر	قورت	۴۰	ایلگر	قاباق	۸۶
قوش	سرچ	۴۳	هاقا	دال	۸۶
یاقاق	قز	۴۸	هوروت	آق	۸۶
آنگر	دونتن	۵۸	آرا	قر	۸۶
ایشیک	قاپی	۶۰	کوک	یاشل	۸۶

افزوده شدن "ه" بر سر واژه‌هائی که در ترکی با صوت آغاز میشود. (مینورسکی نیز این نکته را یادآور شده است.) نمونه:

خلج	ترکی	صفحه	خلج	ترکی	صفحه
هَرْ	اَرْ	۲۸	هَوْ	اِوْ	۵۰
هامْ	آمْ	۳۲	هوچاقْ	اُجاقْ	۶۴
هاداقْ	اَیاقْ	۳۳	هَتَکْ	اَتَکْ	۷۱
هاتْ	آتْ	۳۶	هارّا	اَرّ	۷۲
هاقاجْ	آقاجْ	۴۵	هیرکَکْ	اَرْکَکْ	۷۹
هوزومْ	اوزومْ	۴۸	هارْقانْ	آرْقخْ	۸۰
هوراقْ	اُراقْ	۵۲	هَنلیخْ	اَنْلِ	۸۱
هُتْ	اُتْ	۵۶	هاچخْ	آجی	۸۳
هایْ	آیْ	۵۷	هیشدی	ایشی	۸۳

ولی در سه واژهٔ ذیل در خلج "ه" افزوده نشده است:
خلج: اَلْ، اَتْ، آجْ (ص ۳۲ و ۳۴ و ۸۳).

"ک" آغازی در خلج برابر است با "گ" ترکی. (این نکته را مینورسکی نیز یادآور شده است.) نمونه:

خلج	ترکی	صفحه	خلج	ترکی	صفحه
کَلینْ	گلینْ	۲۸	کوکارچیکْ	گگرچینْ	۴۳
کوونی	گونی	۲۸	کوونْ	گونْ	۵۷
کُزْ	گُزْ	۲۹	کِچَ	گِچَ	۵۷
کُتْ	گُتْ	۳۲			

در دو واژهٔ ذیل "ک" آخر خلج نیز برابر "گ" ترکی است:

خلج : یُونْگ و اَرپگ برابر ترکی : یونگ و اَرپگ (۴۱ و ۴۷).

"ت" آغازی خلج برابر است با "د" ترکی. (این نکته را سینورسکی نیز یادآور شده است.) نمونه :

خلج	ترکی	صفحه	خلج	ترکی	صفحه
تیل	دیل	۳۰	تاش	داش	۵۴
تیش	دیش	۳۰	تاق	داغ	۵۴
تُش	دِش	۳۱	تِمِر	دَمِر	۵۶
تالاق	دالاغ	۳۲	تُبلیک	دَلیک	۶۱
تیرسگ	دیرسگ	۳۳	توشگ	دُشگ	۶۵
تیرناق	دِرناق	۳۳	توز	دوز	۶۷
تیز	دیز	۳۴	تیشِ	دیشی	۷۹
تَر	دَری	۳۴	تاز	داز	۸۱
تاوُشقاق	دُوشان	۴۰	تُلا	دُلی	۸۶

ولی در دو واژهٔ ذیل "ت" آغازی خلج برابر با "ت" ترکی است: خلج تولک و تورناق برابر ترکی: تولکی و تُرناق (۴۰ و ۵۴).

افزوده شدن "ی" بر سر واژه‌هائی که در ترکی با صوت آغاز میشود. نمونه :

خلج : ییل (۵۷)، ییتلیک (۷۲)، ییتی (۸۱)، ییراق (۸۱) برابر ترکی : ایل ، ایتلیک ، ایتی ، ایراق .

در دو واژهٔ ذیل "د" خلج برابر "ی" ترکی دیده میشود:

خلج : هاداق (۳۳) و قوذروق (۴۱) برابر
ترکی: اَیاق و قوئیروق .

درسه واژهٔ ذیل پسوند خلج "قان" برابر است با ترکی "ان" :
خلج : سیچقان (۳۷) ، تاودوشقان (۴۰) ، قازقان (۴۳) برابر
ترکی : سیچان ، دوشان ، قازان .

"ق" خلج در بیشتر واژه‌ها برابر است با "ق" ترکی ولی گاهی "ق" خلج برابر است با "ق" یا "خ" یا "غ" ترکی . نمونه :

خلج	ترکی	صفحه	خلج	ترکی	صفحه
قولاق	قلاق	۲۹	اقلان	اغلان	۲۶
بقارساق	باقرساق	۳۱	بقوز	بغاز	۳۱
بازماق	بازماق	۳۳	تالاق	دالاغ	۳۲
توزیاق	تزیاق	۵۴	تاق	داغ	۵۴
قانق	قانق	۶۸	اوزاق	اوزاخ	۸۱
بیراق	ایراق	۸۱	تق	تخ	۸۲
یووق	یاوق	۸۱	یقار	یخاری	۹۰

اوقلاق اولاق ۳۹ (ق = و و ق = ق).

"گ" برابر "ب" فارسی خلج "گادام" = "بادام" (۴۸) در نویسش خور بیابانک دیده میشود .

دربارهٔ گویش ترکی

۱- صوت شناسی

شمارهٔ واژه‌های ترکی که در جدول واژه‌ها داده شده برای بررسی کلی در صوت شناسی ترکی یا برای یافتن فرقهائی که میان گویش ترکی بلوک وفس و مثلاً گویش ترکی آذربایجان پیدا میشود بسنده نیست. اینجا فقط چند نکته را دربارهٔ صوت شناسی همین گویش بلوک وفس که نمونه‌هائی از آن داده شده یادآور میشود.

بجای صوت ـَ نیز ا شنیده میشود.

نمونه: بجای پَمبُق، پاتمبُق (۷۱).

بجای صوت ی نیز ی شنیده میشود.

نمونه: بجای باجی و تاری، باجی و تاری (۲۶ و ۷۴).

و برعکس: بجای گُلین، گُلین (۳۸).

بجای صوت ا نیز ا شنیده میشود.

نمونه: بجای باش و قاش، باش و قاش (۲۹).

بجای صوت ـُ نیز ـو شنیده میشود.

نمونه: بجای کُوکُول و تُورُش، کُوکول و تورش (۳۱ و ۸۳)

آنجائیکه در ستون ترکی = داده شده و واژهٔ ترکی مانند فارسی است آخر واژه را باید با ـَ خواند.

نمونه: کَتیج (۲۶) و بُت (۴۹). (بُتِ درست نیست.)

صوت ـِ همان ی است و اگر فرقی دارد از هم شناختن این دو آسان نیست.

(رویهمرفته باید نفوذ صوتهای فارسی را در همه جا در نظر گرفت.)

7

PHONOLOGY, CONSONANTS

7.1 Pure consonants. In this chapter we shall discuss the consonants of Khalaj. It must be emphasized that this study is a provisional survey only of the dialects of KhT., KhM., and KhX. The sequence of consonants is about the same as that of the Sanskrit alphabet, that is, it is not alphabetical in our sense. We have found this system to be more natural than that of the regular alphabet. For the examples compare the dictionary in Chapter 14.7.

The phonemes of Khalaj are almost the same as those of ATu. and perhaps those of PTu. with the following exceptions: /ṇ/ may originally have been */ṇ/ and */ń/ (cf. Räsänen 1949.200-3, a rather doubtful interpretation as */ń/ may be explained as */ṇ/ under certain conditions). We find no traces of */ń/ in Khalaj; /ṇ/ very often has become /n/. Kh. /n/ is both ATu. /n/ (e.g., kün 'day' < kün) and ATu. /ń/ (e.g., in qo̊n 'sheep' < qōń). /f/ is found in foreign words in Khalaj. ATu. /b/ has become /v/ (or a diphthong, e.g. hàv, hö̊ʷ 'house' < äb). Kh. /h/ is a special sound not found in ATu. but presumably belonging to a very old Tu. layer (cf. 9.8). On the whole, Kh. is quite close to ATu. We shall deal with some of the peculiarities of Kh. in Chapter 9. So much for the historical development of Khalaj consonants. The following is a description of the consonants (the numbers refer to the language lists given above).

/k/ [k] and [q] velar voiceless fortis stop. k and q (both of which are slightly, or sometimes a little more than slightly, aspirated) are hardly distinguishable (in con-

trast to other Tu. languages); that is, a distinction between a prevelar and a postvelar voiceless fortis stop is hardly perceptible. This is especially obvious in such loanwords as T. 262 nạ' zụq 'thin' ← P. nạzok or T. 132 qardụ 'bed (of a garden)' ← P. kärdụ, where /k/ is not pronounced so forward as in Persian. On the other hand, /k/ in, for example, M. 70 qọn 'sheep' or T. 43 qạ' rụn 'bellow' is not just pronounced back. The difference between the *k and *q of other Tu. languages is not stronger than in English, where /k/ before front vowels (as /i/) is spoken more to the front than before back vowels; cf. Jones 1949. 134: "Taking the k in come k^m as the principal member of this phoneme, we find that a more forward k is used before i: (as in keep ki:p) and a more backward k before ɔ (as in cottagé kɔtidʒ); other intermediate sounds are used before other vowels according to their nature." (The same, by the way, is true of German and other languages. It is possible that Khalaj has preserved in this respect the system of PTu., making no genuine distinction between the allophones [k] and [q] of the PTu. phoneme /k/.) To speak frankly, then, a distinction between [k] and [q] is hardly justified in Khalaj (neither from the phonetic nor from the phonologic viewpoint). However, we make this distinction for the following reasons:

(a) Comparison with other Tu. languages is facilitated. For a Turcologist qạ' rụn 'bellow' looks somewhat more familiar than kạ' rụn (in spite of Turkish karin).

(b) [k] < CTu. [k] before /i/ is a bit palatalized; such palatalization never happens with CTu. q (of course ki- >k'i- is nothing more than a kind of secondary assimilation).

(c) CTu. [q-] often becomes, or alternates with, [G] (transcribed Ǫ by us); CTu. [k-] always remains a fully voiceless [k-] (with the exception of ATu. köl 'lake' >Kh. gȫ·l, but this word may be a loan from older Azerbaijani). Even this viewpoint is semi-diachronic.

(d) CTu. [-q] often becomes, or alternates with, [qx], [x] (e.g., T. 135 'sickle' hōġraqʿ, hōġraqx, hōġrax), whereas [k] never shows such alternances.

(e) In the vicinity of [q] and [ġ] instead of [i̤], [i̥] we sometimes find [ï] or a slightly more back variant of [i̤], [i̥], similar to Evenki /i̥/.

The above considerations show that the distinction between [k] and [q] is not so much in pronunciation (which differs only slightly, just as in the English /k/ before /i/ or /o/) but in the fact that CTu. [q-] has a tendency to become (semi-)voiced and [-q] has a tendency to become affricative (the old /ï/ before it tending to be preserved), whereas [k] has a tendency to become palatalized.

[k′] a palatalized [k], especially before [i̤] (and before [ṳ̈] < [i] as in T. 300 àkk′ṳ̈ 'two' < äkkī); e.g., kī̤·ᵉčä is indeed k′ᶜī̤·ᵉčä. This [k′] seldom occurs in other cases, as in auslaut (M. 31 hàlyäk′ 'sieve').

[Ǫ] CTu. [q], very often [Ǫ], respectively voiceless or semi-voiced media lenis, mainly in anlaut; e.g., M. 1 Ǫara 'black,' seldom in auslaut (M. 22 hadaǪ 'foot'). (It would be better to write [G̃] because [Ǫ] is not pronounced very far to the back; this situation is the same as /k/ = [k] and [q].)

[x] postvelar voiceless fricative as in Scotch loch (or in German Loch), often used as an alternance of [qᶜ], cf. above;

sometimes used in foreign words (in this case it is better regarded as an independent phoneme /x/).

[x́] palatal voiceless fricative as in German ich 'I' (only one doubtful example exists: T. 316.

[^{q}x] affricate of a slight [q] (somewhat back /k/) and [x] (cf. M. 20); alternance of [q], [q^{c}], [x]. Also [qx] (T. 135).

[^{k}] slightly (hardly audibly) pronounced [k] (M. 87, T. 80).

[k^{c}] and [q^{c}] aspirated (more to the front or back) /k/, [q^{c}] often alternating with [qx] or [x] (e.g., T. 135). Since /k/ normally is slightly aspirated (though not so strongly as in some northern German dialects, cf. Jones 1949. 135, 141), we have noted the aspiration only when it is stronger.

/g/ [g] and [g] the normal English [g] as in gone. (Diachronically, */g/ has been partly preserved, e.g., T. 17 bàg, bàG 'son-in-law' < bäg 'prince' and has partly developed to various zero-grades, such as [y] in T. 241 äyrị 'crooked' <ägrē.)

[ǵ] palatalized [g] (T. 205), sometimes pronounced almost as [y] (T. 287), and dialectically alternating with [y]: T. 287 yịlǵàr 'before' = M. 40 ịlyä^{1}r = X. 40 ị^{1}lgär.

[G] voiceless (semi-voiced) media lenis (T. 17 bàG ~ bàg).

[ġ] postvelar voiced fricative (as in New Greek); in T. 75 a sound intermediate between [g] and [ġ].

[^{g}x] affricate of [^{g}] and [x] (M. 29).

[Ġ] approximately voiceless (semi-voiced) affricative media lenis articulated between [x] and [ġ] (T. 179, 257).

[$^{\dot{G}}$] slightly pronounced [Ġ] (T. 263 hànlị$^{\dot{G}}$ 'broad').

[^{g}] slightly pronounced [g] (X. 5).

[ġ] slightly pronounced [ġ].

[ǵ] slightly pronounced palatal voiced fricative (sounding almost like [y], with which it alternates: X. 34 hissiǵ 'warm' = T. 280 hissiy).

[ṛ] French r grasseyé (uvular rolled) in M. 32 ätṛäk < older êtgäk 'we shall do.' Since it alternates with [g], this [ṛ] is an allophone not of /r/ but of /g/.

/ṇ/ [ṇ] velar nasal sonant. Apparently without allophones; never occurring in isolation but always before /g/ and /k/; could be regarded as an allophone of /n/. Cf. M. 111 miṇk 'a thousand' (T. 319 miṇ), etc.

/č/ [č] palatal voiceless affricate with the components [t] and [š]

/ǰ/ [ǰ] palatal voiced affricate with the components [d] and [ž] (occurring only in loanwords).

/t/ [t] dental voiceless fortis stop.

[tʿ] aspirated [t] (T. 97).

[D] voiceless (semi-voiced) dental media lenis (diachronically mostly < */t/, more seldom <*/d/, e.g., T. 41. Often occurring after consonants and used in foreign words, cf. T. 311 hǫtDụz 'thirty,' but yättị 'seven'; also 202 yạ̈ʿsDụq 'cushion' and 232 taxDa 'plank'< P. täxté, i.e., ← older local P. *taxDa. The same phenomenon is found, for example, in Aš., cf. Keyạ 1335,27 täxdä = P. täxté).

[ᵗ] slightly pronounced [t] (X. 89).

[ṭ] a sound between [k] and [t] (diachronically developed

from [t] before front vowels, mainly [i], but never [i] <[ü]). The same sound is found in southern Karaim, cf. PhTF 329 (and even here it is < t, just as in such languages as Samoan or Hawaiian, where older mata 'eye' has become maṭa, written mata, maka, respectively).

/d/ [d] dental voiced lenis stop.

/n/ [n] dental nasal sonant.

/p/ [p] bilabial voiceless fortis stop.

[B] voiceless (semi-voiced) media lenis (M. 79, T. 228).

/b/ [b] bilabial voiced lenis stop.

[b̄] bilabial voiced fricative, resembling Spanish b in haber 'to have' (X. 57, X. 86).

/f/ [f] labiodental voiceless fricative (only in loanwords; suf 'water' in Minorsky 421 may be sụ̈ v or sụ̈ V).

/v/ [v] labiodental voiced fricative (<*/-b-/, */-b/, and in loanwords).

[u̯] bilabiovelar sonant with only slight lip rounding and no friction (as the English /w/), cf. 7.2.

/m/ [m] bilabial nasal sonant.

/y/ [y] palatal sonant, almost semi-vowel, but (in contrast to [i̯]) with a slight friction, i.e., tending to be an affricate (the voiced correspondent of German [x́] in ich 'I'). T. 241 äyrị 'crooked' (< *ägrē), for example, is

not = äirị, that is, is no diphthong. As soon as [y] loses (or almost loses) its fricative character, we write [ị]. Cf. M. 89 yị^{1}l 'year,' but búịil 'this year'; cf. 7.2. Also note such cases as M. 18 'hat' bị̈ rịäk, X. 18 bịrịäk (<bȏrk), in contrast to M. 31 hàlyäk' 'sieve' (< älgäk).

[^{y}] slightly pronounced [y], hardly distinguishable from [$^{\acute{g}}$]; see above.

/r/ [r] dentoalveolar (single-flap) sonant.

[ṛ] cf. /g/ above.

[^{r}] slightly pronounced [r].

/l/ [l] dentoalveolar lateral sonant. Always the front ("European") [l], never the velarized [ɫ] as in the Russian byl 'he was' or as in the English bill. (Perhaps in this case also Khalaj has preserved PTu. /l/ without allophones [l] : [ɫ], in contrast to CTu. and C. But an Iranian influence cannot be excluded.)

/š/ [š] alveopalatal voiceless fricative as in English sh.

/ž/ [ž] alveopalatal voiced fricative as French j in jour (a rare sound, occurring only in loanwords).

/s/ [s] dentoalveolar voiceless fricative (as s in son).

/z/ [z] dentoalveolar voiced fricative (as z in zoom).

[Z] voiced (semi-voiced) media lenis (T. 207, M. 14), occurring rather frequently in auslaut.

[^{z}] slightly pronounced [z] (M. 65).

[d̄] voiced dental fricative as English th in this; perhaps only an individual variant of [z] (T. 55, T. 121).

/h/ [h] glottal voiceless spirant (breathed glottal fricative with very slight friction).

7.2 Semi-vowels and similar phenomena. In this section we distinguish the following categories:

(a) [y], the slight friction of which prevents it from being regarded a genuine semi-vowel.

(b) Frictionless glide-sounds [i̯] (palatal, [u̯] (labial). They always occur between vowels, [i̯] (in sandhi position) sometimes alternating with [y] (in absolute position, i.e., after open juncture; e.g., X. 89 búi̯il 'this year' (but yi̯·l 'year'); also in M. 16 bé̯i̯in 'today'; T. 186 hau̯u̯z 'basin,' T. 282 sou̯u̯q 'hard,' etc.

(c) Diphthongs (mostly as the second parts of falling diphthongs) [i̯], [u̯], [ü̯]; e.g., T. 159 bā̯i̯ 'moon,' T. 17 bai̯ 'son-in-law' (← Az.), M. 6 lo̯u̯ 'lip' (← local P. < older P. lab), M. 30 hö̯ü̯ 'house.' Less frequently we find such cases as T. 308 u̯o·n 'ten,' M. 85 ki̯e̯i̯ 'chest,' where [u̯], [i̯] occur as the first part of diphthongs. (Diachronically [i̯] normally = the /y/ of ATu. and other Tu. dialects, /y/ also being pronounced in these dialects as [i̯]; [u̯], [ü̯] are derived from ATu. /b/.) These diphthongs are independent vowel glides in the sense of Jones 1949.57 (paragraph 219). One has the impression that these sounds have no sonant (vocalic) but consonantal character, though pronounced even more slightly than those of category (b). One may say that they are neither consonants nor vowels.

(d) [a̯], [i̯], [u̯], etc., (placed high with diacritical signs marking the vowel quality). These sounds also occur, just as those of category (c), as the second part of "diphthongs," but with a merely vocalic character. These are, so to speak, less

genuine diphthongs than products of a certain pitch of long (two morae) vowels, as in ā^{ə}, ū^{u}, etc. Whereas /ā/ has a level intonation, /ā^{ə}/ consists of a long vowel plus an immediately following ^{ə}. ā in /ā^{ə}/ is two to three times longer than a. This is a falling intonation with a long first and a short second part, whereas ^{i} in diphthongs does not participate in intonation, since it is no vowel. Besides falling pitch we also find falling-rising pitch.

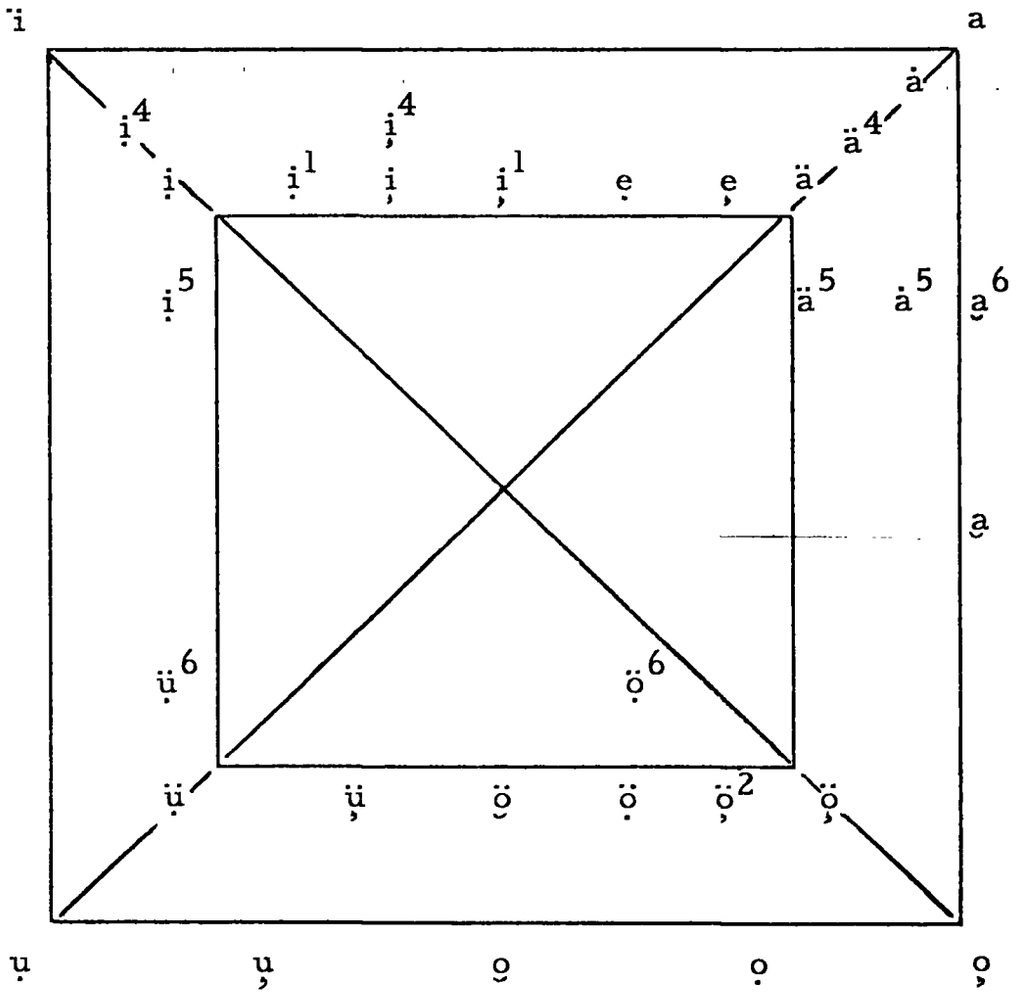
(e) High-placed reduced vowels, which~~, of~~ course, are no semi-vowels. Though we transcribe them just as in category (d), they are easily distinguishable from (d): they occur only after consonants and are not the second part of vowels, as [^{u}] in M. 27 ha·^{i}d^{u}lar 'they said,' cf. 8.1.

In summary, then, we can say of the previous categories that (a) is no genuine semi-vowel because of the slight friction; (b) and (c) may be called semi-vowels [(c) less than (b)]; (d) is a part-vowel of a long total-vowel (a vocalic affricate, so to speak); (e) is a pure and genuine vowel.

8

PHONOLOGY, VOWELS

8.1 Quality of vowels. The vowel system of Khalaj is phonetically complicated (though less so phonologically). The following square may serve as a help toward phonetic orientation (the chart is, of course, only provisional, subject to the changes which further study of Khalaj may dictate).



In order to avoid complicated signs for sounds occurring rarely (and normally only as variants of other sounds representing the

"norm"), we prefer to employ the following system in this study: we mark the distinction between high and low vowels as i̧ (high) and i̧ (low), the dot always marking a close, the cedilla, an open pronunciation. Slight deviations from such "normal" sounds as i̧ and i̧ are marked by the following high-placed figures:

1: slightly lower (more open)
2: slightly higher (closer)
3: slightly more front
4: slightly more back
5: slightly labialized (rounded)
6: slightly delabialized (unrounded).

For example, i̧^{1} means a sound intermediary between i̧ and i̧. (It is obvious that i̧^{2} would be the same; one may employ i̧^{1} for a somewhat closer vowel, i̧^{2} for a more open quality; but this distinction would be hardly perceptible.)

We find the following vowel phonemes and allophones in Khalaj:

/a/ [a] very low back unrounded.

[a̧^{6}] very low back, very slightly rounded, i.e., a slightly delabialized variant of [a̧]

[a̧] very low back slightly rounded

/o/ [o̧] low back rounded

[o̧] low-mid back rounded

[o̧] between low-mid and high-mid back rounded (in the middle between [o̧] and [u̧]). But see note at end of 8.1.

/u/ [u̧] high-mid back rounded

[u̧] high back rounded. But see note at end of 8.1.

/ä/ [ȧ] slightly front variant of [a].

[ȧ^{5}] = [ȧ] slightly rounded

[ä^{4}] more front/lower than [ȧ], more back/higher than [ä]

[ä] low front unrounded. The distinction between [ä], [ȧ^{5}], and [ä] is not always clear. When repeated, the same word may sometimes have the [ȧ] sound, sometimes the [ä]. The same suffix may be pronounced with [ȧ], [ȧ^{5}], [ä]. Therefore a simple transcription [ä] seems to be sufficient.

[ä^{5}] = [ä] slightly rounded

[ẹ] low-mid front unrounded

/ö/ [ọ̈] low front rounded

[ọ̈^{2}] low front rounded, slightly low, more mid (i.e., higher)

[ọ̈] low-mid front rounded

[ọ̈^{6}] = [ọ̈] slightly delabialized

[ọ̈] between low-mid and high-mid front rounded. But see note at end of 8.1.

/ü/ [ṵ̈] high-mid front rounded

[ụ̈] high front rounded

[ụ̈^{6}] = [ụ̈] slightly delabialized. This vowel was found in Xält-ạbạd as the normal variant of /ü/, but we transcribe it simply as [ụ̈]. There are, by the way, even more delabialized (half-rounded, so to speak) variants of /ü/ (resembling <u>y</u> in Swedish <u>lys</u> 'light') and of /ö/ in, for example, Mehr-e Zämin, that is, in the material not yet published.

[ị^{5}] high front, very slightly rounded, phonetically a variant of [ị] but phonologically an allophone of /ü/

/i/ [i̤] high front unrounded

[i̤^{1}] = [i̤], slightly lower

[i̥] high-mid front unrounded. But see note at end of 8.1.

[i̥^{1}] = [i̥] slightly lower, almost [e̤]

[e̤] between low-mid and high-mid front unrounded

[i̤^{4}] = [i̤], slightly more back, in the vicinity of [q], [ġ]

[ï] high back unrounded, often in the vicinity of [q], [ġ]. It sometimes alternates with [u̥] (cf. X. 57 qā^{a}dun àbà 'mother-in-law,' the normal Kh. form, ~ qā^{a}dïn àbà). In this case we may regard [ï] as an allophone of /u/, delabialized in a special position. But after [q], [ġ] [ï] is an allophone of /i/, just as [i̥^{4}], [i̤^{4}]. So we may say that PTu. /ï/ is no longer a phoneme in Kh. but that sounds which are [ï] or are similar to [ï] are either allophones of /u/ or of /i/.

We seldom find the nasalized variants ĩ (T. 64), ã (T. 243) < in, an. We finally find reduced vowels in "reducing position," i.e., when the vowel has neither the main stress nor an accessory stress (which normally is on the first syllable). We find reduced vowels [^{u}], [^{i}], [^{ü}] either in the middle syllables of trisyllabic words — M. 27 hą·^{i}d^{u}lą^{6}r 'they said' (< hā`ydīlā´r), M. 32 ī·tt$^{i}$lä$^{1}$r 'they did' ( < ê`ttīlā´r) — or in the last syllables of disyllabic words, the first part of which has the stress: X. 16 bü´i^{ü}n 'today' < bô´-kün.

Note. The following short vowels are only allophones of long vowel phonemes, hence are, from the phonematic point of view, "long vowels":

ö as in X. köz 'eye (T. kö^{2}z, but cf. T. köt 'anus,' etc.), X. kön- 'to burn.' This [ö] is an allophone of /ō/ (*kōz), cf. 13.11.2.

ǫ as in M. qǫl 'arm,' T. čǫlǫq 'weak' (but T. tǫqquz 'nine,' etc.), T. yǫrġǫn 'blanket,' T. yǫqqǫr 'above,' M. qǫn 'sheep.' This [ǫ] is an allophone of /ō/ (*qōl), cf. 13.11.2.

ụ as in T. bụrụn 'nose' (but cf. T. quḍ^{u}rụq 'tail,' etc.), T. yụn^{k} 'wool,' T. yụm^{u}šaq 'soft,' T. Çụlāq (M. quląq). This [ụ] is an allophone of /ū/ (*būran, etc.), cf. 13.11.2. But cf. M. hąvụl 'good' (X. hąvụl), where [ụ] is but an assimilative variant of [ụ], belonging to /u/.

Furthermore, [ị] is a phoneme different from [ị] in the following cases:

(1) In the southern dialects, where /i/, /ü/ have become [ị] (e.g., *kün 'day' > M. kịn), whereas */ö/, */ō/ have become [ị], [ị^{l}] (e.g., kōz 'eye' > M. kị^{l}z), cf. 10.

(2) In those dialects (e.g., X. and T.) which have preserved an old opposition PTu. */e/ : */i/ in auslaut. Here */e/ >[ị], but */i/ >[ị]. Cf. 9.6: *äkkī 'two' > àkkị, but *yättē 'seven' >yättị, etc.

8.2 Quantity of vowels.

(A) Phonetically Khalaj has the following quantities of vowels:

(a) long vowels with moved pitch (ā^{a} ...)

(b) long vowels with level pitch (ā ...)

(c) half-long vowels (a· ...)

(d) short vowels (a ...)

(e) reduced vowels (^{u} ...).

Furthermore Khalaj has

(f) long diphthongs with moved pitch (ū^{o} ...)

(g) short diphthongs with level pitch (u^{o} ...).

(B) Phonematically this system can be reduced to the following pattern:

(a) long vowels with moved pitch = (a) and (f) above (symbol:/â/...)

I shall call them "moved long vowels."

(b) long vowels with level pitch = (b), (c), and (g) above (symbol: /ā/ ...). I shall call them "level long vowels." Some vowels of (d) above are in this category, cf. 8.1, note.

(c) short vowels = (d) and (e) above (symbol: /a/ ...).

The phonetic difference between (a), (f), (g) and (b) in section A above may be described as follows:

Aa and Af consist of a first part which is two-three times longer than the second part. The second part is pronounced deeper than the first (with falling intonation, sometimes with falling-rising).

Ag has no perceptible falling intonation, both parts being equally (or almost equally) long; but the first part is stressed. Ab is a two-morae vowel, i.e., longer than Ad, without falling intonation (and Ac has one and a half morae).

It must be said, however, that in Khalaj a tendency toward shortening vowels exists. Practically, we find the following variants

(a) Ad ~ Ae, e.g., u̱ ~ u̱ᵇ, cf. above. Vowels in "reducing position" often are reduced; this, however, concerns only low vowels, cf. 8.1 above.

(b) Ab or Ag ~ Ac ~ Ad, e.g., ū̱ ~ u̱˙ ~ u̱. Shortening to half-long vowels mainly occurs in unstressed syllables, e.g., T. 43 qa̱˙ rṵn (< *qārin). But it sometimes even occurs in stressed syllables, e.g., 'arm, sleeve' = T. 223 qu̱ᵒl ~ X. 68 qo̱˙l ~ M. 68 qo̱l. In such cases it is often only the quality of vowels which indicates an old long (level) vowel: an original *qol would have become *qo̱l, and *qul would have become *qu̱l in Khalaj, whereas qo̱l represents an old *qōl and in the phonologic sense represents a separate phoneme. In Khalaj there is a tendency (just as in German) to open short vowels and to close long vowels (quš 'bird' > Çu̱š, but bûz 'ice' >bū̱ᵘz). For other examples of this type cf. 8.1,

note. One may say that some short vowels belong to the same category as Ab, Ac, Ag. However, this grouping does not always work, since ạ, for example, has no low variant indicating an old ā. The phonemic distinction exists only in ō/o, ū/u, ȫ/ö, but not in ā̰/a, etc. Especially a long ā̰ does not exist in the three dialects we investigated, cf. 13.11.5.

Thus the situation is rather complicated. For the diachronic development, see 13. Phonologically we may say that /ā/ ... is represented by [ā] ... (Ab), [a˙] ... (Ac), [u°] ... (Ag) and even sometimes by short vowels (Ad): [ọ], [ȫ], [ụ]. The following is a simple enumeration of some cases of Ab, Ac, Ag, Ad, insofar as they are relevant for phonology (I give but one example):

Ab: /ā/ ... [ā̰] T. 208 ā̰š 'soup,' [ḭ̄] T. 73 ḭ̄t 'dog,' [ō̰] T. 135 hȫ̰graqᶜ 'sickle.'

Ac: /a˙/... [ạ˙] T. 288 hạ˙ġạ 'behind,' [ȧ˙] T. 52 ȧ˙l 'hand,' [ọ˙] T. 23 bọ˙š 'head,' X. 68 qọ˙l 'arm,' [ụ˙] T. 146 sụ˙v 'water,' [ị˙] M. 82 tị˙l 'tongue,' [ȫ˙] X. 50 kȫ˙nmäk 'to burn.'

Ag: /u°/... [ụ°˙] T. 223 qụ°˙l 'arm,' [ị^e˙] M. 50 kị^e˙ndị 'it burnt.'

For Ad see 8.1, note. Although phonemes of this type may occur even in a short form, they never can be reduced (in contrast to the genuine short vowels of type Ad).

8.3 Moved long vowels. Furthermore, we find the phoneme "moved long vowel", symbol /â/ .... Here we find the following variants: Aa or Af ~ Ab ~ Ac ~ Ad ~ Ag, e.g., [ṵ̄^u˙] ~ [ṵ̄] ~ [ụ˙] ~ [ụ] ~ [ụ°˙]. This phoneme, too, never can occur in a reduced form. Short variants are employed less frequently than in /ā/ .... They occur almost exclusively in unstressed syllables (in the first

syllable of disyllabic words), in contrast to /ā/ .... But in unstressed syllables an original /â/ ... may also be shortened, e.g., T. 252 balla 'small' < *bâla (T. bāla). Since this feature is important only to diachrony, we shall treat it later. The following list, however, gives some examples.

Aa: /â/ ... [ā̆ᵃ] T. 268 ā̆ᵃč 'hungry,' [ū·ᵘ] T. 60 bū·ᵘt 'thigh,' [ȫ·ᵒ] T. 157 kȫ·ᵒk 'blue,' [ȫᵒ] T. 133 gȫᵒl 'lake,' [ǖ·ᵘ] T. 209 sǖ·ᵘt 'milk,' [ī·ⁱ] M. 61 sī·ⁱt 'milk.'

Af: /ū°/ ... [ī·ᵉ] T. 218 ī·ᵉm 'trousers,' [ī˒ᵉ] X. 41 ī˒ᵉšik 'door,' [ī·ᵉ] T. 163 kī·ᵉčä 'night,' [ǖ·ᵒ] T. 294 kǖ·ᵒk 'blue,' [ȫ˒ᵒ] X. 51 kȫ˒ᵒk 'blue,' [ū·ᵒ] T. 154 hū·ᵒt 'fire,' [ū˒ᵒ] X. 35 hū·ᵒt 'fire, [ū˒ᵘ] T. 111 Çū˒ᵘt 'wolf.'

Ab: /ā/ ... [ī] T. 299 bī 'one' (< *bîr), T. 61 tīz 'knee' (< *tîz), M. 87 hīnàk 'let us mount' (< *ûn-), [ū] T. 318 yūz 'a hundred' (< yûz ?, but perhaps < *yūz, then belonging to 8.2).

Ac: /a·/ ... [i·] T. 246 hi·rkàk 'male,' T. 32 ti·š 'tooth,' M. 110 yi·z 'a hundred' (cf. above), [u·] T. 216 pu·ta 'shrub,' [ạ·] T. 68 yạ·ġ 'fat' (but T. 275 yā̆ᵃġluχ 'fat,' adjective), [o·] X. 42 yo·llạ⁶maq 'to send.'

Ad: /a/ ... forms such as T. 252 balla < bâla 'small,' T. 257 qurruG < qûrïġ 'dry,' which phonologically belong to short vowels /a/ ....

Ag: /u°/ ... [ö·ᵒ] T. 220 bö·ᵒk 'hat,' [u˒ᵒ] T. 286 tu˒ᵒla 'full,' [u·ᵒ] M. 83 tu·ᵒrạ·q 'dried milk' (T. 214 tū·ᵒrạq), and in a sense [i̯ẹ] T. 286 bàdi̯ẹtmä 'angry.'

A special case arises with *ôn 'ten': T. 308 ᵘo·n, M. 100 ᵘo·n, X. 100 o·n, ᵒōn, unstressed T. 309 on bī, X. 101 on, M. 101

ǫ$^{2\cdot}$n. As one can see, stressed /â/ ... normally falls into the categories of Aa and Af. Cases of Ab (/ā/ ...) are dealt with in this chapter only for diachronic reasons; synchronically they may be /ā/ ... (although we cannot be sure because of the scarcity of our material). Even synchronically words with such vowels often become special cases: bī̇ has lost an -r (which may exist in such cases as bī̇ri 'one of them'?). This word normally occurs in an extremely unstressed position, e.g., as an indefinite article. Another case: ī̇ in hī̇nàk is unstressed, but perhaps in stressed position we would find ī̇$^{i\cdot}$ (e.g., in hī̇$^{i\cdot}$n 'mount'). T. 68 yạ̈·ġ 'fat' seems to be an individual variant, since we find yạ̈^{a}ġlux, etc. Cases of Ac (/a·/ ...) normally occur only in unstressed syllables (pu̇·ta 'shrub,'etc.); half-long vowels may be regarded as belonging partially to /ā/ ...; in other cases they are only variants of /â/ ... (apart from yạ̈·ġ, also yọ·llạ̈^{6}maq 'to send' < yū̇$^{o\cdot}$l 'way'?). Also /u^{o}/ sometimes seems to be only a variant of /â/ ..., e.g., M. 83 tu̇$^{o\cdot}$rạq ~ T. 214 tū̇$^{o\cdot}$raq 'dried milk': perhaps ū̇$^{o\cdot}$ has been shortened because of its unstressed position; should it always be pronounced shortened (as in KhM.), it would be /ā/ ..., but if in KhM. variants such as tū̇$^{o\cdot}$rạ̈·q should exist, it would be /â/ ...; I cannot resolve this question. The situation is similar for tu̇$^{o\cdot}$la 'full'; i̇ẹ in bàdi̇ẹtmä̈ 'angry' (~ M. 32 ī̇$^{e\cdot}$tt$^{i\cdot}$lä̈^{1}r 'they did'; bàdi̇ẹtmä̈ actually means 'ill-doing') is with certainty a variant of [ī̇$^{e\cdot}$], hence /â/ .... ọ̈$^{ö\cdot}$ in bọ̈$^{ö\cdot}$k 'hat' may phonologically be regarded as /ā/ ...; here /â/ ... > /a/ ... may be caused by the dropping of -r- (ATu. bö̂rk). However, we do not find ụ̈$^{ö\cdot}$ (as expected in the analogy in qu̇$^{o\cdot}$l 'arm'); we find ọ̈$^{ö\cdot}$, which resembles the normal development of /ö̂/, e.g., in kọ̄̈$^{ö\cdot}$k 'blue.' Hence we may regard ọ̈$^{ö\cdot}$ as /ö̂/ (generally as /â/ ...) even in this case.

8.4 Summary. We may summarize as follows: We have to distinguish /â/ ..., /ā/ ..., /a/ .... In unstressed position all

these vowels tend to be shortened; /ā/ ... especially tends to be shortened to /a˙/ ... even in stressed position. Besides /â/ ... = [ā̯ᵃ], [ṵ˙ᵒ], etc., we find [a̯˙], [ṵ˙ᵒ], etc., in unstressed position. Besides /ā/ ... = [ā̯], [ṵ˙ᵒ], etc., we find [a̯˙], [o̯] not only in unstressed but even in stressed position. Besides /a/ ... we find reduced vowels in an (extremely) unstressed position. Thus there is this tendency: /â/ ... > /ā/ ... >/a/...; but the old quantitative system is still preserved.

Some of the variants given above are dialectal; others may be individual. These matters cannot be decided until we undertake other expeditions.

Diagrams showing the difference between moved and unmoved long vowels will be given in a subsequent volume.

SOME MAIN FEATURES OF THE DIACHRONIC DEVELOPMENT

In this chapter I shall deal with the diachronic development of Khalaj. Since a complete description before the publication of the entire material is impossible, I shall restrict myself to an explanation of the most important facts. As I dealt with this subject rather extensively in 1968, I will refer to this article in all cases where the last expedition has brought no new results.

9.1. Comparison with Azerbaijani. Let us consider at the outset some points of minor relevance: Kh. has not undergone the marked changes which Az, its neighbor in central Persia, has undergone. It has preserved k: T. 158 kün 'day' (Az. gün); t-: T. 31 til 'tongue' (Az. dil); y- before i, ï: T. 164 yil 'year' (Az. il); -G-, -G: T. 75 sičgān 'mouse' (Az. sičan); T. 276 hāᵃčux 'bitter' (Az. aǰi) [my indication in 1968. 101 that ATu. -q and -ġ and -ġ- have become g- is false: -q normally is -q, -qᶜ, -ᵠx, -x; -ġ is Kh. -ġ, -Ġ, -x; -ġ- is -ġ-]; -b has been preserved even in ATu. sûb 'water' (Az. su): T. 146, M. 78 su·v (but X. 78 sū).

9.2 Iranian influence. We find a strong influence of P. in the lexical system, cf. 3.2. But we also find an influence of the P. sound system. For example, Atu. â, ā, a have become labialized: āᵃ, ā ~ a·, a (âč 'hungry' > T. 268 āᵃč; āš 'soup' > T. 208 āš; and bāš 'head' > M. 15 ba·š; at 'horse' > T. 71 hat). ATu. ǟ, ä have become ȧ· ~ ȧ ~ ä⁴ ~ ä, e.g., *ǟl 'hand' > T. 52 ȧ·l; ät 'flesh' > T. 67 ȧt. But ȧ (with the variants indicated) is typically P. Also the rather open u, sometimes o, is char-

acteristic of P. (qōl 'arm' >M. 68 qǫl). The change of ï > ị (ï, ị^4, ị^4 to be found in the neighborhood of q, ǵ only) may be due to P. influence, e.g., ït 'dog' >T. 73 ịt (but qïrq 'forty' > X. 104 qïrq, M. 104 qị^{4}rq, T. 312 qị^{4}rq, etc.). However, even the system of vowels is not totally Iranized. The preservation of three quantities, the sounds ǫ̈, ṵ at least in the northern dialects (contrary to my assumption of ȯ, u̇ in 1968. 82-3, 103), the distinction between ǫ and ṵ, etc.: all these characteristics are quite un-Iranian. An Iranian influence in the system of consonants does not seem to exist, except for the frequent change q- > Ǫ-, e.g., quš 'bird' > T. 103, M. 72, X. 72 Ǫuš 'sparrow.'

9.3 Long vowels. Contrary to my skeptical explanation in 1968. 101-2, (moved and level) long vowels have been preserved in Khalaj. Since this subject is of special importance and can be adequately treated only at length, I shall discuss it in Chapter 13.

9.4 Uniformity of */k/. PTu. */k/ has not been split into a front and a back allophone ([k] and [q] in the other Tu. languages) but has, on the whole, been preserved as a uniform sound, cf. Chapter 7: only *ki has become k'i (*ḱi has not). There is no relevant difference between the remaining sounds, as, say, in T. 203 käčä 'felt' and T. 43 qạ̈ ruṇ 'bellow,' the last word being written kạ̈ ruṇ, as well. That in the last case /k/ is pronounced (very slightly) more to the back is but a natural assimilation found even in European languages which do not use [q].

9.5 Ancient Turkic ń. ATu. -ń(-) has not become y, as in most Tu. dialects, but n. We find *qâńāq 'cream' >T. 210, M.X. 61 qā^{a}naq; *qâńō 'which?' > M. 60 qā^{a}nị, X. 60 qā^{a}nị; *qōń 'sheep' >T. 78 Ǫu^{o}n, M. 70 qǫn, X. 70 qǫ̈ n; *kōń- 'to burn' >M. 50 kị^{e}ndị, X. 50 kǫ̈ nmäk. I shall pursue this topic further in Chapter 11

9.6 Proto-Turkic *-ē, *-ë̄. To a Tu. -ï, -i corresponds often (but not always!) the Yakut -a, -ä (after o, ö of the first syllable: -o, -ö). It is interesting to see that we find a correspondence to this situation in Khalaj. As I shall show in 13.11.5, 14.3.3 and 14.4.2 ATu. had not eight vowels (in three quantities) but ten, eventually even twelve (that is, thirty-six, counting quantities). We have to assume */e/ (pronounced between /ä/ and /i/) and /ë/ (between /a/ and /ï/). The only Tu. language which has preserved both */e/ and */ë/ is Chuvash: e.g., sas 'voice' < PTu. *säs, but sik- 'to jump' < PTu. *sek-; C. xur 'goose' < PTu. *qâz, but sïpă 'handle' (in other Tu. languages mostly sap, K. sāp)<PTu. *sëp (whereas PTu. */ï/ has become C. /ĕ/). It seems likely that /e/, /ë/ existed in non-initial syllables, too. And I suppose that Y. has preserved a reflex of PTu.-/ē/, -/ë̄/ in the cases mentioned above. Here is a short list:

T.	Y.	KhM.	KhX.	KhT.
yigrimi 'twenty'	sürbä	yï̄ᵢ·rmi	yigirmi	yiiirmi
yädi 'seven'	sättä	yätti	yätti	yätti
(but iki 'two'	äkki~ ikki	àkki	àkki	àkkü)
börі 'wolf'	börö	bï̄ᵉ·ri[1]	bï̄ᵉ·ri[1]	bï̄ᵉ·ri
altï 'six'	alta	alta	alta	alta

(Most of the other Tu. languages have -i, -ï, although sometimes such forms as yigirmä can be found; also *kâmä ~ *kâmi 'ship' < *kämë̄, etc.) This means that KhM. has lost the difference between -/ï/ and -/ē/ (e.g., àkki = yätti), but KhX. has preserved the opposition: PTu. *-/ï/ > /i/, PTu. *-/ē/ > /i/ (àkki, yätti), and the distinction is extremely remarkable in KhT. where *-/ï/ > /ü/ (àkkü, yätti) and all Kh. dialects have changed PTu. *-/ë̄/

>/ạ/: altạ 'six' (but PTu. *tōlï 'hail' >tụ°lọ, etc.). This concordance of two Tu. language groups spoken in such distant areas seems to show that we must assume *-/ē/, *-/ë̄/ even in non-initial syllables of PTu.

Incidentally, the opposition of PTu. *-/ī/ : *-/ē/ has been preserved in Brahmi script, cf. A. von Gabain, Türkische Turfan-Texte VIII, Berlin, 1954: 90 iki 'two,' but 103 yte 'seven' and ygirme (yerme, ygirmë, ygermi) 'twenty.' Therefore it seems probable that even ATu. still had preserved *-/ē/, *-/ë̄/. We may find a similar phenomenon in New Uighur, cf. PhTF. 539, 541-2, 547.

9.7 Ancient Turkic d. Tu. -d(-) has been preserved in Khalaj. Up to this point in Turcology we accepted a simple scheme: in the west Tu. area (with the exception of Chuvash) we considered -d(-) as having become y (e.g., ATu. adaq 'foot' > Osman ayak); only in the far east Tu. area did we consider -d(-) as having been preserved in some form or other (Y. atax, Tuv. adaq, Khakass azax). But now this simple scheme has been destroyed: in Khalaj, spoken about 2500 miles from Tuvinian (the "next neighbor" which has preserved d) we find d: T. 59 hạdạq, M. 22 hạdạǤ = ATu. adaq. Our texts, in fact, include a number of words with -d(-): ATu. qudruq 'tail' = T. 92 qụdᵘrụq, M., X. 67 qụrdụq; ATu. küdän 'wedding' = T. 16, X. 54 kụ̈dàn, M. 54 kịdàn; ATu. küdägü 'bridegroom' = M. 46 kịdàiị; ATu. qâdïn 'brother-in-law' = T. 19, M. 57 qạ̄ᵃdụn, X. 57 qạ̄ᵃdïn; ATu. sïdök 'urine' = T. 69 sị̄dàk; ATu. qudġu 'fly' = T. 109 qụdᵘġụ, M. 74 qụdġị⁴. In the texts not published in this book we find still further examples (KhT.): bọdạmịšlàr 'they colored,' similarly KhX. (ATu. bodo-); bụ°d 'figure,' similarly KhX. (ATu. bōd: K. bōd, T. boy); ọdġạn- 'to wake up' (ATu. odġan-); kàD- 'to clothe' (ATu. kǟd-: K. kǟd, käd-, kät-, T. gäy-, Y. kät-). In other cases we also find ụ̄dụ-

'to sleep' (ATu. ûdu-, ûdï-); hadrı, hadrı 'separate' (ATu. adrï); yıd 'smell' (ATu. yîd); yıd- 'to send' (ATu. îd-). These fifteen examples would seem to confirm our theory, as does the fact that we never found an instance of -y(-) (T. 19 qa^inarvadı 'sister-in-law' is a loanword from Az. gayinarvadï; the genuine Khalaj term is qāᵃdın kıssı). In this respect Khalaj is, so to speak, an archaic enclave in a progressive territory.

9.8 Khalaj h- < Proto-Turkic *p-. But Khalaj has a feature which seems to be even more archaic, cf. Doerfer 1968.105-6. It has preserved h-, going back to PTu. *p-, cf. ATu. oyma 'felt stocking, felt boot' = Mo. hoyimasun = Manchu fomon, older *pomon, *poman; i.e., correctly: PTu. *poyma → Mo. *poyma (later within Mo. itself *poyma+sun, with the singular suffix) → Manchu *poyiman > *poman > *pomon > fomon. PTu. *p- has been preserved, in the form of h-, in other Tu. languages, too; cf. Räsänen in Uralaltaische Jahrbücher 33.146-8, 1961. But these are only sporadic cases, such as Az., New Uighur, Karakalpak höl, Uzbek hol, cf. Doerfer 1968.105-6 (Kh. hȫᵒ·l, hı̄ᵉ·l); some authors therefore have not been convinced of the existence of Tu. *h- <*p-.

I myself cited two examples which seem to contradict an original existence of Tu. *h- = Mo. h- (which must go back to *p-, cf. Doerfer JSFOu, against Sir Gerard Clauson's views): Az. hör- 'to weave' and Kh. har 'man' seemingly do not fit Mo. örmege 'mantle' (derived from ör- 'to weave'), ere 'man.' But this assumption was false. Cf. TM I.103: örmege, ere simply are loanwords not from early Bolgar (these would have become Mo. *hörmege, *here), but from early CTu.; here *p- already had become zero, whereas -e in auslaut still had been preserved; hence Mo. örmege ← early CTu. *ö̂rmäkä < PTu. *pö̂rmäkä and Mo. ere < early CTu. *ärä ← PTu. *pärä are quite regular. In other cases we find a correspondence; Tu. h- = Mo. h-: Uzbek

hokiz, New Uighur höküz 'ox' = Mo. hüker (Evenki hukur) 'bull'; Az. hürk- 'to be frightened' = Mo. hürgü-; Az. him (< *him) 'sign, token' = Mo. *him (Evenki *him); these are loanwords from early Bolgar *pökärz, *pürk-, *pim.

But one cannot do much with this knowledge, since examples with h- are found only sporadically in Tu.: we do not possess more than about a dozen certain examples, and we often find exceptions (e.g., Az. hör- 'to weave,' but New Uighur ör-, Uzbek or-; Az. has öküz 'ox,' etc.). The only Tu. language which has fully preserved h- < *f- <*p- is Khalaj. As I have shown in 1968, there are four proofs that Khalaj has preserved a genuine PTu. opposition *p- (> h-) : zero:

(1) Examples with h- are consistent and numerous, as these further examples indicate (cf. the vocabulary, Chapter 14); hadaq 'foot,' hat 'horse,' hagač 'tree,' hüdüm 'grape,' högrax 'sickle,' hü°t 'fire,' hàv 'house,' hä^ə^čux 'bitter,' etc. Compare all examples with an anlaut vowel in the vocabulary.

(2) No secondary h- can be found, with the exception only of T. 130 harra, M. 24 harra 'saw' ← P. ärré (without h- also in local P. dialects). However the h- form is not found throughout the whole territory of Khalaj: X. 24, e.g., has ärrä (and so have other Kh. dialects, a fact I did not know in 1968). This form seems to be a typical case of "hypercorrectness." There are many other P. loanwords with initial vowel (but I found no other example with the addition of h- in Khalaj); cf. afsar 'halter,' a˙lu 'plum,' a˙smaˑn 'heaven,' astàr 'lining,' etc. (Incidentally, cf. Kipchak-Uzbek harra 'saw,' Abdullaev 100; here the h- is secondary.)

(3) We find a regular retention of h- in derived forms: both hü°t 'fire' (T. 154) and hü°čaq 'hearth' (T. 195), a derivation of hü°t, have h-; similarly hàr 'man' and hi˙rkàk 'male'; on the other hand we find altä 'six,' altmiš 'sixty,' etc.

(4) The examples with and without h- are about equal in number so that we have a quantitatively well-balanced opposition. We

cannot say that h- has been added afterwards, according to some phonetic law, because we find many examples without h-. We furthermore cannot say that the opposition h- : zero is the consequence of a mixture of dialects, for in the numerals, for instance, we find ǖš 'three,' but hǫttụz 'thirty,' a phenomenon which would not seem to be caused by a mixture of dialects. We also cannot say that zero >h- is typically Kh. whereas the examples with zero are loanwords from another Tu. dialect. Admittedly, we find some examples which à la rigueur could be Az., e.g., ụzạq 'long' (local Az. uzax), ärik 'plum' (local Az. ärig; should be ärik; see Azizbekov 1965. 156). But there are numerous examples which are genuinely Kh., which certainly are not Az., and which in all probability are not the result of the influence of any other Tu. dialect, e.g., ȧ̊ rịn 'lip,' ạlụmlạ 'apple,' ī̊ᵉm 'trousers,' ạltạ 'six,' etc. Hence both h- and zero occur in genuine Kh. words. The statistics of h- : zero in genuine Tu. words is, according to the vocabulary, 26 : 34.

Khalaj preservation of h- means that Khalaj is in this respect the most archaic Tu. language, even more archaic than seventh-century RTu., which lost h- very early (or, at least, did not retain it in script).

9.9 Archaic features of Khalaj morphology. Khalaj has also preserved some archaic features in morphology. It has, for example, preserved the ATu. ablative in .dA (unpublished material of Mänṣur-ạbạd, Xärrạb): hàvịdà (KhM.) 'from the house' (= RTu. äbindä, later äbindin, äbindän); on the other hand, the locative ends in .čA (an old prolative-terminalis which has become an equative in many Tu. languages, but in ATu. still bêlčǟ 'up to the hips,' etc.): X. 86 ụ̄čạ 'in the sleep,' (unpublished material) yạ̄ᵃnịčạ 'at his side,' etc. (Khalaj, however, has lost the pronominal -n-.) X. 89 kàšgülị ịịl 'last year' is an interesting case: here kàšgụ̈lị < *käčgüli <*käčügli (i >ü in closed non-first syl-

lables) < käč-igli (or rather *käčěglī). This is the RTu. participle in -glī, preserved in no other Tu. dialect, according to Räsänen 1957. 123 and to PhTF. Some dialects, e.g., those of Mehr-e Zämin and Čąhäk, have preserved the ATu. necessitative in -GULUK as a future form. For other archaic features cf. Doerfer 1968. 100 (dative in .KA, future in .GA).

9.10 The numeral system of Khalaj. In the numerals of Khalaj we find traces of a peculiar trigintesimal system, to be found, I think, in no other language of the world. Cf. X. 106 'sixty' ȧkk^{i}-ǫttuz (literally 'two-thirty'), 'seventy' ȧkk^{i}-ǫttuz-ǫ'n (literally 'two-thirty-ten'); Wolfram Hesche has, since the compiling of the word lists, encountered the following expressions in Xärrąb: äkki ottuzugirmi (80), üčottuz (90), bäšottuz (150), these literally being 'two-thirty-twenty,' 'three-thirty,' 'five-thirty' respectively. Compare, however, Osman üç otuzunda kocakarı 'a very old woman' (literally 'a woman in her three thirties'), Dede Korkut, ed. Muharrem Ergin, Ankara, 1955, 74 üç otuz 'ninety' (literally 'three thirties').

I mentioned in 1968 the interesting form učümün 'third' (Minorsky 1940. 420) found in Kondurud. Similar forms occur in the unpublished material of Xorąk-ąbąd: üčminči, törtminči 'third, fourth' (ičmiṇči, tirtmiṇči? Mäzräᶜä-ye Nou), birminči 'first.'

9.11 Archaic features in the vocabulary of Khalaj. The vocabulary of Khalaj is also archaic. The following words occur in ATu. or Middle Tu. but occur infrequently or not at all in modern dialects (see Doerfer 1968. 106-7): T. 238 dąġ 'not' (K. 165 dāġ, Arghu, not found in any other Tu. dialect); X. 20 är < ärür 'is' (ATu. är- 'to be,' in the most modern dialects shortened >

e-, i-); T. 16 kụdản 'wedding' (K. küdän); T. 218 ị̄^{e}m 'trousers' (Türkische Turfan-Texte VII and K. öm, erroneously üm, Kipchak Houtsma em, erroneously im, Old Osman em, erroneously im; preserved only in C. yĕm, Yellow Uighur yem); T. 289 hụ̈rụ̈n, M. 39 hịrịn 'white' (ATu. ürün 'bright'); T. 115 ạ^{6}lụmlạ 'apple' (K. almïla, in all other dialects alma, elma); X. 86 ū 'sleep' (preserved in Y. ū, but in most of the dialects replaced by derivations from ûdï- 'to sleep' or other forms); T. 109 qụd^{u}ġụ 'fly' (K. 373 qudġu). In the unpublished material we find baluq 'village' (ATu. balïq: Mänṣur-ạbạd, Čạhäk, Mehr-e Zämin), va- 'to bind' (ATu. bâ-, in the modern dialects mostly the derived form bâ-ġ+la-: Mänṣur-ạbạd, Čạhäk).

DIALECT DIFFERENCES

Although our texts are rather scarce, they show clearly some dialect differences. These are of two kinds:

(1) The western dialects (KhX., KhT., etc.) have undergone a stronger P. influence than have the eastern dialects (particularly the southeastern dialects), which have preserved to a greater extent the Tu. character. The following are some examples taken from the lists of KhM. and KhX.: 6 M. 'lip' à˙rin (ATu. ärin) = X. làb, lo^u (← P. läb, local P. lo^u respectively, cf. Aš. Keyą 1335.159); 12 'waist' M. bī˙^e l (ATu. bêl) = X. kàmàrbànd (← P. kämärbänd); 13 'bowels' M. bogąrsuq (ATu. bağirsôq) = X. ru˙ dą (← P. rudé); 20 'bitter' M. hą̄^a ču^q x (ATu. âčiğ) = X. zà˙ r (← P. zähr 'poison'); 21 'tree' M. hągąč (ATu. ağač, yiğač) = X. diräxt (← P. deräxt); 37 'hearth' M. hū˙^o čąq (ATu. ôčâq) = X. kąląk (← regional P., cf. Keyą 139 käläk); 53 'oar' M. kiryäk (ATu. kürgäk) = X. pą˙ ro (← P. paru); 55 'dove' M. gà^5 �à^r čin (ATu. kökörčgün) = X. kàftàr (← local P., cf. Keyą 137 käfder); 67 'tail' M. qurduq (ATu. qudruq) = X. dom (← P. dom); 74 'fly' M. qudği^4 = X. mągąs (← P. mägäs); 107 'seventy' M. yätmiš (ATu. yätmiš) = X. hàftą˙ d (← P. häftąd); 108 'eighty' M. sa^1 san (ATu. säkizôn) = X. hàšta˙ d (← P. häštąd); 109 'ninety' M. to^q xsan (ATu. toquz-ôn) = X. nàvàd (← P. näväd). In nos. 12, 20, 21, 67, 107, 108 we often find original Tu. as well as P. forms, but the Tu. words always have been elicited from informants only through our suggesting the form as a possible variant (the Tu. forms evidently are still known, but the P. forms are more usual in everyday speech). In the other cases (Nos. 6, 13, 37, 53, 55, 74, 109)

informants have expressly stated that only P. forms exist, the Tu. forms being expressly denied.

(2) The northern dialects have preserved ancient *ö, *ü (> ö, ü), whereas the southern dialects have changed these sounds > i, i. Actually we find many transitions from ü > ü^{6} > ü^{66} (an even more delabialized ü) > i^{5} > i. See Chapter 5 for further discussion of this point. Of course we can give a complete analysis only after all the material has been gathered and evaluated. Sometimes we find delabializations in words of a dialect which normally has preserved ö, ü; e.g., X. 36 hī^{e}·l 'wet' (= M. 36) "should be" hȫ^{ö}·l (as it is in T. 256), since KhX. normally preserves ö (thus X. 94 = T. 302 tȫ^{ö}·rt 'four,' but M. 94 tī^{e}·rt < ATu. tört). These instances may be crossings of various dialects.

(3) We also find other dialect differences. In KhT., for example, we find a strong tendency to change i, ˙i in all non-first syllables > ü, u; e.g., T. 21 kiši babasu 'father-in-law' = X. 57 kiši babas˙i, and so always in the possessive suffix (T. 62 hadaqi a^{6}sDo, 221 hadaq qā^{a}bo, etc.); T. 314 altmuš 'sixty' = M. 106 a^{1}tmiš, X. 106 altmiš; T. 276 hā^{a}čux 'bitter' = M. 20 hā^{a}čuqx, but X. 20 hā^{a}čiqx, T. 300 àkkü 'two' = M.X. 92 àkki, etc. Another instance occurs in Mouǰan and Sorxädé, where instead of ī^{e}· (e.g., bī^{e}·l 'waist') we find ē^{e}· (bē^{e}·l), etc. We shall deal more fully with these dialect differences existing in Khalaj after we evaluate the entire material.

11

KHALAJ = NEW ARGHU

Minorsky (1940. 417-37) and Köprülü (Islâm Ansiklopedisi 5. 114-6, headword "Halaç"), who have tried to investigate the past of the Khalaj, have adequately treated such topics as the early notes about the Khalaj in Persian sources. Part of their investigation, however, must be regarded with some mistrust. The alleged connection, for instance, of the Iranian Khalaj with the "Khiljī" (or Khaljī), who played a role in twelfth/thirteenth century India, is not wholly tenable. This apparent connection arises from a certain similarity of tribal names. But similarity of Altaic tribal names does not prove the premise. Names such as Kiräyt (= Mo. Kereyit), Nayman (= Mo. Naiman) and even Qïtay exist as Nogay tribal names, but a significant historical connection of the Nogay tribe Qïtay with the Qïtay (even with the Qara-Qïtay) of ATu. sources cannot be proved. If a connection did exist at all, it may have been so marginal that it did not alter the original character of the language of the people. The Khiljī, then, may have had a slight contact with the Khalaj, may even have adopted their name, but may not have sustained any considerable linguistic or cultural influence. Of course, this latter supposition is purely academic; I do not affirm, nor even suppose, that even marginal contact existed. The Bulgars of today, for instance, have the same name as a Turkic tribe on the Volga river, but there exists not a single Bolgar Tu. loanword in their language. We must not, then, overestimate the importance of names, educing from them absurd historical liaisons. Just such an absurdity would occur were one to claim, for instance, that

in 1813 a Scandinavian tribe and a Baltic tribe defeated a German tribe and conquered their capital. Yet thus might the Russian and the Prussian victory over France under Napoleon be described were one to play the historical name-game, for Russian (Rus′) is a Scandinavian name, Róþsmenn or similar, cf. Vasmer 1955. 551-2; Prussian is a Baltic name, i.e., the name of a nation speaking a language belonging to the Baltic branch of the Indo-European family of languages (Prūsis, cf. Vasmer 1955.451); French (France) is a German name (the same as Francons, Franconia, cf. Vasmer 1955.551). Surely there have been historical contacts, but these were long ago; and whereas the influence of the Scandinavians on the Russians and that of the Francons on the French has existed, though it be slight, a linguistic influence of the Baltic Prussians on the Prussians of Berlin has not existed at all. Neither has linguistic influence of the Turkic Bolgars on the Slavic Bulgars existed. Why must the case of the Khalaj be different? A similar case in point is that of the Xalač, mentioned by al-Kāšġarī as living on the banks of the Amu-Darya. To assume that al-Kāšġarī's Xalač = the Afghano-Indian Xalǰī = the Persian Khalaj would be extravagant (although some historical contact will not be denied, contact not relevant to the languages).

Let us look to another source about the past of the Khalaj: origin-legends. It is well known that the Yakut have preserved the memory of their formerly more southern fatherland in legends. But legends dating from antiquity do not exist among the Khalaj; these people seem to have forgotten the remote past and to have preserved in their memory and traditions only more recent events.

Linguistics, then, must provide the needed clues. Indeed, linguistics is the only means of illuminating the shadows of Khalaj antiquity. Although these clues, of course, are scanty, the number of things which they reveal is somewhat surprising.

(1) As I have shown in 8.5 above and in 1968.103-4, 107, ATu. -ń(-) has not become -y(-) in Khalaj (as in most of the Tu.

dialects) but -n(-). We find qāᵃnaq 'cream' (< qâńāq); qāᵃni 'which?' (< qâńō); Çuᵒn 'sheep' (< qōń); kiᵉn-, kö·n- 'to burn' (< kōń-). Now al-Kāšġarī reports that the Arghu, Turkicized Sogdians living between Isfiǧāb (or Ṭarāz) and Balāsāġūn (cf. W. Barthold, 12 Vorlesungen über die Geschichte der Türken Mittelasiens, Berlin, 1935. 82), have no y but n in the following cases: qanaq 'cream,' qanū 'which?,' qōn 'sheep,' kön- 'to burn.' These are precisely the words given above. This striking correspondence may be a clue that the Khalaj of today are descendants of the old Arghu. But one correspondence is, of course, not sufficient evidence. There is, however, other evidence.

(2) Let us cite here a negative instance. According to K. III 218, the Khalaj changed q- > x- (whereas the Arghu did not, cf. above qanaq, qanū, qōn); al-Kāšġarī cites xīzim 'my daughter' instead of qīzim; xandā 'where?' instead of qandā; Khalaj of Persia has qīⁱz and qāᵃni, which is derived from the same root as qandā (*qâ+).

(3) According to K. III 140, the Uighur Tu. vowel i/i/u/ü has become u/ü in Arghu. Instead of Tu. bardim 'I went,' Oghuz bardam, the Arghu say bardum and käldüm 'I came.' We find the same evolution in Khalaj. Here are some examples from our unpublished material of KhM. (a dialect which has preserved only u, since every ü > i): vardum 'I went,' vardun 'thou wentest,' vardi 'he went,' vardukun 'we went,' etc. And consider these other examples (in which even KhX. often has u, although it normally tends to preserve i, cf. 10.3): T. 19 qāᵃdun 'brother-in-law' (ATu. qādin), M. 57 qāᵃdun, qāᵃdin, qāᵃdin, X. 57 qāᵃdun, qāᵃdin; T. 43, M. 62 qa·run 'bellow' (ATu. qārin) = X. 62 qa·rin; X. 46 kälün 'bride' (ATu. kälin) = T. 15 kälin; T. 291 sāᵃrux 'yellow' (ATu. sârig) = X. 73 sāᵃroᵍ; T. 44, X. 48 kündük 'navel' (ATu. kindik) = M. 48 kindikᶜ, etc. But it must be noted that u/ü often occur in open syllables (cf. 10.3), as in T. babasu < babāsi 'his father,' äkkü < äkki 'two,' or in originally open syllables, as

in T. 115, M. 4 ạ^{6}lụmlạ, X. 4 ạ^{6}lọmlạ < alïmla < almïlā 'apple' (so K.). Furthermore, we often find i instead of u/ü, e.g., in the Uighur suffix +lïg/+lig/+luġ/+lüg as in T. 263 hänlïĠ 'broad' (ATu. Uighur ênlig). The situation seems complicated, but, at any rate, a change of ï/i > u/ü does exist.

(4) According to K. III 153 for 'not' the Arghu say dāġ or dāġ ol, and the Arghu are the only Tu. nation to possess this word. Indeed, in all Tu. languages of today we find *ärmäz 'is not' or *tägül (Osman değil), and other forms. There is only one Tu. nation which has dāġ: the Khalaj. Cf. T. 238 hạvụl dạ^{6}ġ 'is not good,' M. 19 hạ^{6}vụl dạġ, X. 19 hạvụl dạġ. And in Minorsky 422 we even find daġïläm 'I am not' (< dāġ ol). (For the etymology of dāġ ol and tägül cf. Doerfer 1968. 107.) I think that the Khalaj use of dāġ is the most striking proof that Khalaj = Arghu, more precisely = New Arghu.

(5) This last piece of evidence is not so certain. According to K. the Arghu had -d- instead of the -z- of other Tu. nations, e.g., ködäč 'cup' (= közäč, közöč elsewhere); even qadïq 'hollow trunk' may be derived from qazï- (or, less probably, qaz-) 'to hollow out.' Now we find T. 121 hüdüm 'grape' (also T. 55 dụmrụq ~ zụmrụq 'wrist'). This form, however, may be an individual variant; cf., on the other hand, T. 260, X. 28 ụzạq 'long' with a pure -z-, no -d-.

KHALAJ, AN INDEPENDENT TURKIC LANGUAGE GROUP

The usual classification of the Tu. languages is this:

(1) Chuvash or Bolgar group
(2) Southwestern Tu. or Oghuz group
(3) Northwestern Tu. or Kipchak (Kypchak) group
(4) Southeastern Tu. or Uighur group
(5) Northwestern Tu. or South-Siberian group
(6) Yakut

Some scholars, however, have modified this scheme. Benzing, for example, puts Yakut (6) into group 5, PhTF 4. In the classification introducing PhTF (pp. vii, viii) group 3 has been split up into central Tu. (Kazakh, Karakalpak, Nogay, Kipchak-Uzbek, Kirghiz) and western Tu. (Karaim, Bashkir, etc.). Some authors (Menges, Poppe) have separated (more or less rigidly) Chuvash from all other Tu. languages. I do not think this separation is justified, for C. is a genuine Tu. language, cf. my remarks in Indogermanische Forschungen 71.116, 1966. C. has exactly the same numerals as all the other Tu. languages, wheras Mo. and Tungus have completely different numerals (with the exception of '4,' '1,000,' '10,000,' which may be borrowed). Menges 1968.60-1 gives a classification which deviates in some points from his classification in PhTF 6. He combines Uighur and Oghuz into one group and separates Oyrot (Altay Tu.) from the other south-Siberian languages (this separation is justified in a way, as Oyrot may be regarded as providing a transition between Kirghiz and south-Siberian; the combining of Uighur and Oghuz, however, sharply deviates from common practice.) Poppe 1965.33-53

agrees with our classification given above (though he employs other terms: 2 is called Turkmen; 4, Chaghatai; 5, Tuva-Khakass). However, the majority of modern Tu. scholars ascribe to this "classical" six-group classification.

Can we put Khalaj into one of these six groups ? Clearly we cannot classify it with Bolgar: of the relatively old Bolgar rhotacism and lambdacism (found as early as in the Bolgar loanwords in Hungarian, presumably from the eighth century) we find no trace in Khalaj. When Tu. is divided into Bolgar and CTu., Khalaj belongs obviously to CTu. (CTu. *tîz 'knee' = KhT. 61 tīz, but C. čĕr, etc.). It seems obvious, furthermore, that we cannot put Khalaj into one of the groups 2-4. Here we find an old development -d- > -ḏ- > -y-, as attested to in al-Kāšġarī (eleventh century), e.g., aḏiġ 'bear' = ayïġ in Oghuz and Kipchak. In the Uighur group -ḏ- > -y- is a bit younger, but is found in the spoken languages at least since the thirteenth century, as some hypercorrect forms prove; e.g., Ananjasz Zajączkowski, Najstarsza wersja turecka Ḫusräv u Šīrīn Quṭba III, Warszawa, 1961, 3: aḏaq 'cup' instead of the correct ayaq shows that ḏ must be pronounced y. Hence we may also conclude that aḏaq 'foot' was only a historical transcription, just as English wine [wa'^{i}n] which was pronounced [wi:n^{e}] in the middle ages. Now Khalaj has preserved -d-; hence it does not belong to groups 2-4 (and we can find many other features clearly separating Kh. from 2-4). Can Khalaj be ranked with group 5 or 6? Let us consider the scheme given by Poppe 1965.34 (where C. has been disregarded):

atax	adaq/azaq	ayaq 'foot'		
t'ia	taġ	tau/tu	taġ/daġ 'mountain'	
-'i	-'iġ	-'i	-'iq	-'i
Yakut	Tuva-Khakass	Kypchak	Chaghatai	Turkmen

Now Khalaj has hạdạq 'foot' (ATu. adaq), tạ̄^{a}ġ 'mountain' (ATu. tâġ), sạ̄^{a}rụx 'yellow' (ATu. sâr'iġ, also Kh. hànlị$^{\dot{G}}$ 'broad,' etc.), and it thereby corresponds to the "Tuva-Khakass" (or south-Siberian) group. Must Khalaj, therefore, be regarded as a south-Siberian dialect?

Before resolving this problem we have to consider two points:

(1) The investigator who devised this scheme before knowing Khalaj could judge only on the material known to him. Thus we cannot blame him if his scheme turns out to be incorrect. On the other hand, it is clear that an accepted explanation, just because it has been accepted, need not and must not be considered correct a priori for all time.

(2) The argument that Khalaj and Tuvinian are spoken at places so distant that a connection is thereby improbable would be to oversimplify the case: English is spoken, for instance, in England, North America, and Australia, places which are even more distant from each other than Khalaj and Tuvinian are and which are separated by even more languages (pass from England through Asia to Australia!); but English remains one language, nevertheless.

I think, however, that Khalaj cannot be classified with any other Tu. group, for some special features separate it from all other branches of Tu.:

(1) The development of PTu. ń. See V. M. Nadeljaev, "Čtenie orchono-enisejskogo znaka ƷƷ i ėtimologija imeni Ton'ukuka," Tjurkologičeskie issledovanija, Moskva and Leningrad, 1963. 197-213, and Doerfer 1968. 103-4: Khalaj is the only Tu. language to have n (for PTu. ń) in all positions. Yakut has preserved this sound as a nasalized y (transcribed ɟ), the other dialects having mostly y, the Oghuz group having sometimes yVn: T. köy- 'to burn' < kön̄-; goyun 'sheep' < qōń. (Some of Nadeljaev's conclusions, by the way, are false; Tuvinian, for example, has not preserved ń.) Let us consider now four words where Khalaj has n < ATu. ń:

ATu.	Kh.	Y.	Tuv.	Khakass
qōń 'sheep'	Ǫu̯°n	_____	xoy	xoy
qâńāq 'cream	qą̄ᵃnaq	xaɟax	_____	xayax
qâńō (which'	qą̄ᵃni̯	_____	qayï	xay
kön̄- 'to burn'	kǭ·n-	köɟör-	_____	köy-

Yellow Uighur	T.	Nogay
qoy	goyun	qoy
qayaq	(gaymaq)	(qaymaq)
qay	xaysï	qaysï
_____	köy-	_____

The normal correspondent of ń is y in Tuv., cf. F. G. Isxakov and A. A. Pal'mbax, Grammatika tuvinskogo jazyka 84, Moskva, 1961: simply xoy, not xoɟ. In the eastern dialect ɟ also appears, but not always representing old *ń. The authors cite these examples: iɟi 'two' (<*iyi <*ägi < äki); Duruɟā 'crane' (<*turńa);

ijä 'mother' (Khakass ičä, inä, Tuv. iyä, perhaps a baby's word); ïjaš′ 'tree' (< *yïgač). Hence in this respect Khalaj is quite isolated.

(2) The existence in PTu. not only of /a/ and /ï/, /ä/ and /i/ but also of the intermediary phonemes /ë/ and /e/. The development of these vowels is traced below in three groups: A, anlaut; B, inlaut; C, auslaut (CTu. means here all Tu. languages with the exception of C., Y., Tuv. and Kh.; we do not regard quantities in the tables):

	PTu.	C.	Y.	Tuv.	CTu.	Kh.
A	a-	u	a	a	a	ạ < a
	ë-	ï (~ u)	ï (~ a)	a	a	ạ < a
	ï-	yĕ, yï	ï	ï	ï	ị < ï
	ä-	a	ä	ä	ä	ȧ < ä
	e-	i	ä	ä	ä	ȧ < ä
	i-	ĕ	i	i	i	ị < i
B	-a-	u	a	a	a	ạ < a
	-ë-	ï (~ u)	ï (~ a)	ï (~ a)	a	ạ < a
	-ï-	ĕ	ï	ï	ï	ị < ï
	-ä-	a	ä	ä	ä	ȧ < ä
	-e-	i	ä	ä	ä	ȧ < ä
	-i-	i (î >ĕ)	i	i	i	ị < i
C	-a	a	a	a	a	a, ạ < a
	-ë	ă	a	ï	ï	ạ < a < ë
	-ï	ĕ	ï	ï	ï	ị ~ ụ < ï
	-ä	a	ä	ä	ä	ȧ < ä
	-e	ĕ	ä	i	i	ị < e
	-i	ĕ	i	i	i	ị ~ ụ < i

And here is an example for every item (ATu. adāq 'foot,' āy- 'to say,' ī̈t 'dog,' ät 'flesh,' äkkī 'two,' ič- 'to drink'; qarā 'black,' sāp 'handle,' q̂iz 'girl,' käč- 'to pass,' kāl- 'to come,' kišī 'person'; qarā 'black,' altī 'six,' qārī 'old,' kêčǟ 'night,' yêt(t)ē 'seven,' äk(k)ī 'two'):

C. ura, ïyt-, ÿitä, aš < at + šě (possessive suffix), ikkě, ěś-
xura, s̈ipä, xěr, kaś-, kil-, ___(tilě 'fox' < tilkü, etc.)
xura, ultä, ___(possessive suffix + ě), ___(keśśä 'felt'), śiččě, ikkě

Y. atax, ïy-, ït, ät, äkki (~ ikki), is-
xara, up<ïp, kīs, käs-, käl-, kisi
xara, alta, kïrïy- 'to grow old,' kiäsä, sättä, äkki ~ ikki

Tuv. adaq, aÿit-, ït, ät, iyi (< igi < ägi), iš-
qara, s̈ip, q̈is, käš-, käl-, kiži
qara, alďi, kïrï-, ___ (dägä < täkä 'he-goat'), čädi, iyi

T. ayaq, ayt-, it (but cf. ī̈z 'trace'), ät, iki (< äki), ič-
ǫara, sap, ǫīz, gäč-, gäl-, kiši
ǫara, alťi, ǫarrï, gīǰä, yädi, iki

Kh. ḥaḍaq, ḥa̤y-, ḭt, ȧt, ȧkkḭ, ḭč- (unpublished material)
Ǫara, ___ (vaṛ- 'to go' = C. p̈ir-), qīḭz, kȧš-, kȧl-, kišḭ
Ǫara, ȧltȧ, qaṛṛḭ (~ babasụ 'his father'), kīḭčä, yättḭ, ȧkkḭ (~ ȧkkụ).

We can see that in respect to the vowel development traced above, Kh. is clearly distinguished from all other Tu. dialects: although it resembles Y. and Tuv. in the preservation of -d-, it has ë-, e-, -ë-, -e- > a, ä, just as CTu. has; but unlike CTu. it has preserved -ë, -e as -a, -i, in this respect resembling only Y. (but not Tuv., which has -ï, i, just as CTu. has). This situation is peculiar to Kh. alone.

(3) The preservation of h-. Kh. is the only Tu. language which has preserved h- systematically, h- occurring only sporadically in Az., T., Kumyk, Uzbek, New Uighur, and Karakalpak. For Kipchak-Uzbek cf. Abdullaev 100; for some further sporadic occurrences cf. PhTF 780 "h = cons. prothèse." But in all these languages h is preserved only in isolated words. The south-Siberian dialects have no trace of this phenomenon.

(4) The ablative in .dĀ. Khalaj is the only Tu. language which has preserved the RTu. ablative in .dĀ. In all other Tu. languages this form functions only as a locative (in Y. as a partitive, but the ablative of Y. is .tAn, which, by the way, is found in Kh., too, as .dAn). The participle käšgülı < käčěglī is characteristic, cf. above.

(5) The unique word dạġ 'not' < dāġ, not found in any other Tu. dialect, cf. 9.11.

(6) Original Tu. quantities. As we shall see later, Kh. is the only Tu. language which has preserved all three original Tu. quantities, cf. especially 13.12.4 below.

The preceding considerations may be sufficient to show that Khalaj represents a separate, a seventh branch of the Tu. family of languages. Admittedly, some of its features may be found in other Tu. languages, but neither with such systematic regularity nor in the particular Kh. ensemble.

THE PROBLEM OF QUANTITY

13.1 Introduction. The problem of quantity is one of the most sophisticated in Tu. linguistics. It has even been asserted that Tu. originally possessed no long vowels at all (Ščerbak 1967, influenced by some sceptical, but not absolutely negative, remarks of Doerfer, "Langvokale im Urmongolischen?" Journal de la Société Finno-ougrienne 65.16-7, 1964). I do not wish to present here the endless details in the many articles of the many authors who have written about this subject. The reader may find bibliographies for a detailed treatment of this topic in the two most recent works about the quantity of Tu. vowels: Biišev 1963 and Ščerbak 1967.

I think a detailed refutation of the older theories is unnecessary for two reasons: the older investigators did not adequately consider the many "exceptions" in vowel quantity, nor did they know Khalaj.

13.2 Former investigations and the "exceptions." Generally K., T. and Y. have the same quantity of vowels, e.g., K. āč 'hungry' = T. āč = Y. ās; K. ač- 'to open' = T. ač- = Y. as-.

But there are many "exceptions." Here are some of them: K. āš 'food' = T. aš, Y. as; K. qōl 'arm' = T. ǫol, Y. xol; K. är 'man' = T. ār, Y. är; K. il- 'to attach' = T., Y. īl-; K. qal- 'to remain' = T. ǫāl-, Y. xāl-, etc. K. often has alternances, even in the headwords of his vocabulary, as in qōd- ~ qod- 'to place'; and we find even more alternances in the text samples, e.g., üč 'three' (headword) ~ ūč (sample). Let us see what attempts to explain such alternances have been made so far.

Ligeti 1938. 184-5 explains: "Il est à remarquer que chez Kāšġarī le nombre des mots dans lesquels une longue alterne avec une brève est assez élevé, preuve péremptoire de ce qu'au XIe siècle le processus de réduction des voyelles longues était déjà en plein cours et que dans le dialecte qui aux yeux de Kāšġarī avait le plus de prestige, le xaqani, il était très avancé." And he says further (192-3) that in the Tu. dialects we find the following categories: "1° dans un certain groupe de mots la longue se maintient dans toutes les langues sans exception, 2° dans un autre groupe, les formes à vocalisme long alternent avec celles à vocalisme bref d'une langue à l'autre, parfois même à l'intérieur d'une même langue, 3° enfin dans certains mots la réduction de la longue s'est produite même dans les langues les plus conservatrices à cet égard, comme le yakoute (üs 'trois'...). Du reste l'ouvrage de Kāšġarī prouve jusqu'à l'évidence que la réduction des voyelles longues est une tendance très ancienne. Ainsi l'état de choses moderne n'a rien qui puisse surprendre: à part quelques langues fidèles à l'ancien système de vocalisme long, la réduction est à mi-chemin dans un certain nombre de dialectes, tandis que dans la plupart des langues modernes elle est entièrement révolue."

Now let me present three objections to Ligeti's explanation.

(1) An objection to his style, to his mode of expression. Ligeti likes strongly affirmative terms; it is characteristic of him that he accuses the author of "criticisme coutumier" (Acta Orientalia Hungarica 21. 120, 1968). I do not think that the transcription of vowels in al-Kāšġarī's dictionary can be called "une preuve péremptoire" (a peremptory proof) that Karakhanid had a tendency to shorten vowels in monosyllabic (and other) words. Ligeti has regarded only his own theory without considering other possibilities. And "peremptory proofs" are rather rare in science.

(2) An objection to Ligeti's assertion that in one and the same language we find üč ~ üč, and that, furthermore, in the same old source some long vowels have been reduced, others preserved. Arguments such as these are not particularly convincing. Why did Ligeti not regard the possibility of half-long vowels (ü˙č), which might have been written sometimes one way, sometimes another? Surely in the face of such strange conditions as described above, one should try every possible explanation.

(3) An objection to Ligeti's "reduction" theory. Ligeti says that a tendency toward reduction explains the instances where K.'s long vowels have become shortened in later T., Y. sources. But Ligeti has not taken into account the fact that K. often has a short vowel in places where the younger sources T., Y. have a long vowel (cf. above, K. il-, T., Y. īl- 'to attach'). If K. was so "advanced" in reducing long vowels, why has he preserved these long vowels in so many cases where even the "conservative" languages T. and Y. have short vowels? Some kind of contradiction is inherent in Ligeti's argument.

In summary, I think that Ligeti's thesis has been largely provisional in its character.

Räsänen 1949. 68 has noted eleven cases of incongruence between Y. and T.; for instance, Y. ōl 'that' = T. ol; buol- 'to become' = bol-; är 'man' = ār, etc. (I shall mark these cases with the name "Räsänen" in the list given below.) Räsänen writes, "Merkwürdigerweise kommen diese Schwankungen nur vor einem urspr. r und ŕ sowie vor l vor." This explanation, namely, that the special nature of r, ŕ (>z) and l may have caused the incongruences between Y. and T., does not account for the incongruences between T. and Y. which occur with consonants other than -r, -z, -l; e.g., T. āy 'moon' = Y. ˙iy; gan- 'to become satisfied' = xan- ~ xān-; goyun 'bosom' = xōy; guč- 'to embrace' = kūs-; mün- 'to mount' = mīn-, etc. Cf. 13. 7.

Meyer Dissertation 81 gives a list of twenty-six cases where K. has a long vowel whereas T. (and, less frequently, Y.) has a short vowel. (These cases will be marked with the name "Meyer" in our list below.) Meyer does not attempt to explain the cause of such incongruences.

Biišev 1963 explains all Tu. long vowels by an original vowel + ȷ (*aȷ > ā, etc.). Ščerbak 1967.37 questioned this explanation and with good reason. This theory is obviously erroneous, for the very old early Bolgar loanwords in Mo., e.g., Mo. boro (K., Gagauz bōz 'grey'), show no trace of *ȷ whatever. There is no proof (nor even hint) that Biišev's thesis is correct, either in Tu. itself or in Tu. loanwords in other languages. And Biišev did not address himself to the "exceptions" at all.

Ščerbak 1967 ignores the exceptions also; he gives neither a list of them (such as Y. mīn- 'to mount' = T. mün-), nor an explanation of their origin. But the exceptions must be explained before a theory can become credible; at least an attempt at explanation must be made.

13.3 Disyllabic words in al-Kāšġarī. And, indeed, there are many "exceptions," that is, incongruences among vowel quantities in the various Tu. languages! In the following investigation we can treat only sketchily such disyllabic roots as T. böri 'wolf' (Kh. bī'ᵉrȷ) = Y. börö, K. börī. It is well known that T. normally has long vowels in disyllabic roots, whereas Y. and K. have short vowels (Kh. corresponding with T.). Here are some other cases: T. (gur-)bāġa 'frog' = Y. baġa, K. baqā; T. āla 'colored' = Y. ala, K. alā, etc.; see the long list in Biišev 1963.47-51. (Unfortunately the author largely forgot to note Y. and K. forms, giving only T. forms with long vowels.) As the vowels of the first syllables in these forms are unstressed, we can surmise that they have been shortened secondarily. (As we shall see later,

such secondary shortening holds true for Y., whereas this explanation must be somewhat modified to fit K.). Al-Kāšgarī's material in III 237-8, I 410, I 406-10 (word types CV̄CV̄, CV̄CV̄C, CV̄CVC) cannot convince us of the contrary. These disyllabic words with long vowels in the first syllables are for the most part either (a) derivations from monosyllabic roots (sūčig 'sweet' < *süt + sig, literally 'milky,' bēr-im 'debt' from bēr- 'to give,' etc.); or (b) onomatopoetics (ūhī 'owl'); or (c) foreign words, where long vowels seemingly have been preserved in this position because they belong to another layer of the language; e.g., words beginning with l- (an anlaut unfamiliar to Tu. phonology), lāġūn 'a kind of vessel,' lāčin 'falcon'; the Žuan-žuan word qātūn (TM III No. 1159), čāṭir 'tent' ← P. (TM III No. 1042), čāṭir 'salmiac' ← P. nušādir, etc. Of twenty-nine words we find only six which cannot be put into one of these categories: kūpik 'roughly sewed' (but küpī- 'to sew roughly'), kōšik 'curtain' (but köšī- 'to cover'), kōlik 'shadow' (but T. kölägä!), bēšik 'cradle' (T. bīšik), sōġon 'onion' (T. soġon!), sīġun 'deer' (T. sūġun). Six is an extremely low number, considering the many cases where the long vowel of the first syllable (preserved in T.) has been shortened. And these examples of K. seem the more dubious, as in two cases K. has a long vowel (sōġon, kōlik) where T. has a short one (soġon, kölägä). Thus K. does not seem to be too useful to our investigation. However, we shall see (in 13.7) that another Karakhanid source (QB) will help us solve this particular problem of quantity.

13.4 Monosyllabic words in al-Kāšġarī compared with Türkmän, etc. But even in the monosyllabic roots we find exceptions in the correspondences of K. : T. : Y. (we shall take note of Khalaj, too, and occasionally of other languages). In the following survey I shall enumerate all words of K. for which we find cor-

respondences at least in T. Let us see how many exceptions we find, in order to derive some statistics and thereby see whether the problem of the exceptions is quantitatively relevant or whether it can be legitimately disregarded. In the survey I have employed the following code:

(A) K. long vowel — T. short vowel
(B) K. short vowel — T. long vowel
(C) K. long ~ short vowel — T. long vowel
(D) K. long ~ short vowel — T. short vowel
(E) Y. deviation from K. (sometimes with correspondence to T.
(F) Y. deviation from T. (sometimes with correspondence to K.
(G) Statistically insignificant.

In the category "statistically insignificant" we put monosyllabic roots ending in a vowel, such as bā- 'to bind': such words must be long, for roots of the type CV do not exist in Tu. Furthermore čïq- 'to come out' < tašïq- is insignificant since it is only secondarily monosyllabic. Foreign words are put into this category, also.

	K.	English	T.	Other languages
	āč	hungry	āč	Y. ās, Gagauz āč, Kh. ạ̄ặč
	ač	to open	ač-	Y. as-
	āġ	to mount	āġ-	
	āq	white	āq	
	aq-	to flow	aq-	C. yux-, Kh. aqǤạ' r 'rivulet'
	āl	cunning	āl	
	al-	to take	al-	Y. ïl-, WOD. āl-, C. il
	and	oath	ant	
EF	ār-	to get tired	ār-	Y. ïr- ~ ïr-, C. ïrxan, Kh. harqạ̄n 'tired'

B	art	back	ārt	Gagauz ārt
	art-	to increase	art-	Y. ïrt- 'to pile up' [and orduk 'more' as a loanword ?]
	ās, āz	ermine	ās	[perhaps Y. ās 'white horse,' since ermines are white in winter; cf. German Fuchs 'fox' used for fox-red horses]
A	ās-	to hang up	as-	
AE	āš	food	aš	Y. as, QB āš, Kh. ąš
	āš-	to surpass	āš-	Y. ās-
	āt	name	āt	Y. āt, Gagauz āt, Kh. (unpublished material) ąᵉt
	at	horse	at	Y. at, Kh. hąt
	at-	to throw	at-	Y. ït-, WOD. āt-
	āw	hunting	āv	
EF	āy	moon	āy	Y. ïy, Kh. hąᵉⁱ
	ay	ah!	ay	
	ay-	to say	ayt-	Y. ïy-, Kh. hą·ⁱ-, hąⁱ-
	āz	little, few	āz	Gagauz āz
	āz-	to go astray	āz-	
G	bā-	to bind	bā-ġ+la-	Y. bāy-
	baq-	to look	baq-	
A	bāl	honey	bal	(Meyer)
	bār	existing	bār	Y. bār
	bar-	to go	bar-	Y. bar-, C. pïr-, Kh. bąr-, WOD. vār-
	bars	leopard	bars	Y. bar ← Mo.
	bas-	to press	bas-	WOD. bās-
AE	bāš	head	baš	Y. bas, QB bāš, WOD. bāš, Kh. bo·š, bą·š
	bāš	wound	bāš	Y. bās
	bat-	to sink	bat-	Y. bat-, Kh. bąt-
	bāy	rich	bāy	Y. bāy

A	bäg (and bēg 'husband')	prince	bäg	Y. bī, Kh. bȧg
	bäk, bärk	fast, solid	bärk	Y. bärt, Kh. bȧk
	bēl	waist	bīl	Y. bīl, Kh. bi̤ᵉl
AF	bēr-	to give	bär-	Y. biär- (Räsänen), WOD. vēr-, T. according to Ligeti bär-
	bēš	five	bäš	Y. biäs, WOD. bēš, Kh. bi̤ᵉš
	bēz	gland	mäz	
	bič-	to cut	bič-	Y. bis-
	bil-	to know	bil-	Y. bil-
DEF	bīr, bir	one	bir	Y. bīr (Räsänen), Kh. bi̤. T. on-bīr 'eleven,' etc.
	bit	louse	bit	Y. bit, PhTF 442 Nogay, Kipchak-Uzbek, 540 New Uighur bīt, C. piytă
	biz	we	biz	(but cf. sīz!)
A	bōd	stature	boy	KhT. bṳᵒd (unpublished material)
	boġ-	to strangle	boġ-	Y. buoy-
A	bōq	excrements	boq	(Meyer)
D	bōš, boš	empty	boš	(Meyer)
A	bōz	grey	boz	Gagauz bōz
	buz- (in the text erroneously boz-)	to destroy	boz-	WOD. bōz-
	bök-	to surfeit	bök-	
B	börk	hat	börük	Kh. bö̤ᵒk, bi̤ riȧk, bi̤riäk
	böz	linen	bīz	
G	bū	this	bū	Y. bu, WOD. bū
G	bū	steam	būġ	
A	būd-	to freeze to death	buy-	
	buq-	to crisp	buq-	

D	būr-, bur-	to smell	burun 'nose'	Kh. bṵrṵn, Y. murun
	būt	thigh	būt	Y. būt, Kh. bṵ̄ᵘt
	büz	ice	büz	Y. büs, Kh. bṵ̄ᵘz 'cold'
	bür-	to crisp	bür-	Y. bür-
	büt-	to stop	bit-	Y. büt-
BF	čaq	just this	čaq 'measure' (but čāġ 'time')	Y. sax 'time'
	čaq-	to beat	čaq-	Y. sax-
	čāl	grey	čāl	
	čal-	to beat	čal-	WOD. čāl-, Kh. čạl-
	čap-	to beat	čap-	
	čat-	to unify, to join	čat-	Kh. čạt-
	čäk	kind of textile fabric	čäk	
	čäk-	to pull	čäk-	
	čïġ	a kind of reed	čïġ	
G	čïq-	to come out	čïq-	(< tašïq-)
D	čïn, čin	true, correct	čin	
B	čip	thin branch	čïbïq	
C	čēl, čel (in the text erroneously çil)	stripe	čīl	(< čēl, cf. 13.11.5)
A	čīt	kind of fabric	čit	
A	čōġ	bag	čov 'lappet'	
	čōġ	glowing fire	čōġ	
A	čōq	bad (Oghuz)	čoq 'company	Osman çok 'much, many'
A	čōr	obscene woman	čor 'dirt'	
	čök-	to kneel	čök-	Y. söx-
	čöp	cookie	čöp	
D	čöp, čöp	splinter	čöp	(Meyer)
	čuṇ	big	čuṇ 'deep'	
	čüm-	to dive	čüm-	

	äg-	to bend	äg-	
	äk-	to sew	äk-	
EF	ēl	land, peaceful	ïl	Y. il
	äm	medicine	äm	Y. äm
	ēn	breadth	ïn	Y. iän, Kh. hànlị̇Ġ 'broad'
	äṇ-	to go astray	äṇ-	
BF	är	man	ïär	Y. är (Räsänen, Kh. hàr)
	ēr-	to frighten	ïr-	WOD. ēr- (T. 'to get tired')
	ärk	might	ärk	
	ät	flesh	ät	Y. ät, Kh. àt
AF	ēt- (according to the position et-)	to do	ät-	Y. ït- 'to load a rifle,' Brahmi ät-, Kh. ïẹt-, cf. T. äd-il- 'to be done'
B	ew-, äw-	to hurry	ïäv-	
	äz-	to scratch out	äz- 'to crumple'	
	xān	ruler	xān	Y. xān
	ïš, ïš	work	ïš	
	ït	dog	it	Y. ït, Kh. ïṭ, PhTF 284 Qashqai, 540 New Uighur ït, C. yïtă
	ič	inside	ič	Y. is
	ič	to drink	ič-	Y. is-
	ïg	sickness	ïgli 'sick'	
BE	il-	to attach	ïl-	Y. ïl-
	it-	to push	it-	
	qač-	to flee	ǵač-	WOD. ǵāš-
A	qād	snow storm	ǵay	(Meyer)
D	qāq, qaq	dried fruit	qaq 'dry'	(Meyer)
	qaq-	to beat	qaq-	
BE	qal-	to remain	ǵāl-	Y. xāl-, WOD. ǵāl-
	qān	blood	ǵān	Y. xān, C. yun

EF	qān-	to get satisfied	ǵān-	Y. xān-, xan-, WOD. ǵāndir-
	qāp	sack	ǵāp	Kh. ḥaḍaq qāᵃbo 'shoe'
	qap-	to get hold	ǵap-	Y. xap-
	qār	snow	ǵār	Y. xār, Gagauz kār, Kh. Ǵāᵃr
C	qār-, qar-	to mix	ǵār-	
	qāš	stone	ǵāš	
	qāš	eyebrow	ǵāš	Y. xās, Kh. Ǵāᵃš
	qat	layer	ǵat	Y. xat
	qat-	to add	ǵat-	Y. kitar-, Kh. qat-
A	qāw	flint	ǵov	Y. kia
	qay-	to glide, slide	ǵay-	
	qāz	goose	ǵāz	Y. xās, Gagauz kāz, C. xur
	qaz-	to dig out	ǵaz-	Y. xas-, WOD. ǵāzdir-
	kēč	late	ǵīč	Y. kiäsä, Kh. kīᵉčä 'night'
	käč	to pass	ǵäč-	Y. käs-, WOD. ǵäš-
D	kād-, käd-, kät-	to put on clothes	ǵäy-	Y. kät-, Brahmi käd-, KhT. käD- (unpublished material)
B	ked-, ket-	to go	ǵit-	Crimean Tatar kät-, Crimean Osman ket-, Brahmi ket-, ked-, WOD. ǵēt-. Cf. T. gid-iš- 'to go together'
	käl-	to come	ǵäl-	Y. käl-, WOD. ǵäl-, Kh. kal-
G	känd, känt	town	ǵänt	Sogdian loanword
	kär-	to stretch	ǵär-	
	kärt-	to cut	ǵärt-	Y. kärt-
	käs-	to cut	ǵäs-	Kh. käs-är 'axe,' WOD. ǵäs-
B	käw-	to chew	ǵävüšä-	

	käz	to rove	gäz-	
	qïl	hair	g̊il	Y. kïl
CE	qīn, qïn	sheath	g̊īn	Y. kīn
	qïr	mountain step	g̊ir	
B	qïr	grey	g̊īr	
	qïr-	to dig out	g̊ir-	
	qïrq	forty	qïrq	Kh. qïrq and similar
B	qïs-	to shorten	g̊īsga 'short'	Y. kïsay-, Kh. qïsqà (Meyer)
	qïš	winter	g̊iš	Y. kïs
	qïy-	to cut off	g̊iy-	Y. kïy- 'to break'
BE	qïz	girl	g̊īz	Y. kīs, WOD. g̊īz, Kh. qī̥ᵢz
	kim	who	kim	Y. kim
BE	keṇ (in the text erroneously kinğ)	broad	gīṇ	Y. kiäṇ, Kh. kī̥ᵉṇᵏ
	kēp (in the text erroneously kip)	pattern	gäp	Y. kiäp
BE	kir-	to enter	gīr-	Y. kīr-
	qoč	ram	g̊oč	
EF	quč- (in the text erroneously koç-)	to embrace	g̊uč-	Y. kūs-. Cf. T. guǰaq 'embrace'
DE	qōd-, qod-, qoy-	to put	g̊oy-	Y. xot-, WOD. g̊ōyve- < gōdū bêr- (Osman koyuver-) 'to free'
D	qōq-, qoq-	to stink	qoqa-	
AE	qōl	arm	g̊ol	Y. xol (Meyer), Kh. quᵒ·l, qo̱l, qo̱·l
	qōl	plain	g̊ōl	
	qōm	camel's saddle	g̊ōm	
A	qōn, qōy	sheep	g̊oyun	(Meyer), Kh. G̊uᵒ·n, qo̱n, qo̱·n
AE	qōn-	to settle	g̊on-	Y. xon-
	qop-	to jump	g̊op-	
A	qōr	yeast of yoghurt	g̊or 'seasoning'	

	qorq-	to fear	ǵorq-	WOD. ǵōrxu 'fear'
AE	qōš	pair	ǵoš	Y. xos
EF	qoš-	to add	ǵoš-	Y. kuosar-
AF	qōy	bosom, embrace	ǵoyun	Y. xōy, xōyn
	köč	move	göč	Y. kös
	köč-	to move	göč-	Y. kös-
	kök	blue, heaven	gök	Y. küöx, H. kö̤ᵒk, kḭᵉk
	kök	origin, base	kök	Kh. kö̤k 'thick' ← Az.
	köl	lake	köl	Y. küöl, Kh. gö̤ᵒl ← P.?
	köm	to dig in	göm-	Y. köm-
	kön	leather	gön	
	kön-	to straighten	göni 'straight'	Y. kön-, könö
	köp	much	köp	
	kör-	to look	gör-	Y. kör-, WOD. gör-
EF	kön-, köy-	to burn	köy-	Y. köjör- and similar forms 'to cook,' Kh. kḭᵉn-, kö·n-
	qul	slave	ǵul	Y. kulut
	qum	sand	ǵum	Y. kumax
C	qōm	wave	ǵōm	But K. qom- (in the text erroneously kum-)'to wave'
	qun-	to peel off	ǵunuš-	
	qur-	to gather	ǵur-	
B	qurt	worm, wolf	ǵūrt	Kh. ǴŪᵘt
	qus-	to vomit	ǵus-	
	quš	bird	ǵuš	Y. kus, Kh. Ǵuš
	qut	blessing	ǵut	Y. kut
D	qūz, quz	shadowy place	ǵuzay	
	küč	force	güyč	Y. küs
	küd-	to wait	güt- (Biišev 40)	Y. küt-
	kül	ash	kül	Y. kül, Kh. kül
	kül-	to laugh	gül-	Y. kül-

	kün	day	gün	Y. kün, Kh. kụn, kịn, kīn, WOD. gūn, Volga Bolgar كوان küọn?
	kür	hero	gür 'thick' < 'strong'	Y. kür
BF	küz	autumn	güyz	Y. küs (Räsänen)
	män	I	män	Y. min, WOD. bān
	mäṇ	mole	mäṇ	Y. mäṇ
	miṇ	a thousand	müṇ	Kh. mịn, mịṇ^{k}
EF	mün-	to mount a horse	mün-	Y. mīn-
G	nǟ	what	nä	But T. nälär (plural)
DE	ōq, oq	arrow	oq	Y. ox
EF	ol	that	ol	Y. uol, ōl, ol (Räsänen)
AF	ōn	ten	ōn (on-bīr 'eleven')	Y. uon, Kh. ūọn and similar, WOD. ōn
	oṇ	easy, right	oṇ	
AE	ōr-	to cut, sickle	or-	Y. or-, Kh. họ̄ġraq 'sickle'
	ot	medicine	ot 'grass'	Y. ot
	ōy	valley	ōy	
	ōy-	to excavate	ōy-	
A	ōz-	to surpass	oz-	
EF	ȫč	vengeance	ȫč	Y. ös
A	ǖd	time	öylä 'afternoon'	
A	ȫg-	to praise	öv-	
	ȫl	wet	ȫl	Y. üöl, Kh. họ̄ö·l, hī^{e}·l
	öl-	to die	öl-	Y. öl-, WOD. ȫl-
BE	ün- (in the text erroneously ön-)	~~to come~~ out	ön-	Y. ün-, Kh. hīn- 'to mount,' Brahmi ün-
	öṇ	before	öṇ	
	öp-	to kiss	öp-	
	ȫr-	to grow	ȫr-	

EF	ör-	to weave	ör-	Y. ör- (Räsänen)
	ört	flame	ört	
	ürt-	to cover	ört-	
	öt	bile	öt	
	öt-	to pass	öt-	Y. öt-
	öz	self	öz	Y. üös
	biš- (in the text erroneously piş-)	to cook	biš-	Y. bus-
	bus- (in the text erroneously pus-)	to lie in wait	bus-	
G	sā-	to count	sāy-	
	sač	hair	sač	Y. as, Kh. sąč
	sač-	to scatter	sač-	Y. is-
A	sāġ	right	saġ	(Meyer)
	saġ-	to milk	saġ-	Y. ia-
	sāl	raft	sāl	Y. āl
	sal-	to throw	sal-	
AE	sāp	handle	sap	Y. up < *ip (Meyer). Kh. Wenąrej sāp 'thread' (unpublished material)
	sap-	to wrap	sap-	
	sar-	to become furious	sar-	
	sarq-	to drip	sarq-	
	sat-	to sell	sat-	
A	sāy	sandbank	say	
	sän	thou	sän	Y. än, WOD. sān
	säw-	to like	söy-	Y. iäy-
G	sī-	to break	sī-n-dir-	
	siġ-	to fit	siġ-	
A	sīq	little, few	siq 'thick, frequent' (lucus a non lucendo)	

	s̈iq-	to press	s̈iq-	
	s̈irt	mountain ridge	s̈irt	
CF	s̈īs, s̈iš	lance	čīš	Y. sis 'spine' [dubious: s- should become zero]
D	s̈īz-, s̈iz-	to soak into	s̈iz-	
D	s̈īd-, s̈id-	to urinate	siy-	Kh. s̈ḭdäk, s̈ḭ·däk 'urine'
	silk-	to shake	silk-	Y. ilk-
	siṇ-	to soak	siṇ-	Y. iṇ-
A	s̈īz	ye	siz	Y. ähigi (but K. biz) (Meyer)
	soġ-	to get	sov- 'to spend'	
	suq- (in the text erroneously sok-)	to stick into	soq-	Y. uk-
	sōl	left	sōl	
	soṇ	afterwards	soṇ	
B	sor- (according to the position sōr-)	to suck	sōr-	
B	sor-	to ask	sōra-	WOD sōr-
	soy-	to skin	soy-	
	s̈ōg-	to curse	s̈ōg-	
	s̈ök-	to divide	s̈ök-	
AE	s̈ōz	word	s̈öz	Y. ös, QB s̈ōz (Meyer), T. according to Ligeti 191 sōz
A	sūw	water	suv	Y. ū, Kh. sṵ·v. T. suu̯ or sūu̯?
EF	s̈ür-	to drive on	s̈ür-	Y. ūr-, Kh. s̈ṵr-, s̈ṭr- (Räsänen)
	s̈ürt-	to rub	s̈ürt-	
	s̈üs-	to throw away	s̈üs- 'to beat'	
	s̈ūt	milk	s̈üyt	Y. ūt, Kh. s̈ṵ·t, s̈ṭ·t
	s̈üz-	to sieve, filter	s̈üz-	
	tāġ	mountain	dāġ	Y. tia, Kh. tāᵃġ

	taq-	to follow	daq-	
	tam-	to drip	dam-	
B	taṇ	wonderful	tāṇ	
	tap-	to find	tap-	Y. tap-, Tuv. tïp-
	tär	narrow	där	Y. tär, Kh. tä̯ᵃʳ
	tār	float	dār 'gallows'	
A	tār-	to spread	dara-	Y. tarā-
	tart-	to pull, draw	dart-	Y. tart-
	tas	bad	tas 'hardly'	
	tāš	stone	dāš	Y. tās, Kh. tä̯ᵃš
AE	tāš	outside	daš	Y. tas (Meyer)
AE	tāy	colt	tay	Y. tïy (Meyer), ATu. tāń
B	tay-	to glide, slide	tāy-	
G	tē-	to say	diy-	Y. diä-, WOD. dē-
	täg-	to touch	däg-	Y. tiäy-
A	täg (in the text erroneously tek)	like	däk	
	täṇ	equal	däṇ	Y. täṇ
	täp-	to kick	däp-	Y. täp-
	tär	sweat	där	
	tēr-	to gather	tīr-	Y. tïr- 'to draw.' But Az. där-, Brahmi täril-
G	tärs	odd, cross	tärs	Iranian loanword
	täz-	to run away	täz-	
	tïq-	to fill	dïq-	Y. tïk-
DE	tïl, tïl	tongue	dil	Y. tïl, Kh. tị̈l and similar (Meyer)
EF	tïn	breath	tïn	Y. tïn (T. Biišev 45)
BE	tïn-	to breathe	dïn-	Y. tïn-
	tïš	tooth	dïš	Y. tïs, Kh. tị̈š
	tik-	to stick	dik-	Y. tik-
C	tïn, tin	bridle	dïn	

	tiṇ	steep (towering up)	diṇ 'minaret'	
	tīz	knee	dīz	Kh. tīẓ
AE	tōd-	to get satisfied	doy-	Y. tot- (cf. toq 'satisfied')
A	tūġ- (in the text erroneously toğ-)	to be born	doġ-	Cf. Uzbek, New Uighur tuġ-
	toq	satisfied, full	doq	Kh. tọx, tọq
	tōn	clothes	dōn	Kh. tṵ°n (Y. suon?)
	toṇ	frost	doṇ	Y. toṇ
	toṇ-	to freeze	doṇ-	Y. toṇ-
D	tōp, top	ball, round	top	(Meyer)
AE	tōr	net	tor	Y. tor, Mo. toġor, tour
AE	tōy	camp	toy 'festival'	Y. toy 'many'
AF	tōy	clay	toyun	Y. tuoy, ATu. tōń
	tōz	dust	tōz	Gagauz toz
A	tögg-	to beat	döv-	
	tök-	to pour	dök-	
A	töl	young animal	döl 'sperm'	(Meyer)
	tön-	to turn	dön-	WOD. dön-
	tör	seat of honor	tör	
CE	tört, tört	four	dört	Y. tüört, Kh. tọ·ö°rt, tīẹrt
	töš	chest	döš	Y. tüös, Kh. tọ·ö°š
A	töz-	to suffer from cold	döz-	
	tūġ	standard	tūġ	Chinese loanword? TM 622
A	tūl	widow	dul	(Meyer)
DE	tūr-, tur-	to stand	dur-	Y. tur-
	turq	length	durq	
EF	tūš	similar, opposite	dūš	Y. tus
	tut-	to hold	tut-	Y. tut-

	tuy-	to feel	duy-	
	tūz	salt	dūz	Y. tūs, Kh. tṵ̄ᵘz
G	tǖ	down	tüy	Y. tǖ, Kh. tṵ̄ᵘk
	tüg-	to join	düv-	
BE	tün	night	düyn 'yesterday' but tün (Biišev 45 dün) 'night'	Y. tün
	tüp	bottom	düyp	
BE	tür-	to fold	düyr-	Y. tür-
	türk	mature and strong	türk 'Turkic'	
	türt-	to besmear	dürt-	
G	tüš	place of rest	düšäk 'bed.' [In most Tu. languages döšäk, töšäk from töšä- 'to spread.' Or töšäk > düšäk by analogy of düš- 'to lie down'?]	
	tüš	dream	düyš	Y. tül?
	tüš-	to fall, lie down	düš-	Y. tüs-, WOD. düš-
DE	tüz, tüz	level	düz	Y. tüs (Meyer)
	ūč	corner, end	ūč	
	uč-	to fly	uč-	
AE	ūl	base	uli 'big'	Y. ulū < ulug < ūllag, literally 'having a firm base'
	ūn	flour	ūn	
EF	ur-	to beat	ur-	Y. ūr- 'to put,' WOD. vūr-
	ut-	to win, gain	ut-	
	ūz	master	ūz	Y. ūs, from ū- 'to be able'
	üč	three	üč	Y. üs, Kh. ṵ̄š, ḭč, WOD. ǖš, New Uighur PhTF 540 ǖč

C	ün, ün	voice	üyn	
BF	ür-	to bark	üyr-	Y. ür- (Räsänen)
	ürk-	to be frightened	ürk-	Y. ürt- (aorist ürgär)
B	üš-	to gather	üyš-	
	üt-	to singe	üt-	Y. üt-
	üz-	to cut into pieces	üz-	
G	yā	bow	yāy	Y. sā
D	yād-, yad-	to spread	yay-	
	yāġ	fat	yāġ	Y. s'ia, Kh. yạ̄ˈġ, yāᵃġlux
	yaġ-	to rain	yaġ-	
	yaq-	to burn	yaq-	
	yāl	mane	yāl	Y. sāl
	yal-	to flame	yal'in 'flame'	Y. sal-
	yān	crupper	yān 'side'	
	yan-	to burn	yan-	
	yaṇ	model, pattern	yaṇ 'echo'? (cf. K. yaṇqū)	Y. saṇ 'character'
	yap-	to cover	yap-	Y. s'ip-
B	yar-	to split up	yār-	Y. 'ir- [why y- >zero?]
	yār	board	yār	Y. s'ir
	yās	death	yās 'funeral'	
CE	yaš	wet	yāš	Y. sās, Kh. yāᵃšul 'green'
	but yāš 'tear' (the same word)			
	yaš-	to hide	yaš	
	yāt	foreigner	yāt	
	yat-	to lie	yat-	Y. s'it-, Kh. yāt-, WOD. yāt-
B	yay-	to shake	yāy-	
	yāz	spring	yāz	Y. sās

EF	yaz-	to go astray	yaz-	Y. s̈is- 'to be near,' s̈īs- 'to fail,' QB yāzuq 'sin'
B	yaz-	to tie up	yāz-	
	yaz-	to write	yaz-	WOD. yāz-
G	yē-	to eat	iy-	Y. siä-, WOD. yī-
A	yēg	best	yäg	
AE	yēl	wind	yäl	Y. säl (Meyer), QB yēl, Kh. yẹ'l
	yänč-	to bite off	yänč-	
	yeṇ	sleeve	yäṇ	
AE	yēr	earth	yär	Y. sir (Meyer)
EF	yēr-	to hate	īr-	Y. sir-
	yet-	to reach	yät-	Y. sit-
B	yät-	to guide, lead	īt-	Y. siät-
	ÿiġ-	to gather, join	ÿiġ-	
	ÿiq-	to destroy	ÿiq-	
	ÿil	year	ÿil	Y. s̈il, Kh. yi̧l, yi̧'l
	ÿip	thread	ÿüp	
	ÿirt-	to rend to pieces	ÿirt-	
	ÿīg	raw, uncooked	īg 'pure-bred, unmixed'	
	ÿīn	body	īn	
	yit-	to get lost	yit-	
AE	yōd-	to destroy	yoy-	Y. sot-
	yoq	dirt, grease	yoq	
	yōq	not existing	yōq	Y. suox, WOD. yōq, Kh. yṵ°q (unpublished material)
	yōl	way	yōl	Y. suol, Kh. yo̱'lla- 'to send'
	yol-	to pluck	yol-	
	yort-	to gallop	yort-	
G	yū-	to wash	yuv-	Y. sūy-

	yum-	to lock	yum-	
	yuṇ	wool	yüṇ	Y. suṇ, Gagauz ün, K. yuṇ^{k}
BE	yurt	nomadic territory	yūrt	Y. sūrt
	yūt-	to gulp	yuvut-	
	yük	burden	yük-	Y. sük- 'to burden' (?)
AF	yüz	face	yüz	Y. süs 'front,' QB yüz (Räsänen)
	yüz-	to skin	yüz-	

13.5 Statistical data. We have found 406 examples, 15 of which are insignificant. From the examples we can derive the following statistics of correspondence between K. and T. (the correspondence of K. and T. to Y. and other Tu. languages will be investigated later):

A. Coincidences

K. long vowel = T. long vowel	90 examples
K. short vowel = T. short vowel	188 examples

B. Deviations

K. long vowel = T. short vowel	54 examples
K. short vowel = T. long vowel	32 examples
K. long ~ short vowel = T. long vowel	9 examples
K. long ~ short vowel = T. short vowel	18 examples

There are, then, 278 coincidences and 113 deviations. It is obvious that, should we consider the deviations in other Tu. languages, we would get a far greater figure (cf., e.g., K., Y. it 'dog' = T. it, but Kh., Qashqai, New Uighur īt). But even the deviations between K. and T. are so numerous that they are relevant and need detailed explanation.

Let us consider now a statistic of probability. How many monosyllabic roots (ending in a consonant) would be possible theoretically (without consideration of quantity)? According to the usual count (i.e., not counting PTu. *e, *ë, which are traceable only through C., which has a rather limited archaically inherited vocabulary), we get the following sounds:

In anlaut 7 phonemes:	vocalic anlaut, b, k/q, t, s, č, y;
In inlaut 8 phonemes:	the 8 vowels a, ä, ïi, i, o, ö, u, ü;
In auslaut 17 phonemes:	b, k/q, t, s, č, y, p, g/ġ, d, z, š, l, r, m, n, ṇ, ń

The theoretically possible roots would be 7 x 8 x 17 = 952. Counting short and long vowels separately would double this figure, i.e., would make it 1904 roots. But actually this figure is much too high! Many possibilities are not utilized (e.g., no roots exist of the types *bab, *bup, *büń, etc.; ń, in general, is rare, etc.). To be sure, this figure will increase when auslaut clusters (such as ärk 'power,' yūrt 'nomadic territory') are added. But these cases are relatively rare. We can count no more than about 800 monosyllabic PTu. roots. Of these, 113 would be a rather large portion.

13.6 The graphic element in al-Kāšġarī's transcription. Now let us consider the deviations of K. : T. Before attempting an explanation, however, we must consider that K. has a remarkably graphic element, which cannot be utilized for linguistic (phonemic) purposes. After all, al-Kāšġarī was no modern phonetician, and what he has written down is no article in the transcription of the Association Phonétique Internationale!

In the list given above I have utilized only the headwords in K., leaving aside the words in the samples. This procedure was absolutely necessary for reasons of method. Ligeti (and,

after him, Biišev) considered the words in the samples, too, e.g., Ligeti 192 "K ūč, üč 'trois'" (whereas the headword is only üč). This procedure has some serious disadvantages. One gets the impression that al-Kāšgarī tried to give a precise transcription only when dealing with the headwords and only there is he relatively reliable (but even in the headwords we find such errors as il- instead of īl- 'to attach' or such variants as būr- ~bur- 'to smell'). But in the text we often find deviations from correctly noted headwords. For example, qār 'snow' has a short vowel in K. II 204-13 (text sample), and a correctly noted ač- 'to open,' though elsewhere short, occurs with a long vowel in I 358-20, etc. If we considered all the samples, almost every vowel given by K. would be anceps! (And they would be saved from this fate only when occurring in the headword alone or in a very restricted number of samples, where, according to the law of probability, the danger of both quantities occurring would not be so great.) Such a situation would amount to chaos! Admittedly, "correct" variants normally prevail in the samples; qïz 'girl,' for example, has a short vowel as a headword (I 326). But it occurs only in a very restricted number of examples with a short vowel (I 236-15, 442-1, III 120-6 qïz, I 326-10, III 218-21 qïzïm; on the whole, qïz 6 times). But we find qīz in I 7-15, 291-10, 312-21, 382-8, 412-21, 474-5, II 94-25, 96-16, 109-23, 272-1, 276-8, 277-12, 340-8, III 137-25, 203-4, 259-14, 260-16, 289-17, 301-21, 328-20, 371-20, 380-18; furthermore we find qīzïm in III 218-21, qīzïn in I 280-13, 299-11, II 182-25, qīzqā in II 304-14, qīzlār in II 220-11, i.e., qīz 36 times. These figures seem to indicate that one should consider the samples. But statistics are not always so comfortable: they sometimes fail for the simple reason that the number of cases is too limited (with two or three cases one cannot make up a set of statistics).

Many surprising ("false") quantities may be explained by means of prosody (cf. 13.7). But the many variants are, in the last analysis, a terra incognita. We shall therefore take into account only the headwords, a consideration ~~of~~ samples being precipitous at the present time.

Another problem — a graphic one — arises. K. seems to prefer not to write long vowels (plene transcription) in words closed by clusters (or better, before two consonant signs). Therefore he generally writes art 'behind' (T. ārt), börk 'hat' (T. börük), qurt 'wolf, worm' (T. gürt), keŋ 'broad' (T. gīŋ), taŋ 'wonderful' (T. tāŋ), yurt 'nomadic territory' (T. yürt). Seldom do we find variants: tört~tört 'four' (T. dört), bērt ~bärt 'taxes' (from bēr- 'to give'). In keŋ, taŋ the merely graphic character is rather obvious (/ŋ/ is one sound, but is transcribed with two signs in the Arabic script: ng, just as in English 'to sing' [siŋ]). This explanation is provisional, of course; cf. also 13.7.

But there are other graphic elements in K. One sometimes feels that what K. indicates with plene versus defective transcription is not so much longness or shortness of vowels but rather a mixture of quantity on the one hand and a distinction between open and closed syllables on the other. (Non-reduced) vowels in open non-first syllables, for example, normally are written as plene, e.g., išlä- 'to work' (in this paragraph I transcribe literally: ä means plene transcription, etc.), but as soon as the syllable is closed we find išläl-, išlän-, išläš-, išlät- (passive, reflexive, cooperative, causative), cf. 13.11. The merely graphic character of al-Kāšġarī's transcription is particularly evident in such cases as ban- 'to be bound,' from bā- 'to bind' (but aorist bānir); san- 'to be counted,' from sā- 'to count'; sin- 'to break' (intransitive), from sī- 'to break'; tun- 'to be covered,' from tū- 'to cover'; yel (~yēl-) 'to be eaten,' from yē- 'to eat'; yun- 'to

wash (oneself),' from yū- 'to wash (another person).' In these cases one would expect bān-, sān-, etc., and in the modern languages we do find long vowels, e.g., T. sīn-. Here the transcriptions ban-, san-, etc., seem to indicate closed syllables rather than actual shortness.

Another proof for the graphic character of K.'s transcription is category C: tīn ~ tin 'bridle' (T. dīn), i.e., the many variants in closed syllables, furthermore the fact that sometimes vowels are written as short where they should be long according to "position"; e.g., 'to suck' (T. sōr-) is written sor-, but in a context where we merely find verbs of the type CV̄C, i.e., it must be read long: sōr-. The other verbs are kēčtī 'was late,' būrdī 'smelled,' bērdī 'gave,' tārdī 'spread,' etc.

A last proof of the graphic character of K.'s short vowels is the fact that headwords which have a short vowel (but which should have a long one according to T., Y.) often have a long vowel in the text samples. Although this situation must be interpreted cautiously, still the vowel quantity of the text samples is sometimes genuinely significant. As we have seen, the long vowel of the form qīz, which appears thirty-six times in the text samples, must be correct, despite the headword qïz, since the short vowel form appears in only five text samples.

Now this graphic tendency gives us the key for an explanation (provisional) ~~of~~ category B, i.e., of the many cases where K. has short vowels whereas T. (and Y.) have long ones, e.g., K. čïp 'thin branch' = T. čībïq, il- 'to attach' = īl-, qal- 'to remain' = gāl-, etc. The vowels are written as short because they are in a closed syllable. This explanation may also apply to category C, i.e., to the cases where K. has variants: long ~ short vowel, and where T. (and Y.) have a long vowel, e.g., K. čēl ~ čel 'stripe' = T. čīl, tīn ~ tin 'bridle' = T. dīn, etc.

Let us repeat this provisional explanation: unexpected short vowels in K. may be explained by his graphic tendency to mark closed syllables by a defective transcription. Long vowels in closed syllables are in some words written as plene (because of their long quantity), in some words they are written as defective (because of their position in a closed syllable), in some words they are written as plene ~ defective (because of their double character).

But now what about A and D, i.e., the cases where K. has a long vowel (plene transcription) which in T. is short (A), or where K. has variants long ~ short (plene ~ defective) which in T. are short (D)? According to data in Räsänen 1949.68 (cf. above), one could expect K. to have long vowels before r, l, z, š, more often than T. has. But this expectation is false: there are many examples where other consonants follow in the categories A, D; e.g., K. ās- 'to hang up' = T. as-; bāg 'prince' = bäg; bōd 'stature' = boy; bōq 'excrements' = boq, etc. Similarly K. čīn, čin 'correct' = T. čin; K. čōp, čöp 'splinter' = čöp, etc. Here we may accept as a provisional explanation Ligeti's thesis that K. long vowels are correct and precisely reflect the PTu. quantity.

Summarizing the two provisional explanations of incongruence of vowel quantity between K. and T., we may formulate the following: If K. has a long vowel, PTu. must have had a long vowel. If K. has a short vowel but T. (and/or Y.) have a long vowel, the short vowel in K. is merely graphic, T. (and/or Y.) attesting to the PTu. long vowel. More briefly, if any one of the three sources K., T., Y. has a long vowel, its occurrence reflects a PTu. long vowel.

13.7 Vowel quantity in Karakhanid. Perhaps this explanation seems convincing at first, but when one examines it closer, its

incompleteness becomes apparent. Two questions arise:

(1) Why have many vowels in K. remained long in T. (e.g. qār 'snow' = ġār; qāš 'eyebrow' = ġāš), whereas so many others have become short, e.g. K. āš 'food' = aš; bāl 'honey' = bal; qōl 'arm' = ġol, etc.—How can we explain category A? Ligeti's explanation that a tendency to shorten vowels, dating from the eleventh century, succeeded in some cases, in other cases failed, does not satisfy: we ask why in some cases the tendency succeeded, why in other cases it failed. We see no cogent reason for the difference.

(2) Why (cf. 13.3 above), despite all tendencies toward graphic transcription in K., do we find a majority of cases where the "long vowel" (plene transcription) is correct in monosyllabic roots: K. āč 'hungry' = T. āč; āġ- 'to mount' = āġ-, etc., and why in disyllabic roots do we sometimes find— contrary to the graphic convention (K. börī 'wolf' = T. böri) — a "long vowel" (cf. 13.3: K. sīġun 'deer' = T. sūġun, etc.). Can this latter phenomenon be explained by a merely graphic tendency?

Let us consider first the (easier) second question. The problem may stem not so much from a general Turkic but from a special Karakhanid character, i.e., al-Kāšġarī's spellings may reflect a special Karakhanid stage of development.

To investigate this Karakhanid stage of development, let us consider Tekin's superb article (1967). Tekin's starting point was the meter in QB, which is mutaqārib (⏑ – – / ⏑ – – / ⏑ – – / ⏑ –). He found that only such syllables were prosodically treated as long which were closed by a consonant (long syllables by position) or which contained open syllables with a long vowel (be the word of Turkic or of foreign origin). For instance, one may find ātim 'my name' (but never ātim 'my horse'; this must be atim). Thus the PTu. long vowels are reflected not only in K., but also in QB. However, one must consider the following points:

(1) Tu. long vowels are, to be sure, anceps, e.g., besides ātïŋ 'thy name' and āti 'his name,' atïŋ and ati respectively may also be found.

(2) Whereas long first syllables in disyllabic roots seldom occur in K., they occur somewhat more frequently in QB. Here I shall enumerate all such cases found in Tekin 1967: āčig 'bitter' (from āči- 'to be bitter,' K. ačig, ači-, T. ājï); āgū 'poison' (K. agū, T. āvï); bārū 'since' (T. bāri); īdī 'completely' (which is, I think, contrary to Tekin's assumption, no derivation from īd- 'to let go'; īd- has in the RTu. inscriptions a back d, i.e., we must read īd-, whereas īdī is written with a front d in the RTu. inscriptions, i.e., it is īdī); īsiz 'bad' (K. isiz); qādïn 'in-law' (K. qadïn, T. gāyïn); ötā- 'to pay' (K. ötā-, T. ödä-); qūrī- 'to dry' (K. qurī-, T. gūrï 'dry'). We also find some disyllabic derived words with a long first vowel where K. normally has a short vowel: qīn+a- 'to punish' (K. qïna-); kēč+ā 'evening' (K. kečā); kē.din 'after' (K. ___); sāqïn- 'to think' (K. saqïn-); sāqïnč 'sorrow' (K. saqïnč); sāqïš 'counting' (K. ___); sūčig 'sweet' (also K. sučig), tātïg 'taste' (also K. tatïg); tözün (Tekin erroneously tüzün) 'gentle' (K. tözün); yāzuq 'guilt' (K. yazuq).

(3) Some instances are somewhat doubtful: ālig 'fifty': in the modern languages we find mostly ällig or a similar form, with two l's; in the languages closest to Karakhanid, that is, in Uzbek and New Uighur, we find ällik. I think we have to read ällig in QB, too; that is, the first syllable is only positionally long (is closed by the first l of ällig). A similar case is Tekin's "īki" 'two': we have ikki in Uzbek and New Uighur; in QB, too, we must read ikki or ekki; "ēki" in the Yenisey inscriptions does not necessarily mean a long vowel, that is, the "long" mark does not mark a quantity but denotes instead the qualitative character of the closed e: äki, äkki has become eki (or even ekki) in the Yenisey inscriptions, as a kind of assimilation. However, ēkki may be correct, since we find īgi in Shor (Biišev 1963. 53).

(4) QB has some instances of long vowels where T., Y. (or one of them) have short vowels. QB coincides always with K. (and Kh.) in these instances: āš 'food (K. āš, Kh. ąš — T. aš, Y. as); bāš 'head, chief' (K. bāš, Kh. bą'š — T. baš, Y. bas); bōl- 'to become' (T. bol, but Y. buol-); kōz 'eye' (Kh. köz — T. göz, Y. kös. K., by the way, normally has kōz in the text samples); yūz 'face'(K. yūz, Y. sūs — T. yüz). In 13.4 and 13.5 we have enumerated 113 deviations between K. and T. In QB we find the following further examples: bōl- = T. bol- (but Y. buol-, Räsänen); kōz = T. göz, Y. kös. We now have found 115 "exceptions."

I think QB gives us a much better explanation of the development in Karakhanid than does our provisional thesis in 13.6. But now let us consider three items of a more general character.

(1) We have assumed (rather naively) that the terms "long vowel," "short vowel" express the only existing and possible quantities. But such an assumption is false and simplistic. In Low German, for example, four kinds of quantity exist, cf. Essen 1953.112-6: we find short, half-long, long, and over-long vowels, e.g., snak 'talk!' short vowel; ri't'n 'to tear,' half-long vowel with following tenuis; ri:dn 'to ride,' long vowel with following media; hu::s '(in the) house,' mü::s 'mice,' over-long vowel with a particular substitutional lengthening (words which go back to older *hūzə,*mūzə).

(2) Furthermore we have assumed (again rather naively) that this one possibility exists: that a long vowel immediately becomes a short vowel, e.g., that K., QB must have āt 'name,' that modern New Uighur must have at (Uzbek ąt), and that there has been no transition at all. But in the real development of languages there are always transitions. Latin -a (e.g., in rosa 'rose') has not immediately become zero in French ([ro:z]) but we have to assume (and we know several points by

the reports of grammarians) that rosa at first became something like ro:zǎ (with a slightly reduced vowel, as in Portuguese) > ro:zə (as in German Rose) > ro:zᵊ (as in the over-reduced Kalmuck vowels) > ro:z.

(3) And finally we assumed (once again naively) that language is a static thing, with no variations, no social classifications (layers), no situational variants in speech. (De Saussure would say that we did not consider la parole but only la langue.)

Correction of these three linguistic misconceptions allows one to give an explanation of Karakhanid vowel quantity which is more satisfactory than that provided by any previously existing theory.

I think we have to assume that in the Karakhanid period the PTu. long vowels already had become half-long (points 1 and 2). These half-long vowels may in swift colloquial speech often have become short or almost-short vowels (allegro forms, point 3). This shortening may have been true especially of unstressed vowels (i.e., first vowels in disyllabic roots or even in stems). Unstressed vowels normally are shorter than stressed vowels in other languages, e.g., bār (ba:r) 'existing' >Karakhanid ba˙r, but āġū 'poison' >almost aġū, only in very distinct speech a˙ġū. (We shall speak later on about the vowel of the second syllables.) There may have been a sharp distinction between slow and swift speech (lento forms and allegro forms); and especially in everyday speech (which always is the progressive form of speech, in contrast to the more conservative upper style of the "standard" language) allegro forms (with half-long or even short vowels) may have prevailed. It is generally recognized that such a difference exists in many languages and often leads to a change in the system of a language. See, for example, the opinion of N. Poppe, Khalkha-mongolische Grammatik 17, Wiesbaden, 1951: "In drei- und mehrsilbigen Wörtern, besonders in schneller Rede,

fällt das *ə* der einen oder der anderen Silbe sogar oft aus." Unstressed vowels in particular are often shortened, cf. for English Jones 1949.217: "The 'long' vowels ... are shorter in unstressed syllables than in stressed syllables," that is, the swifter a speech is the greater is the chance of shortening, especially in unstressed syllables. Here is an example characteristic of my mother tongue. In German we have the following pronunciations of haben 'to have':

(a) [hābä´n] only in over-distinct speech, to correct a misunderstanding, e.g., "Ich sagte nicht [zī hābä´n], sondern [dū hābä´st]."

(b) [hābən] in careful speech

(c) [hābn̩], mostly pronounced

(d) [hābm̩] in everyday colloquial speech

(e) [hā^{b}m] or even

(f) [hām] as allegro forms in swift and careless (or vulgar) speech, which may even become

(g) [ha˙m].

In Karakhanid we may have had a similar situation: in stressed syllables bār (= ba:r) 'existing' (very careful speech, lento form) ~ba˙r (colloquial speech, allegro form); in unstressed syllables a˙ġū 'poison' (careful speech, lento form) ~aġū or aġu˙ (colloquial speech, allegro form). (An exception may have existed for anlaut, cf. 13.11, 'name,' e.g., a^{a}t ~a˙t.)

With this assumption we can explain the many puzzling facts of Karakhanid transcription:

(a) It explains the variants in K., such as tīn ~tin 'bridle,' ün ~ün 'voice,' qōd- ~qod- 'to place,' etc. We have to assume ti˙n, ü˙n, qo˙d-. And these half-long vowels sometimes were written as plene (as long vowels), sometimes as defective.

(b) It explains why defective writing was used instead of plene writing in such cases as il- 'to attach' (T. īl-), qïz 'girl' (T. ǵīz), etc.: i˙l- may be written il- since it is not merely long, etc.

(c) It explains variable writings in the text samples of K. such as qïz ~qīz 'girl' (cf. above 13.6), and it explains variable (anceps) meters in QB such as ātïŋ ~atïŋ 'thy name.' It is obvious that a half-long vowel is quite naturally anceps.

(d) It explains why expecially before auslaut clusters we find mostly defective writing: such consistent defectiveness cannot be attributed to something purely graphic (cf. 13.6); it must occur primarily because the tendency toward vowel shortening before double consonants is even greater than elsewhere, e.g., *yûrt 'nomadic territory' (T. yūrt) >yu˙rt >yurt (allegro form). See Essen 1953.95, "Je mehr Laute dem akzentuierten Vokal folgten, desto kürzer wurde er." The same holds true for išlät- against išlā-, etc., cf. 13.6.

(e) It explains why long vowels in the first (unstressed) syllables of disyllabic words were normally "short": even in stressed syllables we have half-long vowels in allegro forms (ba˙r); unstressed syllables tend to be shortened still more, i.e., even the lento form a˙ġū 'poison' must become an allegro form aġū. Therefore we find in K. such forms as qadïn 'in-law,' börī 'wolf,' balā 'young animal,' tolū 'full,' tolī 'hail,' etc. (T. ǵāyïn, bōri, bāla, dōlï, dolï — but Kh. tu˚lo).

(f) It likewise explains why in some cases we find long vowels in the first syllables of disyllabic words, such as K. bēšik 'cradle,' sīġun 'deer' (T. bīšik, sūġun; for K. kōlik 'shadow,' sōġon 'onion,' cf. 13.11), etc., cf. above. It is characteristic that QB has preserved many more long vowels in this position: its poetic language makes it tend more to lento forms. Some QB forms with long vowels where K. has short vowels are āčïġ 'bitter' (K. ačïġ, T. ājï), āġū 'poison' (K. aġū, T. āvï), etc., cf. above.

Now let us consider quantity in non-first syllables of Karakhanid words. Seemingly, we have to distinguish between long and short vowels (written respectively as plene and defective). But it is curious that where Karakhanid has "long" vowels, T. sometimes has long vowels (e.g., the comparative suffix + rĀK, QB, Tekin 1967.169, which has the same form in T.) and sometimes has short vowels (e.g., the plural suffix + LĀr = + LAr in T.). I think that we must make a distinction here. We must consider that some suffixes even in QB never have long vowels (namely all suffixes with the fourfold variant i/i/u/ü, e.g., the passive suffix). For an explanation of this situation cf. 13.11.

I have investigated another Karakhanid source, Yüknekī 1951, which has the same mutaqārib meter as QB. In this source I found the same situation, e.g., 453 aǰunqa bu söküš (!) mälāmät ničin 'what is this cursing at the world for?' (hendiadyoin), 470 sözüm munda qālur (!) barur bu özüm 'my word will remain here, I myself will go away,' 472 tükātür 'ümürni bu yāzim (!) küzüm 'this spring and autumn will finish my life,' 476 qali barsa özüm sözüm qalsa tep 'saying, "When I myself go away, this my word shall remain,"' etc. It would be interesting to investigate this (rather short) source completely. We even find here many long vowels in words where vowel quantity is not establishable in modern languages, such as 257 bu bōdun 'this people,' etc. It would be useful to investigate all the other Middle Tu. sources (including Khorezm Tu., Chaghatay, etc.), in order to see at what time the long vowels disappeared definitively. But since this question is without importance for the investigation of PTu. quantity, I shall not deal with it here. For Yüknekī cf. Talât Tekin, Journal de la Société Finno-ougrienne 68:5, 1967.

13.8 Vowel quantity in Yakut. At the beginning of 13.7 I asked two two questions: how can we explain quantity in Karakhanid (this

question has been answered) and how can we explain that some long vowels in K. have corresponding long vowels in T., (qār 'snow' = gār), whereas other long vowels in K. have corresponding short vowels in T. (āš 'food' = aš).

Can we answer this second question by utilizing Yakut? I doubt that we can. We must consider that a long vowel in K. often has a corresponding short vowel not only in T. but also in Y. Here is a list of such cases:

K.	T.	Y.
āš 'food'	aš	as
bāš 'head'	baš	bas
qōd-, qod- 'to put'	goy-	xot-
qōl 'arm'	ǵol	xol
qōn- 'to settle'	ǵon-	xon-
qōš 'pair'	ǵoš	xos
ōq, oq 'arrow	oq	ox
ōr- 'to sickle'	or-	ɵr-
sāp 'handle'	sap	*ïp >up
söz 'word'	söz	ös
tāš 'outside'	daš	tas
tāy 'colt'	tay	tïy
tōr 'net'	tor	tor
tōy 'meeting'	toy	toy
tüz, tüz 'level'	düz	tüs
yēl 'wind'	yäl	säl
yēr 'earth'	yär	sir
yōd- 'to destroy'	yoy-	sot-

It is clear that in these cases Y. does not explain more than T. But let us enumerate all deviations between T. and Y., comparing also the K. forms (if such can be found):

K.	T.	Y.
ār- 'to get tired'	ār-	ïr-, ïr-
āy 'moon'	āy	ïy
bēr- 'to give'	bär-	biär-
bīr 'one'	bir (~on-bīr)	bīr
čaq 'just that'	čaq 'measure' (~ čāġ 'time')	sax 'time'
ēl 'land, peaceful'	īl	il
ïar 'man'	ïar	ïar
ēt- 'to do'	ät- (~äd-il-)	īt-
qān- 'to get satisfied'	ġān-	xān-, xan-
qïs- 'to shorten'	ġïsga 'short'	kïsay-
quč- 'to embrace'	ġuč-	kūs-
qoš- 'to pair'	ġoš-	kuosar-
qōy 'embrace'	ġoyun	xōy, xōyn
köy-, kön- 'to burn'	köy-	kȫjör- and similar forms
küz 'autumn'	güyz	ḳüs
mün- 'to ride'	mün-	mīn-
ol 'that'	ol	uol, ōl, ol
ōn 'ten'	ōn ~on-bīr	uon
ȫč 'vengeance'	ȫč	ös
ȫr- 'to weave'	ȫr-	ör-
s̄is, s̄iš 'lance'	čīš	sis 'spine'
sür- 'to drive on'	sür-	ǖr-
tïn 'breath'	tïn	tīn
tōy 'clay'	toyun	tuoy
tūš 'opposite'	dūš	tus
tün 'night'	tün	tün
ur- 'to beat'	ur-	ūr-

ür- 'to bark'	üyr-	ür-
yaz- 'to go astray'	yaz-	s̄is- (and sis- 'to be near')
yēr- 'to hate	īr-	sir-
yüz 'face'	yüz	s̄ūs

We furthermore have the following examples not found in K. as a headword:

T.	Y.
bol- 'to become' (Biišev bōl-)	buol- (Räsänen)
ǵiz- 'to get red'	k̄is-
māl 'cattle	māl, mal
yüz 'a hundred'	s̄ūs (Räsänen)

And we have the following examples not found in T. but only in K.:

K.	Y.
iš 'smoke'	īs
sun- 'to extend'	ūn-
tār 'pie'	tar 'curd' (Meyer)
yūt 'death by frost'	sut

Here let us continue our statistics of deviation. As noted in 13.5 and 13.7, we found 115 deviations in K. : T. (cases where K. and T. have different vowel quantities). In this chapter we have found these further deviations (where Y. has vowel quantities other than those of K. and/or T.): Y. ī̄r-, īr- 'to get tired' = K., T. ār-; īy 'moon' = K., T. āy; il 'peaceful' = K. ēl, T. īl; xān-, xan- 'to get satisfied' = K. qān-, T. ǵān-; kūs- 'to embrace' = K. quč-, T. ǵuč-; kuosar- 'to pair' = K. qoš-, T. ǵoš-; köjör- 'to cook' = K., T. köy- 'to burn'; mīn- 'to ride' = K., T. mün-; uol, ōl, ol 'that' = K., T. ol; ös 'vengeance' = K., T. ȫč; ör- 'to weave' = K., T. ȫr-; ür- 'to drive on' = K., T. sür-; t̄in

'breath' = K., T. tïn; tus 'opposite' = K. tūš, T. dūš; ūr- 'to put' = K., T. ur- 'to beat'; sïs- 'to go astray, fail' = K., T. yaz- (but QB yāzuq 'sin'); sir- 'to hate' = K. yēr, T. ïr-. We have now found 17 more deviations, the number now being 132.

How can we explain these deviations?

(a) Y. sis 'spine' is dubious; cf. the vocabulary in 13.4: we should expect *is or another form without s-.

(b) Some words may be loanwords from Mo.: il (Mo. el, ėl); māl ~mal (Mo. mal); ös (Mo. ös, öš); sut (Mo. ǰud); sax (Mo. čag). (But for sut cf. 13.11: it may be derived from *yūt.)

(c) The transcription K. iš 'smoke,' sun- 'to extend' may be explained as in 13.7, that is, as merely graphic (actually half-long) vowels.

(d) kïsay- 'to shorten' is short because long vowels of the first syllables of disyllabic words quite regularly are shortened in Y. (böri 'wolf' > börö, etc.).

(e) In some cases the vowel must have been shortened secondarily in Y.: ïr- ~ïr- 'to get tired' (ir- dialectal variant?); ïy 'moon' (probably *ïy > ïy because of the similarity of ï and y); är 'man' (with a short vowel in many Tu. languages, already Brahmi är; cf., however, 13.11.5); xān- ~xan- 'to get satisfied'; küs 'autumn'; ör- 'to weave'; tus 'opposite'; ür- 'to bark'; sïs- 'to be near' ~sïs- 'to fail'; sir- 'to hate'; tar 'curd.' In most of these cases the vowel must have been shortened, because K. and T. agree (ïr- ~ïr-, ïy, xān- ~xan-, ör-, tus, sir-) or because at least T. has a long vowel (är, küs, ür-; K. küz, ür- may be only graphic for kü·z, ü·r-, cf. above) or because at least QB has a long vowel (sïs- ~sïs-; cf. QB yāzuq 'sin'; similarly Y. tar = K. tār). However, the reason for this sporadic shortening is quite unclear: is it dialectal influences? or analogies? (e.g., küs 'autumn' in analogy to kis 'winter'?) Whatever the reason may be, these exceptions do not solve the problem of PTu. quantity. They seem to be merely Y. developments.

(f) In other cases the vowel must have been secondarily shortened in T.: bär- 'to give' (~bär-, however, only according to Ligeti); bir 'one' (but cf. on-bīr 'eleven,' bīr-bīr 'each'); ät- 'to do' (but -d- in äd-il- 'to be done' is proof of an older long vowel); goš- 'to pair' (cf. K. qōš 'pair'); goyun 'embrace'; on-bīr 'eleven' (cf. ōn 'ten'); tin 'breath' (but dīn- 'breathe'; tin must be a loanword because of t-); toyun 'clay' (I have the impression that T. has a tendency to shorten long vowels before y; cf. goyun, also qaymaq 'cream' <*qâńaq); tün 'night' (but düyn 'yesterday'; tün must be a loanword because of t-); bol- 'to become' (~bōl-, but only according to Ligeti); giz- 'to become red'; yüz 'a hundred.' These vowels must be shortened because we find variants either in T. itself (bär- ~bär-, bir ~ bīr, tin ~dīn-, on-bīr ~ōn, tün ~düyn, bol- ~bōl-), or because a special tendency exists (before -y-), or because -d- proves a formerly long vowel (ät- ~äd-il-), or because K. and Y. agree (goš- = K. qōš, Y. kuosar-). But even giz-, yüz seem to belong here. As for guč-, cf. gujaq 'embrace,' apparently <older *qūčaq (-č- becomes -j- only before long vowels), but secondarily shortened. There are some clear cases of secondary shortening in T., e.g., yädi 'seven' (K. yeti, yetti); ät- (cf. äd-il- < *äd-il- < *ät-il-); git- 'to go' (cf. gid-iš 'march'); guč- 'to embrace' (cf. gujaq 'embrace'). These words must contain a shortened vowel (which originally was long) according to an established phonetic law: -t-, -p-, -k-/-q-, -č- become -d-, -b-, -g-/-ġ-, -j- only after long vowels. A further example is ärtä 'early' (< *ärtä, cf. īr 'early' < *ēr); ärkäk 'male' (< * ärkäk, cf. ār, but cf. also 13.11.5); buġa 'bull' < būqa, cf. 13.11.8. See also T. tay 'colt' < ATu. tāń: according to the phonetic laws we should expect *dāyin (cf. 12); tay must be a loanword from another Tu. language.

(g) However, there are some cases which are hardly explicable: mün- 'to mount' (perhaps mü·n- in K., thus Y. mīn-

representing the older form); ol 'that' (perhaps Y. ōl being an affective lengthening, or *ōl having been shortened because of its being mostly proclitic), sür- (perhaps sü˙r- in K., thus Y. representing an older *sür-); ur- (perhaps u˙r- in K., thus Y. representing the older form). Since in all these cases K. shows a defective transcription which, after all, may represent an older long vowel (cf. 13.7), it is possible that Y. has the more archaic form, whereas the T. form is shortened, i.e., category G would be = category F. But even in these cases we do not know why the long vowels have become short in T. In some cases allegro forms may have been the reason, e.g., bōl- > bol- (which often is an enclitic modal verb or copula); ur-, sür- also occur often in an enclitic position. It is noteworthy that all the "exceptions" of G are verbs (only ol is a pronoun, but cf. above). Whatever the cause of this phenomenon may be, the number of exceptions remains rather small; and these exceptions do not solve the problem of PTu. quantity, for they seem to be merely Türkmän.

There is, however, one striking fact: Tu. *ô,*ö̂ in Y. usually become uo, üö, but we find Y. xōy(n) 'embrace' [not *kuoy(n)], kōjör- 'to cook' [not *küöjör-], ōl 'that' (~uol ~ol). These cases are inexplicable on the basis of the older theories. Our solution will be given in 13.11.2 (a solution of the Y. "exceptions" in general).

13.9 Sporadic long vowels in many Turkic languages. Let us look for other languages to solve the problem of PTu. quantity. Are the Oghuz (Türkmän) dialects in the Khorezmian region of Uzbekistan useful for our purpose (see Abdullaev 1967)? We must say at the outset that this is not a dialect of Uzbek (which is an eastern Tu. language) but simply a dialect of Türkmän. This dialect has preserved some archaic features (e.g., qatti 'solid,' with q-, whereas the T. written language has gatï); on

the other hand, it has undergone some (slight) Uzbek influence. Perhaps it would be best to call it "Khorezmian Türkmän." The vocalic quantities of this dialect are rather complicated. Sometimes it has preserved old lengths, e.g., (Abdullaev 93) dūz 'salt' (T. dūz, Y. tūs, K. tūz), (48) dāš 'stone' (T. dāš, Y. tās, K. tāš); sometimes it has lost the original length, e.g., (171) don 'clothing' (T. dōn, K. tōn), (176) döš 'chest' (T. dōš, Y. tüös, K. tōš). Tu. short vowels normally are short, e.g. (48) at 'horse' (K., T., Y. at, Kh. ḫat); but sometimes one finds long vowels where no other Tu. dialect has such, e.g., (45) īč 'inside' (T., K. ič, Y. is), (47) qïr 'hill' (T. gïr, K. qïr), (48) sāč 'hair' (T., K. sač, Y. as, Kh. sąč). Sometimes we find short vowels where K. and/or WOD. (but not T.) have a long vowel, e.g., (35) üč 'three' (T. üč, Y. üs, but WOD. ūš), (53) baš 'head' (T. baš, Y. bas, but WOD. bāš); cf. furthermore (35) gün 'day,' (40) män 'I,' sän 'thou,' gäl- 'to come,' (48) ör- 'to weave,' qoy- 'to put,' yat- 'to lie,' (53) göz 'eye,' (67) göy- 'to burn,' (93) dïl 'tongue,' dur- 'to stand,' (111) ölï 'dead,' (176) top 'ball,' tay 'colt,' doy- 'to become full.' But sometimes we find long vowels in this case: (47) qūǰaq 'embrace' (T. guč- 'to embrace,' K. quč-, but Y. kūs-, and T. guǰaq 'embrace' proves an older *qūč-); (48) qōy 'sheep' (T. goyun, K. qōn, qōy); qōš 'pair' (T. goš, Y. xos, K. qōš); āš 'food' (T. aš, T. as, K. āš); (52) sāp 'handle' (T. sap., Y. up, K. sāp).

However, these vocalic quantities seem to be of no value, because on p. 52 Abdullaev indicates that the opposition of long and short vowels in this dialect mainly serves for the distinction of homonyms. Here we find three cases:

(a) The quantities correspond to T., Y., e.g., (47) uč- 'to fly' — ūč 'end' (T. uč-, ūč); (48) at 'horse' — āt 'name' (T. at, āt); (52) al- 'to take' — āl 'red' (T. al-, āl).

(b) Single T. roots with various meanings have been split up: (48) qoš- 'to add' — qōš 'pair' (T. goš-, gošа); (52) sap 'end' — sāp 'handle' (T. both sap); gök 'blue' — gök 'heaven' (T. both gök); aq 'white' — āq 'cataract' (T. both āq); geč 'evening' — gēč 'late' (T. both gīč).

(c) T. genuine homonyms have been split up: (45) īč 'inside' — ič- 'to drink' (T. ič, ič-); (48) qāš 'eyebrow' — qāš 'incrustation' (T. both gāš); ala 'colored' — āla 'not cleaned rice' (T. āla 'colored'; perhaps āla 'not cleaned rice' is the same word); ara 'middle' — āra 'make up' (T. āra 'middle'); dar 'narrow' — dār 'gallows' (T. both dār); (52) qan- 'to become satisfied' — qān 'blood' (T. gān-, gān); qara 'black' — qāra 'silhouette' (T. both qara, the last word <Mo. qaraġan).

I do not know whether Abdullaev's phonetic transcription is correct. Faulty apperception is always possible, cf. Essen 1953. 148 or (as a special example) the problem of Tu. stress in Räsänen 1949. 32-42; the various authors apperceived the Tu. stress very differently from each other. And Abdullaev's mateial seems to be the more unreliable as it often contradicts what the same author has said in his book Xorezmskie govory uzbekskogo jazyka, Taškent, 1960. Here are some examples: Abdullaev 1960. 21 āla 'colored' (but 1967. 48 ala); 1960. 21 āra 'between' (but 1967. 48 ara); 1960. 30 būt 'leg' (but 1967. 52 but); 1960. 90 ūč 'end' (but 1967. 53 uč; however, 47 ūč); 1960. 71 ōj 'vengeance' (but 1967. 122 höč/öč; however, 48 ōč); 1960. 48 īn 'cave' (but 1967. 122 īn/hīn). But even if Abdullaev's transcription were correct, it is obvious that such cases as īč 'inside' (<īč), ala 'colored' (<āla) are secondary, only developed in order to avoid ambiguity (homonyms), i. e., the quantities in this case are secondary and hence are irrelevant. And as we have seen above, even apart from homonyms the quantities sometimes are "false": don 'clothing' instead of dōn; döš 'chest'

instead of dōš (words *dōn, *dōš with other meanings do not seem to exist). Hence we cannot do much with these quantities. Sometimes we find even a total reversion of what should be correct, e.g., 48 aš- 'to surpass' — āš 'meal' (T. āš- and aš); especially clear in 52 but 'leg' — būt 'idol' (T., Y., K. būt 'leg' but T. but 'idol ← P. but!). Thus I think we may leave this dialect aside.

There are still other Tu. sources (used by Ligeti 1938) which we shall leave aside because they are equivocal (just as Khorezmian Türkmän is); it would take too much time and paper fully to show the equivocality.

Sometimes (but only sometimes) C. is helpful, e.g., in kăvak 'blue' < *koak (cf. A.S. Kanjukova, Čuvašskaja dialektologija, Čeboksary, 1965.82, Sundyr dialect koak ~kăak ~kaak; Cheremis still has üä, ua instead of C. ăva; e.g., in Cheremis śüäś ~suas, soas = C. čavaš; cf. M. Räsänen, Die tschuwassischen Lehnwörter im Tscheremissischen, Helsinki, 1920.65) < *köäk (cf. Hungarian kék) <*kök̂. But C. is not very useful; e.g., Ščerbak's contention (based on Kanjukova; see Ščerbak 1967.36, note 15) that C. has preserved long *ō in dialects is false: śu^{o}k 'not,' pu^{o}l- 'to be,' tu^{o}l- 'to become full,' etc. Cf. Kanjukova 57: in the central upper dialect u^{o} does exist, but it stands for literary u (dialectal o) in all quantities, not only in śu^{o}k <yôq, but also in tu^{o}psa 'finding' <tap-, u^{o}ra 'foot' <adaq, etc.

Tuvinian is rather important. Here we find the following situation, illustrated by examples:

	K.	T.	Y.	Tuv.
'horse'	at	at	at	aˀt
'name'	āt	āt	āt	at

Note that where K., T., Y. have a long vowel, Tuv. has a simple short vowel; where K., T., Y. have a short vowel, Tuv. has

a "laryngeal" vowel with a special kind of acute intonation resembling the Danish stød; for a phonetic description see A. A. Pal'mbax, "Dolgie i poludolgie glasnye tuvinskogo jazyka,' Issledovanija po sravnitel'noj grammatike tjurkskix jazykov I. 179-81, Moskva, 1955. This laryngal vowel is said to be half long. We find lists of such examples in the following works: Ščerbak 1963. 27-8 (the same as in 1967. 47); Pal'mbax, Grammatika tuvinskogo jazyka, Moskva, 1961. 23-6; F. G. Isxakov, Tuvinskij jazyk, Moskva and Leningrad, 1957. 31-3; Pal'mbax, Tuvinsko-russkij slovar', Moskva, 1955. 620-1 (see also the vocabularies themselves). However, even these instances are not without problems: (a) we sometimes find variants: čäʾp ~čäp 'cord,' čaʾrt ~čart 'hard,' üʾp ~üp 'trophy,' etc.; (b) Mo. words sometimes have laryngal vowels (čöʾp 'well'), but for the most part they do not (why not? one sees no cogent reason); (c) Pal'mbax's notations often do not agree, e. g., in Issledovanija ïʾt 'dog,' in Slovar' ït (here are some further words with laryngal vowels in Issledovanija, simple vowels in Slovar': qaʾdïq 'porridge,' buʾduq 'branch' = T. pūdaq, which should be buduq, qaʾš 'how much,' qïʾš 'winter,' oʾq 'cartridge,' quʾš 'bird,' iʾrt 'ram,' böʾrt 'hat' = T. bōrük!, aʾġar 'flows,' aʾdïġ 'shoot,' käʾš 'skin,' čäʾdär 'arrives'). On the whole, even this material is too scarce and too ambiguous to allow a satisfactory evaluation.

We furthermore find long vowels in Gagauz, cf. N. K. Dmitriev, "Dolgie glasnye v gagauzskom jazyke," Issledovanija po sravnitel'noj grammatike tjurkskix jazykov I. 203-7, Moskva, 1955. and L. A. Pokrovskaja, Grammatika gagauzskogo jazyka, Moskva, 1964. 29. Here we find two categories:

A. Gagauz agrees with T.

āč 'hunger' = T. āč

ārt 'behind' = ārt

dōru 'red-brown' = dōr

kār 'snow' = ǵār

kōr 'coal' = ǵōr

ūšen- 'to be lazy' = üyšän-

yārin 'tomorrow' = yārīn

sāya 'fresh butter' (< *sāri yāǵ 'yellow fat'?, length of contraction?)

āz 'few' = āz

āra- 'to search' = āra-

āt 'name' = āt

kāz 'goose' = ǵāz

tōz 'dust' = tōz

B. Gagauz differs from T.

āri 'bee' = ari

ūn 'wool' = yüṇ (K. yuṇ, Y. suṇ)

bōz 'grey' = boz (but K. bōz)

On the whole, Gagauz has preserved only a few words with a long vowel (the numerals, for instance, never contain long vowels: bir, dört, beš = T. bīr, dōrt, bāš). On the other hand, Gagauz has some long vowels where T. has not. But such variances occur too sporadically.

The same holds true for Kirghiz, which, according to K. K. Judaxin, Kirgizsko-russkij slovar', Moskva, 1965, has preserved some long vowels, e.g., āri 'bee' (cf. Gagauz!); bāri 'all' (but bar 'exists,' the root of bāri); kōrük 'bellows.' But normally we find short vowels (at 'name' = at 'horse,' aš 'food,' bol- 'to become,' qar 'snow,' etc.). These few words may have come from T., eventually from Khorezmian T., via "Kipchak-Uzbek."

We find some traces of long vowels in Az. of Nukha, cf. PhTF 284, but only in the sequence ā-i (secondary?): sāri 'yellow,' āǰi 'bitter,' ǵāri 'old' (?), āri 'bee,' yāzi 'script' (?), yāǵi

'enemy' (?); cf. also Qashqai vār 'existing,' īt 'dog,' forms which occur quite sporadically. We furthermore find long vowels in the following languages, but their occurrence is either sporadic or badly attested to, cf. PhTF: Balkar (348), Kumyk (394), Kazakh, Karakalpak, Nogay, Kipchak-Uzbek (442), Uzbek (493), New Uighur (540), Khakass (667), Soyon, especially Karagass (646). Sometimes we find valuable facts even here, e.g., īt 'dog' occurring in New Uighur, (= C. ÿitä!); also bīt 'louse' = Nogay, Kipchak-Uzbek (and C. piytä!). But for a reconstruction of PTu. these forms are not so relevant, as we shall see.

Compare also J. Németh, Die Türken von Vidin, Budapest, 1965.30-1 (long vowels in the sequence ā-ï, such as qāďin 'wife'; furthermore in qāz- 'to dig,' ya·s 'grief'; hence only with the vowel a). And see Räsänen 1949.64-8. According to this latter source we find a substitutional lengthening of the vowel of the first open syllable before the reduced vowel of the second syllable in Kazan-Tatar, Bashkir, Chuvash, Osman dialects, Karachay, Koibal, Kirghiz, Kazakh, above all in the sequence ā-ï; cf. Nukha, Vidin. Concerning the long vowels in New Uighur Räsänen writes: "Die Längen in der SO-Gruppe, besonders bei von Le Coq, sind mir grossenteils unbegreiflich." He furthermore mentions Kazan-Tatar of Nižegorod (cf. O. Böhtlingk, Über die Sprache der Jakuten, St. Petersburg, 1851.135): "Der jakutischen Länge entspricht im nishegorod'schen Tatarisch nicht selten eine Länge; aber wohl eben so häufig auch eine Kürze. Der umgekehrte Fall, dass einer jakutischen Kürze eine nishegorod'sche Länge gegenübersteht, gehört auch nicht zu den Seltenheiten" (however, the examples of Y. short vowel = Nižegorod long vowel are useful: they always reflect CTu. /ā/ ... or /â/ ...). Räsänen further enumerates a Karachay dialect, Khorezmian T., "Kipchak-Uzbek" in Afghanistan, New Uighur of Kāšgar and Turfan, Koibal, Karagass, Soyon, Salbin, Kandov,

Tūra, Kūrdak, Tobol, Tümen, Kirghiz, Kazan-Tatar (Weil), Kumyk (= Ligeti 1938.180); all these long vowels are, however, as Ligeti remarks, "longues sporadiques" (and, let us add, not always incontestable in their quantity).

13.10 Quantity in western Osman (Anatolian) dialects. The western Osman dialect described by Korkmaz 1953, utilized by Biišev 1963.34-46, is very important. Here we find the following categories:

(A) WOD. correspondence with K., T., Y.

bēš 'five' = K. bēš, T. bäš, Y. biäs (Kh. bi̯ᵉš)
böl-mä 'separating wall' = T. böl- 'to part, to separate'
dē- 'to say' = K. tē-, T. diy-, Y. diä-
ēr- 'to arrive' = K. ēr- 'to get frightened,' T. ir- 'to get tired, bored' [cf. German mir reicht's, literally 'it is arriving to me' = 'no more of this,' 'I am sick and bored of it']
yōq 'is not' = K., T. yōq, Y. suox (Kh. yū̯ᵒq in unpublished material)
kēvdir- '?' [said to be connected with Y. kiäp 'pattern' (= K. kēp, T. gäp); kēvdir is a misprint. According to Z. Korkmaz, Güney-Batı Anadolu Ağızları, Ankara, 1956.21, this is kēydir- 'to put on clothes,' cf. 13.8 K. käd-].
ōn 'ten' = K., T. ōn, Y. uon (Kh. ᵒōn and similar forms)
dāl- 'to faint' = T. dāl-, Y. tāl-
dön- 'to turn' = K. tön-, T. dön-
yī- 'to eat' = K. yē-, T. iy-, Y. siä-

(B) WOD. correspondence with only one of the languages K., T., Y.

ōl- 'to become' = Y. buol-, but T. bol- (secondary!)
vēr- 'to give' = K. bēr-, T. bär-, Y. biär-
bū 'this' = K., T. bū, Y. bu (Y. secondary)

gēt- 'to go' = T. git- [gid-iš- proves the originally long vowel], but K. ked-, ket-

ǵāl- 'to remain' = T. ǵāl-, Y. xāl-, but K. qal- (graphic, = qa'l-)

ǵāndir- 'to satisfy' = T. ǵān-, K. gān-, Y. xān-, xan-

ǵiz 'girl' = T. ǵīz, Y. kīs, but K. qiz (graphic, = qi'z, cf. Kh. qīiz)

ǵōy- in ǵōyve- 'to free' = K. qōd-, qod-, T. ǵoy-, Y. xot-

vūr- 'to beat' = Y. ūr-, but K., T. ur-

sōr- 'to ask' = K. sor-, T. sōra-

Normally we find a long vowel either in T. or in Y., so here the vowel must have been originally long, too.

(C) WOD. correspondence with none of the languages K., T., Y.

āl- 'to take' = K., T. al-, Y. 'il-

ālt 'beneath' = T. alt

āt- 'to throw' = K., T. at-, Y. 'it- (C 'ivat-, 'it-, ut-)

ǟv 'house' = T. öy

bās- 'to press' = K., T. bas-

bǟn 'I' = K., T. män, Y. min

bōz- 'to destroy' = K. buz-, T. boz-

vār- 'to go' = K., T., Y. bar-

yāz- 'to write' = K., T. yaz- (but Az. Nukha yāzi 'script')

yāt- 'to lie' = K., T. yat-, Y. 'it- (Kh. yāt-)

gǟš- 'to pass' = K. käč-, T. gäč-, Y. käs-

gǟl- 'to come' = ~~K.,~~ Y. käl-, T. gäl- (Kh. kal-)

gȫz 'eye' (in gȫzlät- 'to order, to guard') = T. göz, Y. kös (Kh. kǫz, QB kȫz)

kǟs- 'to cut' = K. T. käs-

gȫr- 'to look' = K., Y. kör-, T. gör-

gǖn 'day' = K., Y. kün, T. gün (Kh. kụn, Volga Bolgar küǫn, but Kh. Wenareǰ kịn, unpublished material) کوان

ȫl- 'to die' = K., T., Y. öl- (C. vil-)

ǵāz- 'to dig' (in ǵāzdïr-) = K. qaz-, T. ǵāz-, Y. xas-
ǵāš- 'to fly' = K. qač-, T. ǵač-
ǵōrx- 'to fear' (in ǵōrxu 'fear') = K. qorq-, T. ǵorq-
sän 'thou' = K., T. sän, Y. än
däl- 'to bore' = K., Y. täl-, Az. däl- (T. däš-)
düš- 'to fall' = K. tüš-, T. düš-, Y. tüs-
üš 'three' = K., T. üč, Y. üs (C. viśĕ, Kh. ụs, ị̄č, New Uighur PhTF 540 üč)
čāl- 'to beat' = K., T. čal- (Kh. čạl-)

The quantity of these long vowels seems at first to be incorrect and the material accordingly worthless. However, the C. forms seem to certify the original length of vowels in the correspondences of āt- and gün. Furthermore QB proves that göz must be correct (and perhaps gör-, too, which may be derived from the same root). The Az. dialect confirms yāz- as correct (we temporarily leave Khalaj aside). This material is, as we shall see later on, extremely valuable, but only after the facts and forms of Khalaj are taken into account. By itself it is no key to the exploration of PTu. quantity. Without knowing Khalaj one may be inclined simply to explain that WOD. has preserved original long vowels which have been lost in all other Tu. dialects. It seems curious that it has preserved them in so many cases (categories A and B : C = 20 : 25), but we cannot refute this thesis a priori.

Before solving the problem of PTu. quantity, I would like to complete my statistics. In 13.8 we found 132 "exceptions" or "deviations,' i.e., cases where K., T., Y. and QB do not coincide. It would be easy to augment this figure by including Khalaj forms, such as Kh. hạ̄ᵃm 'cunt' = K. am; Kh. ị̄ᵉm 'trousers' = K. öm; Kh. kị̄ᵉn- 'to burn' = K. T. köy-, etc. But we will not include them here, since we are considering only the situation before the discovery of Khalaj. We have found the following new deviations (of monosyllabic roots) in 13.9:

Gagauz ün 'wool' = K. yıŋ, T. yüŋ, Y. suŋ
Qashqai, New Uighur it 'dog' (C. yïtă) = K., Y. ïit, T. it
WOD., Az. Nukha yāz- 'to write' = K., T. yaz-
New Uighur, Uzbek, Nogay, Kipchak-Uzbek bït 'louse' (C. pïytă) = K., T. bit, Y. bït.

Compare furthermore all examples of WOD., category C (with the exception of göz 'eye,' which we already had noted among the forms of QB, 13.7). These are 28 new exceptions. Thus our statistics show 160 deviations.

Finally we find the following variants in K. where I did not find correspondences in T. or Y.: qïš-, qïš- 'to bend'; öz, öz 'fat, grease'; sär-, sär- 'to get angry'; sūd-, sud- 'to spit'; tïd-, tïd- 'to prevent, hinder'; yām, yam 'grain'; yāt, yat 'rain magic'; yïš, yïš 'valley.' See also K. küp 'vessel' = Osman küp (never küb- before vowels, thus < *küp, Meyer). The final statistics before we consider Khalaj show 169 "exceptions." I think this figure can be called rather high, even when the graphic element in K. is taken into consideration.

13.11 Vowel quantity in Khalaj and in Proto-Turkic. Without knowing Khalaj one cannot give a definite solution to the many problems of PTu. vowel quantity.

13.11.1 Khalaj, a solution to Proto-Turkic quantity. As we have seen above, K. sometimes has a long vowel where T., Y. have a corresponding quantity (category A); on the other hand, K. sometimes has a long vowel where T., Y. have a short one (category B). We provisionally "solved" this problem by saying that in this last case T., Y. may have reduced the originally long vowel. This would be a simple scheme: category A = K. $\bar{V}$ > T., Y. $\bar{V}$; category B = K. $\bar{V}$ > T., Y. V. But what is the

reason for this double development? Why have T., Y. shortened the vowel in one case and not in the other? We see no cogent reason. Khalaj, however, can help us solve the problem easily. Let us first look at some lists:

Category A

K.	T.	Y.	KhM.	KhX.	KhT.
ōt 'fire'	ōt	uot	hṵ̄ᵒ·t	hṵ̄ᵒ·t	hṵ̄ᵒ·t
tōn 'clothes'	dōn	___	tṵ̄ᵒ·n	tṵ̄ᵒ·n	tṵ̄ᵒ·n
qār 'snow'	ǥār	xār	___	___	Ǥāᵃ̯r
tār 'narrow'	dār	tār	tāᵃ̯r	tāᵃ̯r	tāᵃ̯r

Category B

K.	T.	Y.	KhM.	KhX.	KhT.
qōl 'arm'	ǥol	xol	qo̯l	qo̯·l	quᵒ·l
qōy 'sheep'	ǥoyun	___	qo̯n	qo̯·n	Ǥuᵒ·n
āš 'food'	aš	as	___	___	āš
bāš 'head'	baš	bas	ba̯·š	ba̯·š	bo̯·š

[And we find bāš in QB, too.]

We complete this list with two examples of short vowels:

K.	T.	Y.	KhM.	KhX.	KhT.
at 'horse'	at	at	ha̯t	ha̯t	ha̯t
toq 'satisfied'	doq	___	___	___	to̯q, to̯x

13.11.2 The "medium quantity" in Khalaj. We see at first glance that we can formulate a rule as follows: where K. agrees with T., Y., we find in Khalaj moved long vowels or moved long diphthongs (symbol: /â/ ...); where K. disagrees with T., Y., we find in Khalaj level long (half-long) vowels or short diphthongs (symbol: /ā/ ...); /ā/ ... is, one might say, a "medium quan-

tity" between /â/ ... and /a/ .... These vowels of category B may be shortened, particularly in KhM. (where qǫl 'arm' presumably < *qǫ·l < *qu°l); but they remain sharply distinct from originally short vowels by having another quality (qǫl 'arm' < qōl, but KhT. tçq 'satisfied' < toq; also such examples as KhM. tçqqy̧z 'nine' or hçtty̧z 'thirty,' cf. 8.1,2). And thus we can say: PROTO-TURKIC ORIGINALLY DID NOT HAVE TWO "QUANTITIES" BUT THREE. This threefold opposition of quantities solves the first question which we asked in 13.7: in such instances as K. qār 'snow' = T. gār, we must assume a quantity other than that in K. āš 'food' = T. aš. Whereas the first quantity became a long vowel in T., the second became a short one; it is, however, not identical to an originally short quantity which exists besides these two quantities (and has been short already in K.).

Contrary to my unwarranted scepticism in 1968: 101-2, Khalaj has not only preserved long vowels: it gives the key to an explanation of PTu. "quantity" in general. And it seems to be the only Tu. language which has preserved exactly all three "quantities," whereas all other Tu. languages have preserved only two (or one). We provisionally may assume: /â/ ... where K., WOD., T., Y. have a long vowel; /ā/ ... where K., WOD. have a long vowel, whereas T., Y. have a short one; /a/ ... where K., WOD., T., Y. have a short vowel. Let us now make some comparisons which will illustrate our theory.

Some comparisons of Kh. with WOD.:

(1) WOD. yāt- 'to lie' (K. yat-, perhaps only graphic; cf. 13.6) = KhM. yą̄t- (but X. yąt-), but T. yat-, Y. s'it- < *yāt- <* dët-

(2) WOD. gōz 'eye' (QB kōz) = KhX. kǭz (< *kǭ·z < *kōz; short *ö >ǭ, cf. KhT. kçt 'anus'), but T. göz, Y. kös < *kōz

(3) WOD. ǖš 'three' (K. üč, perhaps only graphic; in the text ǖč, cf. 13.6) = KhT., X. ṵ̄š, M. ḭč, but T. üč, Y. üs <*ǖč

Some comparisons with K., besides those given above (1-3):

(4) K., QB bāš 'head' = KhT. bo̤ˑš, M., X. ba̤ˑš, but T. baš, Y. bas < *bāš

(5) K. ōr- 'to sickle' = KhT. hṓġraq 'sickle' < *ōrġaq, but T., Y. or- < *ōr-

(6) K., QB yēl 'wind' = KhT. yẹˑl, but T. yäl, Y. säl < *yǟl < *dǟl

(7) K. būr-, bur- 'to smell' = KhT. bṵrṵn 'nose' [< *būran, short u is ṵ in Ǫṵš 'sparrow,' etc.], but T. burun, Y. murun < *būr-, *būran

(8) K. sīd-, sid- 'to urinate' = KhT. sḭdȁk 'urine,' M., X. siˑdäk, but T. siy- (?) < *sīd-

(9) K. sūw 'water' = KhT. sṵˑv, but T. suv (?), Y. ū (?) < *sūb (< *si̯ūb)

(10) K. t̄il, ẗil 'tongue' = KhM. tḭˑl, but T. dil, Y. ẗil < *t̄il

Two comparisons with other dialects:

(1) Qàshqai, New Uighur ī̈t 'dog,' C. ÿitä (K. ̈it, perhaps only graphic, cf. 13.6) = KhT. ḭt, but T. it, Y. ̈it < *ī̈t < *i̯ī̈t

(2) Gagauz ǖn 'wool' (K. yuṇ may be only graphic, cf. 13.6) = KhT. yṵṇ^k [< *yūṇ; short u would become ṵ, as in Ǫṵš, cf. above], but T. yüṇ, Y. suṇ < *yūṇ < *dūṇ

Some examples where Kh. is the only language to have preserved /ā/ ...:

(1) KhM. ha̤ˑ^i̯- (but X. ha̤^i̯-) = T. ayt-, Y. ̈iy- (K. ay-, perhaps only graphic, cf. 13.6) < *āy- < *p̄ey-

(2) KhT. ha˙ ġa̯ 'behind' = T. arqa (K. arqa, cf. 13.3). [Somewhat doubtful: the half-long vowel may be a substitutional lengthening for the dropped -r-]

(3) KhT., M. à˙ l (X. àl) 'hand' = T. äl (Y. älī, ilī, K. älig, Brahmi elig ~ älig) < *ǟl(äg)

(4) KhT., M. à˙ rin 'lip' = T. ärin (K. erin) < *ǟrän? [K.'s e, rather than ä, may indicate an original *â̄rin; â̄ sometimes is shortened in unstressed position in Kh., cf. 13.11.5; the same holds true for T. as in īr 'early,' but ärtä id.; in K. the shortening may be only graphic]

(5) KhT. hikmäk 'bread' [K. ätmäk may be only graphic, cf. 13.6; Kh. i cannot be derived from ä since this vowel remains ä or à, but cf. KhT. hi˙ rkàk 'male' = erkäk elsewhere, cf. 13.11.5]

(6) KhT. čo̯la̯q 'weak' = T. čolaq [short o would become o̯ in KhT., o̯ < o˙ < u˙°] < *čōlāq (or *čōlâq)

(7) KhT., M. qa̯˙ run, X. qa̯˙ rin 'bellow' = T. garin, Y. xarin (Tuv. xirin, C. xirăm, K. qarin) < *qāran < *kēram

(8) KhT. Ǫula̯q, M. qula̯q (but X. qo̯la̯q˂) = T. gulaq, Y. kulgāx, K. qul(q)aq < *qūlâq

(9) KhT. ti˙ ʳsàk 'elbow' = T. tirsäk (K. tirsgäk, cf. 13.3) [the half-long i may be a substitutional lengthening for the reduced r; this possibility, however, is doubtful]

(10) KhT. tu˙°lo̯ 'hail' = T. dolï (K. tolï) < *tōlī

(11) KhM., X. yi˙ l 'year' = T. yïl, Y. sïl (K. yïl, cf. 13.6) < *yīl < *dīl

(12) KhT. yo̯rġa̯n 'blanket' = T. yorġan < *yōrġân < *dōrgân (?, cf. 14.7)

(13) KhT. yum˙ᵘšq̯ 'soft' = T. yumšaq [K. yumšaq; short u would become KhT. u, cf. ɣuldu̯Z 'star'] < *yūmšāq <*dūmšāk

(14) KhT. yo̯qqa̯r 'above' = T. yoqarï (K. yoqaru) < * yōqqār < dōkgārū or dūkgārū

(15) KhM. ki̤ᵉn-, X. kö̤n- 'to burn' = K., T. köy- (but Y. kȫjör-) < *kȫń-.

At the end of 13.8 we said that Y. in some cases has ō, ȫ (which "should be" uo, üö); here we have the solution: ō, ȫ in this case is not < Ptu. *ô, *ô̈; (which become uo, üö) but < *ō, that is, Y. in some cases may have preserved PTu. /ā/ ..., namely in xōy(n) 'embrace,' kȫjör- 'to cook,' ōl 'that.' Should such preserving of the PTu. long vowel be true of mīn- 'to mount,' ür- 'to drive on,' ūr- 'to beat,' sīs- 'to go astray,' sūs 'face' (and, eventually, kīs- 'to get red,' sūs 'a hundred'), too? At any rate, there is a chance that Y. has preserved /ā/ ... in sporadic cases (whereas T. always changes /ā/ ... to /a/ ..., and both languages in monosyllabic roots normally preserve /â/ ...).

Khalaj sometimes has preserved /â/ ..., too, where we do not find correspondences in other languages: KhT., M., X. ḭᵉm 'trousers' = K. öm (perhaps graphic, cf. 13.6); C. yĕm, Yellow Uighur yem, but not attested to in T., nor in Y.: must be < *i̯êmä. KhT. hǟᵃm 'cunt' = K. am (in the text erroneously em), surely in K. only graphic, not found in T. (which may be due to the well-known prudery of Soviet dictionaries). KhT. qǟᵃnaq 'cream' = K. qanaq, qayaq, T. qaymaq, Y. xoymox, perhaps graphic in K. (cf. 13.6), in T. secondary shortening (cf. 13.8). KhM. qǟᵃni̤ 'who, which?' = K. qanū, qayū, T. xaysi, Y. xaya, xanna (a situation similar to qǟᵃnaq).

However we also find some cases where /ā/ ... has been shortened in Kh., according to the parallel forms in K., WOD., Y.:

(1) KhT. harqǟn 'thin' = Y. ïr-, ïr- 'to become thin' <*ārqân
(2) KhT. bäg 'son-in-law = K. bäg <*bäg
(3) KhT. kụn čạlär 'east' = WOD. čāl- 'to beat' < *čāl
(4) KhT., M., X. dạg 'not' = K. dāg
(5) KhX. kälän yi̤l 'next year' = WOD. gäl- 'to come' < *käl-

(6) KhT., X. kụn, M. kịn 'day, sun' = WOD. gün < *kün

(7) KhT. qạrrị 'old' = Az. Nukha ğārï < qārï (?, Wenạrej̆ qạ'rr

(8) KhT. tụrpạq 'soil,' tọpụq 'knee' = K. tōp, top 'ball' [?, cf. Brahmi and Tu. in Tibetan script tupraq]

(9) KhT. tọx, tọq 'satisfied' = K. tōd- 'to be satisfied' < a root *tō-?

(10) KhX. ƀạr- 'to go' = WOD. vār-

The reasons for the shortening of these forms are different. For 2, 5 (and some other examples with *ä) cf. 13.11.5. In some other cases the shortening is due to the unstressed position, where even /â/ ... sometimes is shortened, sometimes leaving a substitutional gemination (cf. *kûrïg 'dry,' T. gūrï >KhX. qụrrụġ; or *bâlā 'young animal,' T. bāla >KhT. balla). We find the same phenomenon in 7, 10, and without substitutional gemination in 1, 3; dạġ (5) may have been shortened because of being enclitic. In 8, 9 the connection with the roots *tōp, *tō- is not absolutely certain. Only kụn (6) is inexplicable, but cf. Kh. Wenạrej̆ kịn (or kị^{5}n).

We may summarize as follows: we have to assume three categories of vowels in PTu., provisionally noted as /a/ ..., /ā/ ..., /â/ .... One may find further instances of /ā/ ... in 13.8 (beginning) and in 13.10 (category C, WOD.).

It is a most important fact that Kh. has preserved /ā/ ... even in unstressed position, i.e., in the first syllables of disyllabic words, such as ạ̇rịn 'lip,' tụ^{o}lọ 'hail,' qạ̣rụn 'bellow,' etc. Since Y. shortens all unstressed vowels (of roots) in such position and T. shortens all vowels /ā/ ... (though not /â/ ...) and K. normally shortens graphically, Kh. is in this case the only Tu. language which may distinctly testify for /ā/ ... in this position. Only some (very few) examples in other languages may be helpful in this respect, too: K. sōġon 'onion' (T. soġan), kölik 'shadow' (T. kölägä) may go back to PTu. *sōgōn, *kölāk (or a

similar form); some other examples in K. are doubtful; cf. the words in K. Tercümesi quoted in 13.3; for Gagauz, Az. Nukha, Kirghiz ārí 'bee,' etc., cf. 13.9.

13.11.3 Oppositions /â/ ... : /ā/ ... : /a/ .... Do we find pairs of words with clear oppositions /a/ ... : /ā/ ... or /ā/ ... /â/ ... or even /a/ ... : /ā/ ... : /â/ ... ? I think we can find such. Here are some examples, taken not only from Kh., but also from WOD. (13.10) and K. (13.8): āl- 'to take' (WOD.) : âl 'pink' (T. āl); ās- 'to hang up' (K.; T. as-) : âs 'ermine' (K., T. ās); bāš 'head' (K., Kh.; T. baš) : bâš 'wound' (T., K. bāš); qōl 'arm' (K., Kh.; T. ǫol) : qôl 'plain' (K. qōl, T. ǫōl) : qol- 'to ask' (K. 340, short also in QB 243 söküšmü qolur sän azu ögdimü 'whether thou mayest ask for cursing or for praising'); āš 'food' (K., Kh.; T. aš) : âš- 'to surpass' (K., T. āš-), etc.

When reading Gabain 1950.292-357, one is astonished to see the enormous number of "synonyms." This number will be radically reduced when the following principles are applied:

(a) the well-known difference (opposition) of /a/ ... : /â/ ... (in the older transcription /a/ ... : /ā/ ...)

(b) the fact that PTu. did not have eight vowels but at least ten, perhaps even twelve (cf. 14.1, 14.3.3)

(c) the fact that in PTu. not only /â/ ..., /ā/ ... existed but also diphthongs /i̯â/ ..., /i̯ā/ ... (cf. 14.2, 14.4.1)

(d) the fact that not only two but three "quantities" existed: /a/ ..., /ā/ ..., /â/ ....

Instead of Gabain's 8 vowels (a, o, u, ï, ä, ö, ü, i), and instead of the commonly accepted 16 vowels (Gabain's vowels in short and long quantities), we must assume the existence of 50 (or even 60) vowels: Gabain's 8 vowels + ë, e, eventually ǫ, ǫ̈ = 10 or 12; these x 3 because of the three quantities = 30 or 36; /i̯â/ ..., /i̯ā/ ... (but not /i̯a/...) gives 20 or 24 more vowels = 50 or 60 vowels.

13.11.4 The medium quantity in a Persian loanword. The following phenomenon is interesting: PTu. *bêl 'waist' (T., Y. bīl, K. bēl, Az. bel, C. pilĕk) is bī̯ᵉ·l, bē̯ᵉ·l in Kh. But P. bēl 'shovel' (an older form prior to 1400 A.D.; later on we find bīl, but Tajik still preserves bēl) has become KhT. bi̯ᵉ·l. We can see clearly that a simple length (ē) has become a short diphthong (i̯ᵉ); hence, bī̯ᵉ·l must go back to something else. However, the normal development of Tu. *ǟ is ȧ·, ȧ in Khalaj.

13.11.5 The problem of Proto-Turkic ä/e. In Turcology an old problem exists: whether PTu. made a distinction between *ä and *e (the correspondences of *ä and *e in the modern languages existing, above all, in C., Az., T., and Y.). For literature see Räsänen 1949.88-90, also Thomsen 1957, etc. I cannot deal with this whole problem, which has raised so many controversies. Here is only a sketchy (incomplete) survey, to which I have attached some brief remarks.

(a) Poppe assumed (Islamica 1.410-4) that C. a = Az. ä < PTu. *ä, but C. i = Az. e < PTu. *e. This assumption is false since we find many examples like C. par- 'to give' = Az. ver- and C. kil- 'to come' = Az. gäl-: Poppe's correspondences are not the only existing ones.

(b) Németh assumed (Nyelvtudományi Közlemények 43.296-7) that Y. iä < PTu. *ǟ, Y. ī < *ē-. But Y. ī seems to occur (for Az. e, etc.) only in one monosyllabic word: bīl 'waist' (T. bīl, Az. bel, K. bēl, etc.). (Of course, Y. ī < PTu. *ī is frequent.)

(c) Räsänen 1949.89 distinguished PTu. *ǟ and *ē; *ǟ > Y. iä, T. ǟ, C. a; *ē > Y. ī, T. ī, C. i. He admitted, however, that there are many exceptions (e.g., T. īn- 'to descend' = C. an-). This "rule" is of no value since the "exceptions" have not been explained and are almost as numerous as the rule itself.

(d) Thomsen stated that Az. ä always goes back to a short *ä (= T., Y. ä) and that Az. e goes back either to a long vowel

(T. ī, ǟ, Y. iä, ī) or to a short ä in the neighborhood of y and before i in the following syllable. This theory practically meant that (except for some cases of assimilation) Az. ä/e did not reflect the qualities of PTu. vowels but their quantities. Thus Thomsen made the first real progress in this point. However, it must be added that we find some other cases of assimilation: before č, š, v (Az. keč- 'to pass' = T. gäč-, K. käč-; Az. deš- 'to bore' = T. däš-; Az. sev- 'to like' = K. säw-; we find the same development in loanwords, e.g., česmä 'source' < older čäšmä ← P. [čäšmä], etc.); furthermore Thomsen did not consider such cases as Az. gämi 'ship' = T. gämi; Az. däli 'mad' = T. däli; är 'man' = är, etc. See the justified criticism of Ligeti in Acta Orientalia Hungarica 7.115-7, 1957, a criticism which, however, is for the most part merely negative.

(e) Ščerbak 1963.25-6 affirmed that we find Az. e in closed syllables, ä in open syllables (beš 'five,' but bäzä- 'to adorn,' etc.). This theory is false, for we also find such examples as gäl- 'to come,' käs- 'to cut,' etc.; on the other hand, we find ešik 'threshold,' ešit- 'to hear,' de- 'to say,' etc.

(f) My own assumption is that the only language which has preserved a PTu. opposition *ä : *e is C. C. i = (e.g.) T. ä goes back to PTu. *e (C. kil- 'to come' = T., Az. gäl-, Y., K. käl-, WOD. gäl- <PTu.* kēl-; C. sik- 'to jump' = T., Az. säk-, Y. äkkiriä- < *sek-); C. a = (e.g.) T. ä goes back to PTu. *ä (C. kaś- 'to pass' = T. gäč-, K. käč-, Y. käs-, Az. keč- < käč-, WOD. gäš- < PTu. *käč-; C. sas 'voice' = T., Az. säs < *säs; C. tan 'equal' = T. dän, Y. tän, Az. tän < *tän).

The situation is very simple for the short vowel /ä/ (by the way, also for /ǟ/, where we find the same situation). But it is more complicated for /ä̂/, cf. section (c) above. Thomsen said that to Az. e corresponds either Y. ī = T. ī, or Y. iä = T. ǟ, or Y. iä = T. ī, but he gave no rules under what circumstances we have to expect ī = ī, or iä = ǟ, or iä = ī.

In my opinion the regular development of PTu. *ä̂, *ê in stressed position (in monosyllabic roots) is: *ä̂ >C. a, *ê >C. i, e.g., *ä̂n- 'to descend' >C. an-; *êr 'early' >C. ir. By the way, it can be proved that C. i in this case formerly was e: C. loanwords in Cheremiss and Votiak have preserved this e, e.g., Hill Cheremiss eŕ 'early' < older C. er, modern ir; Votiak em 'medicine,' modern im; and C. a < older ȧ < ä, preserved in Hill Cheremiss, e.g., käp 'form, pattern' (Votiak kab, Meadow Cheremiss kap, modern C. kap). We may compare also Hungarian kép, which may be old Bolgar, just as the other examples in Räsänen, Finnisch-ugrische Forschungen 24.246-55, 1937. So much for Chuvash. In CTu. *ä̂ and *ê at first converged >*ä̂ (just as *ä and *e converged >*ä). This *ä̂ normally developed as follows:

Y. $*e^{ä}$ >iä

T. $*e^{ä}$ >$*e^{e}$ >ē >ī

K., Brahmi $*e^{ä}$ >$*e^{e}$ >ē

Az. $*e^{ä}$ >$*e^{e}$ >*ē >e

Most Tu. languages $*e^{ä}$ >$*e^{e}$ >ē >e>ä

(Some languages of the last group show a secondary development ä >e >i, or similar; this development is very recent, hence diachronically irrelevant: still in the sixteenth century Kazan Tatar, for example, had ä or at least e instead of i, cf. G. Doerfer, review in Mitteilungen des Instituts für Orientforschung 13.476, Berlin, 1967.)

We find for the most part such correspondences as Y. kiän 'broad' = T. gīn (Kh. $kī^{e}n^{k}$) = Az. geniš = Osman geniş (gäniš), etc.

We have to consider, however, that in T. in unstressed position *ä̂ >ǟ (eventually shortened: >ä), and in Y. in unstressed position *ä̂ >ī (eventually shortened: >i).

All exceptions can be explained by assimilations (e.g., T. īšik 'threshold,' because of š and i^{2} at the same time), or by analogy (e.g., T. gījä 'night' in analogy to gīč 'late,' which, by

the way, is the root of gīǰä; ǟr 'man' in analogy to *ǟrkäk 'male' >ärkäk). Sometimes we have to consider that words must not be regarded in an isolated form (status absolutus) but within the context (status constructus): Y. bīl 'waist,' iŋ <īŋ 'upper cheekbone,' e.g., show ī since words signifying parts of the body normally occur with possessive suffixes (Y. bīlim 'my waist,' etc.), i.e., the *ä̂ here normally is in an unstressed position; therefore we find Y. bīl, īŋ >iŋ, and T. ǟŋ (whereas T. bīl has preserved the status absolutus form).

I cannot note here how I explain all the exceptions (although "exceptions" generally are by far more important than "norms"). Here is but one instance. We find K. bēš 'five' < CTu. *bä̂š = Y. biäs ("correct") = bǟš T. ("false," "incorrect," "exception"). The T. form seems to be contrary to my own rule given above, according to which the form should be *bīš. But this exception can easily be explained when one considers that *bä̂š often occurred in unstressed position (e.g., *bä̂š ǟ'b 'five houses,' etc.). And in unstressed position *ä̂ becomes ǟ in T., as I said. To be sure, this explanation looks like an ad hoc invention. But it can be proved if one but examines the details: C. has two kinds of numerals, those in unstressed position (status constructus), which occur immediately before a substantive (e.g., ikĕ kil 'two houses') and those in stressed position (status absolutus), which are used alone (e.g., as an answer to the question 'how many houses are there?' ikkĕ 'two'). The numerals in status constructus have a simple consonant (ikĕ 'two,' pilĕk 'five,' śičĕ 'seven,' etc.). The numerals in status absolutus have a geminated consonant (ikkĕ, pillĕk, śiččĕ). This system originally occurred in all Tu. languages. Some modern CTu. languages have preserved the status constructus form (e.g., Osman iki 'two,' yedi 'seven,' sekiz 'eight,' dokuz 'nine'); other CTu. languages have the status absolutus forms (e.g., Uzbek ikki, yatti, sakkiz, toqqiz). Which are the T. forms? They are iki, yädi, säkiz, doquz, i.e., the

status constructus forms = the forms in unstressed position — and in unstressed position Proto-CTu. *ä̂ >T. ǟ, as I said. Accordingly, T. bäš is well suited to iki, yädi, etc. We see, then, that this form is not an exception. It is interesting to see that Y. has biäs, i.e., the form in stressed position and, at the same time, has also other status absolutus forms: äkki, ikki 'two,' sättä 'seven' (but ağis 'eight,' toğus 'nine'); here biäs is well suited to the numerals surrounding it: ikki, sättä.

The following are some further proofs of my assumption:

(a) In T. we find īr 'early,' but ärtä id. The last word is derived from the same root (CTu. *ä̂r) as īr. But *ä̂ of this root has become ī in stressed position, *ä̂ >ä in unstressed position (for the secondary shortening of T. see above 13.8).

(b) Nowadays we find gīč 'late,' but bäš 'five' in the T. written language, forms where CTu. *ä̂ has developed in two very different ways (T. ǟ is pronounced ā!). But in Khorezmian T., which seems to have preserved an older stage, there is no distinction: Abdullaev 1967.37 records beš 'five,' geč 'late' (also bel 'girdle,' čel 'frontier,' sel 'current,' el 'nation,' yeddi 'seven,' yer 'earth' = T. bīl, čīl, sīl, īl, yäddi, yär). See also 47-8: gečä 'late' (= T. gīč), gēǰä 'night' (T. gīǰä), er 'young man' (T. ǟr), ēr 'early' (T. īr), eš- 'to twist' (T. īš-), ēš 'companion' (T. ___, K. ēš), bēz 'cotton' (T. bīz, but bäz 'impudent' = T. bäz).

It is interesting to see that the Trukhmen forms in P.S. Pallas, Linguarum totius orbis vocabularia comparativa, Petropoli, 1787-9 also always have i for T. ǟ. This i may represent an ä (or ę), e.g., 237 'to cut' kismjak´ (T. käsmäk), 99 'sea' dingéz´ (T. däŋiz); but it seems strange to assume that it should be used for so open a sound as ǟ. We find not only 90 'evening' kič´ (T. gīč), 116 'breadth' kinlik (T. gīŋlik), but also 89 'early in the morning' irtja (T. ärtä ~īr, Az. ertä, er),

244 'give' bir′ (T. bär ~bār). This system would mean that just the border dialects of T. have preserved an older ē (and, as it is well known, border dialects very often preserve archaic forms).

The older theory had many contradictions, e.g., that 'broad' should be reconstructed PTu. *kāṇ according to Y. kiäṇ, but *kēṇ according to T. gīṇ. Our thesis has no inexplicable contradictions.

What concerns us at this point is that CTu. */ā̈/ has become short in T., Y., Az., as have all other vowels of the type /ā/ .... Therefore we find Kh. ȧ·l 'hand' (<*ā̈l, ā̈läg), but T., Az. äl, Y. älī, ilī (and C. ală, i.e., PTu. *ā̈l, ā̈läg), also WOD. gāl- 'to come,' but T., Az. gäl-, Y. käl-.

What about Khalaj? Normally corresponding to CTu. */ä̂/ is ị̄ᵉ (or ị̄ᵉ̣ or ẹ̄ᵉ̣): kị̄ᵉčä 'night,' bị̄ᵉl 'waist,' kị̄ᵉṇᵏ 'broad,' etc. (T.=gīǰä, bīl, gīṇ, Y. kiäsä, bīl, kiäṇ, C. kaś, pilĕk). We find, however, hȧnlị̄ᴳ 'broad,' hȧnsị̄z 'narrow' (cf. K. ēn, T. īn, Y. iän 'breadth'), yättị 'seven' (T. yädi < yä̂ti), presumably due to the unstressed position. In hịkmäk 'bread' (K. ätmäk) *ä̂ seems to have become ị; for hị·rkȧk 'male', see below.

CTu. */ā̈/ is never represented by a long vowel (or a long diphthong) in Khalaj. We find either a half-long vowel (a) or even a short vowel (b):

(a) *ā̈l(äg) 'hand' = KhT., M. ȧ·l (X. ȧl) = K. älig, Brahmi älig, elig, T. äl, Y. älī, ilī, C. ală <PTu. *ā̈l(äg).
*ā̈rän 'lip' = KhT., M. ȧ·rị̄n = K. erin, T. ärin.
*yā̈l 'wind' = KhT. ye·l = K. yēl, Brahmi yel, T. yäl, Y. säl. Presumably ye̤·l < *yä·l < *yā̈l [ä· assimilated after y, just as in Az. yär 'earth' >yer or Y. yär >*yer >sir].

(b) *ā̈kkī 'two' = KhT. ȧkkṵ, M., X. ȧkki̤ = K., T., Brahmi iki, Y. äkki, ikki. Said to be long in QB (īki, cf. 13.7), ä̂kkī?

*äb 'house' = KhT. hàv = WOD. äv. Cf., however, Wenarej hà·v.

*bäg 'prince' = KhT. bàg = K. bäg, T., Brahmi bäg.

*käč- 'to pass' = KhX. kàšgụlị = WOD gäš-.

*käl- 'to come' = KhX. kàlàn yịl 'next year' = WOD. gäl-, K., Y., Brahmi käl-, T. gäl-.

*kälän 'bride' (< *käl-) = KhT. kàlịn, M. kàlịn, X. kàlụ̈n = K. kälin, T. gälin.

*käd- 'to put on clothes' = KhT. kàDmịšàk 'we put on clothes' (unpublished material) = K. käd-, käd-, T. gäy-, Y. kät-, Brahmi käd-.

*käs- 'to cut' = KhT. kàsàr 'hatchet' = WOD, käs-.

I think the best explanation of this fact may be Persian influence: whereas P. ē has become Kh. i^e (cf. 13.11.4), T. ä has been shortened, since P. does not have ä or ā but only a.

For some other instances of CTu. *ä found in K., we find no equivalent in Kh.: K. täg 'like' = T. däk, K. yēg 'best' = T. yäg, K. känč = Az. gänj (not *genj).

A special problem arises with the word for 'man.' We must consider it together with the word for 'male.'

	man	male	
ATu.	är	erkäk	In Bang and von Gabain, Analytischer Index ... 22, Berlin, 1931, erroneously irkäk
Brahmi	ärän	irkäk(län-)	härä is an error. Here we sometimes find i- instead of e-: iki 'two,' itig ~ etig 'decoration'
K.	är	erkäk	e according to erkek, derivation erkeklen- ~ irkeklen-
T.	ǟr	ärkäk	

Y.	är	irgäx
Az.	är	erkäk
KhT.	hàr	hị̈ rkàk

According to T. ǟr we should expect CTu. *ä̂r. But the odd fact is that all the other forms of Tu. languages clearly and conformably indicate är (*ä̂r should be ATu. *er, Brahmi *erän, K. *ēr, Y. *iär, Az. *er, Kh. *hī^e^r). It would seem to be evident that the word for 'male' is derived from 'man.' But must such derivation be true? The word for 'male' clearly goes back to *ä̂rkäk, cf. the forms of ATu., Az., and Kh. (shortened < *hī^e^rkàk, in unstressed position). K., T. may represent a shortening which respectively is graphic (K.) or secondary (T. ärkäk < *ǟrkäk). I have the impression that the original CTu. word for 'man' was är, not ä̂r (going back to *pärä, ä not e, being clearly from C. ar, p- from Kh. hàr, -ä from Mo. ere). In T. it has been influenced by *ä̂rkäk. It may be, however, that this word constitutes an example of what Ramstedt would call the pre-Altaic layer of Tu., i.e., a vowel gradation *pärä ~ *pä̂rkäk; or är might even owe its origin to analogy with ärk 'might' (är in the RTu. inscriptions has the meaning 'knight, cavalier, champion'; 'man' seems to have been uri or ori) or to something else. The derivation remains unclear.

13.11.6 The diphthongal character of Turkic long vowels. Here I would like to make some comments on the nature of modern Tu. long vowels. I have always said that T. and Y. have preserved long vowels. Now I acknowledge that they have not. T. and Y. possess not long vowels but diphthongs. Jakobson 1962.261, quoting Julius Laziczius, Bevezetés a fonológiába, 1932, says that the so-called long vowels in these languages are "eigentlich Mischvokale, Bewegungsdiphthonge." According to A.P. Poceluevskij, Dialekty turkmenskogo jazyka 31, Ašxabad, 1936, all

vowels of T. are diphthongs: ā rising, ī, ï, ū, ü falling (see also Räsänen 1949. 77, according to whom ä is pronounced $ä^{a}$; ï, $ï^{i}$; ī, $ī^{i}$; ū, $ū^{u}$; ü, $ü^{i}$. (I myself once heard in Bloomington, Indiana, āt 'name' pronounced $ā^{a}t$ by a lady of T. origin). According to N. A. Baskakov, "Ob osobennostjax govora severokavkazskix turkmenov," Jazyki severnogo Kavkaza i Dagestana II. 143-4, Moskva, 1949, all long vowels in Trukhmen, the western T. dialect, are falling diphthongs. Finally, S. Kurenov, Osobennosti turkmenskogo govora Severnogo Kavkaza (Stavropolja), Avtoreferat kand. dissert. 7, Ašxabad, 1959, confirms this theory (cf. Ščerbak 1967. 15). In Y. the diphthongal character is evident in such cases as uo <*ô, üö <*ö̂, iä <*ä̂. The diphthongal nature of these dialects agrees precisely with the Kh. forms $ū^{o}$, $ö^{ö}$, $ī^{e}$, also $ä^{a}$, $ü^{ü}$, etc.

13. 11. 7 The diphthongal character of long vowels in al-Kāšġarī. We find a possible confirmation of the diphthongal character of PTu. /â/ ... in K., too. Whereas 'horse' (at) is written اَت in K., 'name' (āt) is written اَآت. Similarly we find words with ā-, such as اَآج āč 'hungry,' etc. Now this form is not the regular transcription of ā-! ā- in Arabic words is written آ quite regularly, e.g., original p. 2 إِمَامٍ آخَرَ 'of another priest' (imāmin āxara), or آمَنُوهُ مِنْ فِرْقِهِمْ 'they believed that he belonged to their group' (āmanūhu min firqihim). However, we find a transcription اَآ in the middle of words, but here designating a new syllable, e.g., p. 3 طَآئِفَةٍ 'of the tribe' (ṭā'ifatin). These transcriptions indicate that اَآت cannot be read āt but only as something like aat or āat, vowel sounds which would agree with T. $ā^{a}$, Kh. $ä^{a}$.

Here a question arises: were vowels really diphthongs in such words as قَارْ 'snow' < CTu. qâr? Do we have to read Karakhanid $qā^{a}r$? Here two possibilities exist:

(a) We must read ā^{a}t, but can read qār; in accord with Karakhanid shortening (cf. 13.7): a^{a}t or a·^{a}t, but qār (allegro a·t, qa·r). That an anlaut underlies special conditions and may give results other than an inlaut is well known. Tuv., for example, has preserved CTu. *ë as an i, but in anlaut it always has a- (cf. 14.1); CTu., having all PTu. i̯-diphthongs in anlaut, in inlaut has only i̯-diphthongs with back vowels (cf. 14.4.1), etc.

(b) The other possibility is that also in inlaut we would have to read a·^{a} or a^{a} (allegro a·), e.g., qa·^{a}r or qa^{a}r 'snow,' not qār. This reading would agree with K. (cf. 13.6), who prefers to write open syllables as plene, closed syllables as defective. The writing قَار in this case would mean that we must read qa^{a}r; i.e., the first a is not immediately followed by a consonant. It is obvious that no truly open syllable exists, but only something similar to one.

I cannot decide which of these two possibilities is correct. Against (b) is the fact that PTu. /ā/ ... also is written as plene in K., e.g., bäg بَاگ. Here presumably there is no diphthong, but we find nevertheless a plene transcription. Provisionally, I prefer thesis (a).

13.11.8 Turkman -t-, etc., unchanged after Proto-Turkic */ā/ .... As we have seen, PTu. */â/ ... changes T. -p-, -t-, -k-/-q-, -č- >-b-, -d-, -g-/-ġ-, -ǰ-; e.g., *ât 'name,' *âtiṇ 'of the name' >T. āt, ādiṇ. This change holds true even when */â/ ... is secondarily shortened: T. äd-il- 'to be done' (< *ä̂d-il-, from *ä̂t- >ät- 'to do'); gid-iš 'march' (< *gä̂t-iš, from *gä̂t- >git-, *ä̂ assimilated to i under the influence of the frequent form gitti 'he went, he is gone,' just as äki 'two' >iki); guǰaq 'embrace' (< *qûčaq, from qûč- >quč- 'to embrace'); buġa 'bull' (< *bûqa, K. buqā).

But PTu. */ā/ ... never causes this change. This fact is clear proof that */ā/ ... must be distinctly separated from */â/ .... Here are some instances. In T. we find that it 'dog' (Kh. ī̇t, CTu. *ī̇t, cf. 13.9) never occurs with a -d- (e.g., āv iti 'hunting-hound'); at- 'to throw' (WOD. āt-, CTu. *āt-) has the passive form at-il- (not *ad-il-); gač- 'to flee' (WOD. ġāš-, CTu. *qāč-) has the cooperative form gač-iš-; üč 'three' (WOD., Kh. üš, CTu. *üč) has the ordinal number üčünji; *ākki 'two' has become iki, not igi; yat- 'to lie' (WOD. yāt-, Kh. yāt-, CTu. *yāt-) has the cooperative form yat-iš-; oq 'arrow' (K. ōq, oq, CTu. *ōq) is oq + i with the possessive suffix; sap 'handle' (K. sāp, CTu. sāp) is sap + i with the possessive suffix, etc. We may include here also K. kūp 'vessel' = Osman küp, which is küp-ü with the possessive suffix, not *küb-ü.

The law which says that long vowels cause voiceless stops and affricates to become voiced holds true only for PTu. */â/ ... not for */ā/ .... Hence these two vowels must represent two different categories.

13.11.9 Vowel quantity in non-initial syllables. One previously has assumed, according to the thesis of two vowel quantities in Tu., that PTu. had either short or long vowels in non-initial syllables. The strange fact is that T. and K. disagree enormously on this point. Whereas in T. (and in Y.) the vast majority of vowels of non-initial syllables is short, in K. (and QB) almost all vowels in open syllables and many vowels in closed syllables are long in this position. The difference between K. and T. is even greater on this point than in the first syllables; e.g., 'he did not open' would be in Karakhanid ačmādī (if one literally renders the plene transcription as long vowels) = T. ačmadi, etc. Tekin 1967.165-170 has given a list of vowel lengths in suffixes. This list is correct; its only shortcoming is that Tekin gives no general summary, no general rule. The simple rule is that

all vowels of open non-initial syllables (and many of closed ones) are "long" in QB, with the exception of those which have a fourfold set of allophones ïi/i/u/ü; that is, a/ä, u/ü, ïi/i always are long (ağirlā- 'to honor,' čiqarmā 'do not bring out,' birāgü 'one of them,' ölürüm 'my dying,' tapuğčī 'servant,' qalīrī 'his remaining'); but the passive suffix -ïl-/-il-/-ul-/-ül-, for example, never is long, nor is the accusative suffix .ïğ/.ig/.uğ/.üg, etc. (for the correct pronunciation cf. 14.4.4).

Let us state another fact: long vowels in T. and/or Y. sometimes do correspond to Karakhanid "long vowels" (cf. T. according to Dmitriev in Issledovanija po sravnitel'noj grammatike tjurkskix jazykov I. 190, Moskva, 1955 and Biišev 1963. 63-5); e.g., the comparative suffix (QB) +rāq/+rāk (Tekin No. 26) is also long in T. (the same form). But, as I said, in other cases short vowels in T. correspond to Karakhanid "long vowels," e.g., the plural suffix QB +lār/+lār (Tekin No. 27) is short in T.: +lar/+lär. This difference seems to prove that we must distinguish two categories of "length" in this case. Even Y., by the way, makes a clear distinction between such cases as ī in kälī 'mortar' and -i in kisi 'person'; in Karakhanid the vowels would be long in both cases (short vowels in open last syllables do not occur in Karakhanid, except for some affective exclamations). Taking into account the short vowels also (as in QB at+im 'my horse'= T. at+im), we get the following three categories:

(a) T. long vowel = QB long vowel (e.g., +rāq)
(b) T. short vowel = QB long vowel (e.g., +lar/+lār
(c) T. short vowel = QB short vowel (e.g., +im).

The situation in K. is similar to that of QB, i.e., the transcription in K. gives results similar to those of the meter in QB. For example, we find (Tercümesi II. 220-11) qīz + lār 'girls,' or

(II. 138-2) käwil:sün 'he may chew' (= Tekin No. 19). To be sure, in the samples we find even short vowels written as plene, e.g. (I. 69), könlüm 'my heart' or (45) körklüg tonüg 'the beautiful coat' (accusative); but normal transcriptions such as qïzïg 'the girl' (accusative), qïzïm 'my girl' prevail here, i.e., normally the possessive suffix +ïm/+im/+um/+üm 'my' and other suffixes with fourfold allophones are short. (In QB, too, they are always short, e.g., Verse 186, "... sözüm oğluma sözlädim," ◡ - - / ◡ - - / ◡ - , 'I told you my word, O son.') The situation is clear in the headwords of K. where, for example, we find (I. 188-9) alïšür 'he takes together with others.' Here the cooperative suffix -ïš-/-iš-/-uš-/-üš- is written as defective, the aorist suffix -ur/-ür as plene (the aorist suffix sometimes is written as plene, sometimes as defective, the cooperative suffix always as defective). The same holds true for the meter in QB: Tekin's list does not contain one case of a suffix with the fourfold set treated as long. (However, besides išlä- 'to work,' the vowel is written as defective in closed syllables: išläl- passive, iälän- reflexive, išläš- cooperative, išlät- causative; this situation may be partly graphic.) And now let me begin our explanation of these facts:

(a) T. long vowel = QB, K. long vowel < PTu. */â/ ...
(b) T. short vowel = QB, K. long vowel < PTu. */ā/ ...
(c) T. short vowel = QB, K. short vowel < PTu. */a/ ...

*/â/ ... may occur in inlaut (e.g., comparative suffix -rÂK) and in auslaut (Y. kälī 'mortar' < *kälî, etc.); */ā/ ... may occur in inlaut (imperative suffix third person :sŪn) and in auslaut (dative suffix .KĀ); */a/ ... may occur in inlaut (passive suffix -ïl-/-il-/-ul-/-ül- < -ăl-/-ĕl- < unstressed -al-/-äl-, possessive suffix -ïm/-im/-um/-üm < -ăm/-ĕm < unstressed -am/-äm), but it never occurs in auslaut (we do not find the fourfold allophone -ï/-i/-u/-ü in Uighur Tu., only -ï-/-i-/-u-/-ü-).

Now we have to consider that Mo. often has a final -a/-e (or -an/-en) where Tu. has a final consonant. I think that here Mo. has preserved archaic Tu. *-a/-e in auslaut (or rather *-ă/-ĕ, since sometimes other vowels occur in forms which seem to be assimilated, a proof for a reduced -ă/-ĕ. Compare Mo. qadum 'in-law' = Middle Tu. qādin, the Mo. form presumably < Old Bolgar *qâdŏm or a similar form < *qâdăm, ă being assimilated to m; Mo. qonin 'sheep' = Middle Tu. qōn, qōy, ATu. qōń, the Mo. form presumably < Old Bolgar *qōńĭn or a similar form < qōńăn, ă being assimilated to ń; Mo. küčin, later küčün, 'force' = Middle Tu. kûč, the Mo. form presumably < Old Bolgar *kû´čĭn or a similar form <*kû´čĕn, ĕ being assimilated to č).

I maintain that we have to assume Uighur i/i/u/ü < older Tu. (RTu.) ă/ĕ and PTu. -a/-ä > -ă/-ĕ zero, and this for four reasons:

(1) The existence of an original -ă/-ĕ is assumed because we find /â/ ... and /ā/ ... both in inlaut and auslaut, whereas we find /a/ ... only in inlaut. Were this situation original, it would be extremely surprising. That in Mo. -a/-e has not been added secondarily has been proved in Doerfer JSFOu. Here is but one hint. To Tu. küzän 'polecat' Mo. kürene corresponds; and there exist many other words where we find in Tu. -n, in Mo. -na/-ne. But it seems quite unlikely that Mo. has attached (added) -a/-e in this case: -n is a frequent auslaut in Mo.; a word like *küren would have an absolutely "Mongolian" shape (cf. mören 'river,' morin 'horse,' ǰirin 'two,' oron 'place,' a Tu. loanword, etc.) Contrary to the opinion of Sir Gerard Clauson and A. M. Ščerbak, I assume that Mo. has preserved the older situation. At any rate, the mere argument of system would be cogent enough (and the dropping of short or even reduced vowels in auslaut is a well-known development, cf. Old English nama 'name' >Middle English nāmə>New English ne·ᵢm).

The fact that ïi/i/u/ü goes back to a reduced vowel is clear because this form never occurs in auslaut. In the Uighur auslaut we find -ā/-ǟ, -ū/-ǖ, -ïī/-ī (and -ō/-ȫ), but never -ïi/-i/-u/-ü. Why? This phenomenon is inexplicable when one assumes that Uighur represents the oldest stage of Tu.; but it is quite easy to explain according to my thesis: Uighur -ïi-/-i-/-u-/-ü- goes back to older -ă-/-ĕ-. So we may assume an older -ă/-ĕ, which may have disappeared, in contrast to -ă-/-ĕ-.

(2) That ïi/i/u/ü goes back to an older reduced vowel is clear because of its fourfold set of allophones, the only fourfold set existing in Uighur. Here we always find twofold sets of allophones: ā/ǟ (e.g., the dative suffix qōl.qā 'to the arm,' kö̂l.kǟ 'to the lake'); ïī/ī (e.g., the denominal noun suffix +qïī/+kī); ū/ǖ (e.g., the deverbal verb suffix -ġū/-gǖ: bar-ġū 'he must go,' käl-gǖ 'he must come'; we also find ō/ȫ, by the way). But compare the fourfold set of allophones in at-ïġ 'having a horse,' ät-lig 'having flesh,' qōl-luġ 'having an arm,' kö̂l-lüg 'having a lake' (ï after a, ïi; i after ä, e, i; u after o, u; ü after ö, ü, but cf. 14.4.4.) Why do we have a fourfold set in this case alone? This phenomenon is inexplicable according to the terms of the older thesis. According to our thesis, however, it is easily explained: a reduced vowel can easily adopt the timbre of its phonetic surroundings. By the way, I should not exclude the possibility that -ă-/-ĕ- already had some labial allophones (without phonemic value), e.g., -ŏ-/-ö̆- or -ä̆-/-ä̆, after labial vowels, cf. 14.4.4.

(3) A further reason is inherent in the transcription of K. and the meter of QB. Whereas "full" vowels (u/ü, o/ö, ïi/i, a/ä) normally are written as plene in K. (almost always in open, very often in closed syllables) and are long according to the meter in QB, ïi/i/u/ü is written mostly as defective in K. and is always treated as short in QB (cf. above). Thus we see clearly that

ïi/i/u/ü has another, a shorter quantity than, for example, u/ü in the imperative suffix :sūn/:sün, a/ä in the plural suffix +lār/+lär, or ïi/i in the aorist suffix :ïr/:īr.

Now I would like briefly to deal with another point (though it is not so relevant to my purpose). I think that the transcription of the RTu. inscriptions also proves that ïi/i/u/ü must be distinguished from the full vowels (and must be read ă/ĕ), contrary to Meyer 1965. 183-203, who affirmed that RTu. has the same system as Uighur, namely not ă/ĕ, but ïi/i/u/ü. Meyer has not considered the fact that the vowels of the Uighur fourfold set are almost never written in RTu. but occur regularly in the later Runic manuscripts (bilinlär 'ye may know' instead of bilnlr, etc.). The few examples where vowels of the fourfold set are written can be readily explained, as in the word qūnčuyūġ (I transcribe RTu. written vowels as "long" vowels) 'the princess' accusative (cf. Talât Tekin, A Grammar of Orkhon Turkic 37, Bloomington, 1968), easily identified as qunčuyŏġ; furthermore, since these written vowels occur only in the neighborhood of q, k, ġ, g they may be merely graphic. By the way, some forms said by Tekin to contain "connective vowels" have or may have full vowels indeed: bōdūn 'nation,' ōlūr- 'to sit,' cf. Y. olor-. But, in contrast to Meyer's rule (rounded vowels in suffixes written only after unrounded vowels of the root, unrounded vowels of suffixes written only after rounded vowels of the root) we often find rounded "full" vowels in all positions, cf. Tekin 37: the causative suffix, for example, and other suffixes are written as plene even after rounded vowels: bōlčūn 'he may be,' bōšġūrmïš 'he taught,' qōntūr- 'to settle (somebody else),' etc. (and this not only after q, k, ġ, g). And we also find (~~Tekin~~ 35) adăn̆čïġ 'extraordinary' (traditionally transcribed adïn̆čïġ), qōnayïn 'I shall settle down' (Tekin 59), whereas the suffix of the converb is written as defective, cf. René Giraud, L'inscription de Baïn Tsokto,

Paris, 1961.34, e.g., bülmayän 'without finding ' traditionally transcribed bulmayin. We see that a clear distinction is made between ï and ä, that is, ï/ï written after unrounded vowels. But we never find written, for example, the vowel of the perfect first person singular (:tm); nor do we find it after rounded or unrounded vowels. I think even here the situation is clear enough; I agree with Tekin's denomination of "ï/i/u/ü" as "connective vowels" (63), but I think that we must conclude that they are the RTu. reduced vowels ä/ë, disregarding whether or not they had labial allophones.

(4) The last reason is the well-known elision of the middle syllable in Turkic. In late sources elision may affect almost all vowels (at least, all closed vowels), above all, of suffixes; e.g., K. yandru 'again' <yanduru (with a full vowel u). But in words of older texts it concerns only some cases, such as uġur 'opportunity,' oġul 'son,' aġiz 'mouth,' (cf. Gabain 1950.44), also burun 'nose,' köŋül 'heart,' qarïn 'bellow,' boyun 'body.' We find the same instances even in modern dialects (cf. PhTF, "chute des voyelles," p. 758), e.g., Osman burun 'nose,' but burn + u 'his nose.' We find forms with elision also in K.: III.55-18 uġrï 'his opportunity' (from uġur), I.220-17 oġlï 'his son' (from oġul), I.193-8 aġzï 'his mouth' (from aġiz), I.375-7 burnï 'his nose' (from burun), II.188-19 köŋlï 'his heart' (from köŋül), II.288-7 qarnï 'his bellow' (from qarïn), II.233-4 boynï 'his body' (from boyun). And we find the same cases in Brahmi texts, cf. Gabain, Türkische Turfan-Texte VIII, Berlin, 1954: oġlï, aġzï, köŋlï, qarnï, boynï. In these examples we find u after o, u; ü after ö; ï after a, that is, the same distribution as in the fourfold set of vowel harmony! Thus, these must be the same vowels as in, for example, the suffix +lïġ/+lig/-luġ/-lüg. And this identity is confirmed by the fact that in Manichaean texts (where we find a/ä [= ä/ë?] instead of ï/i/u/ü, especially

after a/ä, e.g., bartam 'I went,' kältäm 'I came') we find aġaz instead of aġiz. How can we explain that u, ü, i were dropped just in these words (e.g., aġiz 'mouth,' aġzī 'his mouth'), but never, for example, u in such words as aġūz 'first milk' or sīġūn 'deer' (why never *aġzī 'her first milk')? This phenomenon is inexplicable on the basis of the older thesis. In our view the explanation is quite simple: we have to assume older forms uġăr, oġăl, aġăz, burăn, köṇĕl, qarăn, boyăn. And, quite naturally, the reduced vowels were dropped in unstressed syllables: òġălī 'his son' > oġlī, etc.

These are four proofs of an older RTu. ă/ĕ, which has been dropped in auslaut and in the middle of trisyllabic words (Uighur forms such as oġulī 'his son' are an analogous restitution following the pattern aġūz 'first milk' : aġūzī = oġul 'son' : X, X becoming oġulī).

It seems strange, by the way, that we find no old CTu. or old Bolgar non-long vowels except -ă/-ĕ reflected in Mo. loanwords, e.g., Mo. miṇgan 'a thousand' ← Tu. *bïṇăn > bïṇə > bïṇ (PTu. form presumably *bï´ṇan). It is very possible that in the oldest stage of Tu. (proto-proto-Turkic, so to speak) we had other short vowels in auslaut. It may be, for instance, that *pä´rĕ 'man' < *pä´rä goes back to older *pä´rü, or *bï´ṇăn < *bï´ṇan goes back to *bï´ṇun. In this case we ought to write something like ʊ, that is, "some vowel of indefinite timbre." But this thesis, though not refutable, would be merely a glottogonic speculation. We have no proof whatever for *pä´rü, bï´ṇun: Mo. hints only of *pärĕ, *bïṇăn.

Now let us summarize PTu. vowels of non-initial syllables:

/â/ ... Karakhanid long vowel, T. long vowel, RTu. often written;

/ā/ ... Karakhanid long (or rather half-long) vowel, T. short vowel, RTu. often written;

/a/ ... Karakhanid and T. short vowel, RTu. almost never written, -/a/ ... in all attested Tu. languages dropped, preserved in Mongolian.

However, I should not exclude the possibility that in older Tu., in a period of transition, only /â/ ... was pronounced as a long vowel, /ā/ ... already being short (but a full vowel), /a/ ... reduced (or dropped, in auslaut), in other words, that every vowel of a non-initial syllable was reduced one degree. The reason may have been that non-initial syllables were unstressed, in contrast to modern Tu.

What about the vowels of non-initial syllables in Khalaj? PTu. -/a/ ... has been dropped, too (hàr 'man,' Mo. ere, not *hàrá). The short vowels in closed non-initial syllables (/a/...) often have been rounded, cf. 11, e.g., kàlün 'bride,' čąqur 'pale,' qą˙run 'bellow'; they never occur as long vowels. But also PTu. /ā/ ... is shortened in Khalaj, just as in T. and Y.: àkkü, àkki 'two,' etc. We find long vowels only in the following examples: *baġirsôq 'bowels' (boġąrsą˙q, boġąrsuq); *pirâq 'far' (? irąq, hirąq, yirąq); *ôtčâq 'hearth' (hü°čąq, hü°čą˙q); *qūlâq 'ear' (Ǫuląq, Ǫuląq<, quląq, qoląq); *sičġân 'mouse' (sičġąn, sičġąn, si⁴čġąn); *tâlâq 'milt' (tąląq); tâpân 'sole' (tą̄ᵃpąn); *tabišġân 'hare' (tąvušġą˙n, tovušġąn, touušġąn); *tôrâq 'dried milk' (tü°rąq, tu°rą˙q); *tōprâq or *tuprâq 'soil' (turpąq); *uzâq 'long' (uząq); *yāġâq 'nut' (yaġąq, yoġą˙q, yaġą˙q); *yilân 'snake' (yiląn); *yōrġân 'blanket' (yorġąn).

Thus we find mainly endings -ân, -âq, which often agree with T., K.: yirâq 'far,' yilân 'snake.' But we also find deviations: T. gulaq 'ear' (Y. kulgāx, K. qulaq, QB qulāq). Here are the correspondences in T., Y., K.:

*baġirsôq	—	—	bagirsaq
*pirâq	yirāq	irāx	yirāq

*ôtčâq	ōǰaq	ohox	očaq
*qūlâq	ǫulaq	kulgāx	qulaq (QB qulāq!)
*s'ičġân	s'ičan	___	s'ičġān
*tâlâq	dālaq	(tāl)	talāq
*tâpân	dāban	___	tapan (in the text "taban")
*tab'išġân	tovšan	___	taw'išġān
*tôrâq	___	___	___
*tuprâq	topraq	___	toprāq (or rather tuprāq)
*uzâq	uzaq	___	uzaq
yāġâq	___	___	yaġāq
*y'ilân	y'ilān	___	y'ilān
*yōrġân	yorǫan	___	yoġurqān

Instead of *yōrġân we may prefer another original form, e.g., *yōġurqân. It seems probable that we find -âq in suffixes of parts of the body, since we find in QB adāq 'foot,' qulāq 'ear,' and in K. talāq 'milt.' Thus K. qulaq may be a graphic shortening (cf. 13.6); in K. uzaq the vowels must be long (or at least full) since the word is derived from uzā- 'to be long,' etc. On the whole, the Karakhanid situation agrees with Khalaj quite well; only *tâpân, *ôtčâq deviate, but even here a graphic shortening may exist in K. With T. Khalaj normally disagrees; we find only T. y'irāq, y'ilān; but this situation can be secondary: in Y. we find kulgāx (= QB, Kh.) against T. ǫulaq. However, the situation is sophisticated. On the whole, I am not so sure whether T. shows a secondary shortening in such forms as s'ičan, dālaq or whether we have to assume /â/ ... only in such cases where even T. has a long vowel (y'irāq, y'ilān), whereas in such cases as T. s'ičan, dālaq = K. s'ičġān, talāq we have to assume an original /ā/ ..., quite normally preserved in K., shortened in T. (just as in the first syllables). However, Kh. has /ā/ ...

in these cases, whereas it generally changes /ā/$_2$ ... >/a/ ..., a situation which seems to be a contradiction.

PTu. /ā/$_2$ has been preserved in some cases in WOD., too: yalvār- 'to beg,' and many aorist forms as gidāriz 'we go' (contrary to Korkmaz 203, note 11).

13.12 Attempted reconstruction of Proto-Turkic quantity. We shall try to reconstruct the older (or oldest) situation of vowel quantities in Turkic.

13.12.1 Former attempts. It is clear that all the older attempted reconstructions, based on only two quantities, must be false. Ščerbak 1967, for example, offers a good refutation of Biišev's thesis */â/ ... < */a$^{\dot{i}}$/ .... But his own thesis is not much better. He gives on p. 46 the following pattern for the development of āt 'name' : at 'horse.' *át/at´ (in the first case a stressed vowel, in the second case a stressed consonant) > *āt/att or *a:t/at: (which is the same) >modern languages ād/at . This theory is untenable even without the evidence provided by Khalaj: Ščerbak considered only monosyllabic words. But we find the same opposition of long and short vowels also in disyllabic words, such as T. bōri 'wolf,' āla 'colored' : qara 'black,' kiši 'person.' Applying Ščerbak's thesis to these words, we must assume that in bōri the vowel was stressed, in qara the consonant r, that is, *bö´ri, *qar´a. But it is rather unlikely that a consonant between two vowels would be stressed. Concerning Ščerbak's connection between short vowels and gemination, we find in Kh. several instances where just long vowels have produced a secondary (substitutional) gemination, cf. balla 'small' = T. bāla < *bâlā 'young animal'; qarri 'old' = Az. dialect of Nukha gāri < *qārī (T. garri); qurrug 'dry' = T. gūri <*qûrīg

But my own remarks in Journal de la Société Finno-Ougrienne 65.16 have also been erroneous: mere tonality without quantity is not a sufficient explanation.

13.12.2 The possibilities of explanation. How may we explain the quantities in Kh., for example, in toq 'satisfied,' qu°l 'arm,' tü°n 'clothes'? (We provisionally reconstructed *toq, *qōl, *tôn.) There are many possibilities:

(1) Something like ancient Greek o : ώ : ῶ, i.e., short vowel : simple (acute) length : moved (circumflex) length. We may write o : ō : ô or even o : ō : ō°;

(2) o : o˙ : o:, i.e., short : half-long : long;

(3) o : uo : uō, i.e., short : short diphthong : long diphthong (a : aa : aā, etc.);

(4) o : oó : óo, i.e., short : rising diphthong : falling diphthong

This last possibility would be compatible with the following fact: in Osman (and other Oghuz languages) we find not only ā`tï´n̥ 'of the name' >adın, i.e., -t- >-d- after long vowels, but also qa`natī´n̥ 'of the wing' >kanadın, i.e., -t- >-d- in the third syllable of trisyllabic words. We may explain this phenomenon as follows: *a`atï´n̥ 'of the name' >adın, *qànatï´n̥ 'of the wing' > kanadın, but *a`tï´n̥ 'of the horse' >atın, and also *yaa`tur 'he is lying' >yatır. In the first case an unstressed syllable (or part of a diphthong, two morae) was before -t-; in the second case a stressed syllable (or part of a diphthong, one mora) was before -t-. But the same fact may be explained by possibility (1), as well.

We may consider still other possibilities. On the whole, I think it is rather useless to reflect here too much: we do have taped recordings of Khalaj but we have none of PTu. And, by the way, these explanations are all rather similar (cf. Jakobson 1962.119 ff.). I, for my part, am inclined to accept solution (1), which seems to be the least artificial (it resembles, by the way, the system reconstructed for Indo-European languages, cf., for example, Hans Krahe, Indogermanische Sprachwissenschaft, Berlin, 1943.35). We may assume three "quantities": (1) one-mora (short) vowels, (2) two-morae (long) vowels with a level (or acute)

intonation, (3) two-morae (long) vowels with a moved (or circumflex) intonation. This explanation agrees quite well with Kh. and even with T., Y., K. (cf. 13.11.6, 7).

13.12.3 Monosyllabic roots ending in vowels. In 13.4 I said that monosyllabic roots ending in a vowel are always long in Tu. And indeed we find: K. bā- 'to bind' = T. bā-ġ-la-, Y. bāy-; K. bū 'this' = T., WOD. bū (Y. bu may be a secondary shortening, since PTu. *bô often is proclitic, i.e., unstressed); K. bū 'steam' = T. būġ; K. sā- 'to count' = T. sāy-; K. sī- 'to break' = T. sindir-; K. tē- = T. diy-, Y. diä, WOD. dē-; K. yā 'bow' = T. yāy, Y. sā; K. yē- 'to eat' = T. iy-, Y. siä-; K. yū- 'to wash' = T. yuv- (= $yū^u$-), Y. sūy-. Even a correspondence such as K. nǟ 'what' = T. nä is no genuine exception, because we find such derivations as T. nälär (plural), nämä 'whatever' : nä must be a secondarily shortened form, used perhaps in affective expressions (cf. Essen 1953.119, lines 23-6). For more examples of this type see Ščerbak 1967.43-4.

We surely never find short vowels in the position mentioned. Do we find an opposition /â/ ... : /ā/ ... ? I think we do. Compare the following examples: K. qōd- 'to put,' qōn- 'to settle' seem to go back to a root *qō-. The origin must be *qō-, not *qô-, since we have T. goy-, Y. xot-. A similar case may exist in WOD. gȫr- 'to look,' gȫz 'eye' (= QB kȫz); the root seems to be *kȫ- (T. gör-, göz, Y. kör-, kös). It is hard to say whether or not K. tōd- ~tod- 'to become satisfied' = T. doy-, Y. tot- is among these examples (cf. K. toq 'satisfied' = T. doq). We may cite furthermore K. sīz 'ye' (and, presumably, *bīz 'we'). Since +z is a plural suffix in this case and since we find ATu. si.ni 'thee,' bi.ni ~mi.ni 'me' (and other such case forms, too), we may reconstruct a root *sī (and, analogically, *bī). Even K. yaq- 'to burn (something else)' and yan- 'to burn,' yal- 'to

flame' may go back to *yā-, also yük 'burden,' yüd- 'to burden.' The vowels normally are short in K., but the shortness may be graphic. (This explanation is not certain, however.) The root *ā+ 'that' seems to belong here, too: it is short in T. (anča 'so much'), but it is long in Yüknekī (cf. 13.7); in verse 446 we find ānï 'him.' We may find some other examples of this type, too; however, it is not my task to deal with all of them here. At any rate, I think we have to assume PTu. roots of the type consonant + /â/ ... and of the type consonant + /ā/ ..., but none of the type consonant + /a/ ....

13.12.4 Summary. Here is a survey about the development of PTu. vowel quantities in K., WOD., T., Y., and Kh.

(A) Monosyllabic roots

PTu.	K. lento	K. allegro	WOD.	T.	Y.	Kh.
/â/ ...	/ā/ ...	/a˙/ ...	/ā/ ...	/â/ ...	/â/ ...	/â/ ...
/ā/ ...	/ā/ ...	/a˙/ ...	/ā/ ...	/a/ ...	/a/ ...	/ā/ ...~/a˙/ ...
/a/ ...	/a/ ...	/a/ ...	/a/ ...	/a/ ...	/a/ ...	/a/ ...

Notes: (1) K. â- (in anlaut) has become a^{a} or $a^{\cdot a}$ (lento) ~ a˙ (allegro), cf. 13.11.7.

(2) In WOD. I do not know whether or not a distinction is made between /ā/ ... and /â/ ....

(3) For T., Y. /â/ ... cf. 13.11.6.

(B) First syllables of polysyllabic roots

PTu.	K. lento	K. allegro	T.	Y.	Kh.
/â/ ...	/a˙/ ...	/a/ ...	/â/ ...	/a/ ...	/â/ ...
/ā/ ...	/a˙/ ...	/a/ ...	/a/ ...	/a/ ...	/ā/ ...~/a˙/ ...
/a/ ...	/a/ ...		/a/ ...	/a/ ...	/a/ ...

Notes: (1) K. in this case does not seem to have had a^a in anlaut; at least there is no hint of such.

(2) Very few examples of polysyllabic words are given for WOD. but in Az. Nukha such an example is found, cf. 13.9. For WOD. cf. Korkmaz ālti 'six,' āltin 'gold,' kāndi 'self' (all of them doubtful for various reasons, and we find no correspondence to T. forms with long vowels).

(C) Non-initial syllables of polysyllabic roots

PTu.	K. lento	K. allegro	T.	Y.	Kh.
/â/ ...	/ā/ ...	/a˙/ ...	/â/ ...	/â/ ...	/ā/ ...
/ā/ ...	/ā/ ...	/a˙/ ...	/a/ ...	/a/ ...	/ā/ ...
/-A-/	/V̈/		/V̈/	/V̈/	*/V̈/
/-A/	zero		zero	zero	zero

Notes: (1) PTu. /-A/ has been preserved in no living Tu. language; but its existence is attested to in old Tu. loanwords in Mongolian.

(2) /ā/ ... may be /a˙/ ... or even /a/ ... in Karakhanid.

(3) /V̈/ means the fourfold set ï/i/u/ü (found in Uighur, too, but cf. 14.4.4), this form <older (RTu.) ă/ĕ, eventually ă/ĕ/ä̆/ä̆ or even ă/ĕ/ŏ/ö̆ (cf. 13.11.9).

(4) No material has been found for WOD.

(5) In T. /ā/ ... sometimes may not be /a/ ... but /ā/ ... when used in inlaut before some suffixes, cf. Biišev 1963.54: ōbada 'in the village' (= Karakhanid o˙pādā) becomes ōbadāqï 'he who is in the village' with the suffix +KI. Other cases are assimilations or analogous constructions (e.g., analogous

to ōyla- 'to think' is ōylāp 'thinking'; also aq- 'to flow,' aqīp 'flowing').

(6) In Kh. /V̈/ often becomes ṵ/ṵ̈, cf. 13.11.9.

13.12.5 Reflexes of Proto-Turkic quantity in Chuvash. At last let us investigate the correspondences of PTu. /â/ ..., /ā/ ... and /a/ ... in Chuvash. We find long vowels preserved in Bolgar loanwords in Hungarian (from about the eighth century), cf. Räsänen, "Über die langen Vokale der türkischen Lehnwörter im Ungarischen," Finnisch-ugrische Forschungen 24.246-55. However, this material is not reliable enough: (1) it often is unclear whether a word is of Tu. origin at all (szél 'wind,' nyár 'summer,' for example, are not, in my opinion); (2) even when it is clear that a word is Tu., it is not always clear whether it is just Bolgar or whether it belongs to an~~other Tu.~~ language (e.g., Pecheneg). Why, for example, must szál 'float' be a loanword from Bolgar? Nothing about it is typically Bolgar. Furthermore Hungarian has many secondary long vowels, cf. Gyula Décsy, "Der gegenwärtige Stand der finnougrischen Lautforschung," Mitteilungen der Societas Uralo-Altaica 2.42-3, Hamburg, 1968. I did not find any reliable examples of /ā/ ... in the Bolgar words in Hungarian. /â/ ... has several Bolgar examples with long vowels, e.g., sár [šār] 'yellow' = C. šură <PTu. *siâ´rag. On the whole, we cannot do much with this material.

Volga Bolgar (thirteenth/fourteenth century) has preserved the old distinction of quantities, cf. Doerfer 1967.58: ǰāl 'year of life' = T. yāš; ǰūz, later ǰūr (or čūz, čūr) 'a hundred' = Y. sūs; wǫn 'ten' = T. ōn; xīr 'daughter' = T. gīz; töätĭm 'fourth' = T. dōrt 'four'; ǰiäti 'seven' (or čiäti) = T. yädi < *yâtē, etc. (but säkkăr 'eight' = T. säkiz, etc.). We find two examples of PTu. /ā/ ..., apart from the examples quoted above (which reflect PTu. /â/ ...): ꞓ9 vüč 'three' = WOD. ūš, Kh. ṵ̄s, ṵ̄č

(perhaps only graphic, avoiding ووج , i.e., two wāw, one after the other). Furthermore we find كوان , كُوان , كُوَان 'day' in the older inscriptions 3, 14, 16, 24, 27, 30, 31, 33 (1291 to about 1357 A.D.); in two late inscriptions we find كن (47, from 1340), كون (48, from 1355/6). We may read *küön (later *kün) = WOD. gün.

The C. loanwords in Finnic languages (dating from about the fifteenth/sixteenth century) give no satisfying result since Cheremiss and Votiak have undergone too many changes, etc.

In modern C. we find reflexes of old quantities in the following cases (I speak only of monosyllabic roots):

(1) ô has been preserved as ăva: K. kök 'blue' = C. kăvak, K. tört 'four' = C. tăvată, etc. (the correspondent ü only in Tatar loanwords, such as K. köl 'lake' = C. kül ← Tatar kül or older köl). Short ö after or before k normally is ă: C. kăk 'root' = T. kök, C. tăk- 'to pour' = T. dök-. But PTu. /ö/ seems to be u in this case: kur- 'to look' = WOD. gör- (T. gör-), kuś 'eye' (originally 'his eye') = WOD. göz (T. göz). If this analysis is correct, what about kuś- 'to rove' = T. göč-, kut 'backside' = T. köt? The first word may contain a long vowel, since we find göč- in Khorezmian Tu. (Abdullaev 48), which material, however, is not entirely reliable, as we have seen. The second example cannot be explained. Does it go back to old *köt? Is C. in such cases the only Tu. language to have preserved a reflex of PTu. *ö?

(2) To PTu. kü- in C. kĕ- corresponds, to kü-, ku-, e.g., C. kĕr 'autumn' = T. güyz (Tuv. küs); kĕt- 'to guard' = T. güyt-; on the other hand, kul- 'to laugh' = T. gül-. For kü- we find ku-, cf. kun 'day' (Volga Bolgar küön) = WOD. gün, T. gün (Tuv. xü'n). But is this correspondence correct? What about kĕl 'ash' = T. kül, K. kül? Is it a Tatar loanword? (The many Tatar loanwords, about two-thirds of the C. vocabulary, cause many difficulties,

(3) To PTu. î in C. ĕ corresponds (cf. Räsänen 1949.91), to i, i: C. pĕr 'one' = Y. bīr; kĕr- 'to enter' = T. gīr- (and tĕn 'belief' ← P. dīn!); C. pin 'a thousand' = T. müṇ <min, K. miṇ; C. śip 'thread' = T. yüp, older yip; C. čik- 'to stick' = K. tik-, T. dik- (but ĕś- 'to drink' = T., K. ič- in anlaut). What about PTu. /ī/? It has converged with /i/: sirĕn 'your' = K. sīz 'ye,' T. siz (and, mutatis mutandis, pirĕn 'our'). But if this derivation be correct, what about pĕl- 'to know' = K., T. bil-? Is it older *bīl-, too?

Obviously we cannot do much with this material. However, it is not impossible that C. has preserved the PTu. oppositions /â/ ..., /ā/ ..., /a/ ... in several cases. Research should be continued in this area.

ETYMOLOGICAL DICTIONARY OF TURKIC WORDS IN KHALAJ

14.1 Importance of several Turkic languages. For the reconstruction of ATu. (particularly, quantity of vowels) I used, above all, K., T. (according to N. A. Baskakov et alii, Turkmensko-russkij slovar', Moskva, 1968), and Y. (according to Ė. K. Pekarskij, Slovar' jakutskogo jazyka, Leningrad, 1917-30), sometimes also Az. and other Tu. languages (mostly according to Radloff, and Az. according to Azizbekov 1965); furthermore, I used for the reconstruction of quantity the indications of WOD.

For the reconstruction of PTu. (and CTu.) I used Y. for some questions, above all *-ē/-ë̄, respectively *-ī/-ï̄ of non-initial syllables: -ē/-ë̄ has become ä/a in Y., whereas -ī/-ï̄ has become i/ï, e.g., Y. alta 'six' (most Tu. languages altï) < *altë̄, Y. sürbä 'twenty' < *yi`gärmē', but Y. äkki, ikki 'two' < *äkkī.

Still more important for the reconstruction of PTu. is C. (according to M. Ja. Sirotkin, Čuvašsko-russkij slovar', Moskva, 1961). Chuvash gives us the possibility of reconstructing i̯-diphthongs. Here is one instance: whereas C. xur 'goose' = CTu. qâz gives a reconstruction of PTu. *kâz, the word (that is, the group of words of such a type as) C. yun 'blood' = CTu. qân gives a reconstruction of PTu. *ki̯ân. I also used the older (Bolgar) stages of C. (Volga Bolgar according to G. V. Jusupov, Vvedenie v bulgaro-tatarskuju ėpigrafiku, Moskva and Leningrad, 1960, and Hungarian Bolgar according to Zoltán Gombocz, Die bulgarisch-türkischen Lehnwörter in der ungarischen Sprache, Helsinki, 1912). Sometimes C. helps us to determine whether to reconstruct PTu. *-n(A) or *-m or *mA, cf. Doerfer 1967: PTu. *-n and *-nA are

-n both in C. and CTu. (C xuran 'kettle' = CTu. qâzġān); *-m is -m in C., but -n in CTu. (C. xïrăm 'bellow' = CTu. qā´ran ~qē´ran); *-mA is -m both in C. and CTu. (C. yĕm 'trousers' = CTu. âm, C. yat+ăm 'my name' = CTu. â´t-am). C. is (just as are Y. and Tuv.) relevant for reconstructing PTu. *ë/e: CTu. *a, PTu* ë >ï in C. (whereas PTu. *ï has become ĕ in this language) and/or Y. and/or Tuv. (e.g., PTu. sēp 'handle,' CTu. sāp = C. s'ipă, Y. up < *ïp, Tuv. s'ip; PTu. dēt- 'to sleep,' CTu. yāt- = Y. s'it-, Tuv. č'it-; but sometimes only one of these languages has ï; Tuv. especially never has ï- in anlaut, e.g., C. il- 'to take,' Y. ïl- = Tuv. al-, similar to CTu. āl-, whereas PTu. has had *ēl-. For the reconstruction of PTu. *e C. is the only relevant Tu. language, cf. 13.11.5.

14.2 Proto-Bolgar loanwords in Mongolian. The oldest attestable Tu. stage is represented by the Bolgar loanwords in Mongolian, which, however, represent an archaic dialect, not PTu. itself. For Mo. I used the well-known dictionaries, above all the reconstructions in TM., cf. here the bibliography (e.g., Ko, RKW). Mo. represents to a great extent the same dates as C., e.g., i-diphthongs are represented by i in Mo. (CTu. sâ´rag 'yellow' = C. šură = Mo. šira < *sira ← Bolgar *s'iarăg or similar <PTu. *siâ´rag). The (unstressed) auslaut vowels (and auslaut vowels + n) have been preserved exclusively in Mo., e.g., CTu. kôk 'blue' = C. kăvak would not tell us whether we have to reconstruct PTu. *kôk or *kö´kä, but Mo. köke shows that the last form is correct (in regard to the preservation of Tu. auslauts in Mo., the auslaut vowel is always -a/-e, cf. 13.11.9). Even Tu. *ë sometimes has been "preserved" (in the form of i), e.g., CTu. yāz- 'to write' = C. ś'ir- = Mo. ǰiru- (← Old Bolgar *dërz-) gives a reconstructed PTu. *dēz-. The distinction between *e and *ä, however, does not occur in Mo. The only

language to have preserved PTu. unstressed -An is Mo., e.g., CTu. bïn 'a thousand' = Mo. mingan proves PTu. *bḯnan. The difference between ō/ȫ and ū/ǖ in non-initial syllables is well preserved in Mo. (e.g., CTu. yaqū 'fur' = Mo. daqu ← PTu. *dagku, but CTu. bälgö 'sign' = Mo. belge ← PTu. *bälgȫ, cf. TM I. 9-12). Sometimes ō/ȫ have been preserved in ATu. and Middle Tu., above all after o/ö; e.g., ATu. and Middle Tu. still have ortō 'center,' orō 'ditch,' botō 'young of a camel,' sōġōn 'onion,' törȫ 'law,' etc. Most more recent Tu. languages tend to change ō/ȫ > a/ä, i.e., orta, ora, bota, soġan, törä. Sometimes we find alternances, as in boġoz 'throat' = Osman boğaz, but Taranči boġuz. In Mo. we find botogan, soġongina (with a diminutive suffix), torqa(n), törö, boġorla- 'to strangle.' But ō/ȫ may be reconstructed even after other vowels, e.g., K. töpȫ 'hill' = T. däpä = M. deǵe.re 'above' (deǵe-dü 'superior,' etc.) ← PTu. *täpȫ; modern Tu. *baltu ~ *balta = Mo. balta ← PTu. *baltō; ATu. tusu = Mo. tusa ← PTu. *tusō, etc., cf. TM headwords 587, 592, 777, 134, 792, 884, 872, 78.

Another good means of recognizing the opposition PTu. ō/ȫ : ū/ǖ is Brahmi texts. Here the opposition is clear and strict; the perfect passive participle, e.g., has -oq/-ök (art-oq 'more,' ār-oq 'tired,' süz-ök 'filtered,' yār-oq ~yar-uq 'bright, splendid), whereas the causative suffix, for example, has -ur-/-ür- (ič-ür- 'to let drink,' kāl-ür- 'to bring,' tur-gur- 'to cause,' ün-tür- 'to bring out.' However, there are two difficulties: (1) There is already a perceptible tendency of o/ö becoming u/ü, cf. above yaruq, also cases such as kertü ~kertö 'true,' qayu ~qayo 'who.' In rare cases one may find a word only with -u/-ü although its PTu. form may have ended in -ō/-ȫ. (2) After o/ö of the first syllable even -ū/-ǖ often become o/ö, the distinction between ō/ȫ and ū/ǖ in this case being abolished (cf. öl-ör- 'to kill' instead of öl-ür-, pol:or 'he becomes' instead of bol:ur).

We find the same situation in ATu. in Tibetan script, cf. Sir Gerard Clauson, Turkish and Mongolian Studies, London, 1962. 97-100, e.g., o_2 preserved in alqo 'all' (= Brahmi alqo, ālqo, ālqu. This is not a converb of alq-!, contrary to Gabain 1950. 135: the converb would be alqu, not alqo); törö. g 'law' (accusative) (= Brahmi törö); tözön 'noble' (= Brahmi tözöm); ötönü 'demanding' (= Uighur ötünü), etc. Thus o/ö is not unambiguous in Brahmi Tu.; it stands for PTu. ō/ȫ, for PTu. ū/ǖ (only after o/ö), and for ŏ/ö̆ < ă/ĕ <PTu. unstressed a/ä (only after o/ö).

Compare also some developments in the modern Tu. languages. Normally ō/$ö_2$ becomes u/ü in Tuv. (often even in Khakass, sometimes in New Uighur or in other Tu. languages), a/ä in most Tu. languages, cf. PTu. *baltō 'axe' (→ Mo. balta), TM I. 199: Tuv., Khakass, New Uighur, Čulym *baltu, all other dialects (including Altay Tu.) balta (Y. balta < baltō; however, even PTu. *-ū/ǖ becomes -a/-ä in Y., e.g., saġa 'fur' < yaqū, cf. Mo. daqu ← PTu. *dagku); the form balto has been preserved in Ket, cf. V. N. Toporov, "Materialy k sravnitel'no-istoričeskoj fonetike enisejskix jazykov, 1, Arinsko-enisejskie sootvetstvija (čast' pervaja)," Ketskij Sbornik, Moskva, 1968. 277-330, p. 287 baltó 'topor' (but altún 'zoloto,' which in spite of Mo. altan must have been PTu. *ëltūn, since we find altun in all Tu. languages, but iltăn in C.; in Mo. it is presumably a loanword from an old Tu. dialect where ëltūn may have become altōn?, or is PTu. *ëltōn correct and modern Tu. altun, also Brahmi altun, an inter-Tu. loanword?). Here are some other instances: ortō 'middle' = Tuv. ortu, Khakass orti < *ortu, all other dialects (including New Uighur) orta (TM II. 141); orō 'cave' >Tuv. oru, most other dialects *ora (II. 144); torqō 'silk' >Tuv. Khakass *torqu, most other dialects *torqa (II. 478). That ō/$ö_2$ >a/ä is the normal development is clear also from such examples as qâp = tôn 'a kind of clothing' >qaptan (III. 186-7); säkäz ôn

'eighty' >*säksän (K. still säksön); toqaz ôn 'ninety' >*toqsan (K. still toqson), etc. To this belongs PTu. *olpōq 'a kind of garment' = Tuv. olbuq, Y. olbox, Taranči olpaq, Kirghiz olpoq = Mo. olbog (TM II. 111).

PTu.	RTu.	ATu.	"Khorezmian Tu." Period
o-a	o-ă	o-ŏ	o-u
o-ō	o-ō	o-ō	o-o ~o-u [in suffixes u]
o-ū	o-ū	o-ū ~ o-ō (ō?)	o-u

In suffixes we find variants, e.g., Brahmi bolzun ~bolzon (perhaps *bôl:zōn < *bôl:zūn?) 'he may be,' which in the modern languages have become u. Furthermore suffixes developed differently from second syllables of roots, cf. ortō 'center' >Khorezmian Tu. ortu or orto (modern languages mostly *orta, but Tuv. ɔrtu); but the participle -oq/-ök, for example, became -uq/-ük in all languages; in analogy to a-ō >a-u we find o-ō >o-u, too (Kh. sīdäk 'urine,' however, < *sîd-ōk). For o-ō some modern languages go back to an older o-u (Tuv., for instance), others to o-o >later o-a (and this sometimes secondarily o-o again).

A similar explanation is found in Sir Gerard Clauson, "Three Notes on Early Turkish," Türk Dili Araştırmaları Yıllığı, Belleten, Ankara, 1967. 1-37. However, Sir Gerard is mistaken on this point: he overestimates Kirghiz, which, because it has such forms as orto 'center' "seems in this respect to be the most

archaic living Turkish language" (p. 14); i.e., Sir Gerard thinks that Kirghiz has preserved o in orto and similar words where the other Tu. languages have changed it >a (mutatis mutandis for Kirghiz ö). But it is clear that Kirghiz also originally had *a/ä which, by way of assimilation, it only secondarily changed >o/ö (after o/ö). Here I offer two proofs:

(1) We find o in loanwords after o, where it must go back to older a, e.g., dorbo 'bag' ← P. tōbra (← Indian tōbra); dosondo 'friend' ← P. dōst 'friend' + Mo. anda 'friend' (hendiadyoin); počto 'post' ← Russian počta (older loanword, even počta is attested to in Kirghiz as a younger loanword); moldo 'who is able to write and read' ← P. molla 'priest' (= Osman, T. molla, Kazakh molda).

(2) We find o in Kirghiz suffixes after o, where it must go back to older a, e.g., qol.do 'at the arm' (qoldo bar 'imuščij'), qol.ġo 'to the arm,' etc., respectively < ATu. locative .dĀ, dative .KĀ. And so with many other instances.

Kirghiz does not lead us back to any older stage of Tu. Let us come back to Mo.

Mo. furthermore is important for the reconstruction of PTu. *p- (e.g., Tu. öküz 'ox' = Mo. hüker gives a reconstruction of PTu. *pö´käz >Old Bolgar *pö´kärz → Mo. *pükär >*fükär > hüker). However, such cases are rare, cf. TM I. 93, 97 (an important case is Tu. oyma 'felt boot' = Mo. hoyimasun = Manchu fomon < *poimo(n); hence we may reconstruct PTu. *poyma). Mo. is likewise important for reconstruction of Tu. y- as an original *d- (PTu. *d- >*d´- >*ǰ- >y-, e.g., ATu. yaġi 'enemy' = Mo. dayisun gives PTu. *daġi; later loanwords are such as Mo. ǰol 'luck' ← *ǰôl < *dôl, etc., cf. TM I. 97-8, ATu. yôl 'way, luck'). Perhaps Mo. has preserved PTu. o and ö, cf. 14.3.3.

14.3 Three unsolvable problems. However, in our reconstruction some points will remain unclear. We will distinguish (a)

three unsolvable problems and (b) four points which have been theoretically solved but which often are practicably unrealizable. Here are the three unsolved problems:

14.3.1 Lambdacism and rhotacism. Since we do not possess taped recordings of PTu., we cannot say whether PTu. had z or ŕ or ř or whatever, nor whether it had š or ž or ĺ or whatever. It is obvious that for CTu. qâr 'snow' = C. yur and for CTu. qâz 'goose' = C. xur we have to reconstruct two different PTu. consonants, but we cannot say which. At any rate, CTu. has preserved two different ancient phonemes (converged in C., Mo., Tungus). The special phonetic character of this phoneme is rather irrelevant for a reconstruction: what we can reconstruct is never a sound; it is always only a phoneme. We likewise cannot say, for example, whether ATu. or PTu. /a/ was a or a^6 or ạ or a^3 or a^4 or even ȧ. In principle, the problem is not different from that of the z-ŕ-ř problem.

It is impossible to deal here with this vast problem. I wish to say only that I am not convinced that this problem will ever be solved. It cannot be solved (as some have tried to solve it) on the basis of mere reflection; we would have to wait for old texts (e.g., of 1000 B.C.); and since these do not exist (and the chance that they will be discovered is extremely slight), this problem remains unsolvable. For the sake of simplicity I shall write (not reconstruct) z, š. (There is a slight — but very slight — chance that these forms are preferable, cf. TM I. 523. Even such Hungarian forms as borjú 'calf,' bölcső 'cradle,' older belcsé seem to represent not Bolgar *buraġu, *bišiǵ [contrary to Gombocz' opinion, the form should be *biliǵ, since CTu. -š- is normally C. -l-] = CTu. buzāġū, bêšik, but something like Bolgar *burzāġū, *belžig.)

14.3.2 d- ~t- in Old Bolgar. The second problem is whether or not we have to reconstruct d- or t- in Old Bolgar, cf. TM I. 97. Normally Mo. t- corresponds to a Tu. t-. But we find the following exceptions: ATu. talōy 'ocean' = Mo. dalay, ATu. töpȫ (T. däpä) = Mo. deǵe- 'above,' ATu. tö̂rt 'four' = Mo. dörben, and (78) ATu. tôz 'birch bark' = Mo. durusun. These four examples are sufficient to show that a problem exists, but they are not sufficient to prove that PTu. had d- apart from t-. We cannot exclude the possibility that Mo. got these words from a Bolgar dialect which early changed t- >D- or that, for example, Tu. had unaspirated t-, while Mo. had d- and (aspirated) tʿ- and, having no t- itself, sometimes rendered Tu. t- as tʿ-, sometimes as D-, etc. Therefore I simply reconstruct t-, even in this case, i.e., PTu. *talōy, *täpȫ, *tö̂rt, *tôz (without totally excluding *dalōy, *däpȫ, *dö̂rt, *dǫ̂z, and without excluding the fact that at least Old Bolgar had something like *Dalōy, *Däpȫ, *Dö̂rt, *Dǫ̂rz). It sometimes is said that the Oghuz dialects in particular have preserved an old (PTu.) distinction between t- and d-; but the development t- >D- >d- surely is secondary in Oghuz (I shall prove this point in Wiener Zeitschrift für die Kunde des Morgenlandes 62). Here I will say only this much: the above progression can be shown, among other things, by the development of old loanwords in Oghuz; e.g., Indian tōbra 'bag' (R. L. Turner, A Comparative Dictionary of the Indo-Aryan Languages, London, 1966, No. 5972) became P. tōbra, the modern Osman dorbacik (TM headword 947). Here d- is apparently secondary. The same holds true for P. taġār 'vessel' >Osman dağarcık (TM headword No. 905).

14.3.3 Existence of closed o, ö in Old Bolgar. The third unsolvable problem is that of the existence (or non-existence) of o, ö (or ǫ, ǫ̈) in PTu. Normally to Tu. o corresponds Mo. o, e.g.,

Tu. bōz 'grey' = bora; to Tu. u corresponds u, e.g., Tu. qudruq 'tail' = qudurga. The same holds true for ö = ö, ü = ü. But sometimes to CTu. o corresponds Mo. u, to Tu. ö corresponds Mo. ü, as shown in the following examples: (TM I. 99) qoč 'ram' = quča; bodō- 'to color' = budu- ($ō_2$ after u >u in contrast to Tu. *tusō 'profit' = Mo. tusa!); qopūz 'lute' = quhur, quġur, (100) ökäz 'ox' = hüker; (78) qobī 'luck' = qubi; tôz 'birch bark' = durusun; (182) opā 'make-up, powder' = uha; (435) qozī 'lamb' = qurigan; (II. 289) bôrk 'cap' = bürgü; (III. 9) čōq 'mass' = čug; (239) sôr- 'to ask' = sura-; (547) qôzġāl- 'to be irritated' = quruġulǰa-; also ?(K.) ūd 'time' (T. öylä 'midday') = Mo. üde 'midday'; tôrōq 'meager, hungry' (K. erroneously turuk, but cf. Radloff Altay Tu. toro 'hungry,' torin- 'to hunger, to become emaciated') = turugan ($ō_2$ after u >u, as above; false in TM I.104); K. töz- 'to endure' (T. döz-) = türe-. These sixteen examples again are sufficient to show that a problem exists, but not sufficient to prove that PTu. must have had the special intermediate vowels o, ö between o/ö and u/ü. (I think, however, that the chance of such vowels having existed is a bit greater than that of d-'s having existed, point 2 above.) Even here the possibility cannot be excluded that Mo. borrowed these words from a special Bolgar dialect with o/ö or o/ö (whereas, for example, Mo. bora 'grey' = Tu. bōz is from another Bolgar dialect) or that a uniform Bolgar o/ö sometimes (perhaps at different periods or through different mediators, etc.) gave o/ö, sometimes u/ü. For my part, I regard the existence of o/ö as rather likely, but it cannot be proved with absolute certainty. So I simply write o/ö.

May we find o/ö in certain cases where Tu. dialects have variants o ~u, ö ~ü, e.g., Brahmi "üt" = üd 'time' = T. öy.lä, or Brahmi ürt- 'to cover' (Kazan Tatar ört- < ürt-) = most Tu. dialects ört-?

Fortunately these three problems present no practical difficulty in our process of reconstruction: we simply write respectively z, š; t-; o/ö, leaving aside other possibilities (ŕ, ĺ, D-; o/ö).

14.4 Four problems not generally solvable. But there are four other points far more relevant to reconstruction. Our reconstructions cannot always be definitive, because C. and Mo., the most important languages for reconstruction, have preserved but a little part of the original Tu. vocabulary. Most of the Tu. words in C. are (or, at least, can be) old Tatar loanwords (e.g., ančax 'only,' instead of *unśax, etc.). And the Old Bolgar or Old CTu. loanwords in Mo. are few, even fewer than are words inherited from PTu. in C. Practicably the four following problems often remain unsolvable, due above all to the lack of C. and M. correspondences.

14.4.1 Diphthongs /i̯â/ .... Long vowels may or may not contain a diphthongal part. The only Tu. language to have preserved traces of such diphthongs is C. i̯-diphthongs occur in C. only after q-, t-, s- and in vocalic anlaut (occurrence after k- seems rather doubtful). Here is an enumeration of all PTu. diphthongs attested to by C. (I shall give one example); */i̯â/ (/i̯ā/) in C. čul 'stone' < PTu. *ti̯âš >CTu. tâš; */i̯ê/ (/i̯ē/) in śunat 'wing' < PTu. *ki̯êńat >CTu. qânat; */i̯î/ (/i̯ī/) in yěně 'sheath' < PTu. *ki̯īn >CTu. qīn; */i̯ô/ (/i̯ō/) in šira- 'to ask' < PTu. si̯ôra- >CTu. sôra-; */i̯û/ (/i̯ū/) in šiv 'water' > PTu. *si̯ūb >CTu. sūb (the development is similar to that of PTu. *si/si and of PTu. *ti/ti, which respectively have become šě and čě in C.). Note that we find only back vowels, never front vowels. It may be (though it is not certain) that this situation reflects PTu. In anlaut we find * /i̯â/ (/i̯ā/) in yus 'ermine' < PTu. *i̯âs >CTu. âs, yat 'name' < early *yät < PTu. *i̯ât >CTu. ât; */i̯î/ (/i̯ī/) in yitä 'dog' <

PTu. *i̯ît >CTu. ît, also C. yĕr 'trace,' yar- 'to send' (?); */i̯â/ (/i̯ā/) in yal 'village' < PTu. *i̯âl >CTu. âl; */i̯ê/ (/i̯ē/) in yĕm 'trousers' < PTu. *i̯êmä >CTu. âm; /i̯ê/ (/i̯ē/) in ÿivăś 'tree' < i̯ēgač >ÿiġač and similar forms. I found no example for */i̯ô/, */i̯î/. I suppose that in anlaut after i̯ all vowels were possible in PTu.

C. very often is able to solve this problem, e.g., CTu. qâz 'goose' < PTu. *kâz (because of C. xur), but CTu. qân 'blood' < *ki̯ân (because of C. yun). But what if a C. correspondence is lacking? For instance, Tu. qâš 'eyebrow' has no C. correspondent; hence it may go back to PTu. *kâš and to *ki̯âš, as well. In this case of doubt I reconstruct the form without i̯ (in our given example: kâš), writing after the reconstructed form ~ 1.

Mo. sometimes helps us solve this problem; cf. above where Mo. šira 'yellow' = C. šurä gives PTu. *si̯ârag. Sometimes it has preserved diphthongs with i̯ where C. has lost them or where no C. correspondence can be found, e.g., Mo. biraġu 'calf' (written language) ~bura'u (Secret History) ← Old Bolgar *bi̯ūrzāġū < PTu. *bi̯ūzāgū = C. păru, Hungarian borjú, CTu. buzāġū, T. buzav; Mo. šiŋqor 'falcon' ← Old Bolgar (= PTu.) *si̯ōŋqōr > CTu. sōŋqōr (C. not attested to); Mo. nidurga 'fist' (written language) ~nudurġa (Secret History) ← Old Bolgar (= PTu.) *di̯ūdūrqa = CTu. yudrūq (C. not attested to), cf. TM I. 361-2.

14.4.2 Proto-Turkic *ä̈ and *ë. C. often solves the problem of PTu. *ä, *e: e.g., *säs 'voice,' but *kēl- 'to come,' cf. 13.11.5. But for ATu. äb 'house,' e.g., we find no C. correspondence (avlan- 'to marry' seems to be a loanword from CTu.; the normal C. word for 'house' is kil). We may reconstruct PTu. *pä̈b(ä) and *pēb(ä), as well. In this case I reconstruct the form with ä̈ (in our given example: *pä̈b(ä)), writing after the reconstructed forms ~ 2.

14.4.3 Unstressed auslaut in Proto-Turkic. The problem whether a PTu. word had or had not an auslaut vowel is often unsolvable, e.g., our example *pāb 'house' ~2, given above. Here we have the following means of solving this problem:

(a) When both CTu. and C. have -m, we must reconstruct PTu. -mA, cf. above (CTu. *âm 'trousers' = C. yĕm gives PTu. *jêmä).

(b) When CTu. has -n and C. has -m, we must reconstruct PTu. -m, cf. above (CTu. qāran 'bellow' = C. xirăm gives PTu. *kēram).

(c) Since unstressed -An became zero in modern Tu. (e.g., PTu. bïŋan 'a thousand' >bïŋ, biŋ), Uighur Tu. -in/-in/-un/-ün (<-ăn/-ĕn) in suffixes must go back to PTu. *-AnA. The deverbal suffix -in/-in/-un/-ün has labial harmony, i.e., the vowel goes back to an unstressed ă/ĕ < unstressed *a/ä (cf. kālin 'bride,' tütün 'smoke,' from kāl- 'to come,' tüt- 'to smoke'). Hence we have to reconstruct kālin 'bride' (C. kilĕn) < PTu. *kēlänä.

(d) Mo. often is especially helpful. For example, using Mo. ere 'man' we can reconstruct Old CTu. *ä´rä (not *är) (and Kh. hàr proves that the PTu. form is *pä´rä). For discussion of the fact that the Mo. vowel is correct and not secondarily added, see 13.11.9. On the other hand, Mo qadum 'in-law' shows that we have to reconstruct PTu. *qâ´dam, not *qâ´dama. Sometimes we may even reconstruct not only -A, but -An (e.g., CTu. âm 'cunt' = Mo. aman 'mouth' gives PTu. *â´man).

(e) Sometimes we may draw a conclusion by analogy. Since to CTu. tôrōq 'meager' (from tôr- 'to become emaciated') Mo. turugan corresponds and to CTu. kösik 'curtain' (from kösī- 'to cover') Mo. kösige corresponds, it seems justifiable to reconstruct the ATu. perfect participle suffix -ŌK (after vowels -K) as PTu. *-ŌkA(n). (However, did this form have or not have an -n? And what about Mo. bölög 'part' = ATu. bölök: is this a later loan?)

Another example. Since C. -Ăm corresponds to some designations of parts of the body ending in modern Tu. in -ïn/-in/-un/-ün, we may reconstruct unstressed *-Am in all such cases, i.e., from CTu. qāran 'bellow' = C. xïrăm (giving PTu. *kēram) we may reconstruct *būram 'nose,' etc., as well. (However, the following is not perfectly clear: to Tu. tâpân 'sole' C. tupan corresponds; this word may be a loanword from Tatar, but it may be an old inherited form, as well. In this case a reconstruction of PTu. *tâpâm would be doubtful.) According to Mo. ulaġan 'post horse' = Tu. ulā-ġ we may assume a deverbal suffix -GAn, etc. However, conclusions by analogy are always doubtful.

It must be said that C. -Ă is not relevant to the reconstruction of the PTu. forms. C. -Ă seems to be a diminutive suffix, often secondarily added to substantives (less frequently to adjectives, never to verbs); e.g., CTu. ïit 'dog' = C. ÿită (= little dog), etc.; cf. V. Kotvič, Issledovanija po altajskim jazykam, Moskva, 1962.44, and Ščerbak 1967.40 (-Ă in such numerals as vună 'ten' = Volga Bolgar wǫn or wąn seems to be an analogy to such forms as ikĕ, ultă, śičĕ 'two, six, seven'). That this -Ă is secondary and not relevant to the reconstruction of the PTu. form can be proved by a Chinese loanword (cf. TM headword 1230): Chinese tsʿit 'lac' >tsʿir → Tu. sïr, C. sără; this -ă must be secondary.

Due to the lack of Mo. (and C.) correspondences, we often cannot decide whether a PTu. word had or had not an auslaut vowel, e.g., CTu. äb, Kh. hàv 'house' < PTu. *päb (pēb) or *päbä (pēbä)?; CTu. ät 'flesh,' Kh. àt < PTu. *ät or *ätä? In this case we reconstruct the forms without auslaut vowels (in our given case: *päb, *ät), writing after the reconstructed form ~3 (hence ät ~3, but päb ~2,3, since here even the problem ä/e exists, cf. above).

14.4.4 Vowels in non-initial closed syllables. The fourth problem is that of vowels in non-initial closed syllables. Sometimes the vowels are clear: Ā is always clear (e.g., PTu. *kiêńāt ~3 'wing'). Ū, Ō are always clear after an unrounded vowel (e.g., PTu. *ëltōn 'gold,' according to Mo. altan, ATu. altūn, also in the well-known suffix PTu. -ŌkA, etc.). Ī is always clear after a rounded vowel (ATu. bulīt 'cloud' gives PTu. *bulīt ~3). But Ū, Ō after a rounded vowel, and Ī after an unrounded vowel often are unclear. I mean that one cannot know whether they go back to PTu. Ū, Ō, Ī or to A. For example, does Uighur Tu. būrun 'nose' go back to older *būrūn or to *būran? (both must become būrun >burun in modern Tu.); does Uighur âlïn 'front' go back to older ATu. *âlīn < PTu. *âlīn or *âlīna, or does it go back to PTu. *âlana? This latter solution seems doubtful at first glance, but the problem can be solved in the following cases:

(a) If a/ä in Manichaean Tu. corresponds to Uighur ï/i/u/ü, we have to assume unstressed a/ä (cf. TM I. 23-5, Gabain 1950. 5, 49; also cf. beneath). For example, Uighur Tu. aġïz 'mouth' must go back to *a´gaz because we find Manichaean Tu. aġaz.

(b) The RTu. script often preserves full vowels (seldom reduced ă/ĕ < unstressed a/ä), cf. TM I. 23-5; the same conclusion may be arrived at from a thorough investigation of the material given by Talât Tekin, A Grammar of Orkhon Turkic, Uralic and Altaic Series 69, Bloomington, 1968. 34-8. However, even full vowels are frequently not written, cf. 13. 11. 9.

(c) If the vowel ï/i/u/ü is dropped in unstressed position, we may reconstruct *A; e.g., Uighur Tu. oġul 'son,' oġlī 'his son' gives PTu. *o´gal.

(d) Sometimes we may draw conclusions by analogy. For example, in K. all terms of parts of the body with -n have unrounded ï/i after unrounded vowels and rounded u/ü after rounded vowels, cf. Doerfer 1967. 59: būrun 'nose,' bïqïn 'hip,' qārïn

'bellow,' ärin 'lip,' ušun 'shoulder-blade,' âlïn 'front,' yarïn 'shoulder-blade,' yilin 'udder,' boyun 'neck' (K. ~boyin seems to be an assimilation to -y-), bükün 'blind gut,' tulun 'place between ear and mouth,' boğun 'finger-joint,' ägin 'shoulder.' Such consistency can hardly be coincidental.. Hence we have to reconstruct -A- in the second syllable (and -m according to C., also to Mo. egem 'shoulder): PTu. *bü'ram 'nose,' *bï'kam 'hip,' etc.

(e) Y. seems to have preserved a distinction between A and Ō, Ū, Ī in some cases, e.g., kömör 'coal' (Osman kömür), but kömüs 'silver' (Osman kümüş). Since to Uighur ï/i/u/ü in suffixes, ï/i/u/ü in Y. corresponds (e.g., +ïm/+im/+um/+üm 'my' = the same in Y.), we may assume that kömör must represent PTu. *kömōr (or *kömūr?; at any rate, not *kömär), whereas kömüs represents PTu. *kö'mäš. However this case is not absolutely clear since Y. sometimes even changes genuine Ū >a, e.g. PTu. *dagkū 'fur' (with -ū according to Mo. daqu) >Y. sağa (not *saği). This means that Y. kömör may go back both to kömōr and to kömūr, but not to *kömär. And kömüs must go back to *kömäš. For a similar case see TM I. 100: Tu. öküz 'ox' = Mo. hüker may be reconstructed as PTu. *pökōz and *pökäz (not as *pökūz, because of Mo. hüker, with e_2); Y. oğus shows that *pökäz is the correct PTu. form (*pökōz should have become Y. *oğos).

(f) Mongolian furnishes a good proof. However, its proof can be used only in combination with Tu. facts. We have the following correspondences (cf. TM I. 99-100):

Old CTu., Old Bolgar	Mo.
-Ā-	-A-
-Ū-	-U-
-Ō-	-A- (after I, O: O)
-Ī-	-i-
-A-	-A-

We see that Mo. -A- is ambiguous: it may go back to -Ā-, -Ō-, and -A-. However, Mo. often excludes false possibilities, as above: one may think that Tu. öküz goes back to *pökūz, but Mo. hüker excludes this possibility (which is also excluded by Y. oğus). Let me cite another instance: the suffix -dürük in CTu. kömüldürük 'strap around the horse's chest' can, theoretically, go back to ATu. +dörök/+dörük/+döräk//+dürök/+dürük/+düräk//+därök/+därük/+däräk. Mo. kömüldürge shows clearly that only Uighur +dürük < ATu. +düräk (< PTu. *+dürkä) is correct.

However, we often cannot reconstruct the genuine form. For example, what about ï in Uighur tabïšğân 'hare'? All our instances given above fail: (a) the word is not attested to in Manichaean Tu.; (b) the transcription without vowels in the Runic script does not prove much: many full vowels are not written there; (c) -ï- is dropped in no Tu. language, but it cannot be, for phonological reasons; (d) an analogous form does not seem to exist; (e) Y. has not preserved tabïšğân; (f) Mo. taulai 'hare' proves nothing; perhaps it is not connected with tabïšğân at all. In this case we reconstruct the forms with unstressed a/ä (in our given example: PTu. *ta`bašgâ´n), writing ~4 after the reconstructed form. (Roots with short, later reduced a/ä seem to occur more frequently in Tu. than do those with long vowels in the non-initial syllables.)

I am not sure, by the way, that in Uighur we have to read ï/i/u/ü. The only two scripts which are sufficiently clear in marking vowel qualities are Brahmi and Tibetan. They do not follow the pattern ï/i/u/ü (which seems to be a "crypto-Osmanism," i.e., which has been reconstructed this way because this form occurs in modern Osman). Actually we find the following situation. In Uighur script we find [illegible], which are read ï/i, u/ü. In Manichaean instead of these sounds (cf. beneath) we very often find a/ä, especially after a/ä of the first syllables (e.g., tart:ap

'pulling' ~tart:ip; käl:äp 'coming' ~käl:ip). I think we have to read ë̆/ĕ in this case (just as e, an intermediate sound between ä and i, in RTu. sometimes is spelled i, sometimes ä, I suppose that ë̆ sometimes is written a, sometimes i, and e sometimes is written ä, sometimes i). As to a instead of i, we find the phenomenon in Brahmi, too, cf. ahir ~agar 'heavy' (a only in text I); türmāqag 'the standing' (accusative), etc. Here we also find o after o, ö after ö (e.g., yollog 'knowing the way,' könöllög 'having a heart,' in all texts). I see no cogent reason why the situation in the contemporary documents in Uighur script must have been different; that is, I should suppose the following development of PTu. /Ȧ/ of non-initial syllables:

PTu.	RTu.	ATu.	Khorezmian Tu. period
-a	—	—	—
-ä	—	—	—
-a-	ă	ë̆ ~ĭ, ŭ ~ŏ	i, u
-ä-	ĕ	ĕ ~ĭ, ŭ̈ ~ŏ̈	i, ü

Notes: (1) RTu. may have had ~ŏ, ~ŏ̈ after rounded vowels.

(2) ATu. may have had the following:

ë̆ after a, ĭ after i, ŭ after u, ŏ after o;

ĕ after ä, ĭ after i, ŭ̈ after ü, ŏ̈ after ö,

that is, an almost complete assimilation. ĕ, however, may soon have become ĭ, as in Brahmi script we find mostly i.

(3) Between ATu. and Khorezmian Tu. a period may have existed in which the stress changed from the first to the last syllable (perhaps attested to by Karakhanid). Then also the reduced vowels were stressed, and so were lengthened and became full vowels (just as in the Russian Church

Slavonian unstressed reduced vowels were dropped, whereas stressed reduced vowels became full vowels: sŭnŭ [sŭ'nŭ] 'sleep' > son, etc.).

Here is a complete list of vowel changes (non-initial syllables) in older Turkic:

PTu.	RTu.	ATu.	Khorezmian Tu. Period
-a	——	——	——
-ä	——	——	——
-a-	ă	ä̆ ~ ï̆, ŭ ~ ŏ	ï, u
-ä-	ĕ	ĕ ~ ĭ, ü̆ ~ ö̆	i, ü
-ā(-)	ā	ā	a
-ō(-)	ō	ō	u ~ a
-ū(-)	ū	ū	u
-ï̄(-)	ï̄	ï̄	ï
-ǟ(-)	ǟ(?)	ǟ(?)	ï
-ǟ(-)	ǟ	ǟ	ä
-ȫ(-)	ȫ	ȫ	ü ~ ä
-ǖ(-)	ǖ	ǖ	ü
-ī(-)	ī	ī	i
-ē(-)	ē	ē	i

Notes: (1) I omit the development of -â(-), etc., which must have been quite similar to that of -ā(-), etc.

(2) ATu. means Runic manuscripts (not the inscriptions, which = RTu.); manuscripts in Uighur, Brahmi, Tibetan, Manichaean, perhaps even Arabic; scripts (Karakhanid).

(3) For the preservation of -ē, compare Brahmi yte 'seven'; -ǟ(-) is unclear. Since there is no special sign for it, it can be reconstructed

only on the basis of Y. and Kh. (e.g., altē̄ 'six').

(4) For -ō̄, -ȫ respectively -ū̄, -ǖ cf. 14.2.

(5) In Karakhanid the vowels may have been half long: a· instead of ā̄, etc.

(6) In early Manichaean texts the vowels are all as in RTu.; later on they converge with Uighur.

(7) In RTu. ŏ, ö̆ presumably did not yet exist.

Let me add still another word about the Manichaean a/ä instead of the Uighur "ï/i/u/ü." Meyer 1965.199 explains: "Das a/ä des n-Dialekts ersetzt nur ï/i, nicht die gerundeten Vokale, und zwar nur nach einem a/ä der vorausgehenden Silbe. Die Notationen a/ä des n-Dialekts sind offenbar als ein Assimilationsphänomen zu beurteilen." This theory that a/ä occurs only after a/ä of the first syllable and is a simple assimilation is false. To be sure, we often find a after a, ä after ä, but this phenomenon is no miracle, since a_1 and $ä_1$ are frequent vowels in Tu. (more frequent than o_1, $ö_1$, etc.; the percentage in K. is a_1, 29%; $ä/e_1$, 16%; u_1, 13%; o_1, 10%; i, ï, ö, ü, each 8%). But we often find a after other back vowels, and ä after other front vowels. Here are some other instances, communicated to me mostly by Dr. Peter Zieme, Berlin: (the abbreviations are obvious for every Turcologist, I think, e.g., M = Albert von Le Coq, Türkische Manichaica aus Chotscho, etc., cf. the bibliography in Gabain 1950.225 ff.):

(A) a/ä after ï/i

kiši.nän M I 8/14-15; özi.nän M III No. 32 v 8; anïg.ag X^v^āstvānīft 28; isig.äg W 46; tämir.äg M I 8/12; t(ä)ṇri.äg M III No. 6 II v 15; agrïg.ag U 297 v 3; tumlïg.ag U 297 v 9; tämir.än M I 8/11; yigit.än M III No. 6 III r 17; yïd.an M III No. 32 v 5 [cf. also TT VI 292 yïd.an yïpar.an]; il'ig + (ä)mäz M I 10/4; iš + äṇäz.(ä)n M I

10/13; id:aŋ TT II A 51; ät'iz:äŋ Man. Erz. I 34; ig+säz Man. Erz. I 10 (= M II 1209/9); ad(i)rt+lag M I 26/16; tir(i)l:äp M I 15/9; qat(i)l:ap M I 16/6; kir:äp Man. Erz. I 24 (= M II 1210/6); äšid:äpü (or :äpp?) U 268 r 10; Also M III No. 6 I v 1 (buši) biräŋ (= bêrăŋ). We may count here even M I 36/21 bal(a)q. ag 'the fish' (accusative) = "normally" (Uighur) baliq. ig, but we find in the same texts balaq 'fish' instead of baliq (but baliq 'town').

(B) a/ä after u/ü:

qatun. naŋ M III No. 13 III title; koŋül. näŋ M III No. 13 III v title, - v 6; yaruq. un yašuq. an M III No. 8 VII v 14; yüz'üŋüz. än M I 10/9; küč. äg M III No. 8 II 14.

Zieme adds: "Vgl. auch -maš (?) bei Bang, Türkische Bruchst. einer Georgspassion, S. 70" and "Auch in buddhistischen Texten kommen A (= a/ä)-Formen statt u/ü/i/i vor, z.B. Maitrisimit, U III, U IV u.a." Compare the relics of ATu. ă/ä, etc., in New Uighur, PhTF. 539.

14.5 Graphic signs. These many unclear points seem to be little satisfying. But we can reconstruct only according to a given material. Where the material fails, we can give only provisional, no definitive, reconstructions. (We shall mark definitive reconstructions by //, hereby disregarding, however, the three unsolvable problems.) After all, we have made some progress. Before knowing Khalaj and the Chuvash -n/-m law (cf. 14.1 above), we could reconstruct CTu. (or modern Tu.) üzüm 'raisin' as *üzämä, *üzümä, *üzäm, *üzüm, *püzäma, *püzümä, *püzäm, *püzüm. Now we see that only *püzäma or *püzümä can be correct (we reconstruct püzämä ~4). This restriction of eight possibilities to

two is better than nothing, after all. (And the etymological assumption of üzüm from üz- 'to cut off' would leave *püzämä as the only possibility.)

Here again is a short list of graphic signs which we have used in our reconstruction of PTu.:

//	The reconstruction is definitive.
~1	It is unclear whether a simple long vowel or a long vowel with a preceding j has to be reconstructed.
~2	It is unclear whether we have to reconstruct ä or e (in first syllables).
~3	It is unclear whether or not we have to add a/ä to the auslaut consonant.
~4	It is unclear whether we have to reconstruct PTu. a/ä (becoming ă/ĕ in RTu., ï/i/u/ü in most of the modern Tu. languages) or full vowels ū/ǖ, ō/ȫ, ī/ı̄.

14.6 Preface to the dictionary. The following list is not a complete dictionary of Khalaj, a work which will be published only after all the material has been assembled. In the meantime, I think this index will be sufficient for scientific comparative purposes. It contains all inherited Tu. words in Khalaj; hence it excludes not only P. (or other) loanwords, regional words, baby words, but also Az. loanwords. The basic form we give at first is that of Old CTu., which is quite similar to RTu., only that we have â, not ê as in RTu. and that we have a/ä in non-initial syllables, not ă/ĕ as in RTu. (or ï/i/u/ü as in later Tu. languages). The principal means of reconstructing Old CTu. is K., T., Y.; with the help of Kh., C. (and sometimes Y., Tuv.) we reconstruct PTu. (with asterisks). Then we give the Kh. forms.

14.7 The dictionary.

âč 'hungry' (K., T. āč, Y. ās) < *ëč ~3 (C. vïś- 'to be hungry,' vïśă 'hungry') = ā^{a}č T. 268

âčīġ 'bitter,' from âčī- 'to be bitter' (K. ačiġ, T. āǰï, Y. asī) < *pi̯âčīgan // (C. yüśĕ) = hā^{a}čux 'salty' T. 273, 'bitter' T. 276, hā^{a}čuq̣x 'bitter M. 20, hā^{a}čiq̣x id. X. 20

adāq 'foot' (K. adaq, T. ayaq, Y. atax) < *padāk (or rather *padâk, cf. 13.11.9) ~3 (C. ura) = hadaq T. 59, hadaqī ā^{6}sDo 'shank' T. 62, hadaqī i̯üzü 'instep' T. 64, hadaqī asDo 'sole' T. 65, hadaq qā^{a}bo 'shoe' T. 221, hadaG M. 22

aġāč 'tree' ~ (y)ïġāč (K. yïġāč, yïġač, T. aġač) < *pi̯ëgāč ~3 (C. yïvăś) = haġač T. 113, 'wood' 114, 'tree' M. 21, 58 (X. 21)

almīlā 'apple' (K. almïlā, T. alma) < *almīlā // (C. ulma, Mo. alima, Hungarian alma must not be Bolgar, perhaps Pecheneg) = ā^{6}lumla T. 115, M. 4, ā^{6}lomla X. 4

altē 'six' (K. altī, T. altï) < *altē // (C. ultă, Y. alta, Volga Bolgar الط altï or altë) = alta T. 304, M. 96, ā^{6}lta M. 96

altmaš 'sixty' (K., T. altmïš) < *altmaš ~3,4 (C. utmăl) = altmuš T. 314, ā^{1}tmiš M. 106, altmiš X. 106

âm 'cunt' (K. am, in the text erroneously em) < *pâman ~1 (Mo. aman 'mouth') = hā^{a}m T. 50

amrût (?) 'pear' (T. armït) < *almarūt ~3 [cf. G. Doerfer, Türkische Lehnwörter im Tadschikischen, Wiesbaden, 1967. 26-7] = amrū^{u}t T. 116 (← Persian?)

aqār 'rivulet,' from aq- 'to flow' < *i̯āk- ~3 (C. yux-) = aGGa' r, aqGa' r T. 13. [The quantity of the vowel is unclear. We find K., T. aq-; Biišev 34 has T. āq-, Az. aġ-, but these forms are false: they must be T. aq-, Az. ax-. But the

C. form attests to a long vowel, since in this language i stands only before long vowels. Therefore the most probable PTu. form is *iāk-.]

arq 'excrement' (K. arq) < *park ~3 = hạrq T. 70

ārqā 'behind' (K. arqā, T. ạrqa) < *pārkā ~1 = hạ' ġạ T. 288

arqālaq 'long clothes of men,' from arqā = (a^r xạlụq, arqạlụq) T. 216 (← Az., probably)

ārqân 'thin' (T. arqān, arriq, K. ariq) < *pērkân ~1,3 (Y. ir-, īr- 'to get thin,' C. irxan) = harqạ̄n T. 251

ast 'beneath' (K., T. ast) < *ast ~3 = hạdạqī ạ^6sDọ 'shank' T. 62, hạdạqī ạsDọ 'sole' T. 65

āš 'soup' (K. āš, T. aš, Y. as) < *āš ~1,3 [C. yaška proves nothing: C. i should correspond to CTu. š] = ạ̄š T. 208

at 'horse' (K., T., Y. at) < *pat ~3 (C. ut, the relation to Mo. ạgta is doubtful) = hạt T. 71, M. 7, X. 7, 25

ây 'moon' (K., T. āy) < *pêy ~3 (C. uyăx, Y. iy, Volga Bolgar ayix) = hạ̄^ai T. 159, išqị^4 'moonshine' T. 160

āy- 'to say' (K. ay-, T. ayt-) < *pēy- ~3 (Y. iy-, C. iyt- 'to ask') = hạ'^i d'^u lạ^6 r 'they said' M. 27, hạ^i maq X. 27

āb 'house' (RTu. äb, K. äw, T. öy, WOD. āv) < *pāb ~2,3 = hàv T. 177, M. 30, họ̈^ü X. 30, Wenạreǰ hà' v (unpublished material)

äčkō 'goat' (K. äčkü, T. gäči) < *äčkō ~2 (for -ō cf. Mo. ešige) = à^k čị T. 80, àččị M. 2, àkk'ụ X. 2

ägrī (or rather ägrē) 'crooked,' from äg- 'to bend' (K., T. äg-) < *ägä- // (C. av-, Mo. eǵe-) = äyrị T. 241

äkkī or ä̂kkī (cf. 13.7) 'two' (K. ikī, T. iki, Y. äkki, ikki) < *ekkī or *ê̆kkī // (C. ikkĕ, Volgar Bolgar اكى eki) = ȧkkụ̈ T. 300, ȧkkị M. 92, X. 92; (ȧkk^{i}-ọttụz 'sixty') X. 106, (ȧkk^{i}-ọttụz-ọ̇n 'seventy') X. 107

ǟl(äg) 'hand' (K. älig, Brahmi älig ~elig, T. äl, Y. älī, ilī) < *ǟl(äg) ~3,4 (C. ală) = ȧ̇l T. 52, M. 3, ȧl X. 3

älgǟk 'sieve,' from älgǟ- 'to sieve' (K. älgǟ-, T. älä-) < *pälgǟ- // (C. ala-) = hȧ^{i}lȧk T. 190, hȧlyȧḱ M. 31, hä^{i}lȧk X. 31

älläg 'fifty' (K. ällig, T. älli) < *älläg ~3,4 (C. allă, Volga Bolgar الو, الو älü) = ȧllị^{y} T. 313, ȧ́llị M. 105, ȧllị^{ǵ} X. 105

ä̂m 'trousers' (K. öm, in the text erroneously üm, Yellow Uighur yem, Old Osman em, öm, in the text erroneously im, üm, etc.) < *i̯êmä // (C. yĕm) = ị̄^{e}m T. 218, M. 43, X. 43

ä̂n- 'to go down' (T. īn-) < *ä̂n- ~3 (C. an-, Az. en-) = ị̄^{e}nȧ^{k} 'on foot' (literally 'let us go down') M. 87

ä̂nǟ 'going down,' from ä̂n- = ị̄^{e}nä T. 298

ä̂nläg 'broad,' from ä̂n 'breadth' (K. ēn, T. īn, Y. iän) < *pä̂n ~3 (C. an) = hȧnlị^{G} T. 263, (hȧnlị^{g}x) M. 29

ä̂nsäz 'narrow, thin,' from ä̂n 'breadth' = (hȧnsị̇z said to be Az.) T. 262, (hȧnsị̇z) X. 28, cf. dǟġ

äṇär 'yesterday, evening' (Karaim äṇir 'evening,' K. iṇir, rather eṇir, 'twilight') < *äṇär ~2,3,4 = ȧ́ṇgị̇r 'yesterday' T. 166, ȧ́ṇgị^{r} M. 5, ȧ́ṇ^{g}ụ̈r X. 5; ȧ́ṇgị̇r kị̄^{e}čä 'last night' T. 167, ȧ́ṇgị^{r} kị̄^{e}čä M. 5, ȧ́ṇ^{g}ụ̈r kị̄^{e}čä X. 5

är- cf. ärǖr

är or ä̂r 'man' (T. ǟr, K., Y., Az., Brahmi, Uighur är) < *pärä or pä̂rä // (C. ar, Mo. ere) = hȧr T. 12, M. 56, hȧrị

(< hàrịṇ?) X. 57, hàrịm X. 57. [For the quantity of the vowel cf. 14.4.2. Is Hungarian érdem 'virtue' a proof that it has been long?]

ārän 'lip' (K. erin, T. ärin) < *ārām ~1,2 = à·rịn T. 29, M. 6

ârkāk 'male' (K., T. ärkäk, Az., Uighur erkäk, cf. 14.4.2), perhaps from âr = hị·rkàk T. 246

ärūk 'plum, apricot' (K. ärük, T. ärik) < *ärūk ~2,3 = àrịk 'apricot' T. 118

ärūr 'is,' from är- 'to be' (K. är-) < *är- ~2,3 = hā^a^čị^q^x dạġ šịrịn är 'it is not bitter, it is sweet' X. 20 (är < ärūr)

âšäk 'door, threshold' (T. ïšik) < *âšäk ~3,4 (C. alăk) = ï·^e^šịk 'door' T. 180, M. 41, ï·^e^šịk X. 41

äšgāk 'donkey' (K. äšgäk, T. äšäk) < *äšgāk ~2,3 [the relation to Mo. eljigen is doubtful] = àšGä T. 72, M. 8, X. 8, àškä X. 8

ät 'flesh, meat' (K., T., Y. ät) < *ät ~3 (C. aš < *at+šĕ 'his flesh,' cf. baġarsôq, bāš, kōz) = àt T. 67

ât- 'to do' (K. ēt-, T. ät-, äd-, Y. ït-, Az. et-, Brahmi ät-) < *ât- ~1,2,3 (C. not found) = ï·^e^tt·^i^lä^l^r 'they did,' ï·^e^t·^i^ṛäk 'we shall do' M. 32, bàdiẹtmä 'angry' (literally 'ill-doing') M. 59

ätāk 'seam' (K., T. ätäk) < *pätäk ~2,3 = hàtàk T. 224

âtmāk 'bread' < *pâtmāk ~1,2,3 = hịkmàk T. 206, hịk'mäk' M. 33, hịkmàk X. 33. [The original form seems to have contained a -t-, not a -k-, cf. K. ätmäk. But we often find forms with ö: K. ötmäk, Chaghatay id., ATu. (Manichaica III 12,5) id., Altay Tu. ötpök, from such a form as Mo. ödmeg. However, according to Kh. the form with ä seems to be older. Osman ekmek is quite recent, where we may find an assimilation to -k and/or an analogy to äk- 'to sow.']

bâčānāq 'brother-in-law' (T. bāǰa) < *bâčānāk ~1,3 (C. puśana) = bạ·ǰanax T. 18, bạ·ǰạnax X. 57

baġarsôq 'bowels' (K. baġirsuq, Az. baġirsaq) < * bëgarsôk ~ 3,4 (C. pïršă < *bëgar-sï, derived from bëgar, the basic form of bëgarsôk) = bọġạrsạ·q Ṭ. 45, bọġạrsụq M. 13

bâlā 'young animal' (K. balā, T. bāla) < *bâlā ~1 = balla 'small' T. 252

bār- 'to go' (K., T., Y. bar-, WOD. vār-) < *bēr- ~3 (C. pïr-) ụqạ bạrmịš 'went to sleep' X. 86

barmāq 'finger' (T. barmaq) < *barmāk ~3 (C. pürnä presumably in analogy to tïrṇāq 'nail,' see below) = bạrmạq T. 56, šạ̄bạrmạq 'thumb' T. 57

bāš 'head' (K. bāš, T. baš, Y. bas) < *bāš ~1,3 (C. puś < *pul-šе < *bāš-sï 'his head') = bọ·š T. 23, bạ·š M. 15, X. 15. The Kh. form bọ·š may be explained as follows: bāš > $bā^{5}š$ > bạ̄š > $bạ^{ạ}š$ > $bọ^{ạ}š$ > $bọ^{o}š$ (or $bọ^{ạ}š$) > bọ·š > bọ·š > $bọ^{o}š$ (or $bọ^{o}š$) > $bọ^{o}š$ > bọ·š.

bat- 'to sink' (K., T., Y. bat-) < *bat- ~3 (C. put-) = kụn bạtạr 'evening' (literally 'the sun is sinking') T. 172, 'west' T. 174

bädük 'big' (K. bädük, T. bäyik), from bädü- 'to be big' < *bädük ~2,3 = bịdịk T. 253, bịdịk hạġạč 'big tree' M. 58

bäg 'prince' (K. bäg, T. bäg, Y. bī) < *bäg ~2,3 = bạg, bạG 'son-in-law' T. 17

bâl 'waist' (K. bēl, T., Y. bīl) < *bêl ~3 (C. pilĕk) = $bị^{e}·l$ T. 48, M. 12, (X. 12)

bärk 'strong' (K. bäk, bärk, T. bärk, Y. bärt) < *bärkä // (C. parka, Mo. berke) = bạk T. 283. [However, since in Mo. a word cannot end in two consonants, a vowel must be added; therefore PTu. *bärk would also be possible.]

bâš 'five' (K. bēš, T. bāš, Y. biäs)] *bêš ~3 (C. pilĕk, Volga Bolgar بيال presumably beäl) = bī̇ᵉš T. 303, M. 95, X. 95

bîr 'one' (K. bīr, bir, T. bir, but on-bīr 'eleven,' Y. bīr) < *bîr ~3 (C. pĕr, Volga Bolgar بر bir) = bī̇ T. 299, M. 91, X. 91

bildar 'last year' (K. bildir, T. bildir) < *bildar ~3 (C. pĕltĕr) = bi̥ʹldi̥r T. 169, bü̥ldü̥r M. 89

bin̥ 'a thousand' (K. min̥, T. mün̥, Kazakh min̥, Osman bin) < *bin̥an // (C. pin, Mo. min̥gan) = mi̥n T. 319, mi̥n̥ᵏ M. 111

bô-kūn 'today,' literally 'this day,' from bô 'this' (Brahmi bo, K. bō or bū, T. bū, Y. bu); for the second part of the word cf. kūn = bẹʹi̥in T. 162, 165, M. 16, büʹi̥ⁿ̈n X. 16

bô-yīl 'this year,' cf. bô-kūn and yīl = bu̥ʹi̥il X. 89

boġōz 'throat' (K. boġoz, T. boġaz, New Uighur boġuz) < *bogōz // (C. pir, Mo. boġor+la- 'to strangle') = bo̥ġu̥z T. 40, M. 14, X. 14

bōyan 'neck' (K. boyun, boyin, T. boyun) < *bōyam (C. mĕy?) = bo̥yu̥n T. 39 (Bạġ-e yäk bu̥yu̥n)

bōyandūraq 'yoke,' from boyan = bu̥ndᵘ̈ru̥q, bo̥ⁱndiru̥q T. 139

bôrē 'wolf' (K. börī, T. bōri) < *bôrē ~1 (Y. bördö) = bī̇ᵉri̥ T. 85, bī̇ᵉri̥ˡ M. 11, bī̇ᵉri̥ˡ X. 11

bôrk 'hat' (K. börk, T. bōrük) < *bôrk or *bô̥rk ~3 (Mo. bürgü) = bö̥ᵒ̈k T. 220, bi̥ʳiäk M. 18, bi̥ri̥äk X. 18 (in Čạhäk börk, unpublished material)

bulīt 'cloud' (K. bulit, T. bulut) < *bulīt ~3 (C. pĕlĕt 'heaven') = bu̥lu̥t T. 152

būran 'nose' (K., T. burun, Y. murun), from būr- 'to smell' (K. būr-, bur-) < *būram ~1 = bu̥ru̥n T. 28

bušuq, cf. pišik

bût 'thigh' (K., T., Y. būt) < *bût ~ 1,3 (C. pĕśĕ < *bût-si) = bṵ·t T. 60

bûtā 'shrub' (K. butïq, butaq, T. pūdaq < pūtaq < būtāq) = bûtā ~ 1 = pṵ·ta T. 216

bûz 'ice' (K., T. būz, Y. būs) < *bûz ~ 1,3 (C. păr) = bṵ·z 'cold' T. 279, 'cool' T. 281

čāl- 'to beat' (K., T. čal-, WOD. čāl-) < *čāl- ~ 1,3 (C. śul- 'to cut') = kṵn čạlạr 'east' (literally 'the sun beats') T. 173

čaqar 'pale, faint' (K., T. čaqïr) < *čaqar ~ 3 = čạqụr M. 73

čây 'river' (T. čāy) < *čāy ~ 1,3 = čạ̄ᵃʲ T. 147

čōlāq 'cripple' (K., T. čolaq) < *čōlāq ~ 1,3 = čọlạq 'weak' T. 284

dāġ 'not' (K. dāġ) = hạvụl dạ⁶ġ 'is not good' T. 239, hạ⁶vụl dạġ M. 19, hạvụl dạġ X. 19, hạ̄ᵃčᵢ̣ᵠx dạġ 'is not bitter' X. 20, hànsịz ụzạ̄q dạġ '<u>hànsịz</u> means <u>not far</u>.' [For the etymology cf. Doerfer 1968. 106-7.]

ilgär(ü) (or yilgärü?) 'before' (T. ilär̈i, from the root *il; cf. K., T. ilk 'first,' with directive suffix .gärü) < *il.gärü // (C. ĕlĕk 'formerly') = yịlǵạr T. 287, ịlyä¹r M. 40, ị¹lgär X. 40

ïrâq (or yïrâq?) 'far' (K. yïrāq, T. ïrāq, Y. ïrāx) < *pïrâk ~ 3 = ?ịrạ̄q 'far' T. 265, hịrạ̄q M. 90, yịrạ̄q X. 90

ïs(s)ïġ 'warm' (K. isig, T. ïssï), from ïs(s)ï- 'to become hot' < *pïs(s)ïgan // = hịssịʸ T. 280, hịssị M. 34, hịssịᵍ X. 34

ïšïq 'shine, light, bright' (T. ïšïq), from ïšï- 'to shine' < *ïšïqa(n), ïšï- // = hạ̄ᵃʲ ịšqị⁴ 'moonshine' T. 160, ị⁴šị⁴q 'bright' T. 242

ïit 'dog' (K., T. ïit, T. it, but Qashqai, New Uighur ït) < *i̇ït ~ 3 (C. yït, yïtă) = i̇t T. 73

käč- 'to pass,' cf. käčäglī

käčä 'felt' (K. käčǟ, Oghuz, T. käčä, Az. kečä <käčä) < *keč(č)ǟ (C. kĕśśä) = käčä T. 203 (← older Az.?)

kä̂čǟ 'night' (K. kēč, kēčǟ, T. gīč, gīǰä, Y. kiäsä), from kä̂č 'late' < *kä̂č(ǟ) // (C. kaś, Hungarian késő 'late') = kī̇ᵉčä T. 163, ȧ́ṇgi̇r kī̇ᵉčä 'last night' T. 167, kī̇ᵉčä M. 47, X. 47

kǟčäglī 'passed, past' (from kǟč- 'to pass,' K. käč-, T. gäč-, Y. käs-, WOD. gǟš-) < *kǟč- ~3 (C. kaś-) = kȧšgüli̇ i̇i̇l 'last year' KhX. 89 < *kǟčgüli < *kǟčügli < *kǟčĕglī <*kǟčäglī

kǟl- 'to come' (K., Y. käl-, T. gäl-, WOD. gǟl-) < *kēl- ~3 (C. kil-) = kȧlȧn yi̇l 'next year' (literally 'the coming year') X. 89

kǟlän 'bride' (K. kälin, T. gälin) < *kēlänä // (C. kin, older kilĕn) = kȧli̇n T. 15, kȧli̇n M. 46, kȧlü̇n X. 46

kä̂ṇ 'broad' (K. keṇ, T. gīṇ, Y. kiäṇ) < *kä̂ṇ ~2,3 = kī̇ᵉṇᵏ M. 29

käs-, cf. käsǟr, käsäk

kǟsǟr 'hatchet,' from kǟs- 'to cut' (K., T. käs-, WOD. kǟs-) < *kǟs- ~3 (C. kas-) = kȧsȧr T. 229

kǟsäk 'clothing,' from kǟs- = kȧsi̇k T. 215, 'long clothes of men T. 216

kindäk 'navel' (Brahmi kindik) < *kindäk ~3,4 (Hungarian köldök?) = kü̇ndü̇k (< *kindük < kindik) T. 44, X. 48, ki̇ndi̇kʿ M. 48

kirpäk 'eyelash' (K., T. kirpik) < *kirpäk ~3,4 (C. xăprăk) = ki̇pri̇k T. 25

kis(s)ē 'wife' (K. kis, kisī, kissī) < *kis(s)ē // < qā^{a}dun kissi 'sister-in-law' T. 19

kišī 'person' (K. kišī, T. kiši, Old Osman giši, Y. kisi) < *kišī // = kiši^{5} 'woman' T. 13, kiši M. 56, X. 56, kišī babasu 'woman's father-in-law' T. 21

kök 'blue, heaven' (K. kök, T. gök, Y. küöx) < *kökä // (C. kăvak, Mo. köke, Hungarian kék ← Bolgar *köäk or similar form) = kö^{ö}k T. 157, 'above' T. 297, kü^{ö}k T. 294, ki^{e}k M. 51, kö^{ö}k X. 51

kökörčgän 'dove' (K. kökörčgün, in the text erroneously kökürçkün, T. gögärčin) < *kökörčgänä // (C. kăvakarčăn, Oirot Mo. kögölǰirgene) = kö^{ö}kärčik T. 100, gä^{5}ua^{r}čin M. 55

kol 'lake' (K., T. köl, Y. küöl) < *kol ~3 (C. kül, but the C. word probably ← Tatar, and the Tu. word in general may be a loanword ← Middle P. kōl, Cf. TM III. 645-6) = gö^{ö}l, gö^{ö}l (← Az. ?)

kön- 'to burn' (K. köy-, kön-, T. köy-, Y. köjör-, köynör-, köynör-, könyör-, köynyör- 'to cook') < *kön- ~3 = ki^{e}ndi 'it burnt' M. 50, kö nmäk X. 50

köt 'anus' (K. köt) < *köt ~3 (C. kut) = köt T. 51

köz 'eye' (T. göz, Y. köz, WOD. göz) < *köz ~3 (C. kuś < *kur-šĕ < *köz-si 'his eye') = kö^{2}z T. 24, ki^{1}z M. 49, köz X. 49

küdägü 'bridegroom' (K. küdägü), from *küdä- // 'to wed' = kidäji M. 46

küdän 'wedding' (K. küdän), from *küdä- 'to wed' = küdän T. 16, X. 54, kidän M. 54

kül 'ash' (K., T., Y. kül) < *kül ~3 (C. kĕl) = kül T. 198

kün 'day, sun' (K., Y. kün, T. gün, WOD. gün) < *kün ~3 (C. kun, Volga Bolgar كوان küön) = kün 'sun' T. 158,

X. 52, 'day' T. 162, kịn M. 52; kụ̈n bạtâr 'evening' T. 173, 'west' T. 174, kụ̈n čạlâr 'east' T. 173, Wenạreǰ kī^{5}n (unpublished material)

kündûz 'day' (K. kündüz, T. gündīz), from kün 'day' < *kündûz ~3 'midday' (C. kăntăr; V. G. Egorov, Ėtimologičeskij slovar' čuvašskogo jazyka, Čeboksary, 1964. 99-100 explains this as kün- tûz '[when the] sun [is] straight [over one's head],' but cf. K. tüz, tüz, T. düz, Y. tüs: 'straight' is PTu. *tüz, not *tûz, i. e., we ought to find a T. form *gündiz, not gündīz) = kụ̈ndụ̈z T. 62

kürgäk 'oar' (K. kürgäk, T. küräk) < *kürgäk ~3 (C. kĕräśä < kürgäčäk, with a diminutive suffix) = kụ̈rǵâk, kụ̈ryâk T. 237, kịryäk M. 53

ôčôq ~ôtčôq 'hearth' (from ôt 'fire,' cf. Suvarnaprabhāsa otčoq) (K. očaq, T. ōǰaq, Y. osox) < *pôtčôk ~1,3 = hū^{o}čạq T. 195, hū^{o}čạ̇q M. 37

oġal 'son' (K., T. oġul, Y. uol) < *ogal (C. ïvăl, Volga Bolgar اول ëvăl?) = ọġụl T. 5

ôn 'ten' (K., T. ōn, Y. uon) < *ôn ~3 (C. vună, Volga Bolgar وان wọ̄n) = ^{u}ọ̇n T. 308, ūọn M. 100, ọ̇n, ^{o}ọ̄n X. 100

ôn-bîr 'eleven' cf. ôn and bîr = ọn bī T. 309, ọ$^{2.}$n bī M. 101, ọn bī X. 101

ōrġāq 'sickle,' from ōr- 'to sickle' (K. ōr-, T., Y. or-) < *pōr- ~1,3 = họ̄ġraqʿ, họ̄ġraqx, họ̄ġrax T. 135

ôt 'fire' (K., T. ōt, Y. uot) < *pôt ~3 (C. vut, the relation to Mo. hočin 'spark' is doubtful) = hū^{o}t T. 154, M. 35, hū^{o}t X. 35

ôtan 'wood, timber,' from ôt 'fire' = hū^{o}tụn X. 21

ottaz 'thirty' (T. otuz) < *pottaz ~3 (Y. otut, C. vătăr, Volga Bolgar وطر votor) = họtDụz T. 311, họttụz M. 103, X. 103

ôl 'wet' (K., T. ōl, Y. üöl) < *pôl ~3 (Az., New Uighur höl, Uzbek hol, T. dialect according to Ligeti hōl) = hȫʻl T. 256, hīʻl M. 36, X. 36

pišik 'cat' (or rather *bušuq?) (T. pišik, Uzbek mušuk, etc., cf. Doerfer 1968.87) = pušuq T. 74

qâdan 'relative by marriage' (K. qadin, T. gāyin) < *kâdam ~1 (Mo. qadum ← Old Bolgar *qâdŏm or similar form, C. huń ← Tatar) = qāᵃdun kissi 'sister-in-law' T. 19, qāᵃdun 'brother-in-law' M. 57, qāᵃdin àbà 'mother-in-law' M. 57 = qāᵃdin àbà ~qāᵃdun àbà X. 57, qāᵃdin baba 'mother-in-law' X. 57, qāᵃdin hàrim 'sister-in-law' X. 57)

qâńāq 'cream' (K. qanaq, qayaq, T. gaymaq, Y. xoymox) [cf. Räsänen 1949.208; the Tu. forms end in -maq, -miq, -muq, -moq in analogy to such words as, for example, bulamaq, cf. TM II.321] < *kâńāk ~1,3 = qāᵃnaq T. 210, M. 61, X. 61

qânāt 'wing' (K. qanat, T. gānat) < *kiêńāt ~3 (Y. kijat, kiyiat, kinat, C. śunat) = qànàt T. 106 (← Az.?)

qâńō 'which' (K. qanū, qayū, Brahmi qayo, T. xaysi, Y. xaya 'what kind?' xanna 'where?') < *kâńō ~1 = qāᵃni M. 60, qāᵃni X. 60

qâp 'vessel, bag' (K. qāp, T. gāp) < *kâp ~1,3 = hadaq qāᵃbo 'shoe,' literally 'foot vessel' T. 221

qâr 'snow' (K. qār, T. gār, Y. xār) < *kiâr ~3 (C. yur) = Gāᵃr T. 148

qarā 'black' (K. qarā, T. gara, Y. xara) < *karā // (C. xura, Mo. qara) = Gara T. 290, M. 1

qāran 'bellow' (K. qarin, T. garin, Y. xarin, xariṇ) < *kēram // (C. xirăm, Tuv. xirin) = qa'run T. 43, M. 62, qa'rin X. 62

qarāṇġūlaq 'dark(ness),' from qarā = qạrạ̃lụx T. 243

qarġū 'reed' (Old Osman qarġu, T. ǫarǫi) < *karġū // = qạrġọ T. 188

qārī 'old' (K. qarī, T. ǫarri) < *kẽrī ~1 (Y. kiriy- 'to grow old,' Tuv. qiri-, Az. dialect ǫāri 'old woman') = qạrrị M. 63, qạ˙rrị Wenạrej̆

qâš 'eyebrow' (K. qāš, T. ǫāš, Y. xās) < *kâš ~1,3 = Ǫā^{ə}š T. 26

qatīq, qatōq 'turn,' from qat- 'to add (to the meal)' (K. qat-, T. ǫat-) < *kët- ~3 (Y. kitar-) = qạtụq T. 213

qatmā 'cord,' from qat- 'to add' = qạtma T. 227

qatōq, cf. qatīq

qil 'hair' (K. qil, T. ǫil, Y. kil) < *kil ~3 = qịl T. 36 'down'

qirq 'forty' (K., T. qirq) < *kirk ~3 (C. xĕrĕx, Volga Bolgar خرح xirx) = qị^{4}rq T. 312, qị^{4}rq M. 104, qirq X. 104

qîsġā 'short,' from qîs- 'to shorten' (K. qis-, Y. kisay-, T. ǫisǫa) < *kîs- ~1,3 = qisqà T. 261

qîz 'daughter, girl' (K. qiz, T. ǫiz, Y. kīs) < *kîz ~3 (C. xĕr, Volga Bolgar هير xīr) = qī^{i}z T. 6, qī^{4z} M. 65

qōl 'arm, sleeve' (K. qōl, T. ǫol, Y. xol) < *kōl ~3 (C. xul) = qụ^{o}l T. 223, qọl M. 68, qọ˙l X. 68

qolay 'easy, comfortable' (T. ǫolay 'near, close; relative,' Osman kolay 'easy') < *kolay ~3 = qulạ 'short' M. 66 ('at easy reach' > 'near' > 'short'), qọlạ^{i} 'near' M. 90

qōń 'sheep' (K. qōn, qōy, T. ǫoyun) < *kōńan // (Mo. qonin ← Old Bolgar *qōńĭn or similar form) = Ǫụ^{o}n T. 78, qọn M. 70, qọ˙n X. 70

qudġū 'fly' (K. qudġū) < *kudgū // = qụd^{u}ġụ T. 109, qụdġị^{4} M. 74

qudrūq 'tail' (K. qudruq, T. ǧuyruq, Y. kuturuk) < *kudūrka // (C. xürä, M. qudurǧa) = qu̯d^{u}ʾru̯q T. 92, qu̯rdu̯q M. 67, X. 67

qūlāq 'ear' (K. qulaq, qulxaq, qulqaq, T. ǧulaq, Y. kulgāx) < *kūl(k)āk ~3 (C. xălxa, perhaps <qūl, with a diminutive suffix +qāq; Mo. qulki 'inner ear' < *qūl+qi 'being in the ear'?) = Ǧu̯lāq, Ǧu̯lāqʿ T. 27, qu̯lạq M. 69, qo̯lāqʿ X. 69

qûrīġ 'dry,' from qūrī- 'to dry' (K. qurī-, qurū-, quruġ, T. ǧūri) < *kûrī-, kûrīgan // (C. xăr-) = qu̯rru̯Ġ T. 257, qu̯rru̯ᵍ M 71, qu̯rru̯ġ X. 71

qûrt 'worm' (K. qurt, T. ǧūrt) < *kûrt ~1,3 = Ǧū^{u}ʾt T. 111

quš 'bird' (K. quš, T. ǧuš, Y. kus) < *kuš ~3 = Ǧu̯š 'sparrow' T. 103, M. 72, X. 72

sač 'hair' (K., T. sač, Y. as) < *sač ~3 (C. śüś <čuč <čoč < čạč <sạč <sač or similar form) = šạč T. 37

saq(q)āl 'beard' (K. saqal, T. saqǧal) < *sak(k)āl ~3 (C. suxal, Hungarian szakál(l) must not be a Bolgar loanword, perhaps Pecheneg) = sạqqạl T. 34 (← Az.?)

sârag̈ 'yellow' (K. sarig̈, T. sāri) < * si̯ârag // (C. šurä, Mo. šira, Hungarian sár <Bolgar *siârä or similar form) = sā^{a}ru̯x T. 291, sā^{a}ro̯ᵍ̇, sāro̯ᵍ̇ X. 73

säkkäz 'eight' (K. säkiz, säkkiz, T. säkiz) < *säkkäz ~3 (Y. ag̈is, C. sakkăr, Volga Bolgar سَكَر säkkăr) = säkki̯z T. 306, M. 98, X. 98

säkkäz ôn 'eighty,' from säkkäz and ôn = se̯ʾ^{i}(x́)sạn T. 316, saʾ^{i}san M. 108 (<**säksän <säksön K.**)

sīdōk 'urine,' from sīd- (K. sīd-, sıd-, T. siy-) < *sīd- ~3 (C. šĕr-) = si̯dạk T. 69, si̯ʾdäk M. 75, X. 75

sipärgä, cf. süpärgä

s̈ičġân 'mouse' (K. s̈ičġān, T. s̈ičan, from s̈ič- 'to shit') < *s̈ičġân ~3 (C. šäši with another suffix) = s̥ičġa̰n T. 75, s̥ičġa̰n M. 76, s̥^{4}čġa̰n X. 76

s̈iġar 'cow' (K., T. s̈iġ̈ir) < *s̈igar ~3,4 = s̥^{4}ġ̥^{4}r T. 76, M. 77, s̈iġ̈ir X. 77

s̈iġarčīn 'starling,' from s̈iġar (?) = s̈iġ̈irčīn, s̈iġ̈irčiġo̰, s̈iġ̈irčiṵo̰ T. 104

soġ̈īq 'cold,' from soġ̈ī- 'to get cold' (K. soġ̈ī-, soġuq, Brahmi soġ̈iq, T. sovuq, Y. uox 'strength, hardness') < *soġ̈ī-, soġ̈īqa(n) // = s̥o̰ṵq 'hard' T. 282

sūb 'water' (K. sūw, T. suv, Y. ū) < *s̥iūb ~3 (C. s̈iv) = s̥ṵ^{v} T. 146, M. 78, s̥ū X. 78

sūbsaz 'thirsty,' from sūb = s̥ṵ^{v}s̥ṵzàm 'I am thirsty' T. 146, s̥ṵ^{v}s̥ṵz 'thirsty' T. 269

s̈ūpärgǟ < sipärgǟ 'besom,' from sipär- 'to sweep' (K. s̈ūpür-, s̈ūpürgȫ, T. s̈ūpür-, s̈ūpürgi, Osman sipir-, sipirge) < *sipär-, *sipärgȫ (C. šäpär-, šäpär, Hungarian seper) = s̥ūpürġä T. 205. [Perhaps Tu. sipär- is connected with Mo. sirbe- 'to sweep,' which might be a metathesis < *siprä-. Another explanation would be that Tu. *sirpä- regularly became Mo. sirbe-, and after the elision of unstressed -ä, sirpä- itself became *sirĕp-, and this, with a metathesis, sipĕr- (sipir-). I am inclined to prefer the explanation with Tu. *siprä-, because *sirpä- would have become, according to the Tu. phonetic laws, simply *sirp-. Furthermore in Mo. *sibre- was impossible for phonologic reasons (a cluster -br- does not exist in Mo, cf. ab- 'to take,' but ab,u:ra 'in order to take,' not *ab:ra, etc.); hence (if not the insertion of a vowel) a metathesis was inevitable in Mo. But compare also Mo. šigür 'besom,' West Middle Mongolian ši'ür- 'to sweep,' ši'ürgü ~ ši'ür 'besom.' Perhaps this is a more recent loanword.]

sūr- 'to send, to drive ahead' (K., T. sür-, Y. ūr-) = sịrd^{i}lä^{1}r 'they sent' M. 42, (sürmàk) X. 42, Wenạreǰ (unpublished material) sī^{5}rmịš, etc.

sût 'milk' (K. süt, T. süyt, Y. ūt) < *sût // (C. sět, Mo. sün, a reconstructed singular, T. sût being regarded as a plural form; for the method cf. TM III. 58) = sǖ^{ü}t T. 209, sī^{i}t M. 61

tabašġân 'hare' (K. tawišġān, T. tovšan) < *tabašgân ~3,4 = tạvụšġạ̈n T. 83, tọvụšġạ̄n M. 81, tọu̯ụšġạ̄n X. 81

tâġ 'mountain' (K. tāġ, T. dāġ, Y. tïa) < *tâg ~3 (C. tu) = tạ̄^{a}ġ T. 144, X. 79

tâlâq 'milt' (K. talāq, T. dālaq, Y. tāl) < *tâlâk ~1,3 = tạ̄lạ̄q T. 47

tâm 'roof' (K., T. tām) < *tâma // = dạ̄^{a}m ịstǖ T. 184 (← Az.?)

tâpân 'sole' (T. dāban, Osman taban < tāban < tāpan) < *tâpân ~3 (C. tupan, perhaps a Tatar loanword) = tạ̄^{a}pạ̄n 'ankle' T. 63

târ 'narrow, tight' (K., Y. tār, T. dār) < *târ ~1,3 = tạ̄^{a}r T. 264, M. 80, X. 80

tâš 'stone' (K. tāš, T. dāš, Y. tās) < *tiâša // (C. čul, Mo. čila+ġun) = tạ̄^{a}š T. 143

tämär 'iron' (K. tämür < ATu. tämir, tämär, T. dämir) < *temär ~3 (Y. tämir, timir, C. timĕr; Mo. temür is a Middle Tu. loanword) = tàmịr T. 155

täpȫ 'hill' (K. töpȫ, in the text erroneously tüpü, T. däpä, Y. täbä, töbö) < *täpȫ ~2 (C. tüpä presumably ← Tatar) = tàBà 'mountain' M. 79

tärî 'skin' (K. tärī, T. däri, Y. tärī, tirī) < terî // (C. tir) = tàrị T. 66

tilkǖ 'fox' (K. tilkǖ, T. tilki) > *tilkǖ // (C. tilĕ) = tụ̈lkụ̈ T. 87

tīrs(g)ā̈k 'elbow' (K. tirsgäk, T. tirsäk, Osman dirsek) < *tīrsgā̈k ~3 = tị̈ʳsàk T. 54

tišī, cf. tïšī

tīl 'tongue' (K. tīl, tïl, T. dil, Y. tïl) < *tīl ~3 (C. čĕl-xä) = tị̈l T. 31, tị̈l M. 82, tị̈l X. 82

tïrṇāq 'nail' (K. tïrṇaq, T. dïrnaq) < *tïrṇāk ~3 (C. čĕrnä) = tị̈²rnaq T. 58

tîš 'tooth' (K. tīš, T. dīš, Y. tīs) < *tîš ~3 (C. šăl < sïš < ŝîš < čîš < tîš) = tị̈ š T. 32

tïšī 'female' (mostly tiši, but Y. tïsi, K. tïšī ~tišī) < *tïšī // = tị̈šị̈ T. 247

tîz 'knee' (K. tīz, T. dīz) < *tîz ~3 (C. čĕr) = tị̈z T. 61

toġrī or toġrē 'straight' (Chaghatay toġri, T. doġri, Old Osman doġri) < *togrē (Y. tuora 'opposite') = tọ̈ġrụ̈ T. 240 [why not *tọġra?, loanword ← Az., i.e., contamination with Az. doġru?]

tōlī 'hail' (K. tolī, T. doli) < *tōlī ~1 = tụ̈°lọ̈ T. 150

tôlū or tôlō 'full,' from tôl- 'to become full' (T. dōl-, Y. tuol-) < *tôl- ~3 (C. tul-), tôlu or tolō = tụ̈°la T. 286. [The vowel in 'full' is unclear. Some Tu. languages attest to *tôlō >tola, namely Kh.; furthermore (Radloff III.1191) Chaghatay, New Uighur, Taranči tola 'plenty'; New Uighur, Sagay (Khakass) 'full,' also Uzbek Borovkov tola, Kirghiz Judaxin tolo, Altay Tu. Baskakov tolo (presumably also Brahmi tolo). K. is unclear: tolū or tolō? Other languages attest to tolū with certainty or, at least, with a great probability: Khwarezmian Tu. Borovkov toli, tolu, Codex Comanicus tolu, Houtsma ṭolu, Tuḥfat az-Zakīya toli; modern languages: Az. dolu, Bashkir tuli, Y. tolu, tolū, Karakalpak

tolï, Karaim tolu, Karachay tolu, Kazakh tolï, Kazan Tatar tulï, Kumyk tolu, Nogay tolï, Osman dolu, C. tulli, T. dōlï, Tuv. dolu, Salar tol, t'olj, Yellow Uighur tolu, tolo, Khorezmian T. dōlᵇ. This may be a case of $-\bar{o}_2 > a \sim u$, cf. 14.2. But another explanation is possible, too: *tolō may be the original form, preserved in Kh., etc., whereas *tolū (at least in many cases) either may have been contaminated by toluġ < tôl-aġ or may directly go back to toluġ, cf. Ananjasz Zajączkowski, Najstarsza wersja turecka Ḫusräv u Šīrīn Quṭba III, Warszawa 1961.182 toluġ. A. K. Borovkov, Leksika sredneaziatskogo tefsira XII-XIII vv., Moskva 1963.308 has (besides tolu, tolï) toluġ, too. These texts are not much more recent than K., Y. tolū; furthermore the Kipchak and Oghuz Tu. forms can go back immediately to toluġ, too. And Tuv. dolu may be a regular development of *tôlō, cf. 14.2.]

tôn 'shirt' (K. tōn, T. dōn) < *tôm // (C. tum) = tụ̄ᵒn T. 217, M. 84, tụ̄ᵒn X. 84

toṇaz 'pig' (K. toṇuz, T. doṇuz) < *toṇaz ~3,4 = tọṇgụz T. 84

tōpïq 'ankle' (presumably from tōp ~3, K. tōp ~top, T. top; K. topïq, T. topuq, Y. tobuk) < *tōp ~3, tōpïq (Mo. toyiḡ ← *tōpïq, later Mo. tobuḡ ← Middle Tu. topuq) = tọpụq T. 63

tōprâq 'ground, soil' (or rather tuprâq, so Brahmi, Tibetan, Kh.), perhaps from tōp (cf. tōpïq), cf. TM II.600-1 (C. tupă) = tụrpạq T. 142

toq (tōq?) 'satisfied' (K. toq, but cf. tōd- 'to become satisfied,' T. doq) < *tok ~3?, *tōk ~3? (cf. 13.12.3) = tọx, tọq T. 267

toqqaz 'nine' (K. toquz, T. doquz) < *tokkaz ~3 (Y. toġus, C. tăxăr Volga Bolgar طخور toxur) = tọqqụz T. 307, M. 99, X. 99

toqqaz ôn 'ninety,' from toqqaz and ôn = Dọxsan T. 317, tọᵍxsan M. 109 (toqsan toqson K.)

tôrâq 'dried milk' (Old Osman doraq, Chaghatay toraq) < tôrâk ~1,3 (perhaps a loanword from P., cf. TM III. 210-1) = tṵ°rạq T. 214, tṵ°rạ·q M. 83, X. 83

tôrt 'four' (K. tördt, tört, T. dördt, Y. tüört) < *tôrt ~3 (C. tăvată, Volga Bolgar توات töät, Mo. dör+ben) = tọ̈°·rt T. 302, X. 94, tị̄ᵉ·rt M. 94

tôš 'chest' (K. töš, T. döš, Y. tüös) < *tôš ~3 = tọ̈°·š, Dọ̈°·š T. 41, tọ̈ᵘ·š X. 85

tuprâq, cf. tōprâq

tûz 'salt' (K. tūz, T. dūz, Y. tūs) < *tûz ~3 (C. tăvar; Mo. dabusun has nothing to do with this word, cf. TM II 510-1) = tṵᵘ·z T. 207

türk 'mighty, flourishing' (K., T. türk 'Turk') < *türk ~3 (cf. TM II headword 888) = tṵrkäʳ? (literally 'is far') X. 90 ('mighty' > 'far reaching (what concerns might)' > 'far'?)

tû, diminutive tuk 'down (of birds, etc.)' (K. tū, T. tüy, Y. tū, many languages *tūk) < *tû(k) ~3 (C. tĕk) = tṵᵘk T. 36

ū or û 'sleep' (K. ū, T. ūqi, Y. ū) < *ū or *û // (C. ïyxă) = ṵčạ 'in (during' sleep,' ṵqạ bạrmịš 'he went to sleep' X. 86

uzâq 'long' (K. uzaq, T. uzaq, from uzā- or uzâ- 'to become long,' cf. Y. usā-) < *uzâ-, *uzâka(n) // (C. vărax) = ụzạq T. 260, X. 28 (cf. dāġ)

ūč 'three' (K., T. üč, Y. üs, WOD. ūš) < *ūč ~3 (C. viśśĕ, Volga Bolgar وُج vüč) = ṵš T. 301, X. 93, ị̄č M. 93

ûn- 'to ascend, to rise, to grow' (Brahmi ün-, K. ūn-, Y. ūn-; T. ön- presumably influenced by ör- 'to grow') < *ûn- ~1,3 = hị̄nàk 'to mount a horse' (literally 'let us mount'), cf. Minorsky 419 Kondurud hatimi hündüm 'I mounted my horse,' 421 Xorăkạbạd hati hindim 'I mounted the horse'

ürän̥ 'bright' (K., Y. ürün̥) < *püräṇ ~3,4 = hürün̥ 'white' T. 289, hiriṇ M. 39, hürün̥ X. 39

üst 'above' (T. üst) < *üst+ ~3 = dä̱^{a}m istü 'roof' (literally 'roof-above') T. 184 (← Az. ?)

üzäm 'grape' (K., T. üzüm) < *püzämä ~4 = hüdüm T. 121

yâġ 'the fat' (K., T. yāġ, Y. s'ia) < *dâg ~1,3 (C. śu) = yä̱'ġ T. 68

yaġâq 'nut' (K. yaġāq), perhaps rather yāġâq < *dāgâk ~1,3 = yaġä̱q T. 122, yo̱ġä̱'q M. 88, yaġä̱'q X. 88. [M. 88 may show that the original form is *dāgâk ~1,3. We perhaps should prefer to reconstruct PTu. *dëgâk because of the Hungarian form dió.]

yaġaš 'rain' (from yaġ- 'to rain,' K., T. yaġ-) < *dag- ~3 (C. śu-) = yä̱^{6}ġuš T. 149

yâġlaġ 'fat, thick' (from yâġ, cf. above) = yä̱^{a}ġlux T. 275

yaġūq 'near' (from yaġū- 'to approach,' K. yaġū-, yaġuq, T. yovuq) < *dëgū-, *dëgūka(n) // (C. śivăx) = yo̱ġuq T. 266, yo̱^{u}'q X. 90

yaṇë 'new' (K. yaṇi, T. yaṇi) < *daṇë // (Y. saṇa, C. śĕnĕ) = yeṇgi 'next year' T. 169 (but presumably ← Az., modern yeni, older yäṇi)

yaq(q)ā 'collar' (K. yaqā, T. yaqa, Y. saġa) < *dak(k)ā // (C. śuxa, Mo. ǰaqa) = yaqqa T. 222

yastūq (K. yastuq, T. yass'iq) = yä̱'sDuq T. 202

yâšal < *yâššal [cf. C. Brockelmann, Osttürkische Grammatik der islamischen Litteratursprachen Mittelasiens, Leiden, 1954. 137, from yâš 'wet,' K. yāš, yaš, T. yāš, Y. sās] < *dâš ~1,3 = yä̱^{a}šul T. 292

yāt- 'to lie' (K., T. yat-, WOD. yāt-) < *dēt- ~1,3 (Y. sït-, Tuv. čit-) = yāṭma 'to (go to) sleep' M. 86, yạtmïš 'slept' X. 86

yāl 'wind' (K. yēl, T. yäl, Y. säl) < *dēl ~3 (C. śil, Hungarian szél is a genuine Hungarian word, not ← Old Bolgar) = yẹ'l T. 153

yälāk 'feather' (T. yäläk) < *dälāk ~2,3 =(yàlàk) T. 107

yäṇäl 'light' (Altay Tu., T. yäṇil, Chaghatay yeṇil, Baraba yiṇil) ~yüṇäl >yüṇül (analogy to yüṇ 'down' = 'light as down,' Chaghatay, Az. yüṇül) < *däṇäl ~3,4 (C. śămăl <yüṇül) = yüṇgül T. 254. [The Kh. form may be derived from yüṇul, but also a development yäṇäl > yäṇil >yeṇil > (assimilated) yiṇil > yiṇül (i_2 >ü is quite frequent) >yüṇül (assimilated) cannot be excluded, cf. kindik]

yâtmäš 'seventy' (T. yätmiš) < *dêtmäš ~3,4 (C. śitmĕl) = yätmiš T. 315, yätmiš M. 107

yâttē 'seven' (K. yetī, yättī, T. yädi) < *dêttē // (C. śiččĕ, Volga Bolgar جيات čiäti, Y. sättä) = yättị T. 305, X. 97, yättị M. 97

yigärmē 'twenty' (K. yigirmā ~yigirmī = yigirmē, T. yigrimi) < *digärmē ~4 (Y. sürbä, C. śirĕm, Volga Bolgar جرم, جيارم ǰirmi, ǰiärmi) = yiiirmị T. 310, yī'rmị M. 102, yigirmị, X. 102

yīl 'year' (K., T. yïl, Y. sïl) < *dīl ~3 (Mo. ǰil may be < *dil, but may be even a younger loanword) = yịl, iil T. 164, yị'l M. 89, X. 89; bu'iil 'this year' X. 89, kàlàn yịl 'next year' X. 89, kàšgụli iil 'last year' X. 89

yïlân 'snake' (K., T. yïlān) < *dïlân ~3 (C. śĕlän, "Danubian Bolgar" dilom is devious, just as are all the other reconstructions of this document) = yịlān T. 112

ÿilqī 'cattle' (K. ÿilqī, T. ÿilqi, Y. s'ilgi) < *dilkī // = yilqi 'wether' T. 77

ÿirâq, cf. 'irâq

yôllā- 'to send,' from yôl 'way' (K., T. yōl, Y. suol) < *dôl ~ 1,3 (C. śul, Mo. ǰol 'luck' is a rather recent loanword) = yo̯llạ^{6}maq X. 42

yōq(q)ār(ū), cf. yūq(q)ār(ū)

yōrġân 'blanket' (T. yorġan) < *dōrgân ~ 1,3 = yo̯rġạ̄n T. 201. [But cf. K. yoġurqān. This may show that an original form *dogarkân or something similar is by far more probable. In this case the Kh. form may be a loanword < older Az. with preserved long vowels, as in *gôl instead of kôl 'lake.' Or are these old Oghuz loanwords?]

yuldaz 'star' (K. yulduz, T. yildiz, Y. sulus) < *duldaz ~ 3,4 (C. śăltăr) = yụldụZ T. 161

yūmšāq 'soft' (K., T. yumšaq, from yumšā- 'to be soft,' K.) < *dūmšā-, *dūmšāka(n) ~ 1 = yụm^{u}'šạq T. 285

yūṇ 'wool' (K. yuṇ, T. yüṇ, Y. suṇ, Gagauz ūn) < *dūṇ ~ 1,3 (C. śăm; Mo. nuṇgasun does not belong here, cf. TM 89-90) = yụṇ^{k} T. 91

yūq(q)ār(ū) or yōq(q)ār(ū) 'above, upwards' (K. yuqar, yuqarū according to Uzbek yuqạri, New Uighur žuqur, žuquri, in the text erroneously yokar, yokaru, but cf. Brahmi yoqaru, T. yoqari; original form probably yūq.ġārū > yūqqārū > yuqaru > yoqaru, the KhT. form < *yōq.ġār) < *dūk.gārū or < *dōk.gārū ~ 1,3 = yo̯qqạr T. 297

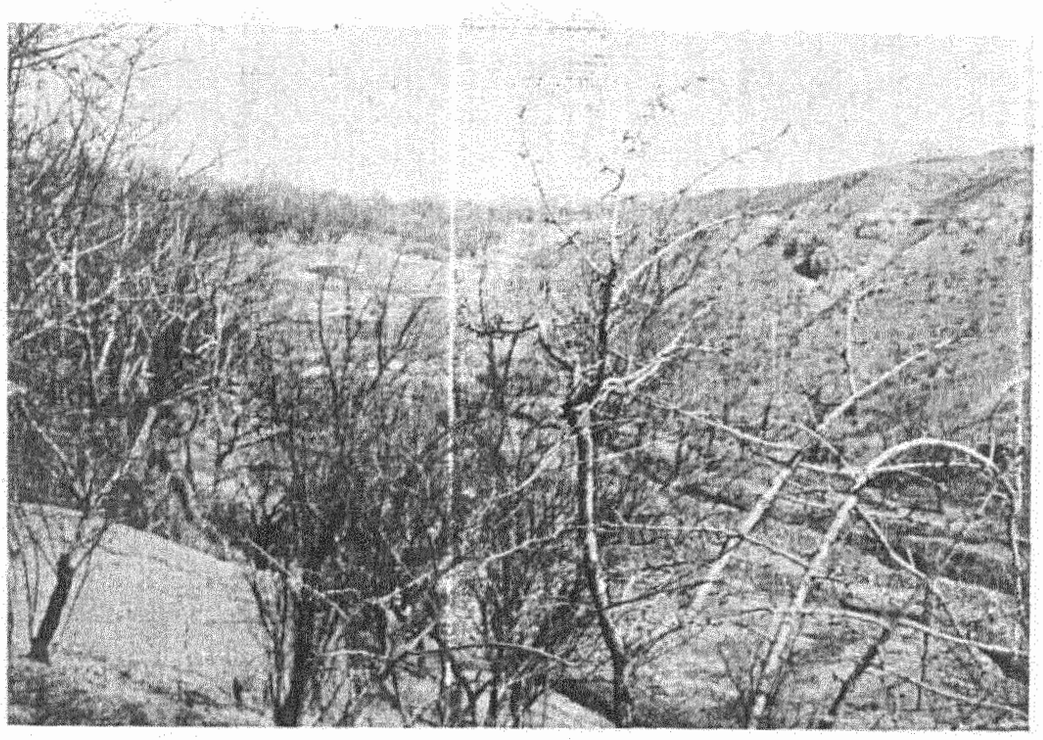
yüṇäl, cf. yäṇäl

yûz (or yūz?) 'face' (K. yūz, T. yüz, Y. sūs 'front') < *dûz or *dūz [whether Mo. dürsün 'appearance' belongs here is unclear for semantic reasons] = ḫadaqī iüzü 'instep' literally 'face of the foot') T. 64

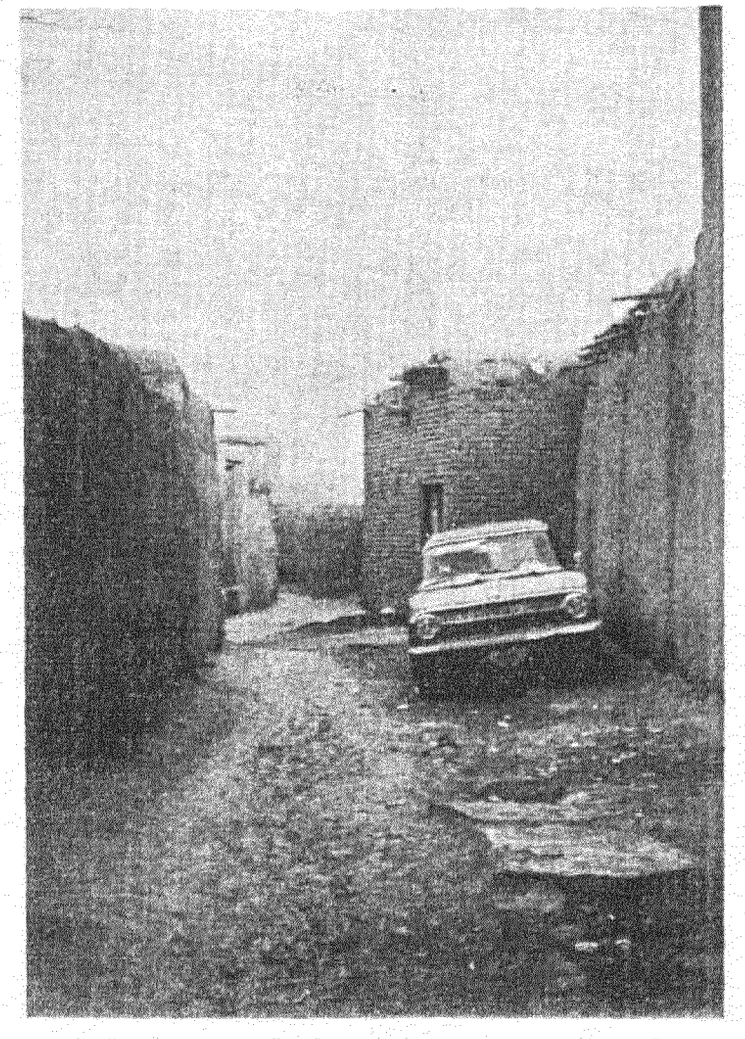
yûz or yūz 'a hundred' (K. yūz, but only in a sample, T. yüz, Y. sūs) < *dûz or *dūz ~3 (C. śĕr, Volga Bolgar جوز , later جور čürz > čür) = yüz T. 318, X. 110, yi'z M. 110

15

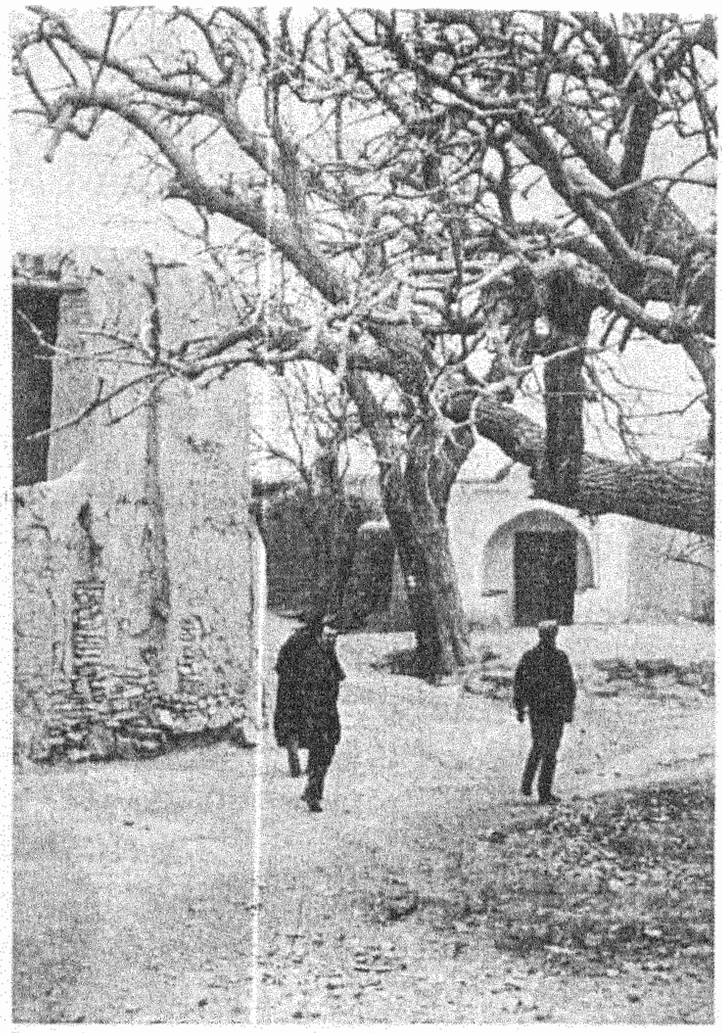
PHOTOGRAPHS



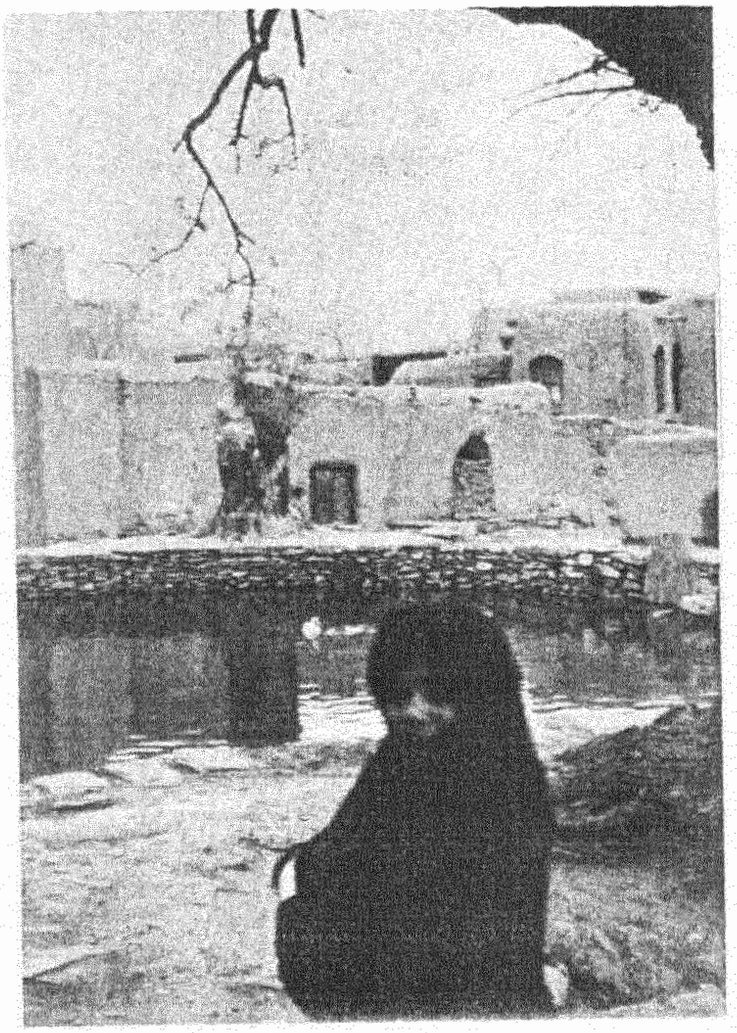
1. A valley near Khalajistan's capital, Dästgerd



2. Our car in a narrow "street" of Dästgerd

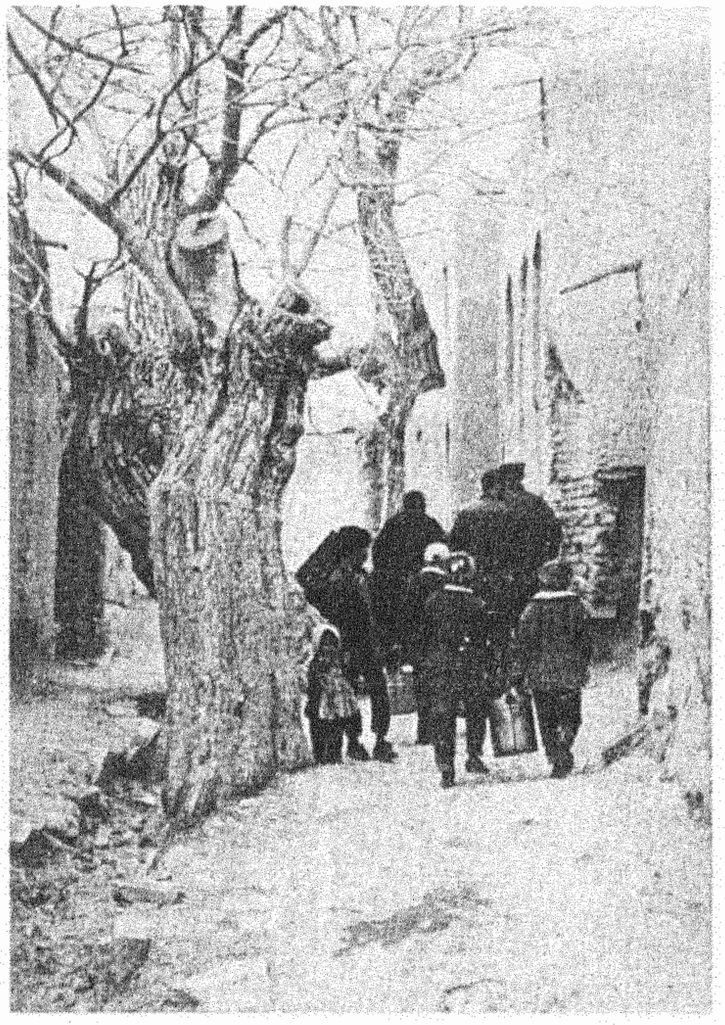


3. A walk in the village of Mouǰan

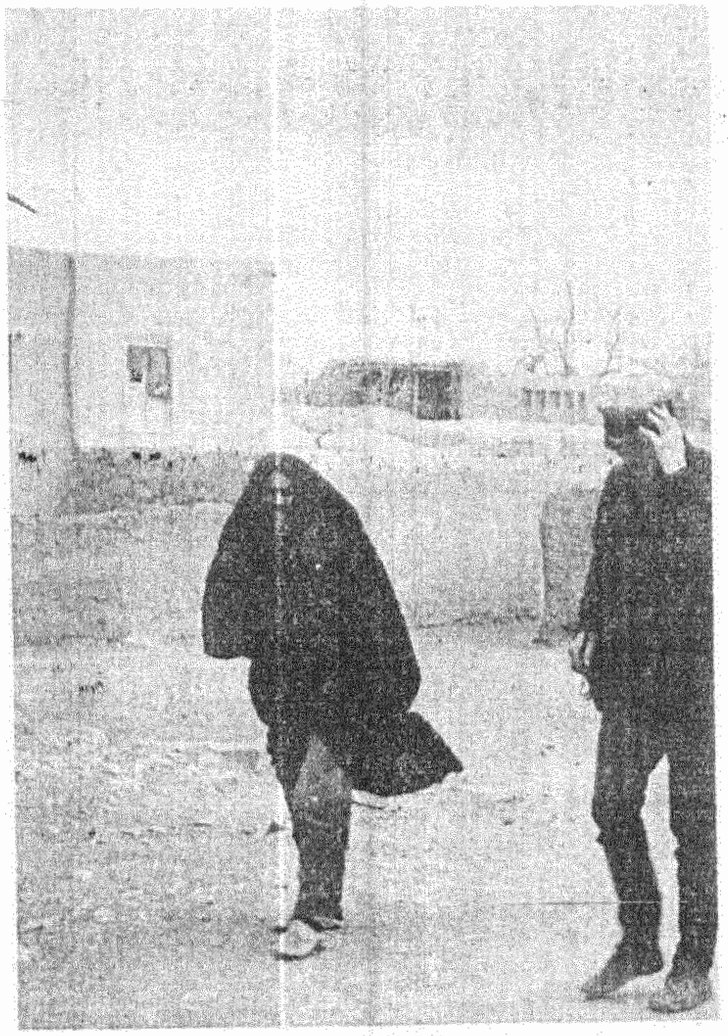


4. A young Khalaj beauty at the laundry pool of Mouǰan

5. Khalaj women washing dishes in Mouǰan

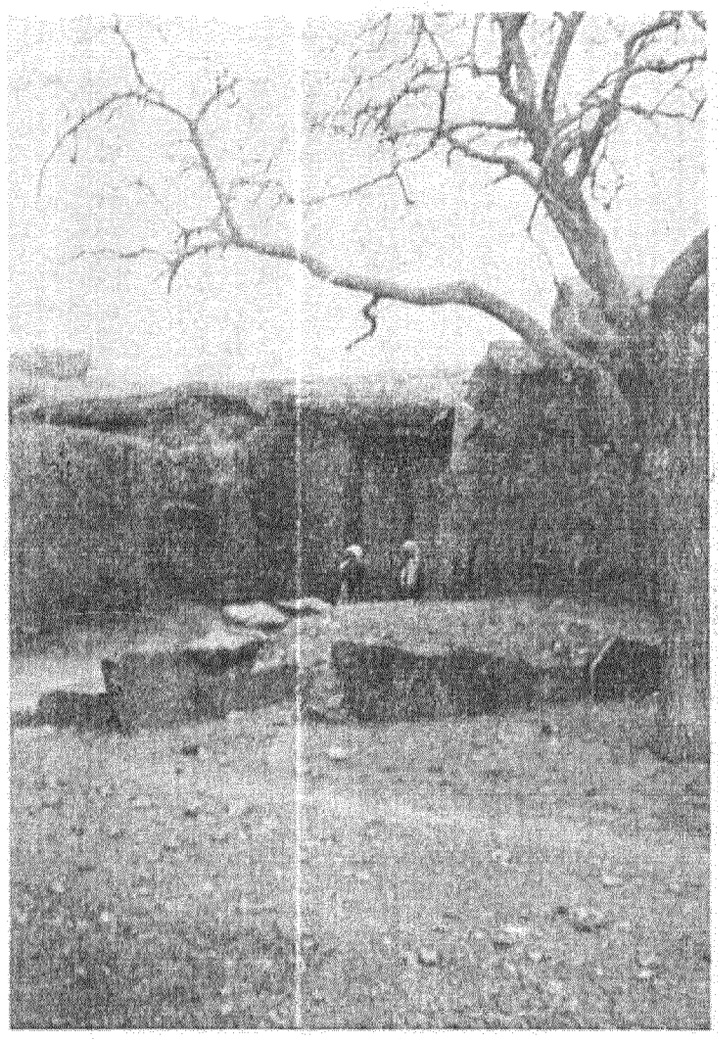


6. Sight-seeing in Mouǰan

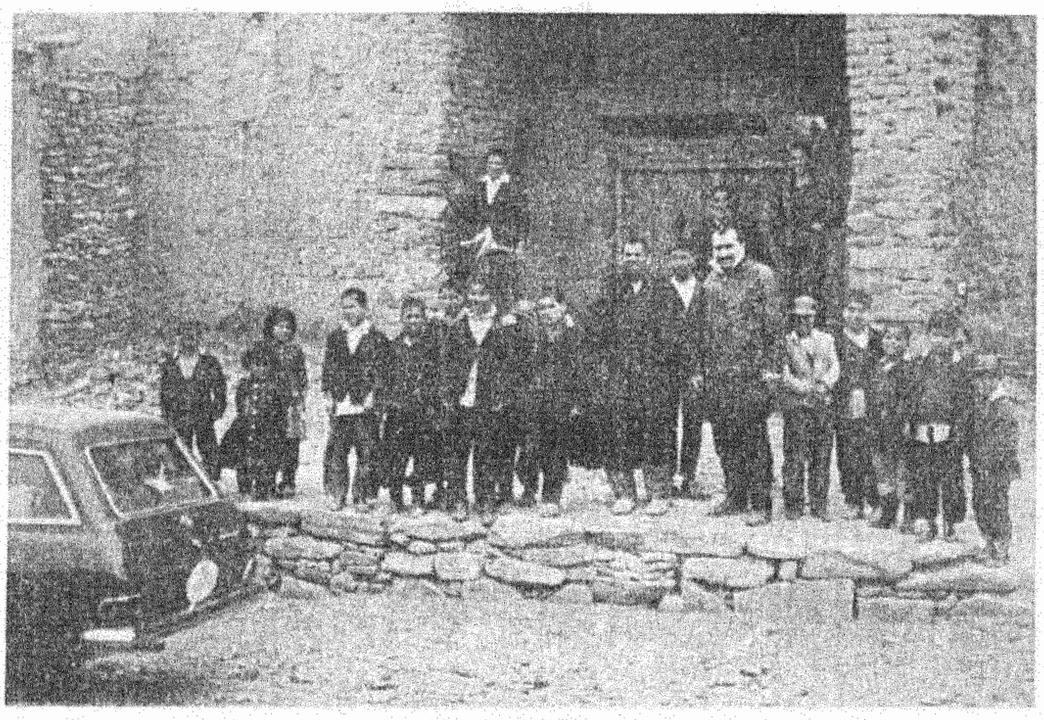


7. The chief of Mouǰan leading our expedition (only Wolfram Hesche is shown) to the school. The wind at that time, early March, was extremely cold and strong.

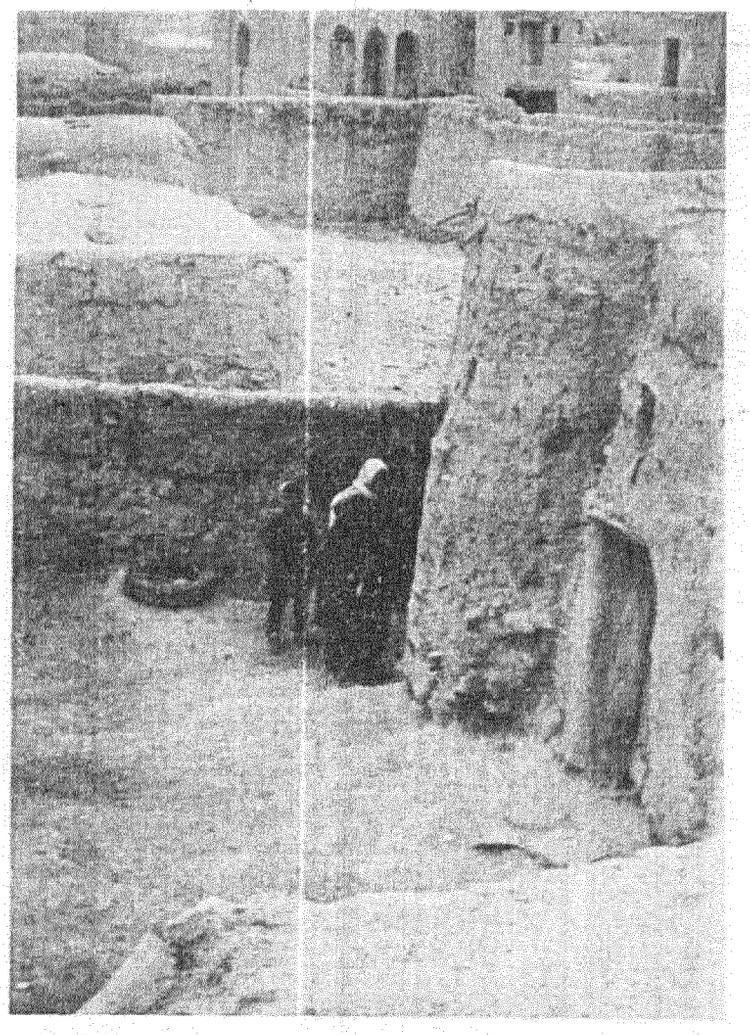
8. The entrance portal of the school of Mouǰan.



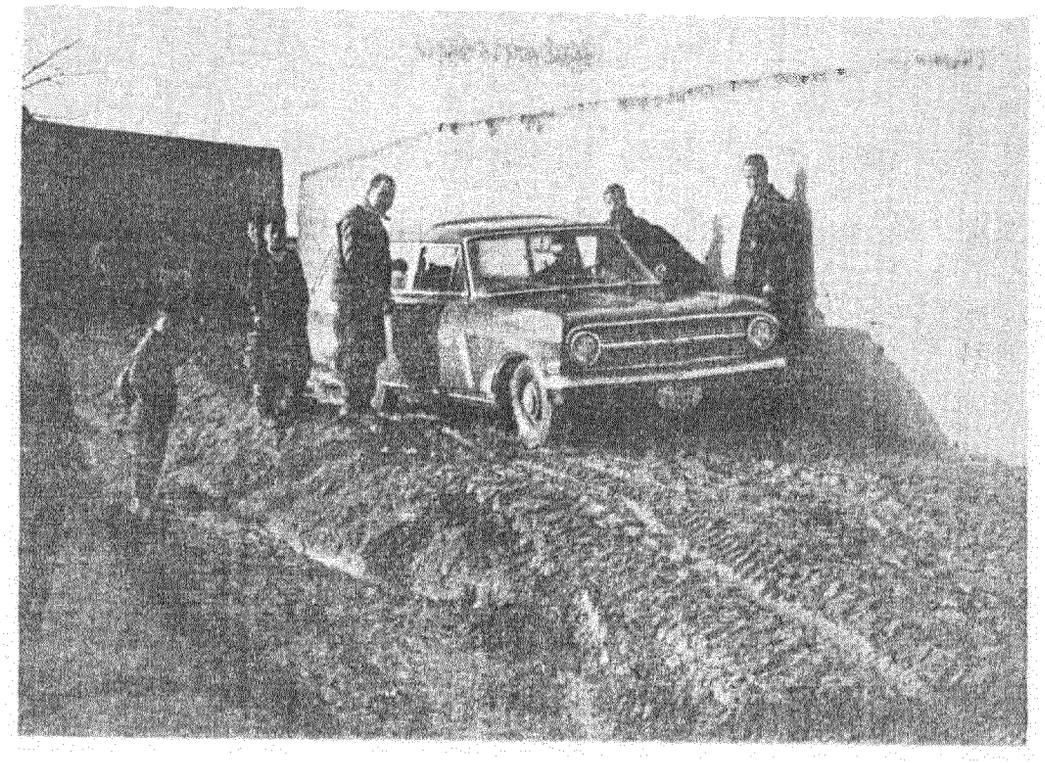
9. Children strolling around the deserted ruins of Mouǰan. Many inhabitants have left Mouǰan and many more will leave because the water supply is inadequate and because the gound contains too much salt



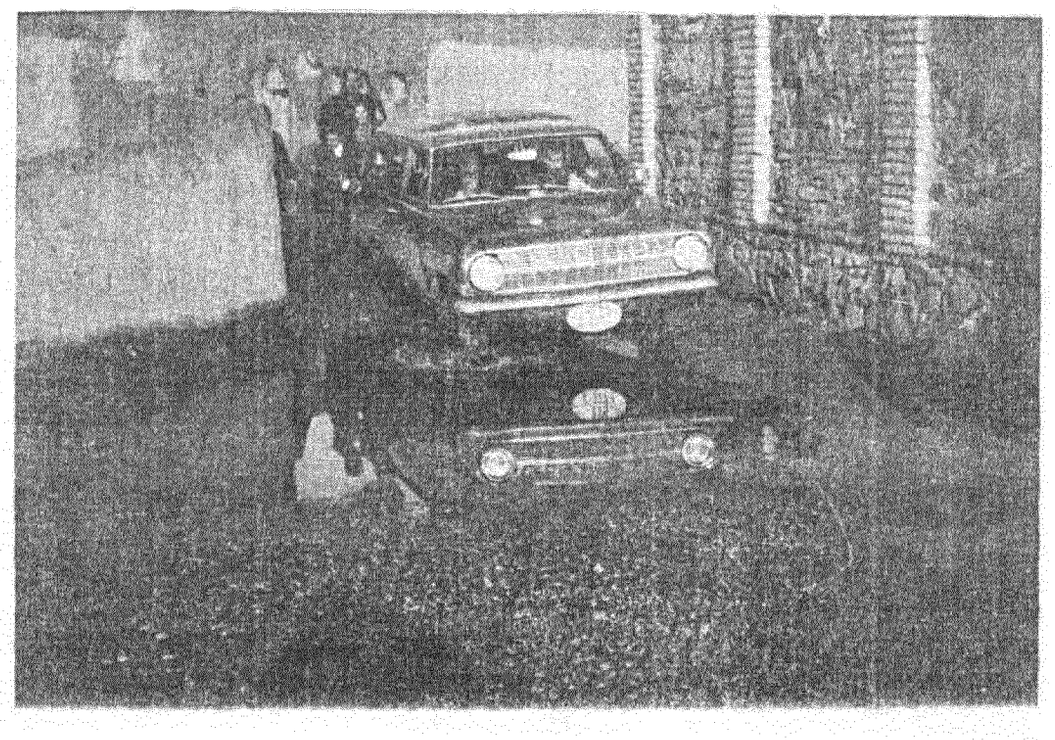
10. A last picture before our departure from Moujan



11. Our first visit to Xärrąb. The weather was cold and so were the people. Only children could be seen.



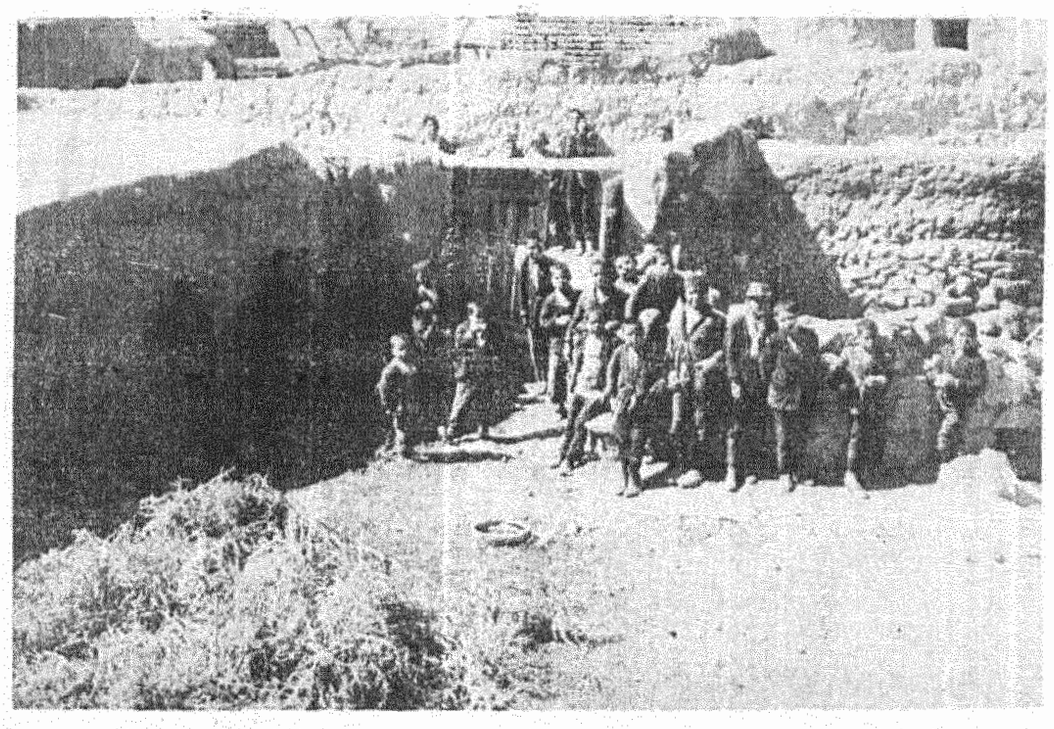
12. The people of Mäzrä'ä-ye Nou (Marzâno) helping us get through the muddy paths



13. Leaving Mäzrä'ä-ye Nou

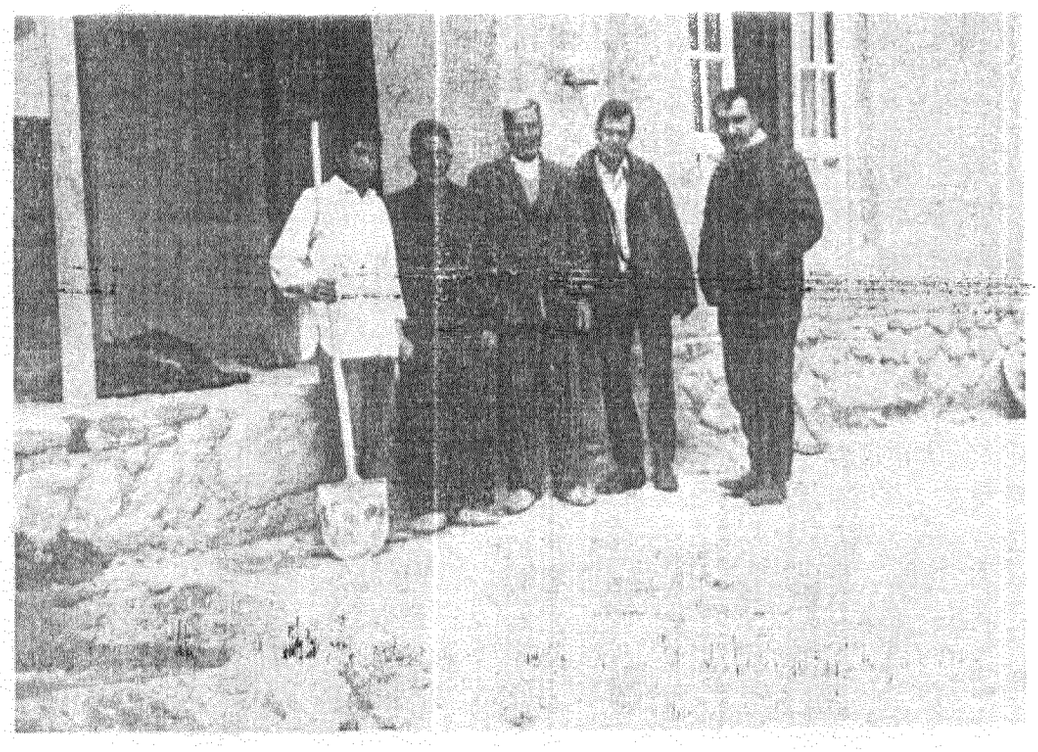
14. Our second visit to Xärraḇ: the Persian village teacher; Mr. Yâdullah, father of the village chief; Mr. ʿEzzätollaḫ, chief of the village; Semih Tezcan, a member of the expedition.

15. Pictured left to right: a native of Xärrąb; the Persian village teacher; Wolfram Hesche, a member of the expedition; another villager; Hartwig Scheinhardt, a member of the expedition; Mr. ʿEzzätolląh



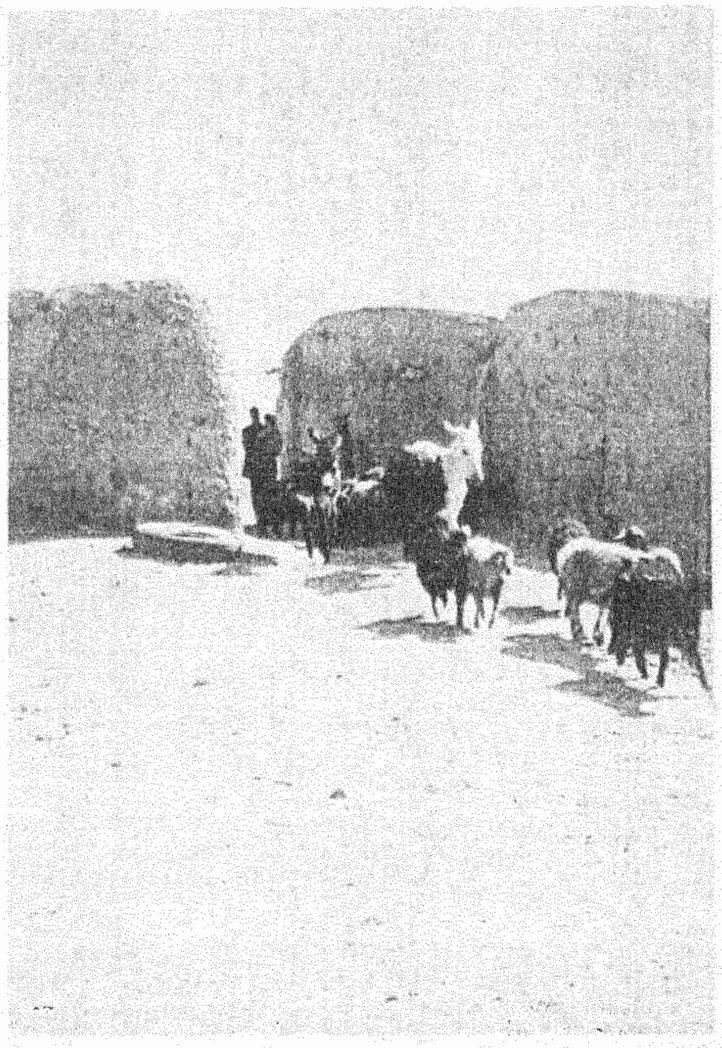
16. Children of Xärraḇ in the courtyard of the chief's house

17. An enexpected meeting in the desert just outside Xärrab with the district officer of Khalajistan, Mr. ʿÄräbgol, one of our best friends in Khalajistan. Mr. ʿÄräbgol contributed greatly to the success of the expedition.

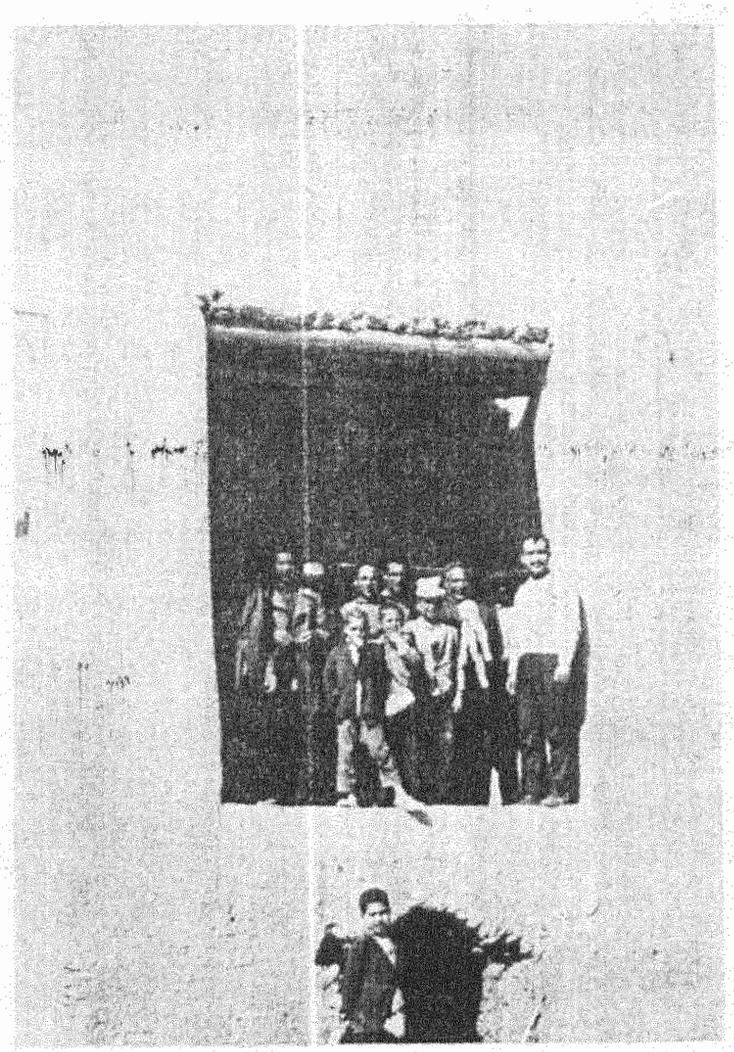


18. The very kind chief of Noudeh, Mr. ʿÄli Äṣqär Wäfại, standing between two Khalaj men and Hartwig Scheinhardt and Semih Tezcan

19. A sport which gave us daily exercise in Khalajistan. There were many of those muddy little rivers on the way from Noudeh to Yängiǰé.

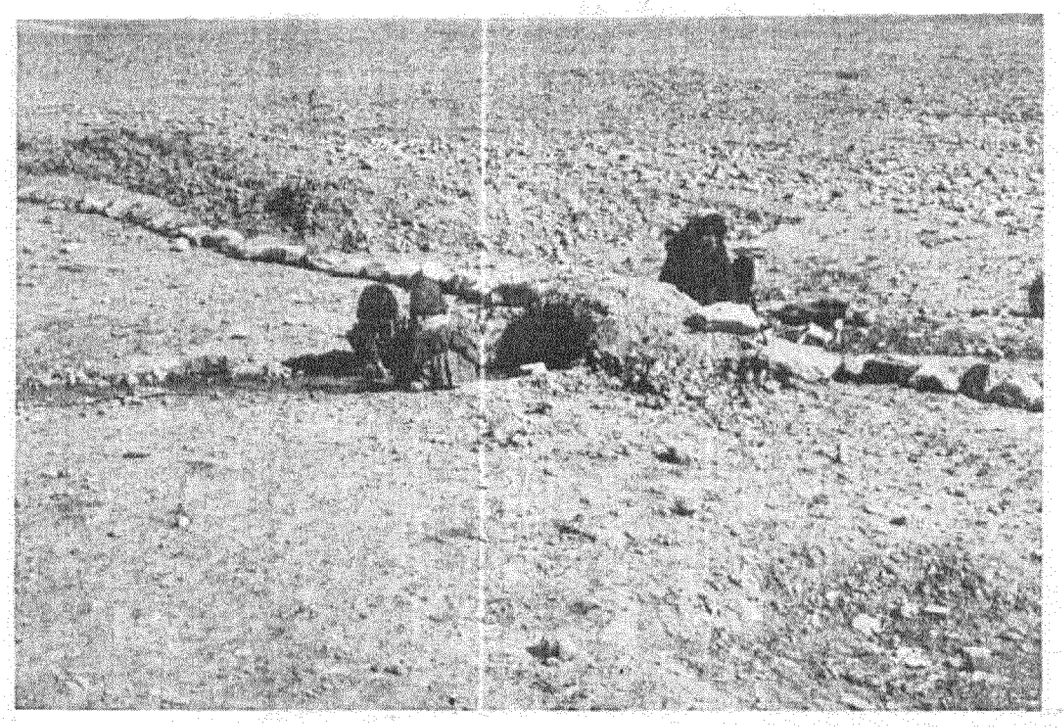


20. A flock of sheep and donkeys coming in from the fields into the big courtyard of the rectangular village Yängijé



21. A typical assembly house for men, found throughout Khalajistan. This house stands in the center of the courtyard of Yängiǰé. The door underneath the balcony leads to a stall for sheep.

22. Kind and joyful people of Yängijé



23. The desert near the salt lake of Arāk

24. Second from right Mr. Ḥäbibollaḫ-e Daraestani of Daraestan, who is responsible for selling gasoline. He seems to be something like the head of the village, because there is no official chief.

25. People of Wenąreǰ, south of Qom

MAP

The following map, drawn by the three students of Gerhard Doerfer who undertook the Khalajistan expedition (Wolfram Hesche, Hartwig Scheinhardt, and Semih Tezcan) is cartographically rather crude. It contains, however, information not given on more precise official maps. It locates, for instance, many obscure villages. It also indicates conditions of roads and gives distances based on readings of the odometer. Moreover, it locates gasoline stations. In spite of its shortcomings, this map should be helpful to anyone wishing to travel in Khalajistan. Professor Doerfer, for instance, found it most useful when he undertook the second Khalajistan expedition in March 1969.

LEGEND

————	Excellent asphalt roads
- - - - - - - -	Good roads, drivable the whole year
. . . . .	Bad roads
Figures	Distance in kilometers
'	Distance interval markers
?	Location of village uncertain
*	Location of gasoline stations

Khalaj Villages Visited
(in order of visiting)

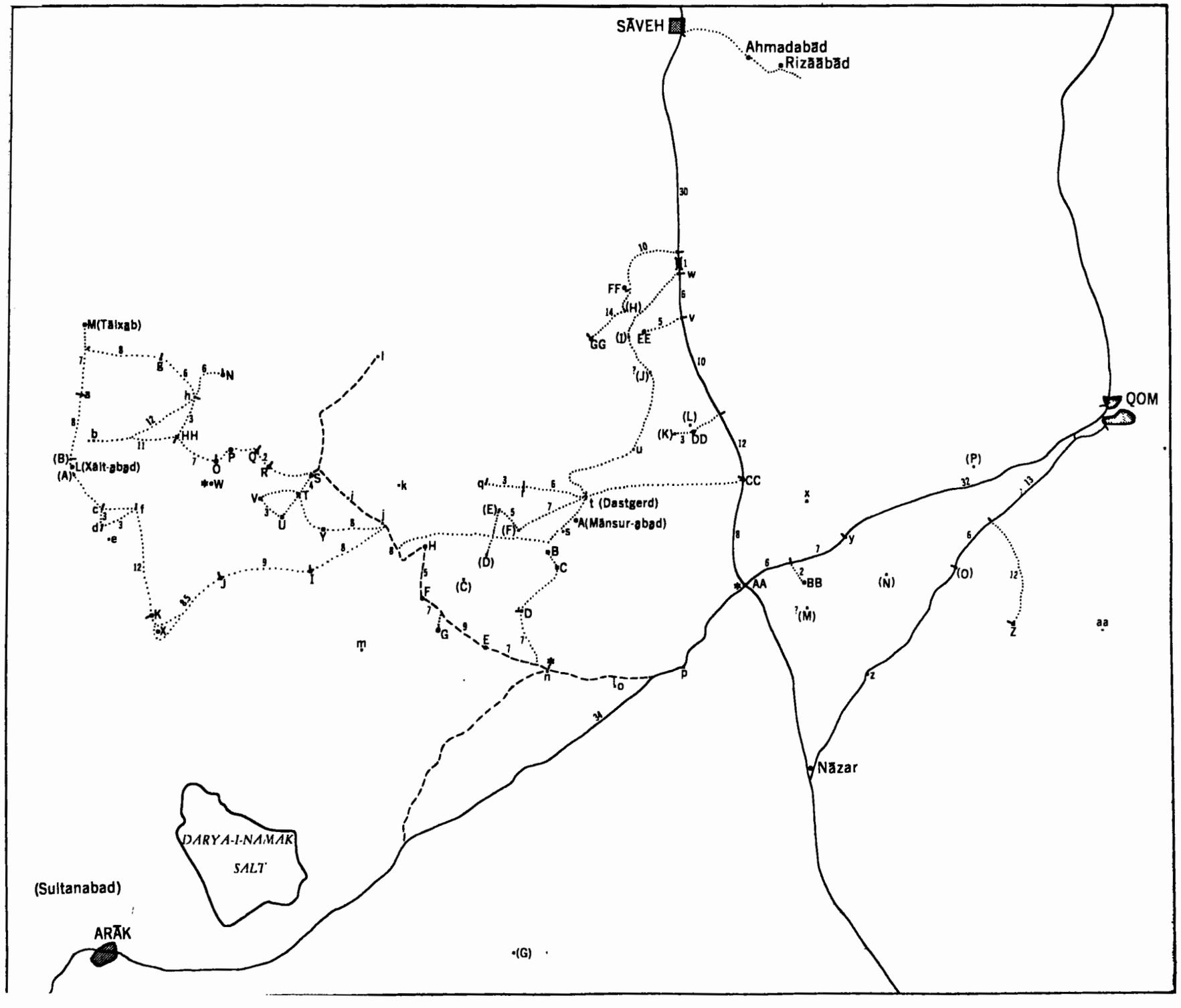
A. Mänṣur-ạbạd
B. Mouǰạn
C. Sorxädé
D. Xärrạb
E. Mäzrä'ä-ye Nou
F. Kärdeyạn
G. Xorạk-ạbạd
H. Hezạr-ạbạd
I. Fäiz-ạbạd
J. Noudeh
K. Yängiǰé
L. Xält-ạbạd
M. Tälxạb
N. Wạšqạn
O. Ḥäsän-ạbad
P. Säfid-ạb
Q. Sär-e bänd
R. Kạšé
S. Bon-čenạr
T. Musi-ạbạd
U. Säqärǰuq
V. Zär-nušé
W. Dạrestạn
X. Moḥsen-ạbạd
Y. Näder-ạbạd
Z. Wenạreǰ
AA. Säläfčegạn
BB. Qäré-Su
CC. Bạġ-e yäk
DD. Seft
EE. Ispit
FF. Čạhäk
GG. Mehr-e Zämin
HH Dermänek

Khalaj Villages Not Visited
(west to east)

(A) 'Äli-ạbạd
(B) J̌älil-ạbạd
(C) Sär-e Rud
(D) J̌irạġạč
(E) Versạn
(F) Zizgạn
(G) Šạné
(H) Ạġuläk
(I) Mušäkeyé
(J) Bạġčé Weswạr
(K) Äḥmäd-ạbạd
(L) Säfid-ạlé
(M) Ḥosäin-ạbạd
(N) Qurqur
(O) Dạġạn
(P) Šạh-qạlu

Non-Khalaj Villages
(generally west to east)

a. Kạzem-ạbạd
b. Ferạhän
c. Borz-ạbạd
d. Šạh-ạbạd
e. Färnähin
f. Zolf-ạbạd
g. Fešk
h. Moässär
i. Gerekạn
j. Ạšteyạn (Ạhu)
k. Ạhu
l. Tärxorạn
m. Čäšmé
n. Sạleḥ-ạbạd
o. Nạngerd
p. Rạhgerd
q. Pougerd
r. Rästgạn
s. Vešạré
t. Dästgerd
u. Kondurud
v. Räḥmät-ạbạd
w. Ruḥ-ạbạd
x. Tạǰ Xạtun
y. Kärvạn-säré-räng
z. Qäl'é-ye Čäm
aa. Virǰạn


SĀVEH
Ahmadabād
Rizāābād
QOM
Nāzar
ARĀK
(Sultanabad)
DARYA-I-NAMAK
SALT
M(Tālxab)
L(Xalt-abad)
t (Dastgerd)
A(Mānsur-abad)

37/1 Robert A. Rupen, Mongols of the Twentieth Century, Part I (1964). SBN 87750-061-4 $10.

37/2 Robert A. Rupen, Mongols of the Twentieth Century, Part II: Bibliography (1964). SBN 87750-062-2 $5.

43. Valentin A. Riasanovsky, Fundamental Principles of Mongol Law (1965). SBN 87750-063-0 $7.50.

45. Fred W. Householder, Jr., with Mansour Lotfi, Basic Course in Azerbaijani (1965). SBN 87750-064-9 $10.

58. Kuo-yi Pao, Studies on the Secret History of the Mongols (1965). SBN 87750-065-7 $4.

59. Alo Raun, Basic Course in Uzbek (1969). SBN 87750-066-5 $10.

60. János Eckmann, Chagatay Manual (1966). SBN 87750-067-3 $4.

61. A. M. Pozdneyev, Mongolia and the Mongols (edited by John R. Krueger, assisted by Fred Adelman) (1971). SBN 87750-157-2 $18.

64. Paula G. Rubel. The Kalmyk Mongols: A Study in Continuity and Change (1967). SBN 87750-068-1 $7.50.

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