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Turkic Languages

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Editorial note

Turkic Languages, Volume 7, 2003, Number 1

The present issue of *TURKIC LANGUAGES*, which introduces our seventh volume, presents contributions on a wide range of general and more specific topics.

Hakan Aydemir's article deals with issues of linguistic relatedness, discussing the possibilities of identifying etymologically mutually connected lexemes in Altaic languages and the methodological requirements for handling questions of this kind. Investigating three similar words for 'dust' and 'soil', the author states that Turkic *topraq* 'soil, earth' is derived from *topu*, i.e. < *topu+rA-q*. Mongolian *toyo+su(n)* 'dust' is taken to be derived from the same primary stem by means of +*sUn*. According to Aydemir, Turkic *tōz* 'dust', however, goes back to a shorter variant of the Mongolian form. The conclusion is that the origins of these three forms cannot be ascribed to Proto-Altaic.

Volume 6 of *TURKIC LANGUAGES* contained a study by Vladimir P. Nedjalkov on means of encoding reciprocal, sociative and competitive meanings in the Karachay-Balkar language. In the present issue, he contributes a similar study on Yakut reciprocals. He demonstrates how the reciprocal suffix *-(V)s* may also express sociative, comitative and assistive meanings as well as (unproductively) anticausative and intensive meanings. The reciprocal meaning can also be rendered by a reciprocal pronoun which consists of a reduplicated reflexive pronoun. A third way of expressing reciprocity in Yakut is to combine the reciprocal suffix and the reciprocal pronoun.

Ludmila A. Shamina deals with what she calls "multicomponent analytical predicates" in Tuvan, one of the Turkic languages of Southern Siberia. The object of investigation are constructions consisting of lexical verbs carrying the converb suffix *-(V)p* and auxiliary verbs in a finite form.

Siavosh Hassan Abadi and Amin Karimnia report on a sociolinguistic study of Kashkay (Qaşqā'ī) Turkic, spoken in the province Fars of Iran. The aim of the study is to determine the factors that affect the use of Kashkay in different contexts. The nomadic way of life is declining, and Kashkay has a limited function for the new generations growing up in the cities. Here, Kashkay is almost exclusively used at home, and its structures are strongly influenced by Persian. The authors of the study try to determine which language—Kashkay or Persian—is used in different situations in Shiraz and Firuzabad. In Shiraz, the age factor plays an obvious role: young people tend to speak Persian in all situations. More loanwords from Persian are used in Shiraz than in Firuzabad. The brief report is of particular interest since it raises the general question how the gradual extinction of Turkic varieties in Iran may be prevented.

Two contributions deal with Turkish. Volkan Coşkun studies differences and similarities between Turkish and German vowels with respect to their articulatory

and acoustic properties. In the article “Linguistic gender differences in teaching different subjects”, Işıl Açıkalın investigates, on the basis of data of teacher-student interactions, linguistic differences between female and male teachers at two institutes of higher education in Turkey. The professional codes used at the two workplaces—the School of Medicine and the School of Education—are shown to be very different from each other.

The well-known Slavicist and expert in Balkan linguistics Victor Friedman, University of Chicago, reviews the recently published dictionary of Bulgarian Turkisms compiled by Alf Grannes, Kjetil Rå Hauge and Hayriye Süleymanoğlu. One of the authors, Alf Grannes, died an untimely death in the final phase of the preparation of this dictionary. Though Grannes was essentially a Slavicist, he was well known to scholars in the field of Turkic studies for his articles on Karachay and other Turkic languages as well as for his 1996 book *Turco-Bulgarica* (Turcologica 30), which contains twelve articles in English and French concerning the Turkish influence on Bulgarian.

Grannes’s death is not the only loss our field of study has suffered in the last months. The present issue also contains an obituary and a short biographical account of the Turcologist and Mongolist Ahmet Temir (1912-2003), who was born in Tatarstan and spent most of his professional life in Turkey. He studied in Berlin from 1936 to 1943 and spent the years 1951-1953 in Hamburg, where he received his habilitation diploma. During the period 1980-1983 he worked in Germany again, continuing his investigations on the history of German Turcology. He wrote several books and articles on the life and work of Friedrich Wilhelm Radloff (1837-1918).

Lars Johanson



Ahmet Temir (1912-2003)

Lars Johanson

Johanson, Lars 2003. Ahmet Temir (1912-2003). *Turkic Languages* 7, 3-5.

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Professor Emeritus Dr. Ahmet Temir, a distinguished scholar in the fields of Turcology and Mongolistics, passed away in Ankara on April 19, 2003, at the age of 91.

Ahmet Temir was of Tatar origin, born on November 14, 1912, in the Tatar town of Elmet (Russian: Almetevsk). From 1920 on, he visited a Russian school in Bögölme (Bugulma), where his father had been appointed imam. In 1926, however, Ahmet was forced by the communists to leave the school because of his father's profession.

Three years later, at the age of 17, Ahmet Bey managed to escape to Turkey, where he first attended the Teachers' School in Trabzon and afterwards the Haydarpaşa College in Istanbul. In 1935, he began to study at the Dil, Tarih ve Coğrafya Fakültesi of Ankara University.

In 1936, Ahmet Temir received a scholarship for Berlin, Germany, where he was awarded the doctorate of philosophy seven years later, in 1943. During his years in Berlin, he also worked as a lecturer in the Tatar language. It was in the middle of

this period that Ahmet Bey received the tragic message from Tatarstan that his father Reşid had been executed by the communists.

After some years in Turkey, Ahmet Temir returned to Germany in 1951, where he worked on his habilitation thesis (“Die Konjunktionen und Satzeinleitungen im Altürkischen”) at Hamburg University and also held a position as a lecturer. On August 1, 1953, he received his habilitation diploma from that university.

In 1955, Ahmet Temir took up a position at the department of Turcology at Ankara University, where he was appointed professor in 1962. In the same year, he married Rana Soytekin, and in 1964 their daughter Bahşayış Zeynep was born—known today as Dr. Bahşayış Temir-Fıratoglu. From 1961 to 1975, Ahmet Temir was the founding director of the Türk Kültürünü Araştırma Enstitüsü, Ankara. He retired in 1982, at the age of 70.

Retirement enabled Ahmet Temir to intensify his scholarly work. Already in the academic year 1980-1981, he had taught Turcology as a highly appreciated visiting professor at the Seminar für Orientkunde in Mainz, Germany. Immediately after this successful stay, Johannes Benzing, my predecessor at Mainz, and myself decided to invite Ahmet Bey for a further period. Thanks to the generosity of the Alexander von Humboldt Foundation, Ahmet Temir was able to spend another year (1982-1983) in Germany, continuing his investigations concerning the history of German Turcology.

Back in Turkey, Ahmet Temir worked unremittingly for two full decades. After the collapse of the Soviet Union, he was invited to visit Tatarstan, but finally decided to decline, since he could not imagine seeing his native country again after his father had been executed there in 1938.

The scholar Ahmet Temir published many monographs, over 200 articles, many of which appeared in the journal *Kazan* (1970-1982), and a number of translations. He is widely known for his contributions to Mongolistics. For Turcologists, his investigations into the life and work of Friedrich Wilhelm Radloff—known in Russia as Vasilij Vasilevič Radlov—are of special interest because of his thorough knowledge of the career and scholarly achievements of this great pioneer of modern Turcology. Some of Temir’s publications on this topic should be mentioned here:

1954-1957. *Sibirya’dan. Friedrich Wilhelm Radloff*. 1-2. Ankara & İstanbul: Maarif Vekaleti.

1955. *Leben und Schaffen von Friedrich Wilhelm Radloff (1837-1918). Ein Beitrag zur Geschichte der Turkologie*. *Oriens* 8, 51-93.

1966. F. W. Radloff’un Kazan raporları. In: *Reşid Rahmeti Arat için*. (Türk Kültürünü Araştırma Enstitüsü yayınları 19.) Ankara. 418-422.

1986. *Sibirya’dan seçmeler. Friedrich Wilhelm Radloff*. Ankara: Kültür ve Turizm Bakanlığı. [Second edition of the 1954-1957 publication.]

1991. *Türkoloji tarihinde Wilhelm Radloff devri. Hayatı, ilmî kişiliği, eserleri*. (Türk Dili Kurumu yayınları 552.) Ankara: Türk Dil Kurumu.

Ahmet Temir’s personal memories of his sojourns and research in Germany have been published in:

1998. *Altmış yıl Almanya (1936-1996)*. Ankara: Kültür Bakanlığı.

One of the monographs deals with the Tatar historian Yusuf Aqçura (Yusuf Akçuraoğlu):

1997². *Yusuf Akçura*. Ankara: Türk Kültürünü Araştırma Enstitüsü.

Yusuf Aqçura, a member of the Turkish National Assembly in the 1930s, was the person who had—only some months before his death in 1935—stood surety for Ahmet Bey after his arrival in Turkey, thus enabling him to study and work in his new country. This confidence was a moral debt that Ahmet Bey repaid with infinite gratitude and with more than seven decades of prolific scholarly work. *Nur içinde yatsın!*

Linguistic gender differences among teachers of different subjects

İşıl Açıkalın

Açıkalın, İşıl 2003. Linguistic gender differences among teachers of different subjects. *Turkic Languages* 7, 6-12.

Women and men have distinct linguistic domains in the workplace, regarding power and solidarity relationships in their interactions; however, a particular professional code used in a workplace may play an important role in distinguishing power and solidarity relations. The purpose of the study is to determine the linguistic differences between female and male teachers in the School of Medicine and the School of Education, each school showing language use that is very different from the other. The teacher-student interactions comprise the data of the study. The results are evaluated according to the six universals regarding language and gender formulated by Holmes in 1993.

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1. Introduction

This study stems from the assumption that women and men have distinct linguistic domains in the workplace. Particular linguistic strategies used by speakers of both sexes can show the effects of the relative solidarity and status relationships in the interactions; however, a particular language used in a workplace, i.e. a professional code, may affect solidarity and power relationships when compared to other workplaces that have no specific professional code. From this point of view, this survey aims at investigating the linguistic differences between female and male university teachers from different schools. The schools in question are the Medical School and the School of Education in Eskişehir, Turkey. The reasons for choosing these two schools are as follows: In the Medical School, the teaching utilizes medical language, and medical teachers belong to a community in which a professional code is used in professional communication. They form a community of practice (Açıkalın 2000) such that in the engagement of joint activities and shared practices, medical language is always used for communication purposes. Hence, their professional code is different from the language of laypeople. On the other hand, teachers in the School of Education use a language with very little special terminology, and this language does not create any comprehension problem for outsiders. From this point of view,

the teachers' language is expected to differ substantially, depending on the schools in which they teach.

2. Methodology

The concern of the study is, therefore, to examine the linguistic differences between female and male teachers at the two schools during face to face teaching and to try to reveal the effectiveness of the code used in the different workplaces. The data are comprised of teacher-student interactions. The settings are either classroom or laboratory. Participants are two teachers of each sex from each school. The instructors from the School of Education were instructors in the Educational Sciences Department. The instructors from the Medical School were from the Histology and Anatomy Departments. The 8 teachers were between the ages of 24 and 40 and had at least 3 years of experience. The teachers who participated in the study were asked to record 45-50 minutes of their class. The recordings were transcribed, and each participants' utterances which fulfil communicative functions were counted: female teachers from the School of Education had 921 utterances and male teachers 1013 utterances during their face to face teaching, whereas female teachers from the Medical School had 877 and male teachers had 850 utterances in the same situation.

The data are classified according to the frequency of tag questions, rhetorical questions and addressing as "arkadaşlar" (friends-guys). These were, then, evaluated based on the six universals regarding language and gender formulated by Holmes in 1993 (Bergvall 1999: 291):

- (1) women develop different patterns of language use;
- (2) women tend to focus on the affective functions of interaction more often than men do;
- (3) women tend to use linguistic devices that stress solidarity more often than men do;
- (4) women tend to interact in ways that will maintain and increase solidarity, while especially in formal contexts men tend to interact in ways that will maintain and increase their power and status;
- (5) women use more standard forms than men from the same social context;
- (6) women are stylistically more flexible than men.

This survey is an example of an asymmetrical discourse. In asymmetrical relations power is held by the person in the one-up position, and in Brown and Gilmen's words, one person may be said to have power over another to the degree that he is able to control the behavior of the other (Tannen 1993:169). In our case, teachers are in the position of controlling the class and holding power. However, during face to face teaching power is not the only relation; it stands in paradoxical relation to solidarity, that is, although power and solidarity, distance and closeness, seem at first to be opposites each also entails the other (Tannen 1993:167). Hence, during their

teaching, female and male teachers reflect both power and solidarity in asymmetrical relations with their students.

3. Results

3.1.

In the Medical School the frequency of tag question use among the female teachers is 25, and for the male teachers it is 4. In the School of Education the frequency of tag questions among the female teachers is 15 and 8 among the male teachers.

3.1.1.

Among the tag questions, 22 speaker-oriented tags, termed by Holmes (1984) as having modal meaning, are used by the female teachers and 2 by the male teachers in the Medical School.

- (a) *Nöroindofin basıncı tamam mı?*
'The pressure of neuroendorphin, ok?'
- (b) *Plantiformisi yaptık tamam mı?*
'You're at the cortex at the moment, ok?'

In the School of Education the female teachers did not prefer to use speaker-oriented tags, while the male teachers used 5 speaker-oriented tags out of 8 tag questions:

- (c) ... *sınıftaki öğrenciye dürüst vatandaş zor anlatırsınız, doğru mu?*
'... you may have difficulties in explaining an honest citizen, right?'

Speaker-oriented modal tags signal the speaker's degree of certainty about the proposition expressed (Coates 1993: 120). By using them, teachers ask the students to confirm the teachers's proposition while teaching in the laboratory in front of a cadaver or a microscope, or in the classroom.

3.1.2.

Another kind of tag, having addressee-oriented function are facilitative tags. These indicate concern for students' understanding and invite students to participate in the discourse. In the Medical School, the female teachers used 3 (out of 25) and the male teachers used 2 (out of 4) addressee-oriented facilitative tags, as in the next example:

- (d) *Plazmı vardı değil mi?*
'It had plasm, didn't it?'

In the School of Education the female teachers' tag usage contained all addressee-oriented tags, i.e. 15, while the male teachers used 3 (out of 8) addressee-oriented tags:

- (e) *Evet deprem korkusu değil mi?*
 ‘Yes, the fear of earthquakes, right?’

Facilitative tags also include informal style tags such as “di mi / de mi”, a short form of “değil mi”. Regardless of the school they taught in, the female teachers used informal style tags (in the Medical School: 1 and the School of Education: 7):

- (f) *Lümen düzenli di mi?*
 ‘Lumen is orderly, right?’
- (g) ... *kuram ve yapıların bilgisi, hatırladınız de mi?*
 ‘... you remembered the theory and the structure, right?’

3.2.

The frequency of rhetorical questions used by female teachers in the Medical School is 6, and by male teachers 13. Similarly in the School of Education, the use of rhetorical questions is 8 by female teachers and 13 by male teachers. In asymmetric discourse such as classroom interaction, rhetorical questions are used by teachers in order to repeat, to remind or to explain some information to students. Clark (1996: 377) terms rhetorical questions “staged communicative acts” and adds that there is no need for an answer to them.

Male teachers use rhetorical questions more often than female teachers because by means of this device they can attract the attention of students for a certain period of time and keep the students alert, which may be an indication of men’s tendency to maintain and increase their authority by keeping students attentive and alert to the lesson.

3.3.

The frequency of addressing students as “arkadaşlar” (friends-guys) in the Medical School is 2 by female teachers and 15 by male teachers. Similarly in the School of Education it is used only once by the female teacher and 15 times by the male teachers:

- (h) ... *bir üst tarafta, arkadaşlar, şurada ...*
 ‘... at the higher part, guys, here it is ...’
- (i) ... *evet, arkadaşlar sınıf yönetimi modelleri...*
 ‘... ok, guys, models of class management ...’

During a symmetrical discourse this kind of addressing is normal, as gender and educational differences are of no importance. In asymmetrical discourse, such as classroom discourse, where the teacher’s status is higher than the students’, this type of address is unusual, since teachers can address their students as “arkadaşlar”, but not vice versa.

Results show that male teachers are more consistent in using this type of address, which suggests that with their choice of address type they forefront their powerful position in front of the class (Açıkalın 2001: 230).

4. Evaluation of results

When the results are evaluated based on the six universals regarding language and gender proposed by Holmes (1993) the following conclusions are reached:

4.1.

This study contributes to the statement that women and men develop different patterns of language use. The frequency of tag question use by female teachers in both schools is more than that of male teachers (40 for females, 12 for male teachers).

4.2.

More frequent use of facilitative tags by female teachers (18 to 5) suggests that women tend to focus on the affective functions of interaction more. They use these tags to support the students, as they feel responsible for ensuring the interaction proceeds smoothly. Female teachers, with the usage of facilitative tags, try to develop a supportive role; they invite their students to contribute to the discourse.

However, the difference between the number of facilitative tags used by female teachers in both schools (Medical School: 3, School of Education: 15), is probably due to the differences in the structure of the subject matter and professional code. In the Medical School, the topics are more scientific, whereas in the School of Education the topics include the humanities and educational sciences. Therefore, through the medical language, medical students are exposed to more visual elements such as tissues or cadavers in laboratories, whereas education students are open to discuss abstract topics.

Another reason is that in the Medical School female teachers introduce and explain the facts in medical language in a laboratory setting where every material thing is seen clearly. And consequently, the female teachers use more modal tags in the Medical School than the teachers in the School of Education, and these modal tags are speaker-oriented, signalling the teachers' degree of certainty about the subject at hand.

In the School of Education, on the other hand, in classroom settings the female teachers try to elicit the information about the topic from the students; they encourage the students to participate in the lesson by using addressee-oriented facilitative tags.

4.3.

Moreover, women's usage of facilitative tag questions, which also include the informal tags "di mi / de mi" indicates the female teachers' sincerity in establishing solidarity with their students. These informal tags are not used by the male teachers.

Furthermore, in the School of Education, the female teachers used them in order to encourage the students' participation. The use of tag questions or facilitative tags by female teachers contributes to the hypothesis of women's tendency to use linguistic devices that stress solidarity. The female teachers, thus, by using informal style tags establish solidarity and friendly-like behavior with their students.

4.4.

The hypothesis that women tend to interact in ways that will maintain and increase solidarity, while in formal contexts men tend to interact in ways that will maintain and increase their power and status is also verified in this survey. The male teachers' addressing their students as "arkadaşlar" contributes to this hypothesis. It indicates their power and status in front of class. By using it they tend to show solidarity with the students, but as this type of address is not used reciprocally in an asymmetrical discourse, they are actually forefronting their position of power before the class. In other words, male teachers in order to maintain and increase their authority and power in class, use this type of address more than female teachers.

4.5.

The fifth hypothesis, which states that women use more standard forms than men, was not the focus of the survey, as both female and male teachers are equally educated and use standard Turkish exclusively.

4.6.

The female teachers' use of the informal style in tag questions contributes to the hypothesis that women are stylistically more flexible than men. Also in asymmetrical discourse, female teachers can show the characteristics related to their gender.

5. Conclusion

To sum up, this survey conducted in the Medical School and the School of Education revealed differences between the language used in classrooms / laboratories by female and male teachers. Another important fact found in this study is that the differences of subject matter, and hence the professional codes used in these two schools, contributes to the linguistic differences between teachers of the same gender in different workplaces. Furthermore, although male teachers seemed to always be status and power conscious in front of the students, the female teachers' frequent usage of tag questions shows that they are not so conscious of status and power as their male colleagues. A greater use of modal tags by the female teachers of the Medical School in comparison to the female teachers at the School of Education indicates that the former tried to signal their degree of certainty about their subject matter, and that by using the medical language, they tried not to leave any space for the students' discussions. In contrast, in the School of Education the female teachers seemed to provide the students more opportunities to participate or to discuss. As a

result, in workplaces such as schools, subject matter and professional code play an important role in determining the linguistic differences within the same gender as well as between different genders.

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Multicomponent analytical predicates in Tuvan

Ludmila A. Shamina

Shamina, Ludmila A. 2003. Multicomponent analytical predicates in Tuvan. *Turkic Languages* 7, 13-17.

In Turkic languages, a predicate can be expressed by structurally and functionally diverse groups of grammatically closely joined word forms constituting an analytical construction. Two-, three-, and even four-component predicates regularly occur in Tuvan. The components of these formations are forms of auxiliary verbs and infinite forms (converbs, participles and infinitives) of lexical verbs. The auxiliary component can also be expressed by the nominal predicates of existence (*bar* 'existent' and *čooq* 'non-existent') or by particles.

In the present article, we deal with Tuvan constructions consisting of a lexical verb in the converb form $-(X)p$ and an auxiliary verb in a finite form. In Turcology, such combinations are called "compound verbs", "biverbal constructions", "postverbal constructions", etc. Here, they are dealt with as analytical predicates. Their structure and function are analyzed according to several parameters: (1) the number of components, (2) the lexico-grammatical and grammatical characteristics of the components, and (3) their semantics.

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A preliminary analysis of Tuvan predicates shows that their forms as well as their specific grammatical meanings are extremely diverse. The terms used in linguistic literature are not sufficient to describe these diverse forms. The wide spectrum of structural forms of predicates involves functional diversity. Multicomponent predicates consist of two, three, or more word forms of different grammatical nature, each one contributing its own function as part of the whole.

The first component of these predicates always expresses the main lexical meaning of the whole, while the subsequent components express lexico-grammatical meanings, in particular, actional (Aktionsart), modal, and some other characteristics. Analytical multicomponent forms also convey phase meanings of the initiation and termination of an action. These are expressed by the "complex verb" construction. They represent a different type since they contain a phase verb retaining its semantics.

The class of analytical multicomponent predicates encompasses several functional types of predicates, each of which is represented by a certain set of structural forms which may belong to several structural types.

The following functional types are expressed in Tuvan by means of analytical predicates.

1. The actional (Aktionsart) type

This type is composed of values of various modes of action expressed by so-called “complex verbs”. Structurally, the complex verbs are combinations of simple converbs (-*p*, -*a*) or the negative adverbial participle -*bain* with auxiliary verbs.

One task is to define the precise semantic content of each form and to analyze its systematic relationship with other similar forms. In what situations, and for what reason does a speaker choose a given form? In addition to the two-component constructions called complex verbs, various three-component constructions with two adverbial participles preceding the finite form participate in expressions of this type, conveying more complicated and delicate meanings. In these chains the first component itself may be a complex verb. These constructions appear as structural and semantic combinations of binary constructions, for example:

- (1) *Amīdirap čüglä äñ-nä kañ-kadık,*
kadığ-bärtkä šīdamık kižilärni šilip ap arttīrip algan.
 ‘Life has selected only absolutely healthy and difficulty-hardened persons.’

Here *šilip* means ‘choose’ and *arttīrip* means ‘retain’. Literally, ‘having chosen it, it retains = selects’. This is a four-component construction.

- (2) *Däñ čirīn dolgandir üzüüt-xovagannar užup čorup turgannar.*
 ‘Night butterflies flew around the lamp.’
- (3) *A’t mannar čoruy bargan.*
 ‘The horse ran away.’
- (4) *Xäp däär orbak samdar čüvälärimni dürgän-nä kädip algaš,*
avamnıñ čanınga čügürüp čädä bārgān.
 ‘I quickly put on the tatters which they called clothes and set off running to my mother.’

2. The phase type

A predicate containing phase components principally may be a verb or a noun. As regards verbal predicates, the phase components may be found in both simple and analytical predicates.

The simple predicate may contain a phase component. This type includes analytical constructions whose first component is the -*p* converb and whose second component is a phase verb: *egele-* ‘to begin’; *soksaar-* ‘to stop’. For example:

(5) *čugaanī bayīr čādiriškinindān āgālāār*
 ‘to begin a speech with greeting’

(6) *Ča’s soksaan.*
 ‘The rain stopped.’

The predicate may be expressed by a simple verb, but in examples of the type *tudup āgālāār* ‘to begin to build’, *čirip āgālāār* ‘began to dawn’ it is expressed by a complex verb.

The predicate expressed by a complex verb permits a phase component if it expresses an imperfective continuous action or state. These are analytical lexico-grammatical constructions with one of the four verbs *tur-*, *olur*, *čüt-*, and *čor-* as the first auxiliary component and with the phase verb as the second component. The component preceding the phase verb takes the *-p* converb.

3. The temporal type

This type encompasses multicomponent forms of predicates expressing localization of an action or a state in time. Traditionally, these forms are not included in the tense categories.

Temporal meanings of this type are expressed, first of all, by various “periphrastic” or “descriptive” forms of predicate verbs, composed of participial forms of the lexical verb, in combination with certain tense forms of auxiliary verbs, namely *bol-*, the defective verb *e-* ‘be’ and the verbs of state *tur-* ‘stand’, *čüt-* ‘lie’. For example:

(7) *Xäy-lä oon-bilä margišpas turgan men.*
 ‘I really should not have argued with him.’

(8) *Xäymär-oolga šagda čüglä kara karaktar taaržir čoraan.*
 ‘Very long ago Xäymär-ool liked only black eyes.’

4. The modal type

The modal constructions are analytical predicate constructions which express meanings of potentiality and irreality.

Unlike Russian, Tuvan has very few modal words. The main expression of subjective modality is a predicate of an analytical type.

The modal particles are numerous and frequent, though they differ from the Russian particles in a number of important ways.

The Russian modal particles function as parenthetical words which belong to a sentence, but not as “sentence parts”. Their position in the sentence is relatively free; they may move to refer to parts of the sentence or the sentence as a whole. The Tuvan modal particles may be inserted into the predicate as an analytical component. They often assume personal markers, which demonstrates their predicative nature.

Semantically, the particles carry both modal and expressive meanings. It is quite usual that one particle has both modal and expressive meanings simultaneously.

The essentially modal analytical forms of predicates are forms that express the following meanings:

A. Potential action:

(a) An action that the subject intends to carry out in the near future:

- (9) *Ool-āštāringā čādārīn kīzīp turar.*
'The boy is trying to catch up with his friends.'

(b) An action which the subject is going to carry out or wants to carry out in the near or relatively far future:

- (10) *Mašina sadīp salīr dāp tur men.*
'I am going to buy a car.'

(c) An action which the subject is not going to carry out (negated forms):

- (11) *Men īnaar baarīn čūū-daa dāp bodavas mān.*
'I think I am not going to go there.'

(d) An action which seems possible to carry out, depending on various degrees of probability:

- (12) *Sāni dāāš, čāčākti kayīn-daa tīp ākkāp bolur mān.*
'For you, I can find flowers anywhere.'

- (13) *Sān ōōrānīp šīdaar īškažīl sen.*
'That means you can learn.'

- (14) *Ānik īt artap kirā albas.*
'The puppy cannot step over.'

(e) An action which should / should not occur:

- (15) *Ol ākzamānni čādīīškinnīg dužaar xūlālgālig.*
'He has to succeed in passing the exam.'

(f) An action which is, or is not permitted to take place:

- (16) *Artīk sōs sōglādir āvāstār.*
'No extra word is permitted to be said.'

In the expression of these meanings, the first component usually is the future participle. Its function in Tuvan is analogous to that of the infinitive in Altay, Shor, and Khakas.

B. Unreal action: This form of expression is used to inform the addressee that the action is to be considered as imagined rather than having happened or likely to happen in the future. For example:

- (17) *Saktirimga daštın xavazı-bilä kadı sālǵüüstäp turgan-daa iškaš.*
'It appeared as if he walked outside together with his puppy.'

There are also analytical constructions relating to social space and expressing in whose interests and to whose favor the action is taken, i.e. whether it is directed towards the benefit of the speaker itself or towards the benefit of another person. For example:

- (18) *Däädigän bāzin bo-la sägirip alir.*
'The hawk also often seizes (its prey).'
- (19) *Avam uruglarınčā xalıp käl čidir.*
'My mother is running to her children.'

5. The expressive-evaluative type

This type is represented by several constructions: (a) constructions of nominal predicates in the accusative form and (b) constructions with a participle having personal markers of the possessive type and with the demonstrative pronouns *ol* or *bu* as the final form.

6. The negative type

The main way of expressing verbal negation in Tuvan is by using the suffix *-ba*, which occupies the position in front of the tense-mood marker. The negation of presence is expressed by *čoq*. The negation of a predicative marker is expressed with the particle *eves*.

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Comparison between the vowels of German and Turkish

Volkan Coşkun

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In 1999 and 2000, Prof. Dr. Jens-Peter Koester, a phonetics professor, gave me the opportunity to do some research in the laboratory of the University of Trier. During my research I was able to determine the quantities and qualities of the Turkish vowels. In a series of tests, vowels articulated by several male adult speakers who spoke Standard Turkish fluently were analyzed by means of spectrograms. To this end, the formant frequencies of German vowels were taken from the *Atlas Deutscher Sprachlaute*, written by Hans Heinrich Wängler. In the present article, the differences and similarities of the Turkish and German vowels in view of articulation, phonology and acoustics have been identified. The vowels are identified in terms of their articulatory classification, which comprises the following features: compact, diffuse, gravis, flat and long. Finally, for the phonological definition, in order to distinguish the Turkish vowels in detail, features such as back, front, high, low, round, tense and long are examined.

Within the Turkish vowel system we distinguish 19 monophthongs, ten of which are short, and nine are long. The quality of the vowel depends on its surroundings or, more precisely, on the segment that follows. The distinctive function of the quantity is so important that it affects the orthography as well.*

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1. Introduction

1.1.

The Turkic languages cover a large area stretching from the European part of Turkey through Central Asia to Northeast Siberia. The morphological differences between them are much smaller than the phonetic and lexical ones. The Turkish vowels dealt

* My knowledge about the Turkish vowels is based on several experimental research studies carried out in the phonetic laboratory of the Trier University in Germany. First of all I would like to thank to Prof. Dr. Jens-Peter Koester, who gave me the opportunity to use his laboratory. My further thanks is to Dr. Herbert Masthoff, who helped me with his scientific experience. In addition my special thanks to Prof. Dr. Ethem Ruhi Figlali, the President of Mugla University, who supported me to carry out this research.

with in this article derive from the language spoken in modern Turkey today, which is based on the dialect of Istanbul, and is also called Standard Turkish.

1.2.

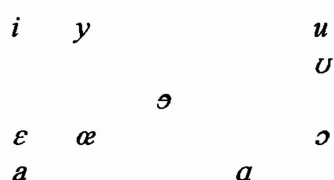
In 1999 and 2000, Dr. Jens-Peter Koester, a phonetics professor, gave me the opportunity to do some research in the phonetics laboratory at the University of Trier. During my research I was able to determine the quantities and qualities of the Turkish vowels. In the test series several male adult speakers, who spoke Standard Turkish fluently, articulated vowels as isolated. The vowels were then analyzed with the help of a spectrogram. In order to this, the formant frequencies of German vowels were taken from the *Atlas deutscher Sprachlaute*, written by Hans Heinrich Wängler. The present article identifies the differences and similarities between the Turkish and German vowels with respect to their articulation, phonology and acoustics.

2. The classification of the vowels

The vowels can be defined in terms of articulation, acoustics and phonology.

2.1. Articulatory definition

Standard Turkish possesses the following vowel qualities.



The vowels are grouped according to the following articulatory classification.

2.1.1. Part of the tongue

This classification deals with the horizontal movement of the tongue. The horizontal movement of the tongue affects the formation of the vowels.

	Turkish	German
front	[i], [y], [œ], [a:], [i:], [y:], [ε], [ε:], [œ:], [a]	[e:], [ø:], [ɪ], [ʏ], [i], [i:], [y:], [œ:], [ε], [ε:], [a]
central	[ə], [ə:]	[ə]
back	[u], [ɔ:], [ɑ], [u:], [ʊ], [ɔ], [ɑ:]	[o:], [u:], [ʊ], [ɔ], [ɑ:]

2.1.2. Opening degree of the oral cavity

The opening degree refers to the size of the angle between the upper and the lower jaw, which forms the vertical opening of the mouth. It refers to the distance between

the surface of the whole tongue and the palate during the articulation of the vowels. High vowels are closed, low vowels are open.

	Turkish	German
closed	[i], [y], [u], [i:], [y:], [u:]	[i:], [y:], [u:]
closed-half closed	[ʊ]	[ɪ], [ʏ], [ʊ]
half closed	[ə], [ə:]	[e:], [ø:], [o:]
half closed-half open	--	[ə]
half open	[ɔ:], [œ:], [ɛ], [ɛ:], [œ], [ɔ]	[ɛ], [ɛ:], [ɔ], [œ]
half open-open	--	[ɐ]
open	[a:], [ɑ], [a], [ɑ:]	[a], [ɑ:]

2.1.3. Lip position

The lip position expresses the curving and the labializing of the vowels. The phonetic formation of rounded and spread vowels depends both on the position of the lips and the movements of the lower jaw and the tongue, two of the most important articulators. We differentiate the vowels as spoken with spread, rounded or neutral lips.

	Turkish	German
spread	[i], [ə], [ə:], [a:], [ɑ], [i:], [ɛ], [ɛ:], [a], [ɑ:]	[ɪ], [i:], [ɛ], [ɛ:], [a], [ɑ:]
neutral	--	[ə], [ɐ]
rounded	[y], [u], [ɔ:], [œ:], [y:], [u:], [ʊ], [œ], [ɔ]	[ʏ], [ø:], [o:], [y:], [u:], [ʊ], [œ], [ɔ]

2.1.4. Muscle tension

The muscle tension is based on the degree of the strain of the speech organs. In German and Turkish, the long vowels are tense, the short ones are lax.

	Turkish	German
tense	[ə:], [ɛ:], [œ:], [ɔ:], [a:], [ɑ:], [i:], [y:], [u:]	[e:], [ø:], [o:], [i:], [y:], [u:] [ɛ:]
half tense	--	[a], [ɑ:]
lax	[i], [y], [u], [ə], [a], [ɑ], [ʊ], [ɛ], [œ], [ɔ]	[ɪ], [ʏ], [ə], [ɐ], [ʊ], [ɛ], [œ] [ɔ]

2.1.5. Length

The length, which is technically easy to measure with the help of an oscillograph, is important in both Turkish and German. The short vowels in German are traditionally

referred to as “open”; the long ones as “closed”. In the articulatory vowel diagram, the length of the vowels is indicated by a colon (:).

	<i>Turkish</i>	<i>German</i>
long	[ɔ:], [œ:], [a:], [i:], [y:], [u:], [ə:], [ɛ:], [ɑ:]	[ø:], [o:], [e:], [i:], [y:], [u:], [ɛ:], [ɑ:]
short	[i], [y], [u], [ə], [ɑ], [ʊ], [ɛ], [œ], [ɔ], [a]	[ɪ], [ʏ], [ʊ], [ɐ], [ɐ], [œ], [ɔ], [ʊ], [a]

The following articulatory vowel diagram shows the short and long vowels of the Turkish language.

		Part of the tongue					
		front		central	back		
		lip position					
		spread	rounded	spread	spread	rounded	
Opening degree of the mouth space	closed	<i>i</i>	<i>y</i>			<i>u</i>	long-short
	closed-half closed					<i>ʊ</i>	short
	half closed			<i>ə</i>			long-short
	half open	<i>ɛ</i>	<i>œ</i>			<i>ɔ</i>	long-short
	half open-open						long-short
	open	<i>a</i>			<i>ɑ</i>		long-short
							Length

Examples of the Turkish monophthongs:

1	2	3	4	5	6	7
<i>iki</i> [i'ci]	<i>iğne</i> [i:'ne]	<i>üzüm</i> [y'zym]	<i>düğme</i> [dy:'me]	<i>uzun</i> [u'zun]	<i>tuğra</i> [tu:'ra]	<i>mahlûk</i> [mah'luk]

8	9	10	11	12	13	14
<i>ılık</i>	<i>tığ</i>	<i>ekmek</i>	<i>yeğen</i>	<i>öz</i>	<i>öğretmen</i>	<i>kor</i>
[ɐ'lək]	[tə:]	[ec'mec]	[je:'en]	[œz]	[œ:'retmen]	[kɔr]

15	16	17	18	19
<i>doğu</i>	<i>kâr</i>	<i>kâmil</i>	<i>kar</i>	<i>kağnı</i>
[dɔ:'u]	[car]	[ca'mil]	[kar]	[ka:'nə]

2.2. The acoustic definition

The acoustic definition of vowels is based on the acoustic characteristics of the voiced source and the tail pipe configuration. The basic tone and its appendant overtones are filtered by the resonance characteristics of the throat-nose-mouth space in such a way that three formants usually develop for each individual vowel. Two of them (F1 and F2) are traditionally used for the vowel characterization. These values of the formants (F1 and F2) are placed in a two-dimensional coordinate system, and they allow the precise description of all the vowels. The frequencies of the formants of the Turkish vowels, which were determined during my research in the laboratory at the University of Trier, and the German vowels, which were measured by Hans Heinrich Wängler (1976), are represented in the following table and entered under the appropriate formant.

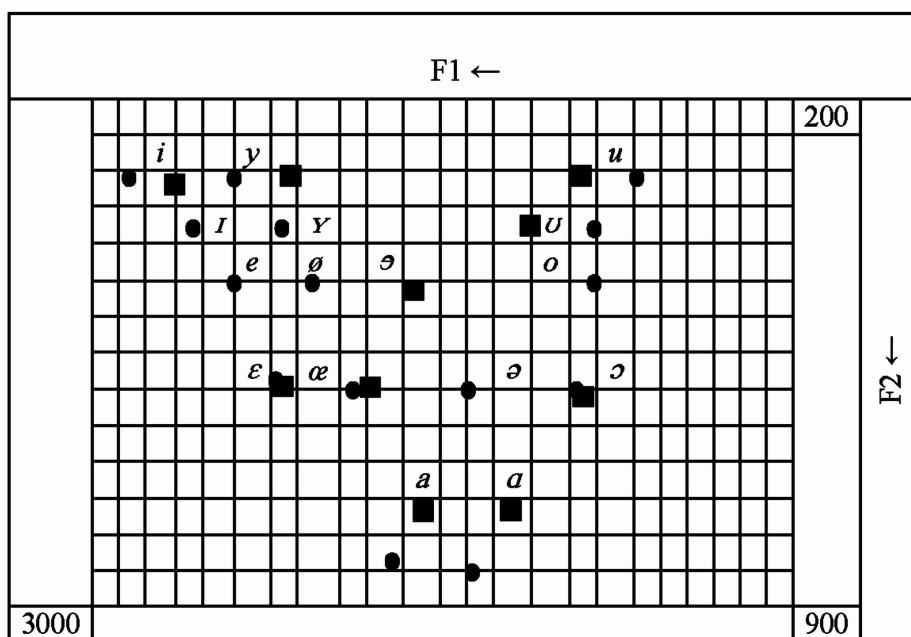
The following table contains the frequencies of the German and Turkish vowels:

German			Turkish		
	F1	F2		F1	F2
<i>a</i>	800	1400	<i>a(:)</i>	650	1250
<i>a:</i>	850	1150	<i>a(:)</i>	650	1075
<i>ε</i>	500	1900	<i>ε(:)</i>	500	1875
<i>e:</i>	375	2100			
<i>ə</i>	500	1200			
<i>ɪ</i>	325	2200			
<i>i:</i>	275	2400	<i>i(:)</i>	275	2200
<i>ɔ</i>	500	900	<i>ɔ(:)</i>	500	850
<i>o:</i>	375	850			
<i>u</i>	325	850	<i>u</i>	325	1000
<i>u:</i>	275	750	<i>u(:)</i>	275	825
<i>æ</i>	500	1550	<i>æ(:)</i>	500	1500
<i>ø:</i>	375	1800			
<i>ʏ</i>	325	1800			
<i>y:</i>	275	2000	<i>y(:)</i>	275	1800

			ə(:)	375	1375
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Diagram of the values of formants of German and Turkish vowels:

■ Turkish
● German



Jakobson, Fant & Halle (1951) devised a system of acoustic features that would allow the phonetic (more often referred to as phonological) description and definition of vowels and consonants. The system of Jakobson, whose ideas go back to the founder of phonology in Prague, N. S. Trubezkoy, is an early contribution to the study of linguistics. Jakobson's system has a strictly acoustic and binary nature. It operates with discrete [+] or [-] values of the features. For the description of the Turkish vowels, the following acoustic characteristics are needed, whose number in the overall system amounts to twelve pairs of characteristics.

2.2.1.

Compact: Both formants are in the middle of the spectrum, relatively close to each other. If the sounds are compact, F1 appears quite high.

	Turkish	German
compact	[a], [a:], [ɑ], [ɑ:]	[a], [ɑ:]

2.2.2.

Diffuse: The Features are called “diffuse” if the formants are far apart. The intensity is located in the periphery of the sonogram. In the case of diffuse sounds, F1 is very low.

	Turkish	German
diffuse	[i], [i:], [y], [y:], [u], [u:], [ʊ]	[i:], [ɪ], [y:], [u:], [ʏ], [ʊ]

2.2.3.

Gravis: In the sonogram, the concentration of intensity is visible on the lower periphery, i.e. in the lower frequency range. If the sounds are gravis, F1 and F2 are only slightly apart; if the sounds are high, both formants are far apart.

	Turkish	German
gravis	[u], [u:], [ʊ], [ɔ], [ɔ:]	[u:], [ʊ], [o:], [ɔ]
±gravis	[ə], [ə:]	[ə], [ɐ]

2.2.4.

Flat: This feature only refers to vowels that have a high F2. Furthermore, those vowels have to possess the same F1. If two vowels fulfill these conditions, the one with the lowest F2 is considered flat.

	Turkish	German
flat	[y], [y:], [œ], [œ:]	[y:], [ʏ], [ø:], [œ]

2.2.5.

Long: This feature possesses a phonological character and is distinctive. To be referred to as “long”, the long vowel has to be almost twice as long as the short one.

	Turkish	German
long	[ɔ:], [œ:], [a:], [i:], [y:], [u:], [ə:], [ɛ:], [ɑ:]	[ø:], [o:], [e:], [i:], [y:], [u:], [ɛ:], [ɑ:]

The following articulatory vowel diagram represents the acoustic features of the Turkish vowels:

	-gravis		±gravis	+gravis	
	-flat	+flat			
+diffuse	<i>i(:)</i>	<i>y(:)</i>			<i>u(:)</i>
+diffuse					<i>ʊ</i>

-diffuse			ə(:)		
-compact	ɛ(:)	æ(:)			ɔ(:)
+compact	a(:)			a(:)	

It is also possible to describe the acoustic features in the form of a feature matrix:

characteristic	vowel																		
	<i>i</i>	<i>i:</i>	<i>y</i>	<i>y:</i>	<i>u</i>	<i>u:</i>	<i>ʊ</i>	ə	ɜ:	ɛ	ɛ:	æ	æ:	ɔ	ɔ:	ɑ	ɑ:	ɑ	ɑ:
compact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+
diffuse	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	0	0	0	0
gravis	-	-	-	-	+	+	+	±	±	-	-	-	-	+	+	0	0	0	0
flat	-	-	+	+	0	0	0	0	0	-	-	+	+	0	0	0	0	0	0
long	-	+	-	+	-	+	-	-	+	-	+	-	+	-	+	-	+	-	+

2.3. Phonological definition

The articulatory differences among various vowels have been shown in the articulatory vowel diagram in the first paragraph. Within the Turkish vowel system we distinguish 19 monophthongs, ten of which are short, nine long. The quality of the vowel depends on its surroundings, more precisely, on the segment that follows. The distinctive function of the quantity is so important that it affects the orthography as well. In modern Turkish words, the long vowel phonemes are depicted orthographically as “vowel + ğ”. In loanwords the length of the vowels is only partly expressed. Because the long vowels have distinctive characteristics, it is necessary to pay attention to the length of vowels to be able to understand spoken Turkish. In order to distinguish the Turkish vowels in detail, the features back, front, high, low, round, tense and long must be taken into consideration.

In order to ensure the phonological distinction the following matrix of characteristics is sufficient for the Turkish vowels.

Characteristic	Vowel																		
	<i>i</i>	<i>i:</i>	<i>y</i>	<i>y:</i>	<i>u</i>	<i>u:</i>	<i>ʊ</i>	<i>ə</i>	<i>ɜ:</i>	<i>ɛ</i>	<i>ɛ:</i>	<i>æ</i>	<i>æ:</i>	<i>ɔ</i>	<i>ɔ:</i>	<i>a</i>	<i>a:</i>	<i>ɑ</i>	<i>ɑ:</i>
back	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	-	-	+	+
front	+	+	+	+	-	-	-	-	-	+	+	+	+	-	-	+	+	-	-
closed	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
open	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+
rounded	-	-	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-
long	-	+	-	+	-	+	-	-	+	-	+	-	+	-	+	-	+	-	+

	German	Turkish
	Long vowels	
	Different opening degree	
/i:/#/e:/	<i>Tier – Teer</i> /ti:r/#/te:r/ (phonetic: [ti:ɐ] – [te:ɐ])	
/e:/#/ɛ:/	<i>Reeder – Räder</i> /re:d ə r/#/redər/	
/e:/#/a:/	<i>Mär – Maar</i> /mɛ:r/#/ma:r/	
/u:/#/o:/	<i>Kur – Chor</i> /ku:r/#/ko:r/	
/o:/#/a:/	<i>bot – bat</i> /bo:t/#/ba:t/	
/y:/#/ø:/	<i>Rühmer – Römer</i> /ʁy:mər/#/rø:mər/	
/ø:/#/a:/	<i>Öl – Aal</i> /ø:l/#/a:l/	
/i:/#/ɛ:/		<i>çiğ – çığ</i> /tʃi:/#/tʃɛ:/
/i:/#/e:/		<i>diğer – değer</i> /di:'ɛr/#/de:'ɛr/
/i:/#/a:/		<i>iğ – ağ</i> /i:/#/a:/
/y:/#/ɛ:/		<i>düğme – değme</i> /dy:'mɛ/#/de:'mɛ/
/u:/#/o:/		<i>tuğ – tığ</i> /tu:/#/tɔ:/
/ø:/#/ɔ:/		<i>dığan – doğan</i> /dɔ:'an/#/dɔ:'an/
/ø:/#/a:/		<i>sığır – sağır</i> /sɔ:'ɛr/#/sa:'ɛr/
/ɔ:/#/a:/		<i>yoğ – yağ</i> /yo:/#/ya:/
	Front vowels – back vowels	
/i:/#/u:/	<i>Tier – Tour</i> /ti:r/#/tu:r/	
/e:/#/o:/	<i>reden – roden</i> /re:dən/#/ro:dən/	
	Front vowels – back rounded vowels	
/i:/#/y:/	<i>Mieder – müder</i> /mi:dər/#/my:dər/	
/e:/#/ø:/	<i>Lehne – Læhne</i> /le:nə/#/lø:nə/	
	Rounded front vowels – back vowels	
/y:/#/u:/	<i>spülen – spulen</i> /ʃpy:lən/#/ʃpu:lən/	
/ø:/#/o:/	<i>Möhren – Mohren</i> /mø:rən/#/mo:rən/	
	Short vowels	
	Different opening degree	
/ɪ/#/ɛ/	<i>Stille – Stelle</i> /ʃtɪlə/#/ʃtelə/	
/ɛ/#/a/	<i>Äcker – Acker</i> /'ɛkər/#/'akər/	<i>lef – lâf</i> /leɫ/#/laf/
/ʊ/#/ɔ/	<i>Glucke – Glocke</i> /'glʊkə/#/'glɔkə/	
/ɔ/#/a/	<i>lochen – lachen</i> /'lɔxən/#/'laxən/	
/ʏ/#/œ/	<i>knüpfen – knöpfen</i> /knyɸfən/#/'knœɸfən/	
/œ/#/a/	<i>kænnte – kannte</i> /'kœntə/#/'kantə/	<i>kör – kâr</i> /cœr/#/car/
/ɪ/#/ə/		<i>asil – asıl</i> /a'sil/#/a'səl/
/ɪ/#/ɛ/		<i>bilgi – belge</i> /bil'ʃi/#/bel'ʃe/

/i/#/œ/		<i>giz – göz</i> /fiz/#/fœz/
/i/#/a/		<i>kir – kâr</i> /cir/#/car/
/i/#/ɑ/		<i>cin – can</i> /cin/#/can/
/y/#/e/		<i>büzmek – bezmek</i> /byzmec/#/bezmec/
/y/#/œ/		<i>güç – göç</i> /fyç/#/fœç/
/y/#/ɔ/		<i>büz – boz</i> /byz/#/boz/
/y/#/a/		<i>lüp – lâp</i> /lyp/#/lap/
/y/#/ɑ/		<i>cüz – caz</i> /cyz/#/caz/
/ʊ/#/ə/		<i>duş – dış</i> /duʃ/#/dəʃ/
/ʊ/#/e/		<i>but – bet</i> /but/#/bet/
/ʊ/#/œ/		<i>çul – çöl</i> /tʃul/#/tʃœl/
/ʊ/#/ɔ/		<i>burç – borç</i> /burtʃ/#/bɔrtʃ/
/ʊ/#/ɑ/		<i>kur – kar</i> /kur/#/kar/
/ə/#/e/		<i>atış – ateş</i> /a'təʃ/#/a'teʃ/
/ə/#/ɔ/		<i>karı – karo</i> /kɑ'rə/#/kɑ'rɔ/
/ə/#/a/		<i>kir – kâr</i> /cir/#/car/
/ə/#/ɑ/		<i>adım – adam</i> /a'dəm/#/a'dam/
/e/#/a/		<i>emel – amel</i> /e'mel/#/a'mel/
/ɔ/#/ɑ/		<i>boş – baş</i> /boʃ/#/baʃ/
Front vowels – back vowels		
/ɪ/#/ʊ/	<i>Kippe – Kuppe</i> /'kɪpə/#/'kʊpə/	
/e/#/ɔ/	<i>Geld – Gold</i> /gɛld/#/gɔld/	<i>beş – boş</i> /beʃ/#/boʃ/
/i/#/ʊ/		<i>bilme – bulma</i> /bil'me/#/bul'ma/
Front vowels – rounded front vowels		
/ɪ/#/ʏ/	<i>Kiste – Küste</i> /kɪstə/#/kʏstə/	
/i/#/y/		<i>diz – düz</i> /diz/#/dyz/
/e/#/œ/	<i>Bäckchen – Böckchen</i> /'bækçən/#/'bœkçən/	<i>cenk – cönk</i> /dʒɛnc/#/dʒœnc/
Rounded front vowels – back vowels		
/ʏ/#/ʊ/	<i>Müll – Mull</i> /mʏl/#/mʊl/	
/y/#/ʊ/		<i>üç – uç</i> /ytʃ/#/utʃ/
Vowels of different quantity		
/e:/#/e/	<i>quellen – quälen</i> /'kve:lən/#/'kvɛ:lən/	<i>eğmek – emek</i> /e:'mɛc/#/e'mɛc/
/a:/#/a/	<i>Schall – Schal</i> /ʃal/#/ʃa:l/	
/i:/#/i/		<i>iğlik – ilik</i> /i:'lic/#/i'lic/
/y:/#/y/		<i>yüğük – yürük</i> /jy:'ryc/#/jy'ryc/
/u:/#/u/		<i>şûra – şura</i> /ʃu:'ra/#/ʃu'ra/
/ə:/#/ə/		<i>sığla – sıla</i> /sə:'la/#/sə'la/

/œ:/#/œ/		öğrek – örek /œ:ˈrɛc/#/œˈrɛc/
/ɔ:/#/ɔ/		doğru – doru /dɔ:ˈru/#/dɔˈru/
/ɑ:/#/ɑ/		âdet – adet /ɑ:ˈdɛt/#/ɑˈdɛt/
Different quantity and quality		
/i:/#/ɪ/	Kiepe – Kippe /ki:pə/#/kɪpə/	
/y:/#/ʏ/	Fühler – Füller /ˈfʏ:lər/#/ˈfʏlər/	
/u:/#/ʊ/	spuken – spucken /ˈʃpu:kən/#/ˈʃpʊkən/	
/e:/#/ɛ/	Beet – Bett /be:t/#/bɛt/	
/ø:/#/œ/	Höhle – Hölle /ˈhø:lə/#/ˈhœlə/	
/o:/#/ɔ/	Ofen – offen /o:fən/#/ɔfən/	
/ɔ:/#/ɑ/		oğlan – alan /ɔ:lan/#/alan/

Summary

The sounds [ɪ], [ʏ], [e:], [ø:], [o:], [ə] and [ɐ] do not exist in Turkish while [i], [y], [u], [ə], [ə:], [œ:], [ɔ:], [a:] and [ɑ] are not used in German. Almost all the German vowels are formed further in front than the corresponding Turkish vowels (with the exception of [u:]). The Turkish [u(:)] is produced more in front than the corresponding German vowel. The German [a] and [ɑ:] are formed further in front and lower than the corresponding Turkish ones. In German the closed vowels are long, the open ones are short, except for the vowels in foreign words. Closed and open vowels in Turkish are both long and short (except [ʊ]). The system of monophthongs of German and Turkish reveals an obvious symmetry in the arrangement of front and back vowels. In German, vowel doubling means a larger quantity of the vowel (= lengthening), and consonant doubling means a smaller quantity of the vowel (= reduction). In German, the letters <h> and <e> are used as length-marks after an <i>. Turkish, on the other hand, only has the length-mark <ğ>.

The Turkish vowels dealt with in this article essentially possess the same qualities as the German ones.

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Yakut reciprocals

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In Yakut, reciprocity is marked by the suffix *-(I)s*. The same marker also expresses sociative, comitative and assistive meanings. The interpretation of the marker is determined by sentence structure and / or context. The reciprocal meaning can also be rendered by a reciprocal pronoun that is inflected for person and case. This pronoun is used with non-reciprocal verbs as the only marker of reciprocity, and it may also occur with reciprocal verbs. Alongside the reciprocal, sociative, comitative and assistive meanings, the reciprocal suffix can also render a number of other (unproductive) meanings, e.g. anticausative and intensive. It also occurs as a lexicalized component in many verbs. Verbs with the reciprocal marker form all the three subject-oriented diathesis types: “canonical” (= intransitive), “dative” and “possessive”.

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1. Introduction

1.1. Yakut

Yakut (Sakha) belongs to the Northeastern, or Siberian group of the Turkic languages. It is spoken natively by nearly all of the 440,000 Yakuts, most of whom live in the Republic of Sakha-Yakutia and in the adjacent territories. The neighbouring aboriginal languages are Evenki, Even, Yukaghir and Chukchi. The Yakuts migrated to their present territory under the pressure of Mongol tribes and reached the northern boundaries by the 17th-18th centuries. As a result of strong influence of Evenki, a specific dialect of Yakut, Dolgan, was formed to the north-west of Yakutia (about 7,000 speakers). The Dolgans developed into a separate ethnic group at the beginning of the 20th century. Dolgan differs from Standard Yakut to a greater degree than other dialects. Yakut has undergone strong influence of Mongolic and Tungusic languages in phonetics, grammar and lexicon due to contacts over a long period of time.

1.2. Summary

In Yakut, reciprocity is marked by the suffix *-(I)s*, which also expresses sociative, comitative and assistive meanings, all being closely related semantically. The inter-

pretation of the marker is determined by sentence structure and / or context. For instance, in (1b) the form *tiey-s-* of the verb *tiey-* ‘to carry / cart’ allows all the four readings, but the reciprocal reading of this particular verb is only possible if we add the adverb *xardarūta* ‘by turns’, ‘mutually’.

- (1) a. *Kiniler xardarūta ot tiey-el-ler*
 they by.turns hay.NOM cart-PRES-3PL
 ‘They cart hay by turns.’
- b. *Kiniler [xardarūta] ot tiey-s-el-ler*
 i. ‘They cart hay together.’ (sociative)
 ii. ‘They cart hay [with somebody].’ (comitative)
 iii. ‘They help [somebody] to cart hay.’ (assistive)
 iv. ‘They cart hay to each other.’ (reciprocal)

The readings of (1b) are arranged in the order of preference for this reciprocal form. In the following two sentences with a singular subject the dative object allows the assistive reading only, and the comitative phrase with the postposition *kitta* ‘with’ allows two interpretations:

- c. *Kini aya-ti-yar ot tiey-s-er*
 he father-his-DAT hay cart-REC-PRES.3SG
 ‘He helps his father to cart hay.’ (assistive)
- d. *Kini aya-ti-n kitta ot tiey-s-er*
 he father-his-ACC with hay cart-REC-PRES.3SG
 i. ‘He carts hay with his father.’ (comitative),
 ii. lit. ‘He with his father helps [somebody] to cart hay.’ (assistive)

Sentence (1e), in comparison with (1d), lacks a comitative phrase. The sentence remains ambiguous, but it has the opposite order of preferable interpretations:

- e. *Kini ot tiey-s-er*
 he hay cart-REC-PRES.3SG
 i. ‘He helps [somebody] to cart hay.’ (assistive)
 ii. ‘He carts hay together [with somebody].’ (comitative)

The reciprocal meaning can also be rendered by a reciprocal pronoun which is derived from the reflexive pronoun by root reduplication. It is inflected for person and case. This reciprocal pronoun is used with non-reciprocal verbs as the only marker of reciprocity, and it may also occur with reciprocal verbs, as in (2) where the reciprocal suffix can be omitted without affecting the meaning:

- (2) *Kiniler beye-beye-leri-n homuruy-s-al-lar* (Slepcov 1972: 496)
 they self-self-their-ACC reproach-REC-PRES-3PL
 'They reproach each other.'

To sum up, there are three ways of expressing reciprocity in Yakut: (1) by means of the reciprocal suffix, (2) by means of the reciprocal pronoun, and (3) by a combination of these two means.

Alongside the four meanings, the reciprocal suffix can also render a number of other (unproductive) meanings (e.g. anticausative, intensive, etc.), and it also occurs as a lexicalized component in a great many verbs. Verbs with the reciprocal marker form all the three subject-oriented diathesis types: "canonical" (see (2)), "dative" (see (1b.iv)) and "possessive" (see (3a)), of which the former are intransitive and the latter two types transitive. Subject-oriented constructions can be transformed into object-oriented ones by means of the causative suffix (see (3b)).

- (3) a. *Kiniler oyo-loru-n bil-s-el-ler*
 they child-their-ACC know-REC-PRES-3PL
 'They know each other's children.'
- b. *Kiniler oyo-loru-n bil-ih-in-ner-d-iler*
 they child-their-ACC know-REC-REFL-CAUS-PAST-3PL
 'They introduced (lit. 'made know each other')
 their children to each other.'

There is a special suffix *-la-s-* / *-la-h-* (containing the reciprocal suffix *-s-* / *-h-*) which derives reciprocal verbs from nouns, e.g.: *tuspa* 'difference' → *tuspa-las-* 'to differ from'.

1.3. Data sources

The material for this paper has been elicited from informants and obtained from the following dictionaries and specialist literature: Afanas'ev & Xaritonov (1968), Böhtlingk (1989), Pekarskij (1959), Slepcov (1972), Ubrjatova (1982), Xaritonov (1963, 1982), Čeremisina (1995). The informants Alexandr Petrov and Nikolaj Artem'ev, and Nikolaj Efremov have provided important information. Their examples are given without reference to the source. Some of the examples borrowed from dictionaries and specialist literature (written by Yakut authors) are not confirmed by our informants. This paper relies heavily on the insightful work of the outstanding Yakut linguist L. Xaritonov (1963).

2. Grammatical notes

2.1. General characteristics

Yakut suffixes may have as many as 16-20 variants due to vowel harmony and processes of assimilation and dissimilation of consonants at the morphemic boundaries. For instance, the dative case marker may have 20 allomorphs in the paradigm of simple (non-possessive) declension, viz. five consonant variants with four vowel alternations each. There are two sets of vowel alternations, of open vowels (-a / -e / -o / -ö, as in the dative endings) and of narrow vowels (-i / -i / -u / -ü, as in the reciprocal suffix). The respective long vowels (signified in this paper by geminated letters, as in the Yakut orthography based on the Cyrillic alphabet) are subject to the same type of alternations. Possessive declension has its own morphonological series of endings (see (4)). In most cases we will refer to one of the variants only instead of an entire series.

Yakut is an agglutinating and suffixing language. It has no prefixes. The boundaries between morphemes in verbs are drawn in accordance with the literature on Yakut. In some unclear cases the boundaries are arbitrary, which does not affect the issues under discussion.

Yakut has numerous postpositions (e.g. *kitta* 'with' in (1d)) and no prepositions. The predicate usually takes the sentence-final (rightmost) position. In sentence structure, an important role belongs to converbs: there may be as many as three or four converbs in a sentence preceding a final finite verb form (see (150)).

Yakut is an SOV language. The Yakut noun has two declensions, simple and possessive. Plural is marked by the suffix *-lar*, etc. There are eight cases. Here are the two paradigms; depending on the stem final, the endings may partly vary:

(4)	Simple declension (for SG)	Possessive declension (for 1.SG)
nominative	<i>at</i> 'horse'	<i>at-īm</i> 'my horse'
accusative	<i>at-i</i>	<i>ap-pī-n</i> (<i>pī < mī</i>)
partitive	<i>at-ta</i>	<i>ap-pī-na</i>
dative	<i>ak-ka</i>	<i>ap-par</i>
ablative	<i>at-tan</i>	<i>ap-pī-ttan</i>
instrumental	<i>at-īnan</i>	<i>ap-pī-nan</i>
comitative	<i>at-tiīn</i>	<i>ap-pī-niīn</i>
comparative	<i>at-taaγar</i>	<i>ap-pī-naaγar</i>

The plural number of both declensions (*at-tar* 'horses' and *at-tar-a* 'his / their horses', etc.) and the 2nd (*at-iγ* 'your horse', etc.) and 3rd person (*at-a* 'his / her horse', etc.) of the possessive declension have special sets of forms.

There are about ten simple and periphrastic tense-aspect forms: present, future, and eight past tenses. Examples with the verb *as-* / *ah-* 'to open':

(5)		Present tense	Simple past tense
	1. singular	<i>ah-a-bîn</i>	<i>as-t-îm</i>
	3. singular	<i>ah-ar</i>	<i>as-t-a</i>
	3. plural	<i>ah-allar</i>	<i>as-t-îlar</i>

2.2. The reciprocal suffix

The reciprocal meaning is rendered by the suffix *-(I)s* (with a voiceless dorsal fricative), which alternates with *-(I)h* (with a voiced pharyngeal fricative) in intervocalic position. The vowel is determined by vowel harmony: *-îs* / *-is* / *-us* / *-ûs*. Not infrequently, the suffix is reduplicated and assumes the allomorphs *-sîs* / *-sis* / *-sus* / *-sûs* (see (6a) and (6b)). Simple and reduplicated variants are regarded as identical in meaning, though sometimes the reduplicated form is “preferable for the expression of reciprocal action in contrast to the sociative meaning, and also for the expression of a special emotive colouring in the verbal meaning” (Xaritonov 1963: 19). When followed by the reciprocal marker, stem-final long vowels and diphthongs become short (see (6c)); the final *-y* may be retained in a monosyllabic stem with a short vowel, while in other cases the final *-y-* is optional (see (6b)).

- (6) a. *bil-* ‘to know’ → *bil-is-* / *bil-sis-* ‘to get acquainted [with each other]’
 b. *suruy-* ‘to write’ → *suru-s-* / *suruy-us-* / *suruy-sus-*
 ‘to write [letters] to each other’
 c. *uuraa-* ‘to kiss’ → *uura-s-* ‘to kiss each other’

In certain verb forms, the vowel and the consonant in *-(I)s* undergo metathesis, e.g. *bil-is-* / *bil-sis-* / *bil-si-* ‘to get acquainted’ (cf. (6a)). In nouns derived from reciprocal verbs, the marker *-s*, when preceded by a vowel, always alternates with *-h*, due to intervocalic position:

- (7) a. *bil-si-* ‘to get acquainted’ → *bil-s-ii* ‘acquaintance’
 b. *suru-s-* ‘to write to each other’ → *suru-h-uu* ‘exchange of letters’

2.3. Reflexive and reciprocal pronouns

The reflexive pronoun is descended from the noun *beye* ‘self’, an ancient borrowing from Mongolian. It is inflected for person, number and case (the possessive declension), which results in 42 forms in all. The most frequently used case forms are accusative, dative, and ablative.

The reciprocal pronoun is formed from the reflexive by reduplication. It has 21 forms, as it naturally lacks forms in the singular. Under (8a) are the accusative case forms of the reflexive pronoun, whose 1SG.NOM forms are [*min*] *beye-m* ‘[I] myself’, [*en*] *beye-ŋ* ‘[you] yourself’, [*kini*] *beye-te* ‘[he / she] him / herself’, etc. The accusative case forms of the reciprocal pronoun are given under (8b).

- | | | |
|------|----------------------------------|--------------------------------------|
| (8) | a. reflexive | b. reciprocal |
| 1.SG | <i>beye-bi-n</i> 'myself' | |
| 2.SG | <i>beye-yi-n</i> 'yourself' | |
| 3.SG | <i>beye-ti-n</i> 'him / herself' | |
| 1.PL | <i>beye-biti-n</i> 'ourselves' | <i>beye-beye-biti-n</i> 'each other' |
| 2.PL | <i>beye-yiti-n</i> 'yourselves' | <i>beye-beye-yiti-n</i> 'each other' |
| 3.PL | <i>beye-leri-n</i> 'themselves' | <i>beye-beye-leri-n</i> 'each other' |

The reflexive pronoun can combine pleonastically with reflexive verbs (cf. the analogous use of the reciprocal pronoun in (2)):

- (9) *Kini beye-ti-n xayya-n-ar*
 he self-his-ACC praise-REFL-PRES.3SG
 'He praises himself.'

2.4. Voice

In Yakut grammar as well as in the grammar of other Turkic languages, the reciprocal is traditionally included in the voice system. Five voices are commonly distinguished: active, or basic (zero marking), reflexive (the marker *-(I)n*; see (10b), (11b), (12b)), passive (the marker *-(I)ln* or *-(I)n*; see (10c), (11b.iv), (11c), (12c)), causative (the markers *-t / -d, -tar / -dar / -lar / -nar*, and unproductive *-ar, -iär*; see (10d), (11d), (12d)), and reciprocal (the marker *-(I)s / -(I)h*; see (10e), (11e), (12e)). Verbal valency in Yakut may be changed only by means of these marked voices.

The names of the voices do not cover the semantic range of their usages. To illustrate the derivational properties of the voice markers, here are a few derivational clusters; as can be seen from the examples, derivatives may have meanings which are not a "sum" of the meanings of the components:

- | | | |
|------|---------------------|---|
| (10) | a. <i>bis-</i> | i. 'to smear / spread' |
| | | ii. 'to soil' |
| | b. <i>bih-in-</i> | 'to smear something for oneself' (reflexive-possessive) |
| | c. <i>bih-ilin-</i> | i. 'to smear / soil oneself' (reflexive proper) |
| | | ii. 'to be smeared / soiled' (passive) |
| | | iii. 'to get smeared / soiled' (anticausative) |
| | d. <i>bis-ter-</i> | 'to cause / allow to smear / soil something' |
| | e. <i>bih-is-</i> | i. 'to smear / soil each other' |
| | | ii. 'to smear / soil together' |
| | | iii. 'to help to smear / soil' |
-
- | | | |
|------|-------------------|--|
| (11) | a. <i>sot-</i> | 'to rub something / somebody' |
| | b. <i>sot-un-</i> | i. 'to rub oneself (e.g. with a towel)' (reflexive proper) |
| | | ii. 'to rub one's body part' (reflexive-possessive) |

- iii. 'to rub against something' (autocausative)
(see Slepcev 1972: 335)
 - iv. 'to be rubbed' (passive)
 - c. *sot-ulun-* 'to be rubbed / towelled, etc.' (passive) (Slepcev 1972: 335)
 - d. *sot-tor-* 'to cause / allow to rub something / somebody'
 - e. *sot-us-* i. 'to rub each other', ii. 'to rub together', iii. 'to help to rub'
- (12) a. *albīn-naa-* 'to deceive' (← *albīn* 'sly, a sly person' + denominal suffix *-naa*)
- b. *albīn-na-n-* i. 'to deceive oneself'
ii. 'to pretend (to be)'
- c. **albīn-na-līn-* 'to be deceived'
(the passive meaning is rendered by (12d); see (14))
- d. *albīn-na-t-* i. '*to cause / allow to deceive somebody'
ii. 'to be deceived (through one's own fault)'
- e. *albīn-na-s-* i. 'to fawn (upon somebody)'
ii. 'to deceive each other'

3. Co-occurrence of voice markers

3.1. Introductory

The voice markers may co-occur in the same verbal form in various combinations. The order of voice markers reflects the sequence of derivational operations. Below is a simplified survey of the meanings and derivational relations between the four voices, of which one (causative; the most productive) increases valency and the other three decrease valency. The purpose is to show the place of the reciprocal suffix among the means of valency change. The passive and causative can be expressed by two markers each, in complementary distribution (which is not quite consistent but covers most of the cases). On verbs with a stem final consonant (a) the passive voice is expressed by the suffix *-(I)līn*, and (b) the causative by the suffix *-TAr* (also used on all the derived verbs). On verbs with a final vowel (a) the passive is expressed by the polysemous reflexive suffix *-(I)n*, and (b) the causative by the suffix *-t*.

3.2. Causative: its meanings and co-occurrence with other voice markers

Apart from causativity (permissive and factitive; see (10d), (11d) and (15)), causative forms may also express a kind of passive (reflexive-permissive) meaning; in this case the number of valencies is retained, but agent valency becomes optional:

- (13) a. *īal* *kini-ni* *saaxīmak-ka* *kīay-d-a*
neighbour he-ACC chess-DAT defeat-PAST-3SG
'The neighbour defeated him in chess.'

- b. *Kini saaximák-ka kíay-tar-d-a* (Slepcov 1972: 203)
 he chess-DAT defeat-CAUS-PAST-3SG
 'He lost (lit. 'let-defeat') a game of chess.'

- (14) *Kimie-xe albínna-t-t-ĩŋ?* (Slepcov 1972: 37)
 who-DAT deceive-CAUS-PAST-2SG
 'Who has deceived you?'
 lit. 'Whom did you allow to deceive yourself?' (cf. (12c))

(1) Causative derivation from causatives. Basically, from any intransitive verb a causative verb can be derived which does not differ in any way from other transitives. Furthermore, from any two-place causative (and from any other transitive verb) a three-place causative can be formed, e.g.:

- (15) *öl-* 'to die' → *öl-ör-* 'to kill somebody'
 → *öl-ör-tör-* 'to cause / allow somebody to kill somebody'

(2) Causatives derived from reciprocals. In principle, a causative can be derived from any reciprocal (see 4.2); for unclear reasons, a reflexive marker is inserted between the reciprocal and the causative markers without affecting the meaning; in verbs with the final *-(l)s* which is not (at least genetically) related to the reciprocal marker, insertion of the reflexive suffix is not possible; cf. (16) and (17) respectively:

- (16) a. *ĩĩ-s-* 'to shoot at each other' (← *ĩ-* 'to shoot') → **ĩĩ-s-tĩr*
 b. *ĩĩ-h-ĩn-nĩr-* 'to cause / allow to shoot at each other'
- (17) a. *tas-* 'to carry' → *tas-tar-* 'to cause / allow to carry'
 b. **tah-un-nar-*

(3) Causative derivation from reflexives. A causative can be derived practically from any formal reflexive, whatever the meaning of the latter:

- (18) a. *öyö-ö-* 'to support somebody / something', 'to prop something up'
 b. *öyö-n-* 'to lean / rest (up)on something / somebody' (autocausative)
 c. *öyö-n-nör-* 'to lean / prop somebody / something against something'; cf.:
- (19) *Kini saa-nĩ mas-ka öyö-n-nör-d-ö* (Slepcov 1972: 286)
 he rifle-ACC tree-DAT prop-REFL-CAUS-PAST-3SG
 'He propped a rifle against a tree.'

(4) Causative derivation from passives. Causatives cannot be formed from passives proper.

3.3. Reciprocal: its meanings and co-occurrence with other voice markers

Apart from the four meanings listed in 1.2, reciprocal forms may also render a number of other meanings, the most important of them being anticausative and converse (see 10.2). Moreover, many of the derivatives with a reciprocal marker are lexicalized and the reciprocal meaning may be absent (see 11.3).

(1) **Reciprocal derivation from causatives.** Reciprocals are derived from two-place causatives without restrictions, like from any ordinary transitives (see, for instance, (20a)). From three-place causatives reciprocals are not likely (at least they are not registered in dictionaries), with two or three exceptions (the only instances we have found are the verbs meaning 'to show' and 'to let somebody know', 'to inform'; see (21), (21')):

- (20) a. *öl-ör-* 'to kill' → *öl-ör-üs-* 'to kill each other'
 b. *öl-ör-tör-* 'to cause / allow to kill' → *?öl-ör-tör-üs-*
 (intended meaning:) 'to cause / allow each other to kill somebody'
- (21) a. *kör-* 'to see / look'
 b. *kör-dör-* 'to show'
 c. *kör-dör-üs-* 'to show something to each other'
- (21') a. *bil-* 'to know'
 b. *bil-ler-* 'to let somebody know something / inform'
 c. *bil-ler-is-* 'to inform each other about something'

(2) **Reciprocal derivation from reciprocals.** This kind of derivation is impossible. There are irregular cases of reduplication of the reciprocal marker which can hardly be regarded as instances of reciprocal derivation from reciprocals (see 2.5), though Slepcev (1972) and Pekarskij (1959) do treat some instances as such: e.g. *kör-süs-* 'to see / meet each other' is interpreted as a reciprocal derivative from the reciprocal *kör-üs-* (same meaning) (← *kör-* 'to see') (Slepcev 1972: 181; Pekarskij 1959: 1165).

(3) **Reciprocal derivation from reflexives.** One-place reflexives, like one-place verbs in general, do not yield reciprocals, but the latter can be derived without special restrictions from two-place reflexives with an anticausative, autocausative and other meanings:

- (22) a. *öyöö-* 'to support somebody', 'to prop up' (transitive)
 b. *öyö-n-* 'to lean / rest (up)on something / somebody'
 (autocausative)
 c. *öyö-n-üs-* 'to lean (up)on / support each other'

Examples:

- (23) *Kiniler beye-beye-leri-tten*
 they self-self-their-ABL

öyö-n-s-ön *tur-al-lar* (Slepcev 1972: 286)
 support-REFL-REC-CONV stand-PRES-3PL
 'They stand supporting each other.'

As a curiosity, formation of a reciprocal from a one-place reflexive can be cited:

- (24) a. *kuus-* 'to hug / embrace somebody'
 b. *kuuh-un-* 'to hug / embrace oneself / one's breast'
 (e.g. 'to stand facing one's superior with one's
 arms crossed on one's breast') (cf. *kuus-t-an* in (134))
 c. *kuus-t-us-* 'to hug / embrace each other'
 (-t- < -un-, by way of assimilation)

(4) Reciprocal derivation from passives. Reciprocals from passives proper cannot be formed, not even reciprocal forms with a sociative meaning:

- (25) *öl-ör-ülün-* 'to be killed' (Slepcev 1972: 286)
 (26) **öl-ör-ülün-üs-* (intended meaning:) 'to be killed together'

3.4. Reflexive: its meanings and co-occurrence with other voice markers

As often as not, the suffix *-n* renders meanings characteristic of reflexive markers in a number of European languages, such as anticausative, autocausative, etc. After some stem finals, usually after vowels, it may render the passive meaning (on stems with a final consonant its meaning is not passive). In derivatives from lexical reciprocals, the suffix *-n* sometimes competes with the reciprocal suffix *-(l)s* (see (27b.iii) and (27c)):

- (27) a. *xolboo-* 'to join something to something' →
 b. *xolbo-n-*
 i. *'to join oneself' (reflexive proper is ungrammatical)
 ii. 'to join / add to oneself' (reflexive-benefactive)
 iii. 'to get joined to something' (anticausative), iv. 'to be joined' (passive)
 c. *xolbo-s-*
 i. 'to get joined to something' (anticausative)
 ii. 'to get joined together' (Xaritonov 1963: 44).

The reflexive marker expresses the reflexive meaning proper (like 'to wash oneself') less frequently than the more common reflexive-possessive meaning in transitive

constructions denoting actions performed on one's own body part or for one's own benefit (i.e. 'to wash one's hands' and the like; cf. the respective meaning of the Ancient Greek middle voice). (Note that most of the Turkic languages have practically lost the reflexive-possessive meaning). This is due to the difference in the lexical range of base verbs that allow one or the other derivative meaning (cf. (i) and (ii) under (27b) and (28b)). If the meaning is reflexive-possessive, as in (28c) and (30), or reflexive-benefactive, as in (29b-c) and (31), the direct object is retained. In cases of the (28b) type, the reflexive suffix corresponds to the object argument (i.e. *sirey-in* in (28a)), while in (28c) the reflexive suffix corresponds to the possessive attribute of the underlying sentence (i.e. *oyo-m* in (28a)).

- (28) a. *Min oyo-m sirey-in suuy-uo-m*
 I child-my face-ACC wash-FUT-1SG
 'I will wash my child's face.'
- b. *Min suu-n-uo-m*
 I wash-REFL-FUT-1SG
 'I will wash myself.' (reflexive proper)
- c. *Min sirey-bi-n suu-n-uo-m*
 I face-my-ACC wash-REFL-FUT-1SG
 'I will wash my face.' (reflexive-possessive)
- (29) a. *Ot tiey-e-bin*
 hay cart-PRES-1SG
 'I cart hay.'
- b. *Ot tie-n-e-bin*
 hay cart-REFL-PRES-1SG
 'I cart hay for myself.' (reflexive-benefactive)
- c. *O-pu -n beye-m tie-n-e-bin* (Xaritonov 1963: 79)
 hay-my-ACC self-my cart-REFL-PRES-1SG
 Literally: '[I] myself cart my hay for myself.' (reflexive-benefactive)
- (30) *Taḡas-kī-n kuur-d-un!* (Slepcov 1972: 195)
 clothes-your-ACC dry-CAUS-REFL
 'Dry your clothes!' (reflexive-possessive)
- (31) *Mas-ta kerd-in!* (Xaritonov 1963: 79)
 wood-PRTV chop-REFL
 'Chop some fire-wood for yourself!' (reflexive-benefactive)

In the northern dialects of Yakut, an extremely characteristic feature of the reflexive marker *-(l)n* is its (mostly desemanticized) use in those cases where Standard Yakut does not resort to it (analogous extension of the use of the reflexive suffix among Turkic languages is attested only in the eastern dialects of Bashkir; cf.: *aša-n-* (instead of *aša-*) ‘to eat’ (Maksjutova 1976: 58, 142)). In a number of dialects, e.g. in the Kolyma dialect, nearly total extension of the reflexive suffix over the active voice without any perceptible semantic contribution is observed (Korkina 1992: 57, 190, 207, 256; Voronkin 1984: 189-90)). The following examples are from the north-eastern (see (32), (33)) and north-western (see (34)) dialects:

- (32) *Kinige aay-īn-ar* (instead of *aay-ar*)
 ‘[He] is reading a book.’
- (33) *[Kini] min ih-in-er* (instead of *ih-er*)
 ‘[He] is eating soup.’
- (34) *Min manna ülele-n-i-em* (instead of *ülel-i-em*)
 ‘I will work here.’

(1) Reflexive derivation from causatives. Reflexives are derived from two-place causatives in the same way as from any other two-place verbs, while they are not formed from three-place causatives (cf. (35c)), very much like reciprocals. Thus, in Xaritonov’s (1963: 84) opinion, reflexive forms of three-place causative verbs that sometimes occur in texts look rather odd (cf. (36)).

- (35) a. *öl-ör-* ‘to kill somebody’ → *öl-ör-ün-* ‘to kill oneself’
 b. *öl-öt-tör-* ‘to cause / allow somebody to kill someone’ →
 c. **öl-öt-tör-ün-* (intended meaning) ‘to cause / allow oneself to kill somebody’
- (36) *Doktor-ga kör-dör-ün !* ‘See the doctor!’
 (lit. ‘Let the doctor see you’; Xaritonov 1963: 84; Slepcev 1972: 180)

(2) Reflexive derivation from reciprocals. Such cases are semantically ruled out. An exception are cases of causative derivation from reciprocals which involve automatic insertion of the reflexive marker (see case (2) in section 3.2).

In a limited number of lexicalized verbs with a non-reciprocal meaning, the reflexive marker follows the reciprocal suffix:

- (37) a. *īk-* ‘to press / squeeze’ (transitive)
 b. *īg-īn-* ‘to press / squeeze for / on oneself’
 (transitive) (reflexive-benefactive or possessive)

- c. *īg-īh-īn-* 'to exert oneself, distend'
(vi) (autocausative) (Xaritonov 1963: 88)
- (38) a. *tart-* i. 'to pull'; ii. 'to restrain'
b. *tard-īn-* i. 'to restrain oneself' (autocausative)
ii. 'to pull [up] for / on oneself' (reflexive-benefactive)
c. *tard-īh-īn-* 'to pull [oneself] up' (autocausative)

(3) Reflexive derivation from passives. This seems to be impossible.

3.5. Passive markers: their meanings and co-occurrence with other voice markers

Passives proper, especially with an agentive object, are rather rare in spoken Yakut (instead of agentive passive, the active is preferred (Xaritonov 1963:104, 108)).

- (39) *Suruk suru-lun-n-a* 'The letter is written.' (← *suruy-* 'to write')
(40) *Ot oxsu-lun-n-a* 'The grass is mown down.' (← *oxus-* 'to mow').

Apart from the passive meaning proper, which is its main meaning, the marker *-īlīn / -līn* (in complementary distribution with *-n* depending on the stem final; see 3.1) is also used to render meanings characteristic of the reflexive-passive marker *-n*. Not infrequently, a derivative has two or more meanings, including lexicalized ones:

- (41) a. *Īal bīa-nī tūūr-d-e*
neighbour rope-ACC coil-PAST-3SG
'The neighbour coiled the rope.'
- b. *Īt tīmñī-ttan tūūr-üllü-būt* (Slepcov 1972: 417) (autocausative)
dog cold-ABL coil-PASS-PERF.3SG
'The dog coiled from cold.'
- c. *Bīa tūūr-üllü-būt* (Slepcov 1972: 417) (passive)
rope.NOM coil-PASS-PERF.3SG
'The rope is coiled.'

Sometimes it is difficult to draw a borderline between the passive and the anticausative meanings, the distinction between them being context-dependent.

- (42) a. *Īal aan-ī xataa-t-a* 'The neighbour locked the door.'
b. *Aan xata-n-n-a*
i. 'The door was locked [by somebody]' (passive)
ii. 'The door locked' (anticausative)

(1) **Passive derivation from causatives.** This is a common case: passives are derived from two-place causatives like from any other transitives; from three-place causatives their derivation is unlikely. As Xaritonov (1963:107) points out, such forms are grammatically possible, but they are avoided in speech; the following example illustrates this form:

- (43) *tiey-* 'to cart' → *tiey-ter-* 'to cause to cart'
 → *tiey-ter-ilin-* 'to be caused to cart something'

(2) **Passive derivation from reflexives, reciprocals and passives.** These types of derivation are not registered. Nevertheless, there is a tendency in Yakut to combine two passive markers. As it happens, in some other Turkic languages the suffix *-l* alone is used to mark the passive voice. In Yakut, this suffix is supplemented by the reflexive-passive suffix *-n*, yielding the complex suffix *-il-in*. As has just been mentioned, it is used on stems with a final consonant. The suffix *-n* is used as a passive marker on stems with a final vowel (see the text above (27)). Since *-n* is more polysemous than *-il-in*, this latter suffix is sometimes added to it when it has a passive meaning, thus yielding a three-component passive marker *-n-il-in* (Xaritonov 1963: 106). (This combination is facilitated by the final consonant on stems in *-n*.) Thus no component of meaning is added, but the form becomes less ambiguous. Compare:

- (44) a. *battaa-* 'to press / squash'
 b. *batta-n-* 'to be pressed / squashed'
 c. *batta-n-il-in-* (same meaning) (Xaritonov 1963: 106)

In the following example, additional marking of the passive resolves ambiguity of the underlying form:

- (45) a. *erbee-* 'to saw'
 b. *erbe-n-*
 i. 'to saw for oneself' (reflexive-possessive)
 ii. 'to be sawn' (passive)
 c. *erbe-n-il-in-* 'to be sawn [by somebody]' (passive) (Slepcov 1972: 543; Xaritonov 1963: 106)

4. Diathesis types of reciprocals with the suffix *-(l)s* / *-(l)h* only

4.1. Subject-oriented reciprocal constructions

4.1.1. "Canonical" (= intransitive) reciprocals

In this type, the reciprocal marker obligatorily deletes either the direct or the indirect object of the underlying non-reciprocal construction. This type also includes reciprocals derived from intransitives commonly used as one-place verbs. Thus "canonical"

reciprocals are always intransitive, while the underlying verbs can be either transitive or intransitive.

4.1.1.1. Derived from two-place transitives

This is the main type of reciprocals. It is likely that all two-place transitives (with both human referents) may be used reciprocally, this process involving intransitivization.

- (46) a. *Min urukkuttan kini-ni bil-e-bin*
 I for.a.long.time he-ACC know-PRES-1SG
 'I have known him for a long time.'
- b. *Bihigi urukkuttan bil-s-e-bit* (Xaritonov 1982: 271)
 we for.a.long.time know-REC-PRES-1PL
 'We have known each other for a long time.'
- (47) a. *Kini kini-ni balïy-d-a*
 he he-ACC slander-PAST-3SG
 'He slandered him.'
- b. *Kiniler balïy-sïs-t-ïlar* (Pekarskij 1959: 62)
 they slander-REC-PAST-3PL
 'They slandered each other.'

Below, representative lists of the most common lexical groups of "canonical" reciprocals are given. The underlying verbs are not quoted because their meaning is part of and, therefore, recoverable from that of the derived reciprocals.

A. The first group comprises verbs of physical action upon an object referent that may result in a change of state of the latter; (it is noteworthy that among verbs of physical action, those of violent hostile actions are prevalent).

- (48) *ann'-ïs-* 'to push each other'
battaxta-s- 'to seize each other by the hair'
kïdïy-ïs-, kïdï-s- 'to kill / exterminate each other'
kïrba-s- 'to beat / hit each other'
muomala-s- 'to squeeze each other when fighting'
musku-s- 'to wring / twist each other's hands'
oxs-us- 'to beat each other', 'to fight'
ölör-üs- 'to kill each other'
öttükte-s- 'to throw each other over the thigh'
seymekte-s- 'to tear each other to pieces'
suturukta-s- 'to attack each other with fists'
sïrbat-ïs- 'to beat / hit each other', 'to fight'

<i>tabīy-īs-</i>	‘to kick each other with front hooves’
<i>tarba-s-</i>	‘to scratch each other’
<i>toyonoxto-s-</i>	‘to push each other with elbows’
<i>tuppaxtī-s-</i>	‘to pinch each other’
<i>tut-us-</i>	‘to seize / grasp each other’
<i>tīg-īs-</i>	‘to flick each other on the forehead’
<i>uolukta-s-</i>	‘to seize / grab each other by the clothes above the waist’
<i>ūtūrū-s-</i>	‘to push each other’
<i>xaanna-s-</i>	‘to beat each other till bleeding’
<i>xabiala-s-</i>	‘to bite each other (of dogs)’
<i>xabīrī-s-</i>	‘to press / push each other’
<i>xad’īkta-s-</i>	‘to bite each other’
<i>xad’īrī-s-</i>	‘to tear / torment each other’
<i>xap-sīs-</i>	‘to seize each other’

B. Here belong verbs denoting all kinds of relations between people that do not necessarily imply physical action, and also verbs of speech:

(49) <i>aatta-s-</i>	‘to name each other’
<i>buruyda-s-</i>	‘to condemn / accuse each other’
<i>bīīha-s-</i>	‘to free / save / rescue each other’
<i>keteh-is-</i>	‘to wait for each other’
<i>kūūt-ūs-</i>	‘to wait for each other’
<i>kīra-s-</i>	‘to curse / damn each other’
<i>sura-s-</i>	‘to ask about each other’
<i>tuorayda-s-</i>	‘to disturb / hinder each other’
<i>xomuruy-us-</i>	‘to reproach each other’
<i>īyīt-īs-</i>	‘to ask each other’
<i>īīsta-s-</i>	‘to scold / curse each other’

C. Verbs denoting feelings or their manifestation, approval or disapproval, mental activities, or sense perception form a distinct lexical group:

(50) <i>axt-īs-</i>	‘to remember each other’
<i>albīnna-s-</i>	‘to deceive each other’
<i>atayasta-s-</i>	‘to offend each other’
<i>bil-is-</i>	‘to know each other’, ‘to get acquainted with each other’
<i>kūnūūle-s-</i>	‘to be jealous of / envy each other’
<i>kūōte-s-</i>	‘to scare each other’
<i>kūtūre-s-</i>	‘to suspect each other’
<i>maanīla-s-</i>	‘to respect each other’

<i>öydö-s-</i>	‘to understand each other’
<i>tapta-s-</i>	‘to love each other’
<i>umn-us-</i>	‘to forget each other’

Verbs of sense perception:

- (51) *bul-us-* ‘to find each other’
ist-is- ‘to hear each other’
kör-üs- / kör-süs- i. ‘to see each other’, ii. ‘to meet each other’
segeer-is- ‘to listen to each other attentively’

D. Verbs of motion also comprise a distinct lexical group:

- (52) *aah-īs-* ‘to pass / go by each other’
kõtöγ-üs- ‘to lift / raise each other’
oro-s- ‘to take each other out’
tohuy-us- ‘to go to meet each other’

4.1.1.2. Derived from two-place transitives with a split object valency

Here belong the same verbs as under 4.1.1.1. The difference lies in the fact that in this case the underlying construction contains an optional ablative object (denoting a body part) which appears as a result of splitting the obligatory human object argument: thus the latter is expressed twice, as a whole by a direct object and as an immediately affected body part by an ablative object. This type is semantically close to “possessive” reciprocals due to the involvement of a body part (inalienable possession) (see 4.1.3):

- (53) a. *Iye-m kīih-ī-n [uoh-u-ttan] uuraa-t-a*
 mother-my daughter-her-ACC lip-her-ABL kiss-PAST-3SG
 ‘My mother kissed her daughter [on the lips].’
 b. *...uos-tarī-ttan uura-h-an ...* (Pekarskij 1959: 2974)
 lip-their-ABL kiss-REC-CONV
 ‘[they]... having kissed each other on the lips...’
- (54) a. *Tustaačči ilii-bi-tten [miig-in] xab-an il-l-a*
 wrestler hand-my-ABL I-ACC grasp-CONV take-PAST-1SG
 Literally: ‘The wrestler grasped [me] by my hand.’
 b. *Tustaačči-lar ilii-ilii-leri-tten*
 wrestler-PL hand-hand-their-ABL

xap-sih-an *il-l-ilar* (Slepcov 1972: 480)
 grasp-REC-CONV take-PAST-3PL
 'The wrestlers grasped each other's hands.'

(55) *Kiniler* *ilii-ilii-leri-tten* *sietti-h-en* *ih-el-ler*
 they hand-hand-their-ABL lead.by.hand-REC-CONV go-PRES-3PL
 'They lead each other holding each other's hands.'

(56) ... *Ilil* *ilii-leri-tten* *il-sis-t-ilar* (Slepcov 1972: 525)
 hand hand-their-ABL grasp-REC-PAST-3PL
 '[They] grasped each other by the hands.'

(57) *Tüös* *tüös-teri-tten* *utarita*
 breast breast-their-ABL opposite

kep-s-en *kebih-en* *bar-an* (Pekarskij 1959: 1003)
 push-REC-CONV AUX-CONV AUX-CONV
 '[they] ... having pushed each other on the breast.'

4.1.1.3. Derived from two-place intransitives

Most of these intransitives take an object with the postposition *kitta* 'with' (see the list of verbs under A below). Some of the speech and motion verbs may require an object either in the dative (see lists A and C) or, much less commonly, in the ablative case (see list B). In the derived sentences, the nominal with *kitta* is a part of the subject group.

Intransitives that can acquire the reciprocal form seem to be much more numerous in Yakut than in some other Turkic languages.

(58) a. *Ĭal* *kinie-xe* *kuruutun* *saan-ar* (Pekarskij 1959: 305)
 neighbour he-DAT all.time threaten-PRES.3SG
 'The neighbour threatens him all the time.'

b. *Ĭal* *kini-ni* *kitta* *kuruutun* *saan-s-al-lar*
 neighbour he-ACC with all.time threaten-REC-PRES-3PL
 'He and the neighbour threaten each other all the time.'

(59) a. *Min atas-par* *sirüt-t-īm*
 I friend-my.DAT come-PAST-1SG
 'I visited my friend.'

b. *Bihigi atas-pi-n* *kitta* *sild'-is-t-ibit*
 we friend-my-ACC with come-REC-PAST-1PL
 'My friend and I visited each other.'

Verbs of the following lexical groups belong here:

A. Verbs of speech and communication (most of the underlying verbs take a dative human object (see (60a)), and some an object with the postposition *kitta* (see (60b)) or both (see (60c)); some of the verbs may take an optional object with the postposition *tuhunan* 'about' denoting the content of speech):

- (60) a. *botugura-s-* 'to whisper with each other'
de-s- 'to talk with each other'
imnen-is- 'to make signs to / wink at each other'
muḡatī-s- 'to complain to each other'
n'īlagna-s- 'to flatter each other'
sibigine-s- 'to whisper with each other'
sipsi-s- 'to whisper with each other'
üögüle-s- 'to shout to each other'
ihīta-s- 'to shout to each other'
- b. *kepset-is-* 'to talk with each other'
labaxala-s- 'to chatter with each other'
xalaata-s- 'to talk loudly with each other'
xobd'oor-us- 'to talk loudly and quickly with each other'
- c. *saḡar-īs-* 'to talk with each other'

B. Verbs expressing mental states (the underlying verbs govern an ablative object):

- (61) *xomoy-us-* 'to be disappointed with each other'
xorgut-us- 'to become upset by each other('s behaviour)'

C. Verbs of various human activities and relations:

- (62) *bat-īs-* 'to live in harmony with each other'
meheyde-s- 'to hinder each other'

4.1.1.4. Derived from two-place intransitives with a split object valency

This case is analogous to that under 4.1.1.2:

- (63) a. *Kini östöö-gör* [ilii-ti-ger] *sillee-t-e*
 he enemy-his.DAT hand-his-DAT spit-PAST-3SG
 lit. 'He spat at his enemy (in)to his hand.'

- b. ... *ilii ilii-leri-ger sillee-h-en bar-an-nar* (Pekarskij 1959: 933)
 hand hand-their-DAT spit-REC-CONV AUX-PAST-3PL
 lit. '[They] spat at each other (in)to their hands.'

4.1.1.5. Derived from three-place intransitives

Unlike the verbs in 4.1.1.2, base verbs of this type take two non-direct objects of which one is retained in a reciprocal construction. Semantically, this type is adjacent to "dative" reciprocals:

- (64) a. *Īal kinie-xe ah-īnan-ūölü-nen xardalı-ır*
 neighbour he-DAT food-INST-food-INST give.in.exchange-PRES.3SG
 'The neighbour gives him food in exchange.'
- b. *Kiniler ah-īnan-ūölü-nen xardala-h-al-lar* (Slepcev 1972: 484)
 they food-INST-food-INST exchange-REC-PRES-3PL
 'They exchange their supplies of food with each other.'
- (65) a. *Oyo oyo-yo xaar-īnan bīray-ar*
 child child-DAT snowball-INST throw-PRES.3SG
 'A child throws snowballs at another child.'
- b. *Oyo-lor xaar-īnan bīrax-s-al-lar* (Xaritonov 1982: 271)
 child-PL snowball-INST throw-REC-PRES-3PL
 'The children throw snowballs at each other.'

4.1.1.6. Derived from one-place intransitives

The latter commonly denote the uttering of sounds by animate beings, or other signals; these actions usually imply an addressee which is practically never expressed. The derived reciprocals denote an exchange of signals provoked by the partner(s). This type is a kind of intermediate between reciprocals and sociatives. The list of one-place intransitives used reciprocally is limited. Compare:

- (66) a. *Küöl-ge kus-tar maatīry-ıl-lar*
 lake-DAT duck-PL quack-PRES-3PL
 'The ducks are quacking in the lake.'
- b. *Kus-tar maatīrya-h-al-lar*
 duck-PL quack-REC-PRES-3PL
 'The ducks are quacking to each other.'
- (67) a. *Börö ird'īgīnaa-t-a*
 wolf growl-PAST-3SG
 'The wolf began to growl.'

- b. *Börö-lör ird'igina-h-al-lar* (Slepcov 1972: 529)
 wolf-PL growl-REC-PRES-3PL
 'The wolves growl at each other.'
- (68) a. *Očut ihīītaa-n bar-d-a*
 mower shout-CONV AUX-PAST-3SG
 'The mower began to shout loudly.'
- b. *Očut-tar ihīīta-h-al-lar* (Slepcov 1972: 531)
 mower-PL shout-REC-PRES-3PL
 'The mowers are loudly shouting to each other.'
- (69) a. *Bu atūr d'oxsootoo-n bar-d-a*
 this stallion assume.threatening.posture-CONV AUX-PAST-3SG
 'This stallion assumed a threatening posture'
 (when he saw another stallion).
- b. *Atūr-dar d'oxsootto-h-on er-el-ler*
 stallion-PL assume.threatening.posture-REC-CONV begin-PRES-3PL
 'The stallions begin to behave towards each other in a threatening way.'
- (70) a. *Bu inax maḡīraa-n bar-d-a*
 this cow moo-CONV AUX-PAST-3SG
 'The cow began to moo.'
- b. *Bu inax maḡīra-h-an bil-s-er* (Xaritonov 1963: 23)
 this cow moo-REC-CONV know-REC-PRES.3SG
 'The cows recognize each other by mooing to each other.'

The following reciprocals also belong in this group:

- (71) *ayaata-s-* 'to roar / bellow at / to each other (of oxen)'
kiste-s- 'to neigh to each other'
kürd'üötte-s- 'to assume a threatening pose against each other (of oxen)'
xongkuna-s- 'to exchange cackles (of geese)'
 (see also (168) and the text beneath)

4.1.2. "Dative" and benefactive reciprocals

In reciprocal constructions of this type, a direct object is retained and an indirect dative or ablative object is deleted (for this reason, a more precise but cumbersome term for these reciprocals would be dative-ablative). Therefore, the underlying transitive structure is retained. The number of reciprocals with the "dative" diathesis derived from three-place verbs with an obligatory indirect object does not exceed ten or

fifteen. If we count reciprocals with the benefactive meaning (derived from verbs with an optional indirect object; cf. (73)) their number will increase significantly. As is mentioned above (see 2.2), the retained object has the nominative case form or, if the object is definite, the accusative.

- (72) a. *Beye-ŋ üle-γī-n mie-xe nayılaa-ma*
 self-2SG.NOM work-thy-ACC I-DAT shift-NEG.IMP
 ‘Don’t shift your work on me.’
- b. *At-tar-ī manııl-larī-n*
 horse-PL-ACC guard-their-ACC
- nayıla-h-an, mökküh-er buol-al-alara* (Xaritonov 1963: 37)
 shift-REC-CONV argue-PART AUX-PAST-3.PL
 ‘It happened from time to time that they argued with each other trying to shift on each other the guarding of the horses.’
- (73) a. *Aya-m kinie-xe die-ni tut-t-a*
 father-my he-DAT house-ACC build-PAST-3SG
 ‘My father built a house for him.’
- b. *Kiniler die-leri-n tut-us-t-ular*
 they house-their-ACC build-REC-PAST-3PL
 ‘They built houses for each other.’
- (74) a. *Ini bii-tten kur-u bıld’a-t-a*
 younger.brother elder.brother-ABL belt-ACC take.away-PAST-3SG
 ‘The younger brother took the belt from the elder brother.’
- b. *Ikki ini-bii kur-dar-in*
 two brothers belt-PL-ACC
- bıld’a-s-püt-tar ühü* (Pekarskij 1959: 616)
 take.away-REC-PERF-3PL they.say
 ‘They say the two brothers are taking belts from each other.’
 (see also (1b))
- (75) *Barı xardarıta sonu-nu bil-ler-s-el-ler* (Xaritonov 1963: 37)
 all mutually news-ACC know-CAUS-REC-PRES-3PL
 ‘All (people) tell each other the news.’

The following verbs meet this description:

- (76) *belexte-s-* 'to exchange presents'
ber-is- i. 'to give something to each other'
 ii. 'to share something with each other' (← *bier-* 'to give')
bıld'a-s- 'to take something away from each other'
kepset-is- 'to tell something to each other'
kör-dör-üs- 'to show something to each other'
nayıla-s- 'to shift something on(to) each other'
n'imaatta-s- 'to exchange presents'
suruy-us- / 'to write to each other'
suru-s-
tiey-s- 'to carry something to / for each other'
tut-us- 'to build something for each other'
ular-sīs- 'to give something to each other for a time'
(ies) il-sīs- 'to borrow something from each other'
ūt-is- 'to send something to each other'.

4.1.3. "Possessive" reciprocals

In this type of reciprocals, the diathesis of the underlying transitive construction is retained, due to object retention as in "dative" reciprocals. The reciprocal marker corresponds to the possessive suffix of the underlying object which usually denotes a body part (for example, a hand, a face, lips, breast, often an injured body part) or, much more rarely, other inalienable or alienable possession (a house, weakness, etc.), or it corresponds to the possessive attribute of an izafet construction of the object (cf. *balih-ī-n* in (77a)). In many of the examples the direct object is reduplicated (see (78)-(81)), thus iconically signalling two objects in the situation described (the structure of the direct object is thus similar to that of the reciprocal pronoun; cf. *beye-beye-leri-n* and *ilii-ilii-leri-tten*). Semantically adjacent to these reciprocals are some "canonical" reciprocals (see 4.1.1.2 and 4.1.1.4), which may find expression in object reduplication (cf. (54)-(57)).

- (77) a. *Ayas balih-ī-n saga-tī-n ist-er*
 elder.sister younger.sister-her-ACC voice-her-ACC hear-PRES.3SG
 'The elder sister hears her younger sister's voice.'
- b. *Ayas-balīs saga-larī-n ist-ih-el-ler* (Pekarskij 1959: 977)
 blood.sisters voice-their-ACC hear-REC-PRES-3PL
 'The sisters hear each other's voices.'
- (78) ... *tüü tüü-leri-n, et et-teri-n,*
 hair hair-their-ACC flesh flesh-their-ACC

- tirii tirii-leri-n bara-s-püt-tara* (Pekarskij 1959: 373)
 skin skin-their-ACC destroy-REC-NR.PAST-3PL
 '[The horses of the athletes] destroyed each other's hair, flesh and skin.'
- (79) ... *tüü tüü-leri-n, et et-teri-n*
 hair hair-their-ACC flesh flesh-their-ACC
- barat-īs-t-īlar, senie-leri-n*
 destroy-REC-PAST-3PL strength-their-ACC
- barat-īs-t-īlar* (Pekarskij 1959: 374)
 destroy-REC-PAST-3PL
 '[The lions] destroyed each other's hair, flesh,
 destroyed each other's strength.'
- (80) *Kuuhima uonna Suonnuya sirey-sirey-deri-n*
 K. and S. face-face-their.ACC
- ere kör-s-ön kebis-t-iler* (Xaritonov 1963: 36)
 only see-REC-CONV AUX-PAST-3PL
 'Kuzma and Sonja only quickly looked at each other's faces.'
- (81) *Ilii ilii-giti-n tut-uh-ug!* (Xaritonov 1963: 35)
 hand hand-your-ACC hold-REC-IMP.2PL
 lit. 'Shake each other's hands!'
- (82) *Xara xaan-narī-n*
 black blood-their-ACC
- toh-su-butunan bar-d-īlar* (Pekarskij 1959: 2702)
 spill-REC-CONV AUX-PAST-3PL
 'They began to spill each other's black blood.'
- (83) ... *imeri-s-en kebis-t-iler et-teri-n,*
 stroke-REC-CONV AUX-PAST-3PL flesh-their-ACC
- tirii-leri-n ölör-üm-müt-teri-n* (Pekarskij 1959: 932-3)
 skin-their-ACC hurt-PASS-PAST.PART-their-ACC
 '[They] stroked each other's bodies and skin where they were hurt.'
- (84) *Ikki xataannax kilī-larī-n*
 two rival fault-their-ACC

berke kete-sih-el-ler (Pekarskij 1959: 1067)
 carefully watch-REC-PRES-3PL
 ‘Two rivals are watching for each other’s faults.’

- (85) *Kiniler oyo-loru-n bil-s-el-ler*
 they child-their-ACC know-REC-PRES-3PL
 ‘They know each other’s children.’

- (86) ... *xatan uquox-tarī-n xardayasta-h-an is-t-iler* (Pekarskij 1959: 3149)
 hard bone-their-ACC break-REC-CONV AUX-PAST-3PL
 ‘[They] began to break each other’s hard bones.’

- (87) ... *ürdük uquox-tarī-n*
 upper bone-their-ACC

üöreyste-h-en is-t-iler (Pekarskij 1959: 3149)
 cut.into.parts-REC-CONV AUX-PAST-3PL
 ‘[They] began to slash [at] each other’s upper bones.’

- (88) ... *xalıñ tirii-leri-n xayit-is-pit-tara* (Pekarskij 1959: 3252)
 thick skin-their-ACC tear-REC-NR.PAST-3PL
 ‘[They] tore each other’s skin.’

- (89) ... *xohox xohox-toru-n xosto-s-put-tar* (Pekarskij 1959: 3523)
 offence offence-their-ACC dig.out-REC-PERF-3PL
 ‘... [they] dug out each other’s offences’

- (90) ... *kepset-er til-larī-n*
 speak-PART speech-their-ACC

öydö-s-pöt gin-an kees-t-e (Pekarskij 1959: 1917)
 understand-REC-NEG.PART AUX-CONV AUX-PAST-1SG
 ‘... [he] did so that [they] did not understand each other’s speech’

- (90') *[Kiniler] iyīī iya-s-pit-tar* (Pekarskij 1959: 3766)
 they.NOM weight.NOM weigh-REC-PERF-3PL
 lit. ‘[They] weighed the weight of each other.’

The reciprocals that occur in this diathesis type can also be used in the “canonical” diathesis (see 4.1.1). Some of them can also occur in the “dative” diathesis, with a slight shift of meaning; e.g.: *ihit-* ‘to hear’ → *ist-is-* i. ‘to hear each other’ (“canonical”); ii. ‘to hear something from each other’ (“dative”); iii. ‘to hear each other’s voices, etc.’ (“possessive”; see (77b)).

4.2. Causatives derived from reciprocals

Causatives from intransitive reciprocals are widely attested in Yakut texts and registered in dictionaries. Contrary to other Turkic languages with object-oriented reciprocals, the causative marker in respective Yakut forms can be added only after an additional reflexive suffix, which does not affect the meaning (as mentioned above, the cause of this phenomenon is not clear).

- (91) a. *bil-* 'to know' →
 b. *bil-is-* 'to become acquainted with each other' →
 c. *bil-ih-in-ner-* (REC-REFL-CAUS) 'to acquaint somebody with somebody'

Here are a few examples of object-oriented constructions with embedded "canonical" (see (92), (93)), "dative" (see (94)) and "possessive" (see (95)) reciprocals respectively:

- (92) *Aya-m kiniler-i bil-ih-in-ner-d-e*
 father-my they-ACC know-REC-REFL-CAUS-PAST-3SG
 'My father introduced them to each other.'
- (93) *Kiniler uol-larī-n kör-üh-ün-ner-d-iler*
 'They made (let) their sons meet each other.'
- (94) *Aya-m kiniler-i kinige-leri-n ber-ih-in-ner-d-e*
 'My father made them give books to each other.'
- (95) *Aya-m kiniler-i sirey-sirey-deri-n kör-üh-ün-ner-d-e*
 'My father made them look into each other's faces.'

4.3. Deverbal nouns

Deverbal nouns are formed from all the verb bases by means of the suffix *-iī* (or its synharmonic variants *-ii* / *-uu* / *-üü*). These deverbal nouns can contain any derivational affixes: either aspectual or voice markers. Reciprocal verb forms can also be nominalized by means of this suffix:

- (96) a. *bilixti-s-* 'to give presents to each other'
 → *bilixti-h-iī* 'exchange of presents'
 b. *tiey-s-* 'to cart to each other' → *tiey-s-iī* 'carting to each other'
 c. *uura-s-* 'to kiss each other' → *uura-h-iī* 'mutual kissing'
 d. *xorgut-us-* 'to be offended with each other'
 → *xorgut-uh-uu* 'mutual resentment'
 e. *il-sīs-* 'to take from each other'
 → *il-sih-iī* 'taking from each other' (see also (7))

The following examples illustrate the use of (96d) and (96b):

- (97) a. *Bihigi ikkardī-bīī-gar*
 we among-our-DAT
xorgut-uh-uu taxs-a sis-t-a
 be.offended-REC-NR appear-CONV hardly-PAST-3SG
 'We almost got offended with each other.' (Slepcov 1972: 500)
 Literally: 'Mutual resentment almost developed between us.'
- b. *Bügün aya-laax uol ikki*
 today father-POSS son two
ardī-larī-gar ot tiey-s-ii buol-l-a
 between-their-DAT hay cart-REC-NR be-PAST-3SG
 Lit.: 'Today mutual carting of hay between father and son took place.'

In (98), illustrating the use of (96c), the name of a reciprocal action occupies the position of a direct object (as a cognate object) with the underlying reciprocal verb as predicate:

- (98) *uonna kiniler aan bastaayī*
 and they very first
uura-h-īī-lar-īn uura-s-t-īlar (Ubrjatova 1982: 22)
 kiss-REC-NR-their.ACC kiss-REC-PAST-3PL
 '... and they kissed for the first time'
 Literally: '... and they kissed-each-other their very first mutual-kiss'

5. Diathesis types of reciprocals with the pronoun *beye-beye-leri-n* 'each other'

5.1. Introductory

As was mentioned above (see 1.2), the reciprocal meaning can be expressed not only by the reciprocal suffix but also by a reciprocal pronoun. Sometimes, these two means co-occur in the same sentence (see 5.4). As was shown above, the reciprocal pronoun is marked for person (see the forms under (8b)), and inflected for case: it can assume five out of eight case forms marked on nouns (accusative, dative, ablative, instrumental and comitative). (99) shows these case forms for the 3.PL form of the reciprocal pronoun:

- (99) ACC *beye-beye-leri-n*
 '[they ...] each other'
 DAT *beye-beye-leri-ger*
 '[they ...] to each other'

ABL	<i>beye-beye-leri-tten</i>	‘[they ...] from / by each other’
INST	<i>beye-beye-leri-nen</i>	‘[they ...] of each other’
COM	<i>beye-beye-leri-niin</i>	‘[they ...] with each other’

Needless to say, the valency properties of the underlying construction do not change in the reciprocal pronominal construction.

The instrumental case form of the reciprocal pronoun is quite rare, being required by verbs like *kien tut-* ‘to be proud of’ (lit. ‘to hold wide’; see (104)). The comitative case form is also rather rare as the accusative form with the postposition *kitta* ‘with’ (*beye-beye-leri-n kitta* ‘with each other’) is more commonly used instead.

5.2. Subject-oriented reciprocal constructions

5.2.1. “Canonical” reciprocals

5.2.1.1. Derived from two-place transitives

Most of the verbs listed in 4.1.1.1 may be used with the reciprocal pronoun instead of the reciprocal suffix, as in the following example:

- (100) a. *Kiniler üčügeydik ist-is-t-iler (ist- < ihit-)*
 they good hear-REC-PAST-3PL
 ‘They heard each other well.’
- b. *Kiniler beye-beye-leri-n üčügeydik ihit-t-iler*
 they each.other-their-ACC good hear-PAST-3PL
 (same translation)

The following are examples from the dictionary by Pekarskij (1959):

- (101) a. *Bihigi beye-beye-biti-n küüt-t-übüt*
 we.NOM each.other-our-ACC wait-PAST-1PL
 ‘We waited for each other.’
- b. *Kiniler beye-beye-leri-n xaristī-il-lar*
 they.NOM each.other-their-ACC take.care-PRES-3PL
 ‘They take care of / protect each other.’

In these two sentences, the suffixed reciprocal forms *küüt-üs-t-übüt* ‘we waited for each other’ and *xarista-h-al-lar* ‘they take care of / protect each other’ are also possible. Substitution of the reciprocal pronoun for the reciprocal suffix seems to be less

acceptable in the case of the most frequent common suffixed reciprocals; cf. *bil-is* ‘to get acquainted / know each other’ and *beye-beye-leri-n bil-* (same meaning).

5.2.1.2. Derived from two-place intransitives

Most reciprocals listed in 4.1.1.2 may be used with the reciprocal pronoun instead of the reciprocal suffix, as in the following examples:

- (102) a. *Kini miig-in tugunan ihit-t-e*
 he I-ACC about hear-PAST-3SG
 ‘He heard about me.’
 b. *Kiniler beye-beye-leri-n tustarīnan ihit-ti-ler*
 they each.other-their-ACC about hear-PAST-3PL
 ‘They heard about each other.’
- (103) a. *Aya-m kini-ni kitta kepset-t-e*
 father-my he-ACC with speak-PAST-3SG
 ‘My father spoke with him.’
 b. *Kiniler beye-beye-leri-n kitta kepset-ti-ler*
 ‘They spoke with each other.’
- (104) a. *Kini miigi-nen kien tutt-ar*
 he I-INST wide hold-PRES.3SG
 ‘He is proud of me.’
 b. *Kiniler beye-beye-leri-nen kien tutt-al-lar*
 they.NOM each-other-their-INST wide hold-PRES-3PL
 ‘They are proud of each other.’

5.2.1.3. Derived from one-place intransitives

If we replace the reciprocal suffix with the reciprocal pronoun in the verbs listed in 4.1.1.6, a shift in meaning may take place; thus, for instance, (105a) denotes acts of the subject referents directed at each other, while (105b) denotes a sociative action. The accusative form of the reciprocal pronoun with the comitative postposition in (105b) can be replaced by the dative form *beye-beye-leri-ger* ‘to each other’, but the informants find it preferable with the reciprocal form of the verb (see (105c)), and the sentence becomes synonymous to (105a), though the informants consider (105c) less acceptable.

- (105) a. *Kus-tar maatīrya-h-al-lar* (see (66b))
 ‘The ducks are quacking at each other.’

- b. *Kus-tar beye-beye-leri -n kitta maatıryı-ıl-lar*
 duck-PL each.other-their-ACC with quack-PRES-3PL
 ‘The ducks are quacking together (lit. ‘with each other’).’
- c. *Kus-tar beye-beye-leri-ger maatırya-h-al-lar*
 (same as (a))

5.2.2. “Dative” reciprocals

All “dative” reciprocals listed in 4.1.2 may be used with the reciprocal pronoun instead of the reciprocal suffix, e.g.:

- (106) a. *Kini ıalı-ttan kinige-ni ıl-l-a*
 he neighbour-ABL book-ACC take-PAST-3SG
 ‘He took a book from the neighbour.’
- b. *Kiniler kinige-leri-n beye-beye-leri-tten ıl-l-ı-lar*
 they book-their-ACC each.other-their-ABL take-PAST-3PL
 ‘They took books from each other.’
- (107) a. *Kini ıalı-gar kinige-ni ıl-l-a*
 ‘He took a book for the neighbour.’
- b. *Kiniler kinige-leri-n beye-beye-leri-ger ıl-lı-lar*
 ‘They took books for / to each other.’
- (108) a. *Kini ıalı-gar kinige-ni bier-d-e*
 ‘He gave a book to the neighbour.’
- b. *Kiniler kinige-leri-n beye-beye-leri-ger ber-di-ler*
 ‘They gave books to each other.’

5.2.3. “Possessive” reciprocals

The majority of “possessive” reciprocals listed in 4.1.3 allow, in the informants’ opinion, the reciprocal pronoun (without a case marker) as an attribute instead of the reciprocal suffix, but we have no textual examples.

- (109) a. *Kini aya-ti-n kuolah-ı-n ist-er*
 he.NOM father-his-ACC voice-his-ACC hear-PRES.3SG
 ‘He hears his father’s voice.’
- b. *Kiniler beye-beye-leri kuolas-tarı-n ist-el-ler*
 they.NOM each.other-their voice-their-ACC hear-PRES-3PL
 ‘They hear each other’s voices.’

- c. *Bihigi beye-beye-bit kuolas-piti-n ist-e-bit*
 we.NOM each.other-our voice-our-ACC hear-PRES-1PL
 'We hear each other's voices.'
- d. *Ehigi beye-beye-yit kuolas-kiti-n ist-e-yit*
 you.NOM each-other-your voice-your-ACC hear-PRES-2PL
 'You hear each other's voices.'

5.3. Causatives from subject-oriented reciprocals

Reciprocal constructions of this syntactic type are rather rare. The antecedent of the reciprocal pronoun in (110) can be either a direct object (which makes the sentence object-oriented; see (i)) or the subject of the underlying sentence (in this case it is a subject-oriented construction; see (ii)). In (111) the subject is singular; therefore, it cannot be the antecedent of the reciprocal pronoun and the antecedent can be only the object referent, which makes the construction unambiguously object-oriented.

- (110) *Kiniler uol-lattar-in beye-beye-leri-ger kör-dör-dü-ler*
 they son-their-ACC each.other-their-Dat see-CAUS-PAST-3PL
 lit.: 'They made (let) their sons meet each other.'
 i. = 'the sons met / saw each other'
 ii. = 'Each of the fathers showed his son to the other.'
- (111) *Aya-m kiniler-i kinige-leri-n*
 father-my they-ACC book-their-ACC

beye-beye-leri-ger bier-der-d-e
 each.other-their-DAT give-CAUS-PAST-1SG
 'My father made them give books to each other.'

5.4. Co-occurrence of the reciprocal suffix and reciprocal pronoun

Concomitant use of these markers is a very common phenomenon (cf. (2), (23), (112), (114)). As the suffix *-(I)s / -(I)h* intransitivizes a verb in "canonical" constructions, interpretation of the reciprocal pronoun as a direct object becomes problematic. Sometimes such a combination may sound unusual; thus, for instance, in (106b) the verbal form *il-l-ilar* cannot be replaced by the reciprocal form *il-is-t-ilar* for unclear reasons, though most sentences with the reciprocal pronoun we find in dictionaries and specialist literature contain the reciprocal verb form (the following combinations can be cited in addition to the examples below: *beye-beye-leri-n maanila-s-* 'to respect each other' (Slepcov 1972: 232), *beye-beye-leri-n buruyda-s-* 'to accuse each other' (Slepcov 1972: 84), *beye-beye-leri-ger n'ilagna-s-* 'to fawn upon each other' (Slepcov 1972: 263), etc.; see also 5.2.1.3). In sentences with both reciprocal markers one of them can be omitted in most cases, though, as we have just mentioned, there are certain preferences which require further study.

- (112) *Beye-beye-γiti-n atayasta-hi-ma-ŋ* (Slepcov 1972: 51)
 each.other-your-ACC hurt-REC-NEG.IMP-2PL
 ‘Do not hurt each other!’
- (113) *ĭt-tar oxs-uh-an beye-beye-leri-n*
 dog-PL hit-REC-CONV each.other-their-ACC
muomaxta-s-t-ilar (Slepcov 1972: 245)
 throttle-REC-PAST-3PL
 ‘In the fight, the dogs throttled each other to death.’
- (114) *Bihigi duohuya seherge-s-t-ibit, beye-beye-biti-n öydö-s-t-übüüt*
 (Xaritonov 1963: 36)
 ‘We talked to our heart’s content, understood each other.’ (see also (2))

5.5. Deverbal nouns

Derivation of *nomina actionis* by means of the suffix *-ii* / *-ii* / *-üü* / *-uu* from verbs with *beye-beye-leri-n* instead of the reciprocal suffix is possible though restricted. The scope of these restrictions is unclear. For instance, in (115a) and (115b) the verbs allow *nomina actionis* with the reciprocal suffix only, while (115c) and (115d) allow *nomina actionis* both with and without the reciprocal suffix:

- (115) a. *beye-beye-leri-n belextee-* ‘to give presents to each other’
 → *beye-beye-leri-n belexte-h-ii* ‘giving presents to each other’
 b. *beye-beye-leri-n uuraa-* ‘to kiss each other’
 → *beye-beye-leri-n uuraa-h-ii* ‘kissing each other’
 c. *beye-beye-leri-n bier-* ‘to give something to each other’
 → *beye-beye-leri-n bier-ii* / *bier-s-ii* ‘giving something to each other’
 d. *beye-beye-leri-tten xorgut-* ‘to be offended with each other’
 → *beye-beye-leri-tten xorgut-uu* / ‘mutual offence’
 xorgut-uh-uu

A sentential example for (115d):

- (116) a. *Bihigi ikkardī-bütī-gar beye-beye-biti-tten*
 we among-our-DAT each.other-our-ABL
xorgut-uu taxis-t-a
 be.offended-NR AUX-PAST-3SG
 ‘We almost got offended with each other.’ (Cf. (97))

b. *Kini aya-laax uol beye-beye-leri-n /*
 he father-POSS.PART son each.other-their-ACC

beye-beye-leri-ger kinige bier-ii-leri-n
 each.other-their-DAT book give-NR-their-ACC

tuhunan kepsee-t-e
 about tell-PAST-3SG
 lit. 'He told [somebody] about father and son
 giving books to each other.'

6. Simultaneity and succession of reciprocal acts

The reciprocal verbal form itself is neutral with respect to the feature named, i.e. it can denote either succession or simultaneity of the acts within a reciprocal event by itself. One or the other interpretation is determined solely by the lexical meaning of the base verb. The situation 'X and Y kissed each other' obligatorily presupposes simultaneity of the acts within this reciprocal situation for pragmatic reasons, while the situation 'They visit each other' necessarily presupposes their succession. And there are a great many other situations which may be either simultaneous or successive, e.g. 'They fired at each other', 'They write letters to each other', etc.

Simultaneity may be explicated by the adverb *biir birieme* 'simultaneously, at the same time': its combinability with reciprocals has rather trivial restrictions; thus it does not collocate with the reciprocals *uura-s-* 'to kiss each other', *ber-is-* 'to give each other' and *til bīrag-īs-* lit. 'to fling words at each other', *kuot-us-* 'to outrun each other', etc., but it can collocate with the reciprocals *suruy-us-* 'to write to each other', *ann'-īs-* 'to push each other', *xad'ikta-s-* 'to bite each other', *küüt-üs-* 'to wait for each other', etc.

The adverb *biirge* 'together' is not used with reciprocals at all.

Succession of reciprocal acts can be expressed by the adverbs *utum-sitim* 'one after another' (which does not collocate with the reciprocal form *oxs-us-* 'to beat each other') and *xardarī-tarī* with the same meaning, *xardarīta / xardarī* 'alternately', 'in turn', 'by turns', and *utuu-subuu* 'one after another' (only with verbs of motion). The reciprocal acts of both agents are fused to a varying degree depending on the situation. For instance, the acts within such situations as 'to embrace [each other]', 'to fight with each other', can hardly be separated, while non-contact acts within a situation like 'to try to surpass each other' can be separated quite easily. Examples:

- (117) *Xardarī-tarī til bīrax-s-al-lar* (Slepcov 1972: 484)
 by.turns word fling-REC-PRES-3PL
 lit. 'By turns they are flinging words at each other.'

- (118) *Xardarī-taarī sild'ī-h-al-lar*
by.turns visit-REC-PRES-3PL
'They call on each other by turns.'
- (119) *Bihigi ügüstük suru-h-a-būt*
we often write-REC-PRES-1PL
'We often write [letters] to each other.'
- (120) *Bihigi kini-liin solbuy-s-an ülelii-bit*
we he-COM replace-REC-CONV work-PRES.1PL
lit. 'We work replacing each other.'

Reciprocals like *kuot-us-* / *kuot-ala-s-* in the meaning 'to try to catch / outrun each other' (← *kuot-* 'to outrun'; *-ala-* is an iterative suffix), *kepset-is-* 'to tell each other [stories]' (← *kepset-* 'to (re)tell [stories]'), do not allow simultaneous interpretation for pragmatic reasons:

- (121) a. *Die tahīgar xas künnete ünüges oyo-loro sīr-s-al-lar,*
home outside each day puppy child-PL run-REC-PRES-3PL

xaya-lara dayanī kuot-us-pat-tar (Pekarskij 1959: 1235)
which-PL PRTL outrun-REC-NEG.PRES-3PL
'Two puppies outside run together every day
and cannot outrun each other.' (Answer: sledge runners.)
- b. *Ikki olbot-tor miin-s-en-ner*
two Venus-PL mount-REC-PRES-3PL

ölüü-nü ogor-uox-tara (Pekarskij 1959: 1571)
misfortune-ACC do-FUT-3PL
'Venus now appears now disappears
(lit. 'Two stars mount each other') betokening misfortune.'

7. Productivity and restrictions on reciprocal formation

It has been claimed that reciprocal verbs are relatively few in number but they are very widely used in spoken language (Xaritonov 1963: 31, 1982: 271). The cited dictionaries (Pekarskij 1959; Slepcev 1972) register the forms in *-(I)s* / *-(I)h* as either reciprocal or sociative (in our terminology) or both. These forms may have either one of the two meanings or both. Judging by the dictionaries, there are no less than 300 verbs in which the reciprocal meaning can be expressed by the suffix *-s* / *-h*.

As to restrictions, they seem to be mostly trivial, being imposed by the inanimateness of the second argument in two-place verbs. Thus, Xaritonov (1963: 31; 1982: 271) lists *xoruy-* 'to dig up', *ör-* 'to put on a fire', *xataa-* 'to close', *orgut-*

‘to boil’, *buhar-* ‘to cook, brew’ and the like as examples of verbs that cannot be used in the reciprocal form. According to our informants, however, these verbs may take the reciprocal suffix but not in the reciprocal meaning. In fact, “canonical” reciprocals cannot be formed from these and similar verbs (see (122b.i)), unless for a description of a fantastic situation, but “dative” and “possessive” reciprocals, at least from some of them, are quite possible, especially if the reciprocal pronoun is used; cf. (122c) and (122d):

- (122) a. *Kini as belemnee-bit-e*
 ‘He has cooked the food.’
 b. *Kini-ler belemne-s-pit-tere*
 i. *‘They have cooked each other.’ (reciprocal)
 ii. ‘They have cooked together.’ (sociative)
 iii. ‘They helped [somebody] to cook.’ (assistive)
 c. *Kini mie-xe as belemne-pit-e*
 ‘He has cooked food for me.’
 d. *Kiniler sıl-ı bîha beye-beye-leri-ger*
 they year-ACC whole each.other-DAT
 as belemne-s-pit-tere
 food prepare-REC-PERF-3PL
 ‘They have cooked food for each other for a whole year.’
 (“dative” reciprocal)

If the reciprocal pronoun is omitted in (122d), it results in the loss of the reciprocal meaning and acquisition of the assistive or the sociative meaning.

According to our informants, the *-(I)s / -(I)h* forms of the base verbs *orulaa-* ‘to wheeze / shout in a hoarse voice’, *orunnaa-* ‘to provide with a sleeping place’, *öhöö-* ‘to feel hostile towards somebody’, *ülelet-* ‘to make somebody work’ and the like are not reciprocal in meaning; instead, they can have the sociative meaning. Sometimes, the informants (one or both) do not accept reciprocals registered in the dictionaries or they recommend adding the reciprocal pronoun. An example can be the form *axt-is-t-ılar* ‘[they] remember / miss each other’ where the reciprocal pronoun *beye-beye-leri-n* ‘each other’ should be added, in the opinion of an informant (see also 5.4). The form *saan-s-al-lar* ‘they threaten each other’ requires the dative form *beye-beye-leri-ger*, in the opinion of the same informant. Sometimes, the informants’ opinions do not coincide.

Due to their lexical meaning, some of the reciprocals can be used only in the negative form or with a specifier; thus (123b) sounds strange though acceptable if we add *xardarıta* ‘by turns’ (the sense is ‘They overcome one another by turns’); in the perfective aspect the sentence without negation is ungrammatical:

- (123) a. *Kiniler beye-beye-leri-n kīay-sī-bat-tar* (Slepcov 1972: 203)
 they each.other-their-ACC overcome-REC-NEG.PRES-3PL
 'They cannot overcome one another.'
- b. *?Kiniler beye-beye-leri-n kīay-sī-lar*
 'They are overcoming each other.'
- c. **Kiniler beye-beye-leri-n*
 they each.other-their-ACC
kīay-s-īīn kebis-t-iler
 overcome-REC-CONV AUX-PAST-3PL
 'They overcame each other.'

Compare, however, (7) in 10.2.

8. Expression of reciprocal arguments

8.1. Simple reciprocal constructions

In this type of constructions, both reciprocal arguments are in subject position, which requires a predicate in the plural. Their expression is no different from that of plural subjects in non-reciprocal constructions. There are two subtypes of the syntactic subject: (a) homogeneous subject, expressed either by a plural nominal (e.g. (122d)) or by a collective noun like *kerge* 'family', *d'on* 'people', etc. (see (124)); (b) heterogeneous subject, covering such means of expression as (i) two nominals conjoined by the numeral *ikki* 'two' (for two participants only; see (125a)) which as a rule occurs twice, after each of the nominals; (ii) two nominals conjoined by the conjunction *uonna* 'with' (see (125b)); (iii) two nominals conjoined by the coordinative postposition *kūta* 'with' placed after the second nominal in the accusative form (see (125c)); (iv) two nominals conjoined by the comitative case marker on the second nominal or on both (see (125d)); (v) the first component containing a possessive suffix in attributive position (*oyonn'or-doox emeexsin* 'an old man and woman', lit. 'an old woman possessing an old man'). In all these cases the verb agrees with the subject group in the plural number.

- (124) *D'on / d'on-nor beye-beye-leri-n ölö-üh-ül-ler*
 people people-PL each.other-their-ACC kill-REC-PRES-PL
 'People kill each other.'
- (125) a. *Kini [ikki] aya-ta ikki sura-h-al-lar*
 'He and his father ask each other.'
- b. *Kini uonna aya-ta sura-h-al-lar*
 (same)

c. *Kini aya-ti-n kitta sura-h-al-lar*
(same; lit. 'He with his father ask each other')

d. *Kini aya-ti-niin sura-h-al-lar*
(same; lit. 'He father-his-with ask each other').

8.2. Discontinuous reciprocal constructions

It should be pointed out at once that verbs with *beye-beye-leri-n* cannot be used in the discontinuous construction, which is to say that we shall discuss only suffixed reciprocals, i.e. the possibility of their use with a singular subject. In discontinuous constructions, one of the arguments is the subject and the other is an object. This object may be marked either by the postposition *kitta* 'with' or by the comitative case form, i.e. it is homonymous with the second part of a heterogeneous subject in (125c-d). Schematically, this homonymy looks as follows: Subject₁ + Subject₂ and Subject₁ + Object₂:

(126) a. *Kini aya-ti-n kitta kuust-uh-a tüs-t-üler*
he father-his-ACC with hug-REC-CONV AUX-PAST-3PL
'He and his father hugged each other quickly.'

b. *Kini aya-ti-n kitta*
he father-his-ACC with

kuust-uh-a tüs-t-e (Xaritonov 1963: 36)
hug-REC-CONV AUX-PAST-3SG
'He and his father hugged each other quickly.'
lit. 'He quickly hugged each other with his father.'

This homonymy is due to the sentence-final position of the verb: it prevents placing a comitative phrase after the predicate, which would unambiguously point to its object status. However, an object does occur in the final position, though rarely, for emphasis, etc.; thus in the following example the comitative object is in post-verbal position:

(127) *Min bil-si-bit-im onnuk soru kitta* (B. 393)
I know-REC-PERF-1SG misfortune with
'I met (lit. 'got acquainted') with misfortune.'

If the first nominal preceding a comitative phrase is singular and the predicate agrees with it in number, the construction is unambiguously discontinuous (because "the subject and predicate are always linked by agreement in Yakut" (Ubrjatova 1962: 103)). Constructions of this type have the function, among others, of topicalizing the first nominal (see (126b).

It should be borne in mind that a transformation of the (126a) → (126b) type may be complicated by the fact that with a singular subject a verb with the suffix *-(I)s / -(I)h* may have a sociative or comitative or assistive meaning; in other words, this may result in the loss of the reciprocal meaning or at least the reciprocal reading may become a less preferable one.

Let us consider instances with the first nominal in the plural. In this case the predicate is necessarily plural, too. If the first nominal is the 1.PL pronoun *bihigi* 'we', the second nominal can be only the 2nd or 3rd person. If the first nominal is the 2.PL pronoun *ihigi* 'you', the second may be either the 1st or the 3rd person. In these cases we obtain a discontinuous construction because the verb agrees with the first nominal:

- (128) *Bihigi elbex saxa-ni gitta kör-sü-büp-püt* (Böhtlingk 1989: 393)
 we many Yakut-ACC with see-REC-PERF-1PL
 'We met / collided with (lit. 'saw each other') many Yakuts.'

If the first nominal is the 3.PL pronoun *kiniler* 'they' (or a plural noun), the second nominal can be any of the three persons. As a result, if the second nominal is a 3rd person pronoun or a noun, it is practically impossible to distinguish between a simple and a discontinuous reciprocal construction as they are formally homonymous. The syntactic difference between (126a) and (126b) is neutralized if the subject is plural, because the predicate is also plural; and, therefore, it is not clear whether it agrees with the first nominal alone (which would make it a discontinuous construction) or with both arguments (which would make it a simple construction). As a rule, such constructions are interpreted as simple:

- (129) *Kiniler aya-ları-n kitta kuust-uh-a tüs-t-üler*
 they father-their-ACC with hug-REC-CONV AUX-PAST-3PL
 i. 'They and their father quickly hugged each other.' (simple), ii. (same)
 lit. 'They quickly hugged each other with their father.' (discontinuous)

Now, let us consider sentences with the first nominal in the singular. There seem to be certain restrictions imposed by combinations of personal pronouns in both positions. Let us discuss combinations of the 1SG, 2SG and 3SG pronouns in the first position with the 3SG pronoun (or a noun) in the comitative phrase. The following regularity, which is not quite clear, can be observed: if the first nominal is the 1SG pronoun *min* 'I' or the 3SG pronoun *kini* 's/he', the predicate may be either in the singular or in the plural, the constructions being discontinuous or simple respectively (see (130a, b)), but if the subject is the 2SG pronoun *en* 'you [fam.]' the predicate can assume the singular form only, which makes it a discontinuous construction (see (130c, d)).

- (130) a. *Min kini-ni kitta ann'-ih-a-bīn*
 I he-ACC with push-REC-PRES-1SG
 'He and I push each other.'
- b. *Min kini-ni kitta ann'-ih-a-bīt*
 I he-ACC with push-REC-PRES-1PL
 'He and I push each other.'
- c. *En kini-ni kitta ann'-ih-a-γīn*
 you.SG he-ACC with push-REC-PRES-2SG
 'You and he push each other.'
- d. **En kini-ni kitta ann'-ih-a-γīt*
 you.SG he-ACC with push-REC-PRES-2PL
 'You and he push each other.'
- e. *Kini aya-iīn kitta ann'-ih-ar*
 he father-his with push-REC-PRES.3SG
 'He and his father push (lit. 'pushes') each other.'
- f. *Kini aya-iīn kitta ann'-ih-al-lar*
 he father-his with push-REC-PRES-3PL
 'He and his father push each other.'

With regard to (130d) it should be added that the predicate is plural if the subject is expressed by a form for two persons only, of the type *en bih-ikki* 'you and I' (lit. 'you [fam.] we-two') and *kini / aya-m bih-ikki* 's/he / my father and I' (lit. 's/he / my father we-two'):

- g. *En bih-ikki ann'-ih-a-bīt*
 you I-two push-REC-PRES-1PL
 'You and I push each other.'

In most of the sentences of these types in the dictionaries and specialist literature, agreement in the singular is observed, which makes them discontinuous constructions. Here are examples for "canonical", "dative" and "possessive" reciprocals respectively:

- (131) a. *Kini ... ayabūt-ī kitta*
 he priest-ACC with

tīrīt-a *tīīt-s-pīt-a* (Xaritonov 1963: 36)
 tear-CONV tear-REC-NR.PAST-3SG
 lit. 'He scratched each other with the priest.' (see also (126b))

b. *En* *on-u* *kītta* *tīl* *ber-si-bit-iŋ* (Pekarskij 1959: 440)
 you.SG s/he-ACC with word give-REC-NR.PAST-2SG
 lit. 'You gave word (= made promise) to each other with him.'

c. *[Kini]* *Edlin-i* *kītta* *ilii* *tut-us-put-a* (Xaritonov 1963: 36)
 he E-ACC with hand hold-REC-NR.PAST-3SG
 'He exchanged handshakes with Edlin.'

In the examples of discontinuous constructions at our disposal, reciprocals with a greater or lesser degree of lexicalization are prevalent. But this issue requires further study. Thus, it is not clear why the reciprocal *axt-iŝ-* 'to remember / miss each other' cannot be used (according to one of our informants) in a discontinuous construction, while *kūitire-s-* 'to suspect each other' allows such usage. The informants do not accept a discontinuous construction for (83) either.

The tendencies in agreement in constructions with comitative phrases are not, it seems, a specific feature of reciprocal verbs. Analogous tendencies are also observed in constructions with non-reciprocals, i.e. in constructions of the type (164c-d). But the following example from specialist literature, unlike (130d), is accepted by the informants without hesitation; (if we substitute the phrase with *kītta* 'with' for *Ivan-nīin* the sentence will retain the agreement scheme).

(132) *En* *Ivan-nīin* *balīkt-iāx-xīt* (Xaritonov 1987: 176)
 you.SG I.-COM fish-FUT-2PL
 'You and Ivan will go fishing.' (lit. 'You with Ivan will fish.')

8.2.1. The second reciprocal argument in direct object position

Two reciprocals of this type have been registered so far, both of them lexicalized items. But their object can also be of the regular type (cf. (133c) and (133d)).

(133) a. *Kini bu* *kihi-ni* *bil-bet* *[ete]*
 he this man-ACC know-NEG AUX.PAST
 'He did not know this man.'

b. *Kiniler* *bil-si-bet* *eti-ler*
 they know-REC-NEG AUX.PAST-3PL
 'They did not know each other.'

c. *Kini bu kihi-ni bil-si-bet ete*
 he this man-ACC know-REC-NEG AUX.PAST
 (same meaning); lit. 'He this man did not know each other.'

d. *Saḡa ülehit-i kitta bil-is-t-im* (Slepcev 1972: 70)
 new worker-ACC with know-REC-PAST-1SG
 'I got acquainted with the new colleague.'

Sentence (134) contains the reciprocal verb *kör-üs-* (← *kör-* 'to look, to see') registered in the Russian-Yakut dictionary as the only equivalent of the Russian verb *vstretit'* 'to meet':

(134) *Min uulussa-ya biler*
 I street-DAT familiar

kihi-bi-n kör-üs-t-üm (Afanas'ev & Xaritonov 1968: 85)
 man-my-ACC know-REC-PAST-1SG
 'I met an acquaintance in the street.'

8.2.2. Non-reversible discontinuous constructions

These are constructions that cannot be transformed into simple reciprocal constructions. This may involve a shift in meaning or metaphoric use, which allows the speakers to use in comitative object position entities that differ from the subject referent semantically; cf. (127) and the following:

(135) a. *Bīar kuus-t-an tur-an,*
 breast hug-REFL-CONV AUX-CONV

ohoḡ-un kitta xumuru-s-t-a (Xaritonov 1963: 40)
 stove-ACC with scold-REC-PAST-3SG
 'Standing with her arms crossed on her breast
 (lit. 'hugging her breast'), she was reproaching her stove.'

b. **Kini ohoḡ-un kitta xumuru-s-t-ular*
 s/he stove-ACC with scold-REC-PAST-3PL
 'She and the stove reproached each other.'

9. Meanings immediately related to reciprocal: sociative, comitative, assistive

9.1. Introductory

The four meanings listed in the heading are closely related semantically: all of them presuppose at least two participants of the same situation performing the same action together. It is not accidental that they may be expressed by the same form (cf. (1)). It

is tempting to regard them as realizations of one and the same meaning dependent on contextual factors in the broad sense, including the lexical meaning of the underlying verbs, the type of construction, pragmatic factors, etc. But it is necessary to distinguish between these meanings one way or another because they are attested to a varying degree across the Turkic languages, including possible absence of some of them in a particular language: compare the weak development of the competitive meaning in Yakut (see 6) in 10.2) and its extreme productivity in Karachay, very high productivity of the sociative meaning in Yakut and its next to total absence in modern Kirghiz, extreme productivity of the assistive meaning in Yakut, Tatar and some other languages and its nearly absolute absence in Azerbaijanian and Turkish, etc. (see, for instance, Sevortjan 1962: 532, 539). Therefore it is reasonable and convenient to regard them as distinct meanings, whatever our attitude to the possibility of their interpretation as manifestations of one general meaning. It is noteworthy that the reciprocal meaning proper is attested in all of the Turkic languages, though with a varying degree of productivity.

The relationship between the four meanings can be shown in the following way:

(136)	a.	b.
	1. reciprocal	assistive
	2. sociative	comitative

(1) In column (a), the meanings (reciprocal and sociative) obligatorily require a plural subject (discontinuous reciprocal constructions, which allow a singular subject, are a later development from simple reciprocal constructions).

(2) In column (b), the two meanings (assistive and comitative), contrary to those in column (a), can be realized with a singular subject.

(3) In column (b), realization of both meanings involves valency increase by one unit. The sociative meaning (2a) involves an increase of the number of participants by at least one.

(4) In column (a), the reciprocal meaning, with the exception of “possessive” reciprocals, involves valency decrease, and the sociative meaning retains the valency of the underlying form.

(5) In line 1, the meanings (reciprocal and assistive) involve a more significant shift in the lexical meaning of a verb than those (i.e. sociative and comitative) in line 2.

(6) In column (a), the subject referents perform identical actions, while in the case of the assistive meaning (1b) the dative object referent is the main “performer” (though it may be not mentioned or it may not take part in the action; cf. (171) and 9.2.4). In the case of the comitative meaning, on the contrary, the subject referent is the main “performer”.

9.2. Subject-oriented constructions

9.2.1. The sociative meaning

Judging by the data registered in Slepcev (1972) (and checked with the informants), the number of verbal forms in *-(I)s / -(I)h* which may render the sociative meaning is at least twice as large as that of forms that can express the reciprocal meaning (approximately 600 sociatives vs. 300 reciprocals). Needless to say, this involves a significant overlapping of meanings in the same forms rather than in different sets of verbs. Most of the verb bases whose reciprocal form can acquire the sociative meaning (about 60 per cent of the relevant forms) denote everyday activities of humans, i.e. controlled actions (about 90 per cent of them are transitives).

The sociative meaning can be emphasized (or expressed only) by the adverb *bi-irge* 'together' or by the postpositional reciprocal pronoun *beye-beye-lerin kitta* 'with each other'.

9.2.1.1. Sociatives derived from one-place intransitives

These are verbs denoting motion of animate subjects, emotions, sounds, etc., e.g.:

- (137)
- | | |
|-----------------|---------------------------------------|
| <i>bar-īs-</i> | 'to go away / leave together' |
| <i>kel-is-</i> | 'to come together' (= simultaneously) |
| <i>köt-üs-</i> | 'to fly together' |
| <i>sīt-īs-</i> | 'to lie down together' |
| <i>taxs-īs-</i> | 'to go out together' |
| <i>xaal-īs-</i> | 'to stay / remain together' |
| <i>xon-us-</i> | 'to spend a night together' |

The number of sociatives with inanimate subjects is very limited and includes, for instance, verbs denoting burning, flashing, glittering, sounding and the like: these processes involve at least a degree of activity on the part of the subject referents perceived visually:

- (138)
- | | |
|--------------------|---|
| <i>d'irimne-s-</i> | 'to glitter / flash / blink together (of several objects)' |
| <i>kilengne-s-</i> | 'to glitter together (of several objects)' |
| <i>külümne-s-</i> | 'to flash / flare up / sparkle together (of several objects)' |
| <i>kilamna-s-</i> | 'to burn / twinkle together (of several objects)' |

In (138) and in the other lists of verbs, the sociative meaning is more or less adequately rendered by the translations, but in sentential examples selected from texts the translations do not always reflect this meaning, which may be due to subtle semantic deviations from the meaning roughly rendered by the adverb 'together'. The following examples illustrate this type of sociative forms:

- (139) *Uot-tar suburuḡna-s-t-ilar*
 fire-PL flash-REC-PAST-3PL
 'Sparks began to flash / glitter.'
- (140) *Tihīna-nan hoyuu bugul-lar baigīra-h-al-lar*
 thousand-INST thick haystack-PL stand-REC-PRES-3PL
 'Thousands of haystacks stand here and there.'
- (141) *Kölöhin-ner-e allirya-ī tammala-s-t-ilar*
 sweat-PL-his drop-CONV drop-REC-PAST-3PL
 'Drops of his sweat fell down.'
- (142) *Üöhe sulus-tar d'irimne-h-el-ler*
 above star-PL glitter-REC-PRES-3PL
 'Stars are twinkling above.'
- (143) *Töbö-tü-ger bīstala suox uraan-nar liḡkīna-h-al-lar*
 head-his-DAT continuously little.bell-PL ring-REC-PRES-3PL
 'Little bells were continuously ringing in his ears.'
- (144) *D'on kü-l-en n'irg-is-t-iler*
 people laugh-CONV ring.out-REC-PAST-3PL
 'The people burst into loud laughter.'

These six examples are borrowed from (Xaritonov 1963: 270).

In most examples of our sample the sociative subject has a plural referent, but sociatives can also describe situations with two subject referents; e.g.:

- (144') *Oxu ikki baya ikki sir-ten ikki-te-üs-te*
 snail and frog and ground-ABL two-TE-three-TE

örüte tey-iekkete-h-e tüs-t-üler (Pekarskij 1959: 2118)
 upwards rise-ITER-REC-CONV AUX-PAST-3PL
 'The snail and the frog raised themselves together two or three times.'

Sociatives are especially frequent from onomatopoeic verbs (typically used in iterative contexts) and expressive verbs (often with an iterative suffix; cf. *-ḡḡö-*, *-iāla-* and *-uoxxala-* below; see Xaritonov 1963: 28).

Sociatives are easily formed from verbs denoting multi-directional, disorderly actions:

- (145) *aybarda-s-* 'to rush from side to side together, fuss together'
biḡ-iāla-s- 'to look out / show oneself out together repeatedly'

- d'abd'ili-s-* 'to do something together in a rush, fussily, with energy'
oy-uoxxala-s- 'to jump up together repeatedly'
tohugura-s- 'to produce together frequent slight knocks'
töḡkō-ḡḡō-s- 'to bend together repeatedly'
xaaxina-s- 'to creak together raucously and slowly'

The sociative meaning differs from simple plurality in that the subject referents are presented as participants of the same situation connected in one way or another and acting jointly at the same time and place or iteratively (one after another) within the same situation. The sociative form of some verbs implies a kind of coordinated action. Sometimes, the common cause of several actions is implied. A sociative meaning may also acquire additional emotive or intensive overtones (see Xaritonov 1963: 22-25):

- (146) a. *Turaax-tar daayīnī-l-lar*
 'Crows are crowing.'
 b. *Turaax-tar daayīna-h-al-lar*
 'Crows are crowing (all of them together, simultaneously).'
 (147) a. *Oḡo-lor iīī-l-lar*
 'The children are crying.'
 b. *Oḡo-lor iīa-h-al-lar*
 'The children are crying
 (all of them together, as if vying with each other; etc.).'

Compare also:

- (148) *Oyuur-ga iī aax-tar iḡigīra-h-al-lar*
 'In the woods, birds are chirping (all of them together, at high tempo, etc.).'
 (149) *Suol-ga d'on-nor elegne-h-el-ler*
 'On the road, people are rushing back and forth
 (rapidly, one after another).'
 (150) *Talax-tar būs-tarī-ttan inax-tar*
 willow-PL border-their-ABL cow-PL
 mülükü ü-h-en taxs-an kel-l-iler (Xaritonov 1963: 29)
 dash-REC-CONV go.out-CONV come-PAST-3PL
 'Suddenly cows came out rushing from the willow-wood.'

In constructions with verbs of uttering sounds, a kind of semantic neutralization between reciprocal and sociative interpretation can be perceived if a situation can be interpreted as a kind of exchange; cf. 4.1.1.6.

Sociative forms in *-(I)s* / *-(I)h* are not derived from verbs denoting “passive” properties, interior processes or states (see Xaritonov 1963: 21), such as the following:

- (151) a. *sīlay-* ‘to grow tired’,
 b. *toŋ-* ‘to be cold’
 c. *üün-* ‘to grow’,
 d. *uoy-* ‘to grow fat’, etc.

9.2.1.2. Sociatives derived from two-place transitives and intransitives

Unlike the sociatives from one-place intransitives, which do not as a rule allow parallel reciprocal interpretation, those derived from two-place verbs may in principle, though not always, allow dual interpretation. They can be divided into three main groups with respect to their relatedness to the reciprocal meaning: (a) derivatives that can assume the reciprocal as well as the sociative meaning; (b) verbs that can assume the sociative meaning only; (c) verbs that assume the reciprocal meaning only. Let us consider these three groups.

A. Verbs assuming both the reciprocal and the sociative meaning; cf.:

- (152) a. *Kiniler is taŋah-ī mülala-s-t-īlar*
 they interior clothes-ACC soap-REC-PAST-3PL
 ‘They soaped the underwear together.’
 b. *Kiniler mülala-s-t-īlar*
 ‘They soaped each other.’

The following verbs with the reciprocal suffix derived from transitives belong here:

- (153) *ann'-īs-*
 i. ‘to push somebody / something together’
 ii. ‘to push each other’

ist-is-
 i. ‘to listen to somebody together’
 ii. ‘to listen to each other’

kör-süs-
 i. ‘to look at somebody together’
 ii. ‘to look at each other’

kīrba-s-

- i. 'to beat somebody together'
- ii. 'to beat each other'; etc.

The following verbs are derived from two-place intransitives:

(154) *ihīir-is-*

- i. 'to whistle to somebody together'
- ii. 'to whistle to each other'

sīld'-īs-

- i. 'to call on somebody together'
- ii. 'to call on each other'

tūh-ūs-

- i. 'to rush at / attack somebody together'
- ii. 'to rush at / attack each other'; etc.

The sociative or the reciprocal meaning is dependent on the syntactic changes in the derived construction: in the case of the sociative meaning, the structure of the underlying construction remains unchanged, the object being retained, while in the case of the reciprocal meaning the object is omitted as it is co-referent with the subject (though in the case of ellipsis the interpretation may present difficulties).

B. Verbs that can assume the sociative meaning only: they cannot assume the reciprocal meaning because of the inanimate object, which is retained in sociatives (a special problem is the possibility of a benefactive dative and its reciprocalization; cf. (122)):

- (155) a. *Kiniler uulussa-nī muosta-s-t-īlar*
 they street-ACC pave-REC-PAST-3PL
 'They paved the street together.'
- b. *Kiniler muosta-s-t-īlar*
 i. *'They paved each other.' But:
 ii. 'They did the paving together.'

Verbs of this type:

- (156) a. *d'ūülle-s-* 'to discuss (a project, etc.) together'
- b. *mehiy-is-* 'to knead (dough) together'
- c. *naarda-s-* 'to stack (in a certain order, books, etc.) together'
- d. *naborda-s-* 'to set up / compose (a book, etc.) together'
- e. *narīla-s-* 'to trim up (something) together'

- f. *nastaabıla-s-* 'to brew (tea, etc.) together'
 g. *nuormala-s-* 'to normalize, standardize together'; etc.

This derivational pattern is highly productive, as is testified by the sociative use of many recent borrowings from Russian (see (156b, c, e, g)).

C. Verbs that can assume the reciprocal meaning only. Here belong relatively few verbs which take an animate object whose form in *-(I)s / -(I)h* does not assume the sociative meaning due to their lexical meaning or for some pragmatic reasons. According to Xaritonov (1963: 33), the following verb forms are of this type:

- (157) *axt-īs-* 'to miss each other'
bil-is- 'to get acquainted with each other', 'to know each other'
kig-is- 'to instigate each other'
künüüle-s- 'to be jealous of each other'
kīay-īs- 'to win a victory over / overcome each other'
süüy-ūs- 'to win from each other'
tapta-s- 'to love each other'
ubura-s- 'to kiss each other'
umn-us- 'to forget each other'
üöx-süs- 'to curse each other, to quarrel'

9.2.1.3. Sociatives derived from three-place transitives

There are probably no derivatives from this class of transitives that are used as sociatives only. In other words, two subtypes can be expected here: (a) verbs in *-(I)s / -(I)h* with two meanings, both sociative and reciprocal (cf. (1)), and (b) verbs acquiring the reciprocal meaning only. This issue requires further study.

9.2.2. The comitative meaning

It should be borne in mind that unlike verbs with the sociative meaning, those with the comitative meaning can be used with a singular subject. The co-participant can be expressed in two ways: either by a noun phrase with the postposition *kitta* 'with' or by a nominal in the comitative case; or it may be omitted though implied by the verb form. The possibility of transforming sociative sentences into comitative ones divides the verbs considered under 9.2.1 into two groups: verbs that allow it without restrictions and verbs that do not allow it or produce unnatural sentences.

A kind of parallelism can be observed in the relations between sociative and comitative, on the one hand, and between simple and discontinuous reciprocal constructions, on the other. It is possible that the existence of comitative constructions furthered the development of discontinuous constructions. In sociative and simple reciprocal constructions both participants are presented as pragmatically equal, while in comitative and discontinuous reciprocal constructions the subject referent (to be more precise, the first reciprocal argument) is foregrounded. The difference lies in the fact that the object referent of a discontinuous reciprocal construction cannot as a rule

be omitted as it is implied by the lexical meaning of the verb, while the object referent of a comitative construction is not infrequently absent and the reciprocal suffix indicates only that the subject referent does not act alone and there is a co-participant in the situation named.

9.2.2.1. Comitatives derived from one-place intransitives

Sociatives from certain groups of intransitives, especially those implying a non-human agent, are never found in comitative constructions. We have in mind the intransitives in (138)-(143) and (146)-(150). Other sociative constructions are easily transformed into comitative ones. This transformation triggers predicate agreement with the first nominal only; therefore, (158a), where the first nominal is singular and the predicate plural, is ungrammatical. Note that formally analogous constructions with a reciprocal verb allow plural agreement with the subject containing a comitative noun group (see (126a)).

- (158) a. **Kini ikki aya-ta bar-s-al-lar*
 he and father-his go-REC-PRES-3PL
 ‘He and his father go away.’
- b. *Kini aya-ti-n kitta bar-s-ar*
 he father-his-ACC with go-REC-PRES.3SG
 ‘He goes away with his father.’

Comitative verbs can express actions that are not simultaneous but follow another action (in the following sentence comitativity is emphasized by the adverb *biirge* ‘together’):

- (159) *Kennitten aya-m biirge taxs-is-t-a* (Xaritonov 1963: 25)
 behind [him] father-my together go.out-REC-PAST-3SG
 ‘Immediately after him my father went out.’

In the following examples the second co-participant is not named (as a translation equivalent, the adverb ‘too’ can be used here in certain contexts; see also (165b)):

- (160) a. *Bar-s-aarī gīn-a-bīn*
 go-REC-CONV AUX-PRES-1SG
 ‘I want to go together / too,’ ‘I want to join / accompany.’
- b. *Biirge ülele-h-er*
 together work-REC-PRES.3SG
 ‘He works together / too.’

Comitativity can also be expressed by lexical means alone, viz. by the adverb *biirge* ‘together’, or by a noun phrase with the same postposition *kitta* ‘with’. The difference between this and a construction with a comitative verb is very subtle. In the case of a comitative verb form the co-participants are more closely related within the situation described, though the first participant remains pragmatically more prominent than the second:

- (161) a. *[Min] ehigi-ni kitta üör-e-bin*
 I you.PL-ACC with rejoice-PRES-1SG
 ‘I rejoice together with you;’ ‘I share your joy.’

- b. *[Min] ehigi-ni kitta üör-s-e-bin*
 (same translation)

- (162) a. *Min ehigi-ni kitta bar-a-bīn*
 I you.PL-ACC with go-PRES-1SG
 ‘I am going away with you.’

- b. *Min ehigini kitta bar-s-a-bīn*
 (same translation)

9.2.2.2. Comitatives derived from two-place transitives and intransitives

Comitatives can be derived from two-place transitives, but not from two-place intransitives (see the lists under (60), (61), (62)). As a rule, a comitative object with the postposition *kitta* ‘with’ cannot be added in a sentence which already contains an oblique object with the same postposition, viz. in sentences with meanings like ‘He is whispering with her’, ‘He is talking with her’, etc. Its addition would yield an unnatural sentence (see also 9.2.3.2).

- (163) a. *En bihigini kitta mas-ta kerd-is!*
 you.SG we.ACC with fire.wood-ACC cut-REC.IMP.2SG
 ‘Cut firewood together with us!’

- b. *Kini iye-tin kitta ĭnax ĭa-s-t-a*
 s/he mother-her.ACC with cow milk-REC-PAST-3SG
 lit. ‘She with her mother milked cows.’

The following examples illustrate the four main ways of expressing comitativity: two of the examples, (164a) and (164b), contain the reciprocal suffix and the other two contain only the lexical means which may co-occur with the grammatical expression. All of the sentences are roughly synonymous:

- (164) a. *Kini miig-in kitta [biirge] ot tiey-is-t-e*
 he I-ACC with together hay cart-REC-PAST-3SG
 'He and I (lit. 'He with me') carted hay [together].'
- b. *Kini miigin-niin [biirge] ot tiey-is-t-e*
 he I-COM together hay cart-REC-PAST-3SG
 (same translation)
- c. *Kini miig-in kitta [biirge] ot tiey-d-e*
 he I-ACC with together hay cart-PAST-3SG
 (same translation)
- d. *Kini miigin-niin [biirge] ot tiey-d-e*
 (same translation)

If the first nominal is plural, which involves plural marking on the predicate, the comitative phrase allows two interpretations, as part of the subject and as a comitative object:

- e. *Kiniler miig-in kitta ot tiey-d-iler*
 they I-ACC with hay cart-PAST-3PL
 i. 'They and I carted hay.'
 ii. 'They carted hay with me.'

In the following example the second co-participant is not named, the implication being that the subject referent was one of a group of hunters:

- (165) a. *[Min] tayay-ī bulta-s-t-īm*
 I elk-ACC hunt-REC-PAST-1SG
 'I took part in hunting down elk.'
- b. *Et-te kīrba-s!*
 meat-PRTV chop-REC.IMP
 'Chop some meat, too!'
 (in a situation when someone is already chopping the meat).

9.2.3. The assistive meaning

As mentioned above, a comitative or assistive interpretation of a reciprocal form is determined by the way the second co-participant is expressed: in the case of its comitative marking (the postposition *kitta* 'with' or the comitative case ending *-liin*, etc.) the reading is as a rule comitative, and if the marking is dative it is usually assistive. If the expression of this co-participant is omitted, the interpretation is determined

pragmatically and by context. Thus in the case of motion verbs the reading is likely to be comitative; e.g.:

- (166) a. *Kini bar-s-ar*
 i. 'He is going with somebody.'
 ii. *'He is helping somebody to go.'
- b. *Kini aha-s-ta*
 i. 'He has eaten with somebody.' (= in company)
 ii. *'He has helped somebody to eat.'
- c. *Min üör-s-e-bin*
 i. 'I rejoice [together] with somebody;' 'I also rejoice.'
 ii. *'I help somebody to rejoice.'

It has been pointed out above that the lexical range of comitatives is somewhat narrower than that of sociatives, partly due to the fact that sociatives from certain intransitives do not have corresponding comitatives. If we take into account (166) and similar data, we can assume that the lexical range of assistives is somewhat narrower than that of comitatives.

The lexical range of sociatives and reciprocals most likely overlaps. The following acceptability hierarchy in the lexical range of reciprocals, sociatives, comitatives and assistives can be tentatively proposed: reciprocal \cap sociative \supset comitative \supset assistive.

9.2.3.1. Assistives derived from one-place intransitives

The number of assistives of this type seems to be rather limited and covers mainly verbs denoting various everyday activities, e.g.:

- (167) *Aya-m miexe üleli-h-ir*
 father-my IDAT work-REC-PRES.3SG
 'Father helps me to work.'

9.2.3.2. Assistives derived from two-place transitives and intransitives

Assistives derived from two-place transitives comprise the main group. There are no assistives from two-place intransitives, which is accounted for by the lexical meaning of the verbs: assisting in such actions and states as whispering, flattering, being disappointed, etc. (see (60), (61), etc.) is pragmatically unlikely (cf. 9.2.2.2).

- (168) *bih-īs-* 'to help to cut'
 kötöγ-ūs- 'to help to lift / raise'
 kīrg-īs- 'to help to chop / hack'

suuy-us- 'to help to wash'
tut-us- 'to help to catch', 'to help to build'; e.g.:

- (169) a. *At tut-us-t-a* '[He] helped to catch the horse.'
 b. *Aya-m miexe otuu tut-us-t-a* 'Father helped me to build a hut.'
 c. *Bihiexe mas-ta kerd-is!* 'Help us to chop the firewood.'
 d. *Iti d'oh-γo ot munn'-uh-a-bīn* '[I] help these people to rake hay.'
 e. *Iye-tiger īnax īa-s-t-a* '[She] helped her mother to milk cows.'

The following sentence contains no expression of the second co-participant.

- (170) *Min d'ie-ber uu bas-ih-a-bīn*
 I home-? water bring-REC-PRES-1SG
 'At home, I help to bring water.'

The reciprocal form is used to encode the assistive meaning even when the subject referent performs the action alone (see (171)). If the reciprocal form of a given verb customarily has a comitative meaning, the lexical verb meaning 'to help' is used instead of the reciprocal suffix (see (172)):

- (171) *Min key-en kaam-pa-ppīn, ol ihin da*
 I walk-CONV be.able-NEG-ABL that because.of

īal-īm mie-xe mas kerd-er-is-t-e
 neighbour-my.NOM I-DAT firewood chop-REC-PAST-3SG
 'I could not walk, therefore my neighbour helped me to chop the firewood.'

- (172) a. *Kini bar-īs-t-a*
 he walk-REC-PAST-3SG
 'He walked with somebody.'
- b. **Kini mie-xe bar-īs-t-a*
 (intended meaning:) 'He helped me to walk.'
- c. *Kini mie-xe bar-ar-īgar kōmōlōs-t-ō*
 he I-DAT walk-PART-DAT help-PAST-3SG
 'He helped me to walk.'

9.2.4. The use with negation

When used with negation, verbs with a comitative meaning show that the subject referent either does not perform the action at all or performs it alone. The action of

the co-agent is not negated. Verbs with a negated assistive meaning denote that the co-agent performs the action alone:

- (173) a. *Kini biirge ülele-s-pet*
 he together work-REC-NEG.PRES.3SG
 'He does not work together [with somebody].'

- b. *Kini mie-xe ülele-s-pet*
 'He does not help me to work.'

9.3. Causatives from sociatives, comitatives and assistives

As well as in the other cases, causative constructions can be easily formed from all the semantic types of derivatives with the reciprocal suffix (see (16) and the relevant text, and 4.2):

- (174) a. *balikta-* 'to fish'
 b. *balikta-s-* 'to fish together'
 c. *balikta-h-în-nar-* 'to make / allow to fish together'

A causative derived from an assistive (cf. (169e)):

- (175) *Aya-m kini-ni iye-ti-ger*
 father-my she-ACC mother-her-DAT

inax ia-h-în-nar-d-a
 cow milk-REC-REFL-CAUS-PAST-3SG
 'My father made her help her mother to milk the cow.'

A causative derived from a comitative:

- (176) *Aya-m kini-ni miig-in kitta bar-ih-în-nar-d-a*
 father-my he-ACC I-ACC with go-REC-REFL-CAUS-PAST-3SG
 'My father made him go with me.'

9.4. Deverbal nouns

Nouns are easily formed from all the semantic types of derivative verbs with the reciprocal suffix. (177) contains a deverbal noun with a sociative meaning, and (178) with an assistive meaning (it contains a substantivized participle with the suffix *-er* / *-ar*, etc.):

- (177) *Kini inax mayira-h-ii-ti-n ist-er*
 he.NOM cow.NOM moo-REC-NR-its-ACC hear-PRES.3SG

'He hears the mooing of many cows.'
(SG of both nouns has collective meaning)

- (178) *Emtieke ot-un tiey-s-er-e,*
drugstore hay-ACC cart-REC-PART-his

mah-īn erbe-h-er-e muuh-un
firewood-ACC saw-REC-PART-his ice-ACC

il-s-ar-a barammat buol-l-a (Xaritonov 1963: 27)
take-REC-PART-his endless be-PAST-3SG
'His help in carting hay to the hospital, his help in sawing firewood
and his help in bringing ice became endless.'

10. Non-productive meanings of the reciprocal suffix

10.1. Introductory

In the specialist literature on the Turkic languages it has been noted that the reciprocal markers in these languages are the most polysemous among the voice markers (the other three being the passive, reflexive and causative). There is an opinion that this is particularly true of the Yakut language (Xaritonov 1982: 268). The four productive meanings covering hundreds of verbs considered above are supplemented by a number of other meanings less productive but interesting typologically.

It should also be pointed out here that in many verbs the meaning of the reciprocal marker undergoes lexicalization and it cannot be assigned a distinct meaning in some of the derivatives. The meanings listed below are characteristic of small groups of reciprocal forms, sometimes of two or three only (according to our probably incomplete data). Nevertheless, they deserve mention, in particular those cases where a semantic shift is the same as in the reciprocal (or reflexive) marker in other Turkic and non-Turkic languages.

Some reciprocal forms may have several meanings; for instance, alongside unproductive meanings they may have the reciprocal proper, or sociative, or comitative meaning. Thus the reciprocal form *il-i-s-* (← *il-* 'to take') acquires at least three meanings: the regular meanings 'to take / grasp each other' and 'to grasp something together' and also the two-place intransitive meaning 'to grasp at / take hold of something', which may be tentatively called "contact-locative".

- (179) *Kini aan tutaayī-ttan il-is-t-a* (Xaritonov 1982: 272)
he door handle-ABL take-REC-PAST-3SG
'He took hold of the door handle.'

10.2. The list of non-productive meanings

Derivation of these meanings involves valency reduction, including demotion of the object, or valency retention. Here belong the following meanings.

10.2.1. The anticausative meaning

The anticausative meaning is the meaning which is a result of the elimination of the causative meaning. This group of forms is derived from three-place transitive lexical reciprocals (see 13.3). The derivatives are two-place intransitives.

- (180) *xolboo-* ‘somebody joins (something to / with something)’
 → *xolbo-s-* ‘something joins to something’.

The anticausative meaning seems to be more commonly marked by the reflexive suffix, which also derives anticausatives from lexical reciprocals, thus competing in this function with the reciprocal marker. The reciprocal suffix may have acquired this function due to a kind of “mutual attraction” of the lexical reciprocal meaning of the underlying verbs and the grammatical reciprocal meaning of the suffix, which most commonly appears on “canonical” reciprocals that are intransitive.

10.2.2. The converse meaning

Here belong verbs derived from base verbs meaning ‘to sell’, ‘to rent out’, etc. The derivatives denote the actions of the counter-agent implied by the meaning of the base verb, i.e. they have meanings like ‘to buy’, ‘to rent / hire’. The actions they describe seem to be more “active” than those described by the base verbs.

- (181) a. *ayaxtaa-* ‘to give somebody to somebody
 who should provide for him / her’
 → *ayaxta-s-* ‘to take somebody in order to
 provide for him / her’ (Slepcov 1972: 34)
- b. *atīīlaa-* ‘to sell something to somebody’
 → *atīīla-s-* ‘to buy something from somebody’
- c. *ettee-* ‘to hire out (a horse, a scythe, etc.)’
 → *ette-s-* ‘to hire (a horse, etc.)’
- d. *kuortamnaa-* ‘to lease (e.g. lodgings)’
 → *kuortamna-s-* ‘to rent (lodgings, etc.)’
- e. *tüülee-* ‘to lease (meadow-land)’
 → *tüüle-s* ‘to take (meadow-land) on lease’
 (arch.; Slepcov 1972: 417).

10.2.3. The meaning of response action

These are verbs of the following type:

- (182) a. *ayaataa-* 'to produce a long drawn-out bellow before a fight'
 → *ayaata-s-* 'to produce a drawn-out bellow in response to the
 same kind of bellow' (Xaritonov 1963: 32)
- b. *mayīraa-* 'to moo'
 → *mayīra-s-* 'to moo in response' (Xaritonov 1963: 32)

10.2.4. The contact-locative meaning

The contact-locative meaning is attested in the derivatives of several verbs of manual physical actions involving a relatively long physical contact in order to keep balance, a posture, or contact between agent and a (fixed) object, etc.:

- (183) a. *īl-* 'to take'
 → *īl-is-* 'to take hold of / to grasp' (see (178))
- b. *tart-* 'to pull'
 → *tard-is-* 'to pull oneself up to something'
- c. *tut-* 'to hold / grasp'
 → *tut-us-* 'to hold on to something'
- (184) a. *Bīa-ttan tut-us!* (Xaritonov 1963: 39)
 rope-ABL hold-REC.IMP.2SG
 'Get hold of the rope!'
- b. *Mas-tan tard-is!* (Xaritonov 1982: 279)
 tree-ABL pull-REC.IMP.2SG
 'Pull yourself up to the tree!'

10.2.5. The absolutive meaning

In the case of the absolutive meaning, the surface object is deleted:

- (185) a. *Miigin meneek üögü-me!*
 I.ACC for.nothing scold-IMP.2SG
 'Don't scold me for nothing!'
- b. *Meneek üöx-sü-me!* (Slepcev 1972: 454)
 for.nothing scold-REC-NEG.IMP.2SG
 'Don't swear without reason!'

10.2.6. The intensive meaning

The intensive meaning is present in (186b) (see Xaritonov 1963: 40). It can also be discerned in the lexicalized form *teb-is-* ‘to trample down / on’ (transitive) derived from *tep-* ‘to kick’ (transitive) (Slepcev 1972: 424; Pekarskij 1959: 2613), and also in a number of verbs listed in (193).

- (186) a. *Tugu tard-īala-a-γīn?*
 what.ACC pull-ITER-PRES-2SG
 ‘What are you pulling at?’
- b. *Tugu tard-īala-h-a-γīn?*
 what.ACC pull-ITER-REC-PRES-2SG
 ‘What are you pulling at (with such effort)?’

10.2.7. The competitive meaning

The competitive meaning is attested in only a few verbs, e.g.:

- (187) a. *kīlīy-* ‘to jump on one foot’ (intransitive)
 → *kīlī-s-* ‘to compete in jumping on one foot’
- b. *īstangalaa-* ‘to jump’ (intransitive)
 → *īstangala-s-* ‘to compete in jumping’
- c. *kuot-* ‘to outrun’ (transitive)
 → *kuot-us-* i. ‘to compete in running’, ii. ‘to compete’ (Slepcev 1972: 190)
- d. *küötee-* ‘to overwhelm’ (transitive)
 → *küöte-s-* ‘to rival / compete’ (Xaritonov 1963: 33).

11. Lexicalization

11.1. Introductory

Lexicalization is defined here as a semantic process in which the derived meaning is not related to the underlying meaning in a standard way, i.e. the meaning of a reciprocal is not composed of the meaning of the underlying verb + ‘each other’, as it undergoes a kind of further semantic change. Not infrequently, despite an irregular shift of meaning, the derived meaning is clearly reciprocal. Lexicalization does not include the cases of sociative, comitative, and assistive meanings nor the meanings considered in section 10, as they are more or less regular changes of meaning marked by the reciprocal suffix.

There are two types of lexicalized verbs with the reciprocal suffix, those that are formally relatable to non-reciprocal verbs (*et-* ‘to say / speak’ → *et-is-* ‘to quarrel’),

and those that have no non-reciprocal counterparts, e.g. *tubu-s-* 'to make peace with somebody' ← **tubu-*. The latter are termed *reciproca tantum*. In the former instance, two cases can be distinguished: (a) verbs that have a lexicalized meaning as well as a regular reciprocal meaning, and (b) verbs that have a lexicalized meaning only.

This section concerns derived verbs which have not been dealt with in the above sections. In (188), an approximate range of lexical meanings characteristic of lexicalized reciprocals is shown by means of their semantic English equivalents, including meanings represented by groups of two or more, or even by single verbs if these meanings are also attested in other languages.

- (188) a. 'to quarrel'
 b. 'to fight'
 c. 'to share'
 d. 'to agree with each other'
 e. 'to meet'
 f. 'to have / begin sexual intercourse'
 g. 'to follow', 'to chase', 'to attain', 'to succeed'
 h. 'to contradict', 'to persist'
 i. 'to ask'
 j. 'to begin'

Most of the lexicalized reciprocals are two-place intransitives governing an object with the postposition *kitta* 'with' or in the comitative case. These verbs are not marked as intransitive in the lists below. A few verbs govern a dative object and some of them are transitive; they are marked as transitive. Alongside a lexicalized meaning some of the verbs have a standard reciprocal, sociative or assistive meaning (see (195)).

11.2. *Reciproca tantum*

The list under (189) comprises verbs whose underlying verbs are lost or almost extinct, or semantically not associated with the formally reciprocal counterparts. I list not only verbs whose reciprocal meaning is more or less clear but also verbs which are in a way peripheral to the reciprocal meaning. This list and those in the subsequent subsections have been compiled on the basis of the data from Slepcev (1972) and Pekarskij (1959). It covers half the verbs with (fossilized) *-(I)s* / *-(I)h* registered in Xaritonov (1963: 120-121). The verb under (189f) is semantically close to comitatives.

- (189) *batīs-* 'to follow' (transitive)
bölüös- 'to form into a clot, to condense'
iris- / *kiris-* 'to couple (of animals)', 'to gather for coupling'

<i>kečes-</i>	‘to persist’ (transitive)
<i>killeekele-s-</i>	‘to contradict (about an obstinate person)’ (Pekarskij 1959: 1088)
<i>meld'es-</i>	‘to deny’ (transitive)
<i>sayīs-</i>	‘to want to go together’, ‘to not let go (of children)’ (transitive)
<i>seles-</i>	‘to converse with somebody (for a long time)’
<i>sīrīs-</i>	‘to race with one another’
<i>tigis-</i>	‘to gather (from different directions)’ (coll.)
<i>tubus-</i>	i. ‘to make peace with each other’, ii. ‘to improve’
<i>ūles-</i>	‘to settle with somebody’, ‘to come to an agreement’
<i>ūlles-</i>	‘to share with somebody’
<i>xarīs-</i>	‘to butt’, ‘to compete’, ‘to collide’
<i>ibīs-</i>	‘to close up’, ‘to adhere closely to something’

11.3. Some types of lexicalization

The groups of verbs are listed below with the aim of giving an idea of the semantic range of lexicalization. Verbs that do not lend themselves to any classification are quoted as a separate group: the function of the suffix *-(I)s / -(I)h* in these verbs is not clear. In the case of polysemous verbs, sometimes only some of the meanings are quoted. Needless to say, the lists of lexicalized reciprocals are not exhaustive.

(1) The first group comprises intransitive verbs in *-(I)s / -(I)h* which denote various hostile actions. The underlying verbs denote actions that may be a part (not necessarily hostile) of the latter; the typical lexical meaning of the derivatives is ‘to quarrel’, ‘to fight’:

- (190) *et-* ‘to say, speak’
 → *et-is-* i. ‘to quarrel’, ii. ‘to speak with each other’
- oyus-* ‘to beat / hit’
 → *oxs-us-* i. ‘to fight’, ii. ‘to struggle against something’
- xap-* i. ‘to catch / seize’
 → *xap-sīs-* i. ‘to enter into a fight’, ii. coll. ‘to scold / abuse’,
 iii. ‘to enter into an argument’, iv. ‘to seize each other’
- kumalaa-* ‘to break, rumple’
 → *kumala-s-* ‘to fight’ (cf. Pekarskij 1959: 1212)
- kiir-* ‘to enter’
 → *kiir-is-* ‘to enter into a fight’ (Xaritonov 1963: 32)

(2) The derivatives denote resistance, objecting, defence of someone. The base verbs may render these meanings as well:

- (191) *beigennee-* 'to be stubborn, to resist'
 → *beigenne-s-* 'to persist (in one's own opinion)'
 (transitive) (Pekarskij 1959: 451)
- d'oryoy-* 'to show courage'
 → *d'oryo-s-* 'to vie (with) / rival' (Pekarskij 1959: 835)
- kirietee-* 'to cut with a blunt knife'
 → *kiriete-s-* i. 'to contradict' (Pekarskij 1959: 1105), ii. 'to reproach'
- kömüskee-* 'to intercede (for) / defend'
 → *kömüske-s-* 'to intercede (for) / defend'

(3) The derivatives (all of them intransitive) denote coming to an agreement and the like. Or they denote actions that lead to coming to an agreement; the underlying verbs are roughly synonymous to the derivatives, or they denote actions that may be a part of the meaning of the derivative:

- (192) *aax-* i. 'to read', ii. 'to count'
 → *aax-sīs-* i. 'to settle accounts with each other',
 iii. 'to regard as', ii. 'to take somebody into account'
- ana-* i. 'to appoint', ii. 'to bequeath'
 → *ana-s-* 'to come to an agreement'
- kepset-* 'to talk / converse', 'to agree to do something'
 → *kepset-is-* i. 'to enter into a conversation',
 ii. 'to agree (with somebody) to do something'
- kik-* 'to incite, provoke'
 → *kik-sis-* 'to agree to do something'
- söbulee-* i. 'to give consent / approve'
 → *söbule-s-* 'to agree (with somebody / something)',
 ii. 'to agree with somebody / something'
- sübelee-* 'to advise'
 → *sübele-s-* 'to ask advice of / consult together'

(4) The meaning of this group of derivatives can be roughly defined as an intention to obtain or achieve, to follow or pursue something. The underlying verbs may be synonymous to their derivatives at least in one of the meanings, or the difference

in meaning may be so great that the dictionaries register them as unrelated items. Most of the derivatives retain transitivity; two verbs take a dative object. The actions denoted by the derivatives often imply a response action of the object (e.g., imploring presupposes compliance with the wish expressed, etc.).

- (193) *aartaa-* 'to implore, to beg'
 → *aarta-s-* i. 'to implore', ii. 'to apologize' (transitive)
- bat-* 'to follow / pursue' (out of use)
 → *bat-īs-* 'to follow / pursue' (transitive)
- d'anīy-* i. 'to pursue (a goal), to strive'
 → *d'anī-s-* 'to pursue a goal / strive' (transitive)
 ii. 'to revenge'
- d'uluy-* i. 'to do something persistently',
 ii. 'to wish / strive for something'
 → *d'ulu-s-* 'to wish / strive for something' (vi+DAT)
- ekkiret-* 'to follow / pursue'
 → *ekkiret-is-* 'to follow / pursue' (transitive)
- ellee-* 'to pound, to knead', 'to forge'
 → *elle-s-* i. 'to try to achieve (with difficulty)',
 ii. 'to endure / hold out against' (transitive)
- iettee-* i. 'to pluck / pick out'
 ii. 'to force, to implore persistently'
 → *iette-s-* 'to implore persistently' (transitive)
- irdee-* 'to track / trace (an animal)'
 → *irde-s-* i. 'to find out (by inquiring)',
 ii. 'to demand (a debt)' (transitive)
- ketee-* 'to await / wait for'
 → *kete-s-* i. 'to await / wait for, lie in wait',
 ii. 'to guard / watch over, to be on the look out for' (transitive),
 iii. 'to watch / spy on'
- kördöö-* i. 'to look for', ii. 'to beg, to demand'
 → *kördöö-s-* 'to beg / demand' (transitive)

<i>sit-</i>	'to catch up with somebody'
→ <i>sit-is-</i>	i. 'to achieve (a goal, etc.)', ii. 'to revenge' (transitive)
<i>soyuolaa-</i>	i. 'to look for'; ii. 'to track hunting'
→ <i>soyuola-s-</i>	'to persecute (like a hunted elk)' (Pekarskij 1959: 2264) (transitive)
<i>suraa-</i>	'to inquire'
→ <i>sura-s-</i>	'to inquire' (transitive)
<i>tiiy-</i>	'to reach'
→ <i>tii-s-</i>	(disapproval) 'to try to achieve / secure' (vi+DAT)
<i>tuluy-</i>	'to endure / suffer'
→ <i>tulu-s-</i>	'to endure / suffer' (transitive)

(5) The intransitive derivatives denote entering into or having a love affair:

(194) <i>bul-</i>	'to find'
→ <i>bul-us-</i>	i. 'to find each other', 'find something together', ii. 'to enter into a love affair' (Pekarskij 1959: 546)
<i>kulaa-</i>	'to hit / strike violently'
→ <i>kula-s-</i>	'to begin / have a love affair' (Pekarskij 1959: 1203)
<i>kuud'uy-</i>	i. 'to lure', ii. 'fall in love'
→ <i>kuud'uy-us-</i>	i. 'to lure', ii. 'to have a love affair (with)', iii. 'to long (for)' (Pekarskij 1959: 1195).

(6) Residual verbs with various meanings:

(195) <i>bier-</i>	'to give something to somebody'
→ <i>ber-is-</i>	i. 'to share something with somebody' ii. 'to give something to each other' (transitive)
<i>bil-</i>	'to know, recognize'
→ <i>bil-sis-</i>	i. 'to be / get acquainted', 'to know each other', ii. 'to call on each other regularly', iii. 'to consort with' (Pekarskij 1959: 471)
<i>kör-</i>	i. 'to look / see'; ii. 'to look after'
→ <i>kör-üs- / kör-süs-</i>	i. 'to see each other' ii. 'to meet / gather (from different directions)'

- iii. 'to suffer (something) / experience'
- iv. 'to look after (somebody) together' (sociative)
- v. 'to help to look after' (assistive)
- vi. 'to suffer / experience together' (sociative)

oinoo- 'to play'
 → *oino-s-* 'to flirt (with a woman)' (Pekarskij 1959:
 1801)

il- 'to take / seize'
 → *il-sīs-* i. 'to seize each other', ii. 'to start (doing something)'.

12. Lexical reciprocals with the reciprocal suffix derived from non-verbal bases

12.1. Introductory

The principal means of denominal verb derivation is the suffix *-laa*, which has 16 synharmonic variants. This suffix can derive verbs from any part of speech. Among 16 meanings of denominal derivatives with this suffix cited in the grammar of current Yakut (Korkina 1982: 215-6; see also (12)), only one has parallels among verbs in *-la-s*, viz. verbs derived from names of games; cf. *xaarti* 'cards' → *xaarti-laa* 'to play cards' vs. *temteti* 'a card game' → *temteti-le-s* 'to play temteti' (Pekarskij 1959: 2634). The suffix *-la-s* derives a considerable number of reciprocal verbs from nominal stems (Xaritonov 1963: 34). Characteristically, these base nouns are in fact lexical reciprocals. It is easy to see that *-la-s* is composed of the suffix *-laa* and the reciprocal suffix *-(l)s* (*-laa* > *-la* before *-s* according to the general rule of final vowel shortening before a derivational suffix). It should be noted, however, that verbs with the suffix *-las* do not have non-reciprocal counterparts without *-s*, i.e. with the suffix *-laa* alone. This fact makes it possible to qualify them as lexical reciprocals according to our definition. They can be divided into two groups: (1) those with non-spatial meanings and (2) those with spatial meanings. Needless to say, the lists below are not exhaustive.

12.2. Non-spatial reciprocals

They fall into three subgroups.

12.2.1. Derived from nouns denoting reciprocal relations

The base nouns of these derivatives have such lexical meanings as 'peace', 'agreement', 'game', 'quarrel', 'exchange', 'struggle', etc. With the exception of *atas*, all the verbs below are two-place intransitives.

- (196) *atas* 'exchange'
 → *atas-tas-* 'to exchange something' (transitive)

<i>baarīs</i>	‘a card game’
→ <i>baarīs-tas-</i>	‘to play baarys’ (Pekarskij 1959: 387)
<i>besiede</i>	‘conversation, a talk’
→ <i>besiede-les-</i>	‘to converse / talk with’
<i>d’üül</i>	‘trial’
→ <i>d’üül-les-</i>	‘to be at law with, to argue with’
<i>eye</i>	‘peace’
→ <i>eye-les-</i>	‘to get reconciled / make peace with’
<i>il</i>	‘peace, concord’
→ <i>il-les-</i>	‘to make peace with’
<i>iirseen</i>	‘quarrel’
→ <i>iirseen-nes-</i>	‘to quarrel’ (Pekarskij 1959: 958)
<i>kör-s-üü</i>	i. ‘meeting’, ii. ‘lover’, iii. ‘love affair’
→ <i>kör-s-üü-les-</i>	‘to have a love affair’, etc.
<i>kuomun</i>	‘complicity’
→ <i>kuomun-nas-</i>	‘to be accomplices’
<i>küres</i>	‘competition’
→ <i>küres-tes-</i>	‘to compete’
<i>tuspa</i>	‘difference, distinction’
→ <i>tuspa-las-</i>	‘to differ, to be distinct from’
<i>xoxučuol</i>	‘quarrel, squabble’
→ <i>xoxučuol-las-</i>	‘to quarrel / squabble’

The base noun (*nomen actionis* with the suffix *-üü*; see *kör-s-üü* under (196) is in its turn a derivative from the reciprocal verb *kör-üs-* ‘to see / meet each other’ derived from the transitive *kör-* ‘to see / look’.

12.2.2. Derived from nouns denoting participants of a reciprocal situation

The base nouns have such lexical meanings as ‘fellow-traveller’, ‘friend’, ‘neighbour’, ‘family’, ‘relatives’, ‘collaborator’, ‘people’, etc. (it is probably not accidental that the final consonant in three nouns (*argīs*, *atas*, *böyös* in (197)) is materially identical with the reciprocal suffix). This pattern of derivation is rather productive, as we find such derivatives from fairly recent Russian borrowings: e.g. *tabaarīs*

‘comrade’ (< Russian *tovarišč*) → *tabaarīs-tas-* ‘to establish friendly relations with’. All the derivatives are two-place intransitives:

- (197) *aymax* ‘relatives, kinsfolk’
 → *aymax-tas-* ‘to become relatives’
- argīs* ‘fellow-traveller’
 → *argīs-tas-* ‘to travel together’
- atas* ‘friend’
 → *atas-tas* ‘to become / make friends’ (Pekarskij 1959: 190)
- bōγōs* ‘fighter, wrestler’
 → *bōγōs-tōs-* ‘to fight / wrestle’
- doyor* ‘friend’
 → *doyor-dos-* ‘to become / make friends’
- d’on* ‘a people, relatives’
 → *d’on-nos-* ‘to become friends’
- d’ukaax* ‘neighbour’
 → *d’ukaax-tas-* ‘to share a room / house’
- kergen* ‘family, family member’
 → *kergen-nes-* ‘to get on with / get used to each other’

12.2.3. Verbs denoting resistance or assistance, derived from nouns, adjectives and adverbs

Verbs of this group do not express reciprocity, but they denote an action performed in response to another implied action, which sense may be termed semi-reciprocal. It should be noted that in this case situations that are not reciprocal proper are treated by the languages in the same way as reciprocal proper. All the verbs, excepting *tur-uu* in (198), are two-place intransitives.

- (198) *bōppörök* ‘across’, ‘rude’
 → *bōppörök-tōs-* ‘to contradict [each other]’ ‘the one who contradicts’
 (Pekarskij 1959: 523)
- breeki* ‘stubborn, stubbornness’
 → *breeki-les-* ‘to contradict / object’ (Pekarskij 1959: 532)

<i>kirdiex</i>	‘obstinate, unyielding’
→ <i>kridiex-tes-</i>	‘to be obstinate’ (Pekarskij 1959: 1102)
<i>ōrō</i>	‘upstream’
→ <i>ōrō-lōs-</i>	‘to contradict / oppose / counteract’
<i>tur-uu</i>	‘standing’ (<i>nomen actionis</i>)
→ <i>tur-uu-las-</i>	‘to struggle persistently against’
<i>utarī</i>	‘opposite, against’
→ <i>utarī-las-</i>	‘to contradict / counteract’
<i>xarsaax</i>	fig. ‘stubborn’
→ <i>xarsaax-tas-</i>	‘to be stubborn, to disobey’ (transitive)
<i>xatay</i>	‘opposite, stubborn’
→ <i>xataj-das-</i>	‘to contradict each other’
<i>ilax</i>	‘cross-clamp (in a sled)’
→ <i>ilax-tas-</i>	‘to do something stubbornly, overcoming difficulties’ (Slepcov 1972: 525)

There are a number of verbs with the suffix in question that are unrelated to any attested bases, e.g.:

- (199) *kičepke-les-* ‘to be obstinate, to disobey’
(Pekarskij 1959: 1116; Slepcov 1972: 169) (transitive)

Curiously enough, there are a few verbs which are to a certain degree antonymous to the verbs under (198); the verbs under (200) are two-place intransitives with a dative object:

- (200) *kōd’ūūs* ‘usefulness / benefit / profit’
→ *kōd’ūūs-tōs-* ‘to help’ (Pekarskij 1959: 1127)
- kōmō* ‘help, assistance’
→ *kōmō-lōs-* ‘to help / assist’
ōnō ‘service, good turn’
→ *ōnō-lōs-* ‘do service [to each other]’ (Pekarskij 1959: 1950)
- tuha* ‘use(fulness)’
→ *tuha-las-* ‘to help’ (Pekarskij 1959: 1127)

12.3. Spatial (locative) reciprocals

Here belong verbs derived from various parts of speech and denoting all kinds of motion or position relative to each other, or changing position of parts of a whole, including chaotic movements. These verbs are either two-place or one-place intransitives with a plural subject:

- (201) *aal* 'raft, any floating means'
 → *aal-las-* 'to crowd / move (about a crowd)'
- atax* 'leg / foot'
 → *atax-tas-* 'to lie together with heels touching'
- eġer* 'side, edge'
 → *eġer-des-* 'to live next to [each other]'
- kiliēp* 'bread'
 → *kiliēp-tes-* 'glue / stick together into a mass' (Pekarskij 1959:1088)
- n'uur* 'face'
 → *n'uur-das-* 'to stand face to face' (Pekarskij 1959: 1738)
- oyoyos* 'side, rib'
 → *oyoyos-tos-* 'to be side by side with somebody' (Slepcev 1972: 268)
- serge* 'next to, near' (PPS)
 → *serges-tes-* 'to line up, walk next to [each other]'
- üömx* 'disordely crowd / flock'
 → *üömx-tes-* 'to flock / crowd / mill together'
- üörük* 'matted hair'
 → *üörük-tes-* 'to become matted / entangled'
- ürüö-taraa* 'to and fro / in all directions'
 → *ürüö-tes-* 'to gather / crowd together'
- xar-ii* 'ice-blocking'
 → *xar-ta-las-* 'to pile up (of ice blocks) one upon another'
- iam* 'spawning'
 → *iam-naa-* 'to gather for spawning' (Slepcev 1972: 520)
iam-nas- (same)

<i>īama</i>	‘young fish’
→ <i>īama-las-</i>	‘to swarm / teem with’
<i>īksa</i>	‘nearby, close (to)’
→ <i>īksa-las-</i>	‘to be next to each other’

13. Lexical reciprocals and their derivatives

13.1. Introductory

The verbs to be discussed in this section are heterogeneous both morphologically and lexically. Most of them denote connecting (in the broad sense, i.e. combining or fixing things together literally or figuratively), gathering or collecting things in one place, or changing the position of an object or one part of an object relative to another part. Less commonly, they denote disconnecting. We shall confine ourselves to this major group of lexical reciprocals with the meanings of connecting and disconnecting.

Reciprocal arguments may be separate entities or substances (cf. (210) and (205)) as well as parts of a whole which move to one point from different directions (or perform chaotic movements) or, if they compose one whole entity, contract, thus growing smaller. All these different actions and processes are similar in the sense that the space taken up by the argument referents is reduced.

According to valency and derivational properties, three main types of verbs can be distinguished.

Group A is the main group of verbs under consideration, which comprises three-place lexical reciprocals (= lexical causatives), e.g. *xolboo-* ‘to join something to something’.

Group B falls into two subgroups.

Group B1: from some of Group A verbs, the reciprocal (or reflexive) morpheme can derive two-place intransitive anticausatives, e.g. *xolbo-s-* ‘to become / get joined’.

Group B2 is comprised of underived (though they may contain the root-final *-s-* / *-h-*) two-place intransitives which are also lexical reciprocals, e.g. *eps-* ‘to get clenched’.

Group C includes morphological causatives—three-place lexical reciprocals derived from the latter verbs, e.g. *eps-er-* ‘to clench (two entities)’.

13.2. Group A: underived three-place transitives

This group comprises at least 15 lexical reciprocals with the typical meanings ‘to join’, ‘to combine’, ‘to tie’, ‘to mix’, ‘to glue together’, etc.:

- | | | | |
|-------|----|-----------------|----------------------------|
| (202) | a. | <i>baay-</i> | ‘to tie together’ |
| | b. | <i>bōlōtōō-</i> | ‘to gather (cattle, etc.)’ |
| | c. | <i>bulkuy-</i> | ‘to mix, to join’ |

- | | | |
|----|------------------------|--------------------------------------|
| d. | <i>d'üörelee-</i> | 'to couple / mate' |
| e. | <i>ilbee-</i> | 'to join / gather' |
| f. | <i>kelgiy-</i> | 'to tie together' |
| g. | <i>kītar- / kīīar-</i> | 'to mix / join' |
| h. | <i>mus- / munn'-</i> | 'to gather / pile' |
| i. | <i>silimnee-</i> | 'to glue up / glue together' |
| j. | <i>tūm-</i> | 'to tie / gather together' |
| k. | <i>xanīīlaa-</i> | 'to put / join in pairs' |
| l. | <i>xatīy-</i> | 'to put crosswise' |
| m. | <i>xolboo-</i> | 'to join / mix / tie together'; etc. |

13.3. Group B1: two-place anticausative intransitives

These are derivatives from Group A verbs, mostly by means of the reciprocal marker *-s-* / *-h-*. Other anticausative markers are also used. In a number of cases both co-participants are expressed by a semantically plural subject. In some of their usages these verbs may have non-reciprocal meanings. Compare English *The stamp got glued to the wall* = **The stamp and the wall got glued together* vs. *The old stamp got glued to the new one* = *The old stamp and the new stamp got glued together*. These derivatives enter into the following three formal types of oppositions with Group A verbs.

(1) The base verb has no related anticausative, though it may have a derived form with the reciprocal suffix. Anticausative derivation is blocked by the ("ever-present") agent-oriented component in the meaning of the base verb (see Haspelmath 1993: 93). The derivative may be sociative, comitative or assistive, as in (203a), or it may be lexicalized, as in (203b).

- (203) a. *kelgiy-* 'to bind / tie together'
 → *kelgi-s-* i. 'to do the tying together', ii. 'to help to tie'
- b. *baay-* 'to tie a knot'
 → *baay-īs-* / *baay-sīs-* i. 'to do the tying together',
 ii. 'to help to tie', iii. 'to nag / find fault with'.

(2) Most base verbs have respective anticausatives derived by means of *-(I)s-* / *-(I)h-*:

- (204) a. *bulku-s-* 'to get mixed' (Pekarskij 1959: 545)
 b. *d'üörele-s-* 'to couple / mate'
 c. *ilbe-s-* 'to join / unite / gather'
 d. *silimne-s-* 'to get glued together'
 e. *tūm-ūs-* 'to gather'
 f. *xanīīla-s-* 'to be / move in groups'

- (207) a. **kīt-*
 b. *kīt-īar-* 'to join something to something' (transitive) ↔
 c. *kīt-īn-* 'to join something' (vi) →
 d. *kīt-t-īs-* 'to join something, to copulate' (vi)
- (208) a. **sīh-*
 b. *sīh-īar-* 'to stick / glue / press something to something' (transitive) ↔
 c. *sīh-īn-* i. 'to get stuck / glued to something'
 ii. 'to press oneself to something / somebody' (vi) →
 d. *sīs-t-īs-* i. 'to get stuck / glued together'
 ii. 'press oneself to each other' (vi).

13.4. Group B2: *reciproca tantum*

Group B2 comprises intransitive lexical reciprocals which have either no underlying verbs at all or no verbs with a semantically related meaning in current Yakut. Nearly all the verbs of this group contain, however, a final *-s* / *-h*, which is hardly accidental. This may be accounted for by two reasons: (1) the underlying verb has gone out of use after a reciprocal form was derived from it; (2) there has never been an underlying verb, i.e. a lexical reciprocal may have acquired the reciprocal suffix by analogy due to its meaning (lexical reciprocal meaning may have attracted the reciprocal marker because there were numerous verbs that became reciprocal due to this suffix; this is supported by the pleonastic use of the reciprocal suffix in (209e, g, n, q)). With respect to the range of lexical meanings Group B2 verbs are similar to Group B1 verbs. The typical meanings are: 'to join together', 'to get clenched', 'to mate / couple', 'to adjoin', 'to border on', 'to make peace / reconcile', 'to argue', 'to fight / butt (about bulls, etc.)', 'to disperse', 'to divorce', 'to miss (not to meet) each other', etc. All the following verbs with the exception of (209i) and (209r) are intransitive:

- | | | |
|----------|--|---|
| (209) a. | <i>arayīs-</i> | 'to branch / fork', 'to part' |
| b. | <i>batīs-</i> | 'to get along together' |
| c. | <i>bölüös-</i> | 'to clot' |
| d. | <i>ībis-</i> / <i>ībīs-</i> / <i>īps-īs-</i> | 'to get clenched' |
| e. | <i>illes-</i> | 'to get reconciled' |
| f. | <i>iris-</i> / <i>irs-is-</i> | 'to mate / couple' |
| g. | <i>könūs-</i> | 'to get reconciled' |
| h. | <i>kuodarīs-</i> | 'to court each other' (Pekarskij 1959:1223) |
| i. | <i>meld'es-</i> | 'to deny' (transitive) |
| j. | <i>mökkūs-</i> | 'to argue / altercate' |
| k. | <i>seles-</i> | 'to converse for a long time' |
| l. | <i>silbes-</i> | 'to join' |
| m. | <i>sīrīs-</i> / <i>sīrs-īs-</i> | 'to compete in running' |
| n. | <i>taryas-</i> | 'to disperse' |
| o. | <i>tigis-</i> | (coll.) 'to gather' (Slepcov 1972: 382) |

- p. *tubus-* / *tups-us-* 'to get reconciled'
 q. *üömextes-* 'to crowd'
 r. *xarīs-* 'to fight / butt' (of bulls, etc.)
 s. *xardarīs-* 'to disperse, miss each other' (transitive)

In the following two instances, there are two parallel, roughly synonymous forms, one underived and the other derived. The forms in *-s* probably have a sociative meaning.

- t. *kekkelee-* / *kekkele-s-* 'to stand up / sit down in a row /
 next to each other' (Slepcov 1972: 217)
 u. *keigiree-* / *keigire-s-* 'to stand in / form an even row'
 (Slepcov 1972: 224).

13.5. Group C: causatives derived from verbs of Group B2

All of them are regular derivatives, with the exception of two verbs which take an unproductive causative suffix: *ebis-* 'to get clenched' → *eps-er-* 'to clench (jaws, etc.)' and *tubus-* 'to get reconciled' → *tups-ar-* 'to reconcile somebody with somebody'; see (209d) and (209p) respectively. In (Pekarskij 1959: 2791) the latter verb is registered with the productive causative suffix as well: *tubus-un-nar-* 'to reconcile somebody with somebody'):

- (210) a. *Sīḡaay-a eps-en xaal-bīt*
 jaw-his get.clenched-CONV AUX-PERF.3SG
 'His jaws have clenched.'
 b. *Kini sīḡaay-īn eps-er-en kees -pit*
 he jaw-his.ACC get.clenched-CAUS-CONV AUX-PERF.3SG
 'He clenched his jaws.'

In all the other instances the productive suffix *-tar* is preceded by the reflexive suffix (inserted, as is common, after the base-final *-s* / *-h*; see 2) in 3.2):

- (211) *arayīh-īn-nar-* 'to make somebody part' (cf. (209a))
irs-ih-in-ner- 'to couple / mate (of animals)' (cf. (209f))
silbeh-in-ner- 'to connect / join something' (cf. (209l))

Finally, here is an interesting example in which a verb of Group B1, like Group B2 verbs, assumes a form characteristic of Group C verbs, i.e. the underlying and the final forms of the derivational chain are roughly synonymous:

- (212) a. *ilbe-* 'to connect / gather something' (Group A)

- b. *ilbe-s-* 'to be connected, to gather' (Group B1)
ilbe-h-in-ner- 'to join / connect something between them'
 (Pekarskij 1959: 914) (Group C).

In conclusion, as I have shown, in the continuum of the Turkic languages Yakut displays a maximum productivity of the reciprocal suffix in general and the widest range of extended meanings, whereas Karachay-Balkar and certain other languages display the lowest productivity and narrowest range of meanings (on Karachay-Balkar see Nedjalkov 2002: 19-80). The other Turkic languages are closer either to Yakut (e.g. Tuvan and Tatar) or to Karachay-Balkar (e.g. Turkish) to a greater or lesser degree in this respect.

With respect to the polysemy pattern of the reciprocal suffix, Yakut and also some other Turkic languages, e.g. Tuvan and Tatar, are a typologically rare phenomenon. There are numerous languages world-wide in which a reciprocal marker has the sociative and even comitative meaning, but the only convincing cases I have encountered so far, where the polysemy of a reciprocal marker also includes the assistive meaning, are some Mongolian languages which are adjacent to the Turkic areal.

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Altaic etymologies: *tōz*, *toprak*, *toɣosun*

Hakan Aydemir

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One of the fundamental questions of research in Altaic studies concerns how we can identify those elements of the vocabulary of the Altaic languages which belong together etymologically. This article (as the first step of a process of research) investigates three words in order to establish the essential methodological aspects necessary to solve the above-mentioned problem. The author points out that Turkic *toprak* 'soil, earth, etc.' is a form derived with the formative +rA- from Turkic *topa* ~ *topo* ~ *topu* 'id.' (= Samoyedic *tobo*), i.e. *topu*+rA-k. The Mongolian *toɣo*+su(n) 'dust' is also a regular derivation of this form *topo* / *topu* with the formative +sUn. Turkic *tōz* 'dust', however, goes back to one of the shorter variants of this Mongolian *toɣosu*(n), and probably to the Qitañ **to*'us (> *tōz*). On the basis of the above argument, the author concludes that it is not reasonable to ascribe the origins of these forms to Proto-Altaic.*

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The words *tōz*, *toprak*, and *toɣosun* are among the most debated words in Altaic studies. The relatively large number of comments in the literature (see below) demonstrates how important the problems connected with them are considered to be.

Certain scholars have explained these words through Proto-Altaic and different bases. Some have perceived the phenomenon of zetacism in them, whereas others have attempted to prove their Turkic origin and confirm that they include loan-words in Mongolian. As a result, while some scholars have used the words in question to prove Altaic linguistic affinity, others have used them to refute this.

The problem is still unsolved because the approaches made so far have been only from a phonological or morphological aspect, and agreement has not been reached as concerns the etymological background of the words in question. The problem cannot be solved by means of phonology or morphology only. The semantic aspect is an *essential condition* for the solution but has been left out of consideration to date.

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I have chosen these three word-forms because their problems are closely inter-linked. Moreover, they help to clarify certain questions of the history of the Turkic and Mongolian languages, and certain problems in the research into Turkic vocabulary and word-formation. Thus, they also play an important role in the solution of certain cases of rhotacism-zetacism (see Aydemir 2002).

I would like to examine here fundamental questions relating to the words under discussion, and to point out the etymological relations between these word-forms as well as to demonstrate the lessons they provide for the history of the Turkic and Mongolian languages. One of my main aims is to elucidate and systematize the inner-Turkic material concerning the problem. This is one of the most important preconditions for the determination of the lexical correspondences and borrowings between the Turkic and Mongolian languages. As Ligeti said: "It is an unsolved problem even today in research in Altaic studies, which are those elements of the vocabulary of the so-called Altaic languages that belong together etymologically" (1977: 397). Another of my aims is to establish the essential methodological aspects necessary to solve this problem.

It must be mentioned in advance that in contradiction to earlier opinions, the results of the studies on the words under discussion cannot, in my view, be utilized to support the arguments for or against Altaic linguistic affinity. The vocabulary (correspondences or borrowings) in itself is not enough to support or refute relatedness.

Opinions of scholars

As in many other instances, the first remark concerning the etymology of the word-form *toprak* has been made by Vámbéry, who analysed it as *top-rak* (1877: 257). Ramstedt (*towu-ray* > Mongolian *toyu-ray*, Turkic *toprak*, 1935: 405a) and Doerfer (*top+rak* > *toprak*, 1965: 597, 1971: 306) had the same opinion.

Pritsak, however, gave quite another explanation. He started from Proto-Altaic and considered the word-form **toβar-* (> Mongolian *tobar-ay*, Turkic *topr-ak*, 1954: 245). In contradiction to his previous opinion (cf. Mongolian *toyu-ray* 'Staub' ~ *tob-ray* 'Erde, Staub' Poppe 1933: 119), Poppe postulated a suffix *-ay-* as in Mongolian *tobaray* (< **toβaray*, 1955: 161-162). In his later essays, he explained Mongolian *tobaray* from a hypothetical word-form **topārak* (1960: 47, 1974: 133). Eren also analysed this word-form as *topur+(a)k*, considering the *+(a)k* to be a diminutive (1999: 412a).

Ligeti introduced the suggestion that Turkic *toprak* and Mongolian "*toγuruy*" (together with Turkic *tōz* and Mongolian *toγusun*) were connected with each other through Proto-Altaic (i.e. Turkic *toprak* < Proto-Altaic **toβ-us* > **toβuray* > Mongolian *toγuruy*, 1938a: 75-76, 1398b: 201), and maintained this suggestion later too (1975: 104, 1986: 429).

Menges explained the word-form *toprak* from a Chagatay [!] **topuryak*, which he regarded as a derivation from a base "*topra-* / **topur-*". He believed that the Mongolian *tobaray* (in his notation with final *-k*) must also have been derived from this

base (i.e. *toprak* < **topuryak* < **topur-* / *topra-* > Mongolian *tobaray*, 1939: 22-23, 1954:85, 1955: 121, 1959a: 653, 1959b: 107). On the basis of this argument, he transcribed Kāšyārī's entry as *topurgan yir* 'staubiger Boden' (1954: 85).

Clauson derived the word-form *toprak* from the verbal base *topra-* 'to become dry (plant)', a form attested to at present only in Kāšyārī's dictionary (1964: 156, EDPT: 444). Dankoff and Kelly are of the same opinion (1985: 195). According to Ligeti (1986: 429), however, Clauson's explanation was unlikely to be correct. Räsänen (probably following Menges) explained *toprak* first from **topuryak*, but later accepted Clauson's opinion and considered that Turkic *toprak* corresponded to Kalmuk *toɣuray*, which in his opinion had developed from **towuray*. He regarded the form **towuray* as a precedent of Tuvan *dovurak* 'zemlja' (i.e. Turkic *toprak*, Tuv. *dovurak* < **towuray* > Kalmuk *toɣuray*, VEWT: 489b). Tekin too accepted Clauson's opinion (though with some reservations, i.e. *topra-k*, 1997: 347), but his view of the etymology of the verbal base *topra-* is quite different. Like Ligeti, and later Pritsak and Poppe, he started from a Proto-Altaic base **toβur* (> **toβur-a-k* / **toβur-ak* > **toβrak* > *toprak*, 1976: 232, cf. 1969: 65), and on this transcribed Kāšyārī's entry as *topuryan* 'soft and dust-like earth' (1969: 65, 1976: 232). Miller also transcribed it as *topuryan*, but he explained it in terms of a hypothetical verbal base **towru-* (i.e. DLT *topuryan* < **topruyan* < **towru-* > *toprak*, 1975: 165).

As concerns Written Mongolian *tobaray* and Buriat *toborog* ~ *toorog* 'zemlja, počva', Ščerbak supposed an earlier form **toβoroy* (1997: 232).

Doerfer initiated a new chapter in the research by presuming the form *tuprāk* in early Turkic on the basis of the instances in Brāhmī and Tibetan writing (1971: 306). Later, together with Tezcan, he considered that the -*u-* in the first syllable is primary and that the -*o-* in *toprak* emerged under the analogous influence of the -*o-* in Turkic *top* 'Kugel' (Doerfer & Tezcan 1980: 209a, Doerfer 1987: 107, Tezcan 1974: 33). These suppositions by Doerfer and Tezcan drew the attention of scholars to the degree of openness-closeness of the -*o-* in *toprak*. Erdal also believed that the primary form was *tuprak*, with -*u-*, its base being the verb *tupra-* (1991: 249, 387).

This outline of the research history, which does not aim at completeness, reveals that the background of the word-form *toprak* has not been clarified on either the Turkic or the Mongolian side.

Summary of opinions

top-rak (Vámbéry 1877); *towu-ray* > *toɣu-ray* (Ramstedt 1935); *toprak* < **toβ-us* > **toβuray* > *toɣuray* (Ligeti 1938, 1975, 1986); *toprak* < Chagatay **topuryak* < *topra-* / **topur-* > Mongolian *tobaray* (Menges 1939, 1954, 1959); **toβar-* > Mongolian *tobar-ay*, Turkic *topr-ak* (Pritsak 1954); **topār-ak* > Mongolian *tobaray* (Poppe 1960, 1974); *topra-k* (Clauson 1964, EDPT, VEWT); *tuprak* > *toprak* (Doerfer 1971, Tezcan 1974, Doerfer & Tezcan 1980, Doerfer 1987); **towru-* > *toprak* (Miller 1975); *topra-k* (Dankoff & Kelly 1985); *tupra-k* (Erdal 1991); *topra-k* (Tekin 1997); *topur+(a)k* (Eren 1999).

The main forms in the Turkic and Mongolian languages concerning the word-form *toprak* are as follows:

Old Turkic:

toparak 'Staub' (BT III); DLT *toprāk* 'earth or soil'; *tuprak* 'Erdboden' (TT VIII; Maue 1996).

Middle Turkic:

(CC) *toprak* 'Staub, Schmutz'; (ChagPdC) *twpray* 'terre'; (ChagBad.) *twfray* 'prax, zemlja'.

New Turkic:

Oghuz:

(Gag.) *toprak* 'zemlja; glina; zemljanoj; počva, grunt; počvennyj'; (Turkish) *toprak* 'earth, soil, ground; land, territory, country; earthen, etc.' (RTED); (TrKüt.) *topurak* [sic! -p-] 'toprak'; (Az.) *torpag* 'počva, zemlja, grunt; počvennyj'; (AzGal.) *turpax*; (SouthOgh) *turpax* 'Boden, Erde, Asche'; (Khoras.) *turpax*, *turpaq* 'Erdboden'; (Tkm.) *toprak*, *topur* 'počva, zemlja, grunt; strana, rodina'.

Kipchak:

(Tat.) *tufrak* 'počva, zemlja, grunt'; (TatBál.) *tuprak* 'Staub, Erde'; (TatDS) *tupīrak* 'dom, zemlja, mesto, gde rodilsja ili gde živet'; (Bash.) *tuprak* 'počva, zemlja, grunt; počvennyj'; (Kr-Tat.) *toprak* 'počva, grunt, zemlja, suša; prah'; (KarH) *toprak* 'pyl', prax, ostanki'; (KarT) *toprak* 'zemlja; prax'; (KarT) *toprah* 'zemlja; prah; strana; suša'; (KbalkTav.) *topurak*, *toprak* 'toprak'; (Rkbalk.) *toprak* 'zemlja'; (Kmk.) *topurak* 'zemlja; počva; teritorija'; (Nog.) *topīrak* 'zemlja, počva, grunt'; (Nog-dial.) *toprak* 'počva'; (Kir.) *topurak*, *tuprak*, *turpak*, *topur* 'glina, zemlja; počva; teritorija'; (Kklp.) *topīrak*, *torpak* 'zemlja, počva, grunt; pyl'; teritorija'; (Kklp-dial.) *toprak*, *torpak* 'zemlja, počva'; (Kzk.) *topīrak* 'zemlja, počva'; (KzkKat.) *toprak* 'zemlja, perst'.

Turki:

(Uig.) *toprak*, *tuprak* 'zemlja, počva; pyl', prax'; (UigMal.) *tupurak* 'id.', (UigJar.) *tofrak* 'dust, earth'; (UigFe.) *turpak*, *tupak*, *tuprak* 'zemlja, počva'; (YUig.) *torvak* 'pyl' (v dome i na dvore); zemlja'; (YUig.) *tīrvak* 'prax; pyl'; zemlja'; (YUigTen.) *torvak*, *turvaq*, *tyrvaq* 'zemlja, počva, pyl'; (YUigPot.) *torvak* 'zemlja, pyl'; (Sal.) *torax* 'počva, zemlja, pyl', prax' (~ *torāx*, *tōrax* <? Mongolian *to'oray*); (SalKak.) *torax*, *t'orāx*; (Uzb.) *tuprāk* 'zemlja, glina (suhaja); počva; prax; teritorija'; (UzbAfg.) *tupray*, *tupraq*, *turpaq* 'earth, clay, ground, soil'.

South Siberian Turkic:

(Oit.) *tobrak* 'zemlja, pyl', prax, počva'; (OitTu.) *tobrok* 'počva, černozem', *toburak* 'počva, zemlja'; (OitCha.) *torbok* 'zemlja'; (Khak.) *tobrah* 'zemlja, počva'; (KhakBut.) *tobīrah* 'počva; zemlja; grunt'; (KhakKo.) *tōbīrak* 'Staub, Sand'; (Tuv.) *dovurak* 'zemlja; pyl' (cf. Tuv. *dovura*- 'stanovit'sja mutnym, mutnet', *zagrjazn-jat'sja* (o vode); *pačkat'sja* zemlej; *pylit'sja*); (Tuv.) *dovurat*- 'mutit'; *pačkat*

grjaz'ju, zemlej; pylit''); (Tofan) *to"prak* 'zemlja, počva; pyl', prax'; (TofaRass.) *to"p"rak* 'prax, pyl'; počva'; (TofaCast.) *to"φrak* 'Staub, Sand'.

Khalaj:
(Khal.) *turpāq* 'Staub, Erdboden'.

Yakut:
(Yak.) *toburax* 'grad; (dialectical) pyl'; (YakPek.) *toburax*, *tobur* 'pyl', kopot'; grad, melkij snežnyj gradkrupa'.

Chuvash:
(Chuv.) *tāpra* 'zemlja, počva, grunt'; (ChuvPaa.) *tāpra*, *tōpra* 'Staub, Erde'.

Middle Mongolian:
(WMoK) *toγoray* 'prax, zemlja', *toboray*, *tobaray*, *tobray* 'prah, zemlja, perst'.

New Mongolian:
(Khalkha) *tovrōg* 'prax, pyl', *toorog* 'nežidkaja primes' (v židkosti); (Bur.) *toborog* 'pyl', prax', *toorog* 'pyl', pylinki, sorinki'; (BurČC) *tobrog* 'pyl', prax'; (Kalm.) *towrvōq* 'Staub, Erde, Sand', *tōrvōq* 'Staub'; (KalmMun.) *tovr-g* (tovr-g) 'pylinka; atom'; (Ord.) *t'awarak*, *t'oworak*, (Turkic *topur* ? >) *t'owor* 'poussière'.

Before evaluating the different opinions given in the literature on the etymology of the word-form *toprak*, it may be of value to survey in brief the remarks in the literature concerning Turkic *tōz* and Mongolian *toγosun*. The related problems are closely linked to the problem of the form *toprak*.

The origins of Turkic *tōz* and Mongolian *toγosun* have given rise to many statements of many kinds in the literature. It has been believed since Gombocz (1912/1913: 12) that Turkic *tōz* is connected with Mongolian *toγosun*, but how they are connected has not yet been clarified.

Ramstedt (1912: 186, 1935: 405a) explained Mongolian *toγosun* from a word-form **towa-sun* and considered that the base of this word corresponded to the Eastern Turki *topa* 'Erde' and Samoyedic *topo* 'Erde, Staub'. In the view of Doerfer (1965: 601), however, this is not convincing. Ramstedt's research led Gombocz to believe that Turkic *tōz* and Mongolian *toγosun* correspond to each other; and this was accepted by later scholars (Gombocz 1912/1913: 12, Németh 1914: 134, Pelliot 1925: 231, Sinor 1952: 220, 1963: 141, Doerfer 1965: 601, Tekin 1995: 162, Ščerbak 1997: 158).

Pelliot suggested (1925: 231) that Turkic *tōz* emerged from **to^wuz* as a result of contraction. Ligeti accepted Pelliot's contraction theory and concluded that the following changes had occurred to Turkic *tōz* and Mongolian *toγosun*: Proto-Turkic **tōz* / **toiz* < Proto-Altaic **toβ-us* > Proto-Mongolian **toβus* (1938a: 75, 1938b: 201) > **toβus-un* > Mongolian *toγusun* (1938a: 74). Later, however, he connected Turkic *tōz* and Mongolian *toγosun* and also the Mongolian *toγoray*, *tobray* and Turkic *toγ*, *toprak* with words in a fragment-record of Sienpi-Tabgach taken as of the

3rd century: **toγusin* ‘terre, poussière’, **tayušin*, **toγočin* and Qitañ **to’us*, a late variant (1970: 287-288, 1986: 429, cf. 1938b: 198). For another transcription of the Sienpi-Tabgach and Qitañ glosses, see **toγojin* ‘Erde, Staub’ (Doerfer 1985: 161) and **taywəsə* ‘dust’ (Doerfer 1993: 83).

There are also other opinions in the literature about the correspondence between Turkic *tōz* and Mongolian *toγosun*. Sinor (1952: 220) had postulated that Turkic *tōz* and Mongolian *toγosun* corresponded to each other. In this respect, Clauson stated (1964: 155, 1969: 22, EDPT: 463b) that the Mongolian *to’osun* / *toγosun* is a “perfectly” first period Turkic loanword in Mongolian, “but not taken from *to:z*. It is, in fact, taken from the rarer synonymous word *to:ğ*”. Doerfer held a similar opinion as concerns Sienpi-Tabgach **toγojin*. In his view (1985: 161, cf. 1967: 103), this word is a derivation of Turkic *toγ* with the Mongolian diminutive-suffix *+jin*.

Tekin, however, had another opinion concerning *toγ*. He considered (1969: 65) that *toγ* goes back to a hypothetical **tow* and, although Clauson’s opinion seemed conceivable, he preferred to think of the zetacism phenomenon for *toγ* (i.e. *toz* < *tōz* < **toβuz* < **towur*², 1976: 232). In the case of *toγosun*, however, he started from a form **toβar-sun* (i. e. Mongolian *toγosun* < **toγur-sun* < **toγar-sun* ~ **toβar-sun*, 1976: 232, 1995: 162). The latter suggestion of Tekin had first been made by Pritsak (1954: 245). Poppe had a similar opinion: *toγosun* < **towārsun* < **topārsun* ‘Staub, Erde’ (1960: 47, 1975: 174, cf. 1955: 162, 1933: 119, cf. Doerfer 1965: 511, 601). Miller, however, favoured the zetacism phenomenon and started from a word-form such as Altaic **tōr*² (> *tōz*, 1975: 165, 2001: 59-60).

Summary of opinions:

tōz: (1) *tōz* = *toγosun* (Gombocz 1912/1913, Németh, 1914, Sinor 1952, 1963, Ščerbak 1997). (2) *tōz* < **to^wuz* (Pelliot 1925); **tōz* / **toǰz* < **toβ-us* (Ligeti 1938b); *tōz* < **tōr*² (Miller 1975); *tōz* < **toβuz* < **towur*² (Tekin 1976, cf. *toγ* < **tow*, Tekin 1969).

toγosun: (1) *topa* > *towa-sun* > *toγosun* (Ramstedt 1912, 1935); (2) Turkic *toγ* > Mongolian *toγ(o)sun* (Clauson 1964, 1969, EDPT); Turkic *toγ* > Mongolian *toγosun*, Tabgach **toγojin* (Doerfer 1985), (3) a: **to^wuz* > *to’usun* (Pelliot 1925); **toβus-un* > *toγusun* (Ligeti 1938a), b: *toγar-sun* ~ *toβar-sun* > *toγosun* (Pritsak 1954, Tekin 1976, 1995); *topārsun* > *towārsun* > *toγosun* (Poppe 1960, 1975).

The main forms in the Turkic and Mongolian languages as concerns the word-forms *tōz*, *toγ* and *toγosun* are as follows:

Old Turkic:

(DLT) *tōz* ‘dust’; *toz* ‘Staub’ (TT VIII).

Middle Turkic:

(CC) *toz* ‘Staub’; (ChagAbuš.) *tos* ‘toz’.

New Turkic:

Oghuz:

(Gag.) *toz, tooz* 'pyl'; pylinka; porošok'; (Turkish) *toz* 'dust; powder; like dust'; (Az.) *toz* 'pyl'; (SouthOgh) *tūz, to^uz, tūδ* 'Staub'; (Khoras.) *toz, tōs, tuz* 'Staub'; (Tkm.) *tōz* 'pyl'

Kipchak:

(TatBulg.) *toz* 'dust'; (TatBa.) *tos* 'pyl'; (Kr-Tat.) *toz* 'pyl'; pudra'; (Kar.) *toz* 'pyl'; porošok'; (Kklp.) *toz* 'pyl'; mučnaja pyl'; paklja'; (Kir.) *toz* 'melkaja pyl'; bus, ras-truska (myčnaja pyl'); (Kzk.) *toz* (*toz-toz bolyp ket-* 'raspylitsja').

Turki:

(Uig.) *toz* 'pyl'; (UigJar.) *tōz* 'flour-dust'; (YUig.) *tos* 'pyl'.

South Siberian Turkic:

(OitTu.) *toos* 'pyl'.

Khalaj:

(KhalLex.) *tōz*.

Old Turkic:

(DLT) *tōγ* 'dust raised by horses' hooves'; (QB) *toγ* 'dust'.

Middle Turkic:

(SinoUig.) *toγ* 'poussière'; (ChagPdC) *to:γ* 'poussière; étendard'; (ChagAbuš.) *toγ* '(*toz ve gubar manasındadır...*) dust'.

New Turkic:

Oghuz:

(TrDS) *toğū* 'vatan, toprak'.

Turki:

(Uig.) *toγ* '(dialectical) pyl'; (UigSin.), (UigMal.) *toγ* 'pyl'; (UigJar.) *toγ* 'dirt, which as the result of a dust-storm gathers on the leaves of trees and bushes'.

Old Mongolian:

(Tabgach) **toyusin, *tayušin, *toγočin* 'terre, poussière'; (Qitañ) **to'us* 'dust'.

Middle Mongolian:

(SecHist.) *to'osun* 'Staub; Staubwolke', *to'usun* 'Staub'; (hP'ags-pa) *t'o-osun* (in: *t'ariyan t'o-osun* 'crops'); (Hua-i-i-yü) *to'osun* 'poussière'; (IMuh.) *tōsun* 'pyl'; (VocIst.) *tōsun* 'poussière'; (WMoK) *toγosun, toγosu* 'poussière; atome'.

New Mongolian:

(Khalkha) *toos(on)* 'pyl', pylinki; ivetočnaja pyl'; (Bur.) *tooho(n)* 'pyl'; pylinka; pyl'nyj'; (Dag.) *tos, tōs* 'Staub', *tuāse* 'dust, dirt'; (Kalm.) *tōsŋ* 'Staub';

(KalmMun.) *toosn* (*toos'n*) 'pyl'; *pylinki*; *pyl'ca'*; (Ord.) *t'ōs*, *t'ōsu*, *t'ōson* 'poussière'; (Oir.) *tōsŋ*, *tōson* 'poussière'; (Üjüm.) *t'ōs* 'poussière'.

The concept that *toprak* is a derivation of the suffix *+rAk* (*top+rak*: Vámbéry 1877: 257, Doerfer 1965: 597, 1971: 306, *towu-ray*: Ramstedt 1935: 405a) cannot be accepted because this suffix creates only comparatives. Doerfer probably saw this difficulty and later revised his view, supposing that *tuprak* was the primary form, the *-u-* changing into *-o-* under the analogous influence of the *-o-* in Turkic *top* 'Kugel', giving rise to *toprak* (Doerfer & Tezcan 1980: 209a, Doerfer 1987: 107). However, this derivation also involves many difficulties. I shall expatiate on this problem below.

The theories that start from different Proto-Altaic forms, such as **toβ-us* (> *topur-ak*, Ligeti 1938a: 75-6, 1398b: 201); **toβar* (> Mongolian *tobar-aγ*, Turkic *topr-ak*, Pritsak 1954: 245); **topār-ak* (> Mongolian *tobaray*, Poppe 1960: 47, 1974: 133, cf. 1955: 161-2), **toβur* (> *toβur-a-k* / *toβur-ak* > **toβrak* > *toprak*, Tekin, 1976: 232, cf. 1969: 65) and from a word-form such as *topur* (> *topur+(a)k*, Eren 1999: 412a), also come up against many difficulties. (1) These are quite hypothetical forms and, otherwise, the hypothesis of a Proto-Altaic origin does not help us to solve the problem. (2) Such a view further raises well-founded doubts because, at the present state of research, we do not know about a sound change in early Turkic where a bilabial voiced fricative (*-β-*) in an intervocalic position changes to a bilabial voiceless explosive (*-p-*). (3) Eren considers the suffix *-ak* to be a diminutive, but this cannot be accepted because in this case the semantic connection between the suffix and the base cannot be explained. (4) Difficulties likewise arise as concerns the vocabulary because at the present these hypothetical bases cannot be shown either in early Turkic or in early Mongolian. This, of course, does not mean that such forms could not have existed in the early period.

With regard to the modern word-forms for *topur* (Tkm. *toprak* ~ *topur*, Kir. *topurak* ~ *topur*, YakPek. *toburax* ~ *tobur*), it is not impossible that, in the early period, there might have been a base **topur*, but this can only be a hypothesis because at present time there is no evidence for such a form either in early or in Middle Turkic sources. The morphological connection between the word-forms *toprak* and *topur* can be seen in many other instances too (e.g. Yak. *oγuruk*, *oγoruk*¹ ~ *ogūr*, *oγūr* 'arkan, verevka', Tuv. *kövürüg* ~ KhakVerb. *kübür*, Kzk. *köpir* 'most', etc.), where the situation is the same and, of course, the base is not the shorter form. In my opinion, *topur* is a shorter form of *toprak* and not its base form. I think it very likely that the final *-k* in *topurak* or *toprak* might have dropped out in the early period of the Middle Turkic (i.e. *topur* < ? **topra* / **tofra* / **topura* < *tofra(γ)* / *topra(γ)* > Chuvash *tăpra*, *töpra* 'zemlja, počva, grunt') and the same sound change might have occurred as in the Arabic *sufra* (i.e. Arabic *sufra* → Uigur *supur* ~ *su-*

¹ The Yakut forms *oγuruk*, *oγoruk* are not derivations of a base such as Yak. *ogūr* ~ *oγūr*, as supposed in the literature (see Aydemir 1999: 430-433).

pura 'podstilka iz škury'/(portable) underlay of leather'). For a similar phenomenon, cf. Old Turkic *ywkaru* > Fuyü-Kirghiz *yogor*, Turkish *yukar* 'above, upstairs, etc.'. If any kind of word such as *topur* can be established in early sources, then a derivation such as *topur*+A- > *topra*- might be supposed. All this, however, is speculation and there are numerous factors of uncertainty.

On the above basis, derivation of the word-forms *topurak* ~ *toprak* from a *topur* does not appear to rest on sure ground. Further, considering the phonological, morphological, semantic and lexicological arguments, there seems to be no reason to explain the word-form *toprak* and its variants through the Proto-Altaic (cf. Pritsak 1954: 245, Poppe 1960: 47, 1974: 133, Tekin 1976: 232) or to assume a rhotacistic change (cf. Ligeti 1938a: 75-76, 1938b: 201).

All this holds, of course, as concerns the derivation of *toprak* < Chagatay **topuryak* too, supposed by Menges (1939: 22-23, 1954: 85, 1955: 121, 1959a: 653, 1959b: 107), an interpretation which otherwise does not differ from those based on **toβur* / *topur* and the opinion of Miller, who regards *toprak* as a derivation of a verbal base **towru*-.

I agree with Clauson (1964: 156, EDPT: 444) that the form *toprak* is a derivation of the Old Turkic verb *topra*- 'become dry (plant)'. Räsänen (VEWT: 489b) and Dankoff & Kelly (1985: 195) have the same opinion. This argument, however, has not yet been supported by phonological, morphological or semantic criteria. For this reason, Doerfer, Tezcan and Erdal considered that, on the basis of the instances in Brāhmī and Tibetan writing, the original form must have been *tuprak*, with -u- in the first-syllable, and not *toprak* (Dorfer 1971: 306, Tezcan 1974: 33, Doerfer & Tezcan 1980: 209a, Doerfer 1987: 107, Erdal 1991: 249, 387).

Even though this conclusion seems to be correct and, on the evidence of the Brāhmī and Tibetan instances, we must in fact assume a word-form *tuprak* (and maybe **tupra*-) in Old Turkic, in contradiction with Doerfer, Tezcan and Erdal (1) I believe that the Brāhmī and Tibetan instances do not confirm the primary quality of the first syllable vowels. (2) They merely prove that in the Old Turkic period there were forms with -u-, and (3) they must be considered dialectal forms because there are also a number of Brāhmī and Tibetan instances in which the first-syllable rounded vowels do not correspond to each other.

toprak 'soil, earth'

My etymological suggestion is based partially upon the quality of the first-syllable rounded vowel. In my opinion, we must assume an -o- in the first syllable and analyse this word as *topu*+rA-k and *topa*+rA-k. As concerns this supposition, a number of chronological, lexicological, morphological, phonological and semantic questions must certainly be answered, and the application of many other criteria and their concordance are needed.

(a) The base *topu* / *topa* can be shown in some Turkic languages and dialects in the meaning of 'soil, dust(y), clay, ground, territory, etc.': Kir. *topo* '(1) glina, zemlja, (2) počva, (3) territorija'; SalGre. *topa* 'terre, argile'; Uig. *topa* 'počva, zemlja;

glina' (UigLo. *topa*, *topo* 'pyl', *zemplja*, *prax*'; UigLo. *topu* 'pyl'; UigSin. *topa* 'prax, pyl', *zemplja*; *glina*'; UigMal. *topa*, *topo* 'zemplja, prax, pyl'; UigLeC. *tōpá* 'Erde; Staub'; UigJar. *topa* 'dust, earth, sand, soil, loes, dusty'; UigRaq. *tòpá* 'earth, dust'; UigShaw *topa* 'earth, dust'; UigSinGN *tofa* 'dust').

Although at present the base has not been confirmed in early Turkic sources, the Samoyedic, Mongolian and Turkic languages and a Sienpi-Tabgach source provide clear-cut proof that the base *topo* / *topu* / *topa* goes back to ancient times and at the same time ensure the lexicological and chronological criteria necessary for the etymology in question here.

The following data can be seen in Samoyedic: Enets *tobo*, *tóbo*, *tobu*', *tobō*', *tobō* 'Ton/pesok', *top* 'Sand'; Mator *taha* 'Schmutz; Asche' etc. < Proto-Samoyedic **t^ləpə* 'Schmutz, Erde (von verschiedenen Bodenarten)' (Helimski 1997), cf. <**t^ləp^lə* 'id.' (Janhunen 1997).

Accordingly the question arises as to the origin of the base *topo* / *topu* / *topa*. In connection with this, three important questions must be answered. (1) Is the word of Turkic origin? If so, can it be etymologized at all? (2) If the word is not of Turkic origin, then what is its origin, and is its origin identical with the language from which it was borrowed into Proto-Turkic, or (3) must we consider another intermediary language?

I, of course, do not take it upon myself to examine the derivation or origin of this base *topa*, but it should be noted that the views of Ligeti (Proto-Altaic **toβ* > *topa*, 1938a: 75-76, 1938b: 201) and Doerfer (Turkic *top* 'ball, round' > *topa*, 1965: 597) cannot be accepted because there is no suffix **+a* in Turkic. Further, the semantic connection between the suffix **+a* and the base cannot be explained.

It is beyond question that the Samoyedic and Turkic forms are related to each other. However, we have no criteria which reveal that the word is a Turkic loan-word in Samoyedic, or conversely. We must also consider the possibility that the word was taken over into both from a third language. This is simply a working theory, but as regards its origin, it may help us to determine the direction of borrowing if we examine the Greek word *topo(s)*. The sole problem is the meaning of the Greek word. In various etymological dictionaries, only the meanings 'Ort, Stelle, Platz' of the word *topo(s)* are to be found. However, if the meanings 'ground, soil, stubble-field' of the word *topo(s)* exist in Byzantine-Greek texts, as demonstrated by a study by Şinasi Tekin (1998: 402) in connection with another question, then this problem may be overcome. The questions of the direction of borrowing and the origin of the word remain open in the future and necessitate further examination.

On the basis of the meanings of the Turkic and Samoyedic forms, the basic meaning in Proto-Turkic and in the language from which it was borrowed into Proto-Turkic might have been **'ground; earth, soil'*. Semantically cf. Old Turkic *yēr* 'ground, earth, land, soil, place, territory' (EDPT, Dankoff & Kelly) and WMoL *siruyai*, *sirui* 'earth, ground, soil', etc.

(b) As regards the suffix *+rA-* and its function in my analysis (i.e. *topu+rA-k* ~ *topa+rA-k*), Erdal holds that this suffix is added only to onomatopoeics (1991: 469-

474). Furthermore, in connection with the view of Menges (1961: 22, 1995: 158-159) that the Turkic word-forms *ögrän-* ‘to learn’ and *ögrät-* ‘to teach’ are derivations of a base *ög+rä-*², Erdal remarks that “there is no formative ‘+rA-’” in Turkic (1991: 33). Tekin fully agrees with Erdal (1994: 246). I shall expatiate briefly on the treatment of the problem of *ög+rä-* below.

I do not agree with Erdal and Tekin. As in Mongolian, there was and even still is a denominal verb-forming suffix *+rA-* in Turkic, but it is not so productive and cannot be shown in every Turkic language. In Proto- or Pre-Turkic, it might have been relatively productive. Let us examine the suffix briefly first in Turkic and then in Mongolian from synchronic and diachronic aspects, respectively:

Tkm.:

garaḡkīra- ‘temnet’, večeret’ (< *garaḡkī+rA-*), *garaḡkī* ‘temnota, t’ma, potemki, trak’, cf. Old Turkic *karagku* ‘darkness’ (EDPT, Dankoff & Kelly).

Tkm.:

dālire- ‘obezumet’, sojti suta; pomešat’sja’ (< *dāli+rA-*), *dāli* ‘sumasšedšij, umališennyj, pomešannyj’, cf. Old Turkic (Oghuz) *tālū* ‘an idiot’ (EDPT), ‘stupid’ (Dankoff & Kelly).

Uig.:

koniri- ‘vetšat’, prixodit’ v vetxoe sostojanie’, *konirat-* ‘iznašivat’, prixodit’ v vetxoe sostojanie’, *konirap žirtil-* ‘istrepat’sja’ (< *kona+rA-*), *kona* ‘drevnij; vetxij, staryj’ < Persian *kuhna* ‘old, ancient’.

Uig.:

kakraḡ ‘vysoxšij’; *kakraḡ yār* ‘vysoxšaja zemlja’ (< *kak+rA-(X)ḡ*), *kak* ‘suxoj’, cf. Old Turkic *kak* / *kāk* ‘something dried; a dried segment of something’ (EDPT), *kāk* ‘dried (fruit)’ (Dankoff & Kelly), cf. Uzb. *kakra-*.

Uzb.:

kakra- ‘sohnut’, peresyvat’, *kakrat-* ‘vysušivat’, issušat’ (< *kak+rA-*), cf. Uig. *kakraḡ*.

Uzb.:

kākrä- ‘gorčit’, ostavljat’ gor’kij vkus vo rtu’ (< *kāk+rA-*), cf. Old Turkic *kāk* ‘malice, spite, secret hatred’ (EDPT), ‘revenge; hardship’ (Dankoff & Kelly).

Turkish:

kekre- ‘kükreyip ihtimâr etmek, acılařmak // boil over/foam with rage, turn bitter’ (LehOsm.), ‘to become acrid (milk, wine)’ (RTED), cf. Uzb. *kākrä-*.

² This was first suggested by Vámbéry (1877: 304) and later by Ramstedt (1952: 199).

Bash.:

kuδra- ‘prevraščať sja v gorjaščie ugli’ (< *kuδ+ra-*), Bash. *kuδ* ‘gorjaščie ugli žar’, cf. Old Turkic *kooz* ‘glühende Kohle’ (Zieme 1984: 346).

Tofan:

eʷrhire- ‘ustaret’; zastaret’ (< *ārki+ra-* / *ārka+ra-*), *eʷrhi* ‘staryj, prežnij, davnyj’ (< *ār-gA*), cf. YakPek. *ārgā* ‘staryj; starost’; YUig. *erke* ‘staryj, prežnij’, etc.

ChagE:

gandra- ‘to stink, smell badly’ (< *gand+ra-*) < Persian *gand* ‘stink, stench, foul smell’.

ChagE:

telbārā- ‘to go mad; become insane’ (< *telbā+ra-*), ChagE *telbā* ‘mad, insane, crazy’, cf. Old Turkic *telvā* ‘lunatic, mad’ (EDPT), *telwā* ‘crazy’ (Dankoff & Kelly) < **telbā*.

ChagR:

yīrakra- ‘sich entfernen’ < *yīrak+ra-*, cf. Old Turkic *yīrāk* ‘distant, far away’ (EDPT, Dankoff & Kelly).

CCI:

katīrap ‘kräftig’ (< *katī+ra-p*), CCI, CCG *katī*, *kattī* ‘hart, fest, stark, heftig’, cf. Old Turkic *katīg* ‘hard, firm, tough’ (EDPT).

Kao-kiü:

*huluy bāgrāk*³ (< *bāg+ra-k*).

A thorough examination would certainly reveal more examples from early and Modern Turkic, but even the above data clearly reveal that as in Mongolian, in Turkic there is a denominal verb-forming suffix *+ra-*. As regards its function, it is added to adjectives and nouns used as adjectives and creates intransitive verb stems. Adding to the base, it denotes “becoming or turning into the characteristic indicated in the base lexeme”.

This semantic function is corroborated by Mongolian instances: *köke* ‘blue’ → *kökere-* ‘to become blue’, *kögšin* ‘old’ → *kögšire-* ‘to become old’, *ügei* ‘poor’ → *ügeyire-* ‘to become poor’, etc. (cf. Poppe 1964: 65).⁴

³ The title of the Kao-kiü ruler from the 4th-5th century, cf. Ligeti (1986: 431).

⁴ It should be noted that this suffix is added to verbal bases as well. Addition of the suffix *-ra-* to verbal bases has already been mentioned briefly in the literature (see Tekin 1995: 173-187). I dealt with the suffix *-ra-* (~ *-(I)r-*) and the problem of its derivations in my study on Turkic *sāmiz*, **sāmi-ra-* > *sāmrā-* (see Aydemir 2002). I shall be dealing with the derivations belonging to the *-ra-* formation, such as *kūtu-ra-* > *gūdura-*, *kutuz* and *köküz* (~ *köküräk* ~ *kökräk*), in another study.

(c) As regards the Old Turkic period, three definite examples can be given of the suffix *+rA-*: *käkräš-*, *ögrän-* / *ögrät-* and *topra-*. A high number of examples in Old Turkic cannot be presented for the moment since there have not yet been thorough examinations concerning this suffix in the Old Turkic period, and it must probably be sought not in Old Turkic, but in Proto- or Pre-Turkic.⁵

One of the low number of instances in Old Turkic is *käkräš-* 'to hate / quarrel with one another' < *käk+rA-š-* < Old Turkic *käk* 'malice, spite, secret hatred' (EDPT), 'revenge; hardship' (Dankoff & Kelly). Even though the base is at present not attested to in early Turkic sources, some modern Turkic languages have it, such as Turkish *kekre-* 'kükreyip ihtimâr etmek, acılaşımak // boil over / foam with rage, turn bitter' (LehOsm.), 'to become acrid (milk, wine, etc.)' (RTED), Uzb. *käkrä-* 'gorçit', ostavl'jat' gor'kij vkus vo rtu'.

Another example is *ögrän-* 'to learn' or *ögrät-* 'to teach', already mentioned above in connection with the suffix *+rA-*. The verbal base **ögrä-* (< *ög+rA-*) is not attested to in Turkic at present.⁶ The explanation and analysis of the base **ögrä-* as a derivation of Old Turkic *ögür* 'a herd', i.e. **ögür+A-* > **ögrä-* (cf. EDPT: 114b, cf. Severtjan 1974: 498, Erdal 1991: 33, 609, Tekin 1994: 246), and its interpretation or reconstruction as **to socialize (tr. or intr.!)* (see Erdal 1991: 33, 609, Tekin 1994: 246), encounter serious difficulties. Clauson, by contrast, remarks that there is "no close semantic connection" between **ögrä-* and *ögür* (EDPT: 114a). Considering the etymological, semantic,⁷ morphological, logical and analogical (see below) ar-

⁵ A majority of the *+rAk* derivations possibly include this *+rA-* suffix (? *+rA-(O)k* > *+rAk*; Written Mongolian *metü* 'like, similar' *+rA-(O)k* > Turkish *+(X)mirak*).

⁶ Johanson, however, is right when he says that "Obwohl das Ost-Altürkische kein produktives Suffix *-rā-* aufweist und kein **ögrä-* in historischer Zeit belegt ist, ist nicht einmal eine Bildung wie **ö-g+rā-n-* 'lernen' im etymologischen Sinne ganz auszuschließen (*ö-* 'denken'+ Nominalsuffix *-g = ög* 'Verstand' + *-rā* + Medialsuffix, d.h. 'für sich in den Sinn tun') (1995: 109).

⁷ The only basis for the explanation given by Erdal (1991: 33) and Tekin (1994: 246) is the morphological analysis (i.e. *ögür+A-* > **ögrä-*). (1) An unexceptionable morphological and phonological analysis is certainly necessary, but is not a sufficient condition, since it has no validity as evidence in itself, if we can not explain it semantically or there are many factors of uncertainty, as here. (2) A close semantic and etymological connection to be expected between *ögrän-* 'to learn', *ögrät-* 'to teach' and the supposed *ögür+A-* > **ögrä-* **to socialize* cannot be observed, although this would be essential to proving such a supposition. (3) Nowhere in the semantic field of the verb-forms *ögrän-*, *ögrät-* is there a hint of the supposed meaning **to socialize* or 'a herd' (for the occurrences of the meanings of the *ögrän-*, *ögrät-* in Turkic languages, cf. Severtjan 1974: 497). (4) On the basis of *ögür* 'a herd', not a meaning **to socialize*, but **to assemble / join / associate with, etc.* or a similar meaning would be expected. Such a meaning, however, cannot be shown. (5) The meaning 'to understand' of the verb *ögrän-*, on the other hand, can be found in

guments, in my opinion, it is not reasonable to trace back the verbs *ögrän-*, *ögrät-* to the noun *ögür* ‘a herd’. Further, I consider that the meanings of ‘to learn’ and ‘to teach’ have come into existence not from the *‘socialization’ (still less from the meaning ‘a herd’) as supposed by Erdal and Tekin, but from the meanings ‘thinking’ and / or ‘understanding’. (1) The Hungarian verbs *oktat-* ‘educate, teach’ and *okul-* ‘learn (by experience), etc.’ which developed from Old Turkic *uk-* ‘to understand’, corroborate this supposition. (2) The WMoL *ukayul-* ‘to teach, explain, etc.’ which is a derivation of WMoL *uka-* ‘to understand, know, comprehend, realize’, corresponding with Old Turkic *uk-* above, also clearly favours this supposition. (3) The base *ög* ‘understanding; mature (animal)’ of the verb-form **ögrä-*, which is a derivation of the verb-form *ō-* meaning ‘to understand after thinking’, similarly to the Hungarian and Mongolian verb-forms, also corroborates this supposition. (4) Last but not least, WMoL *čegejile-* ‘to learn by rote, memorize’ derivation of WMoL *čegeji(n)* (semantically, cf. Old Turkic *könül* ‘heart, mind, thought’, *ög* ‘memory, etc.’, EDPT) meaning ‘chest, breast, bosom; memory as a faculty’, as the imaginary center of emotional life and the intellectual faculty, demonstrates unambiguously that the verb-forms meaning ‘to teach’ / ‘to learn’ in different languages are derivations of bases expressing “intellectual faculty”. This appears to furnish sufficient evidence that the verb-forms *ögrän-*, *ögrät-* might also have derived from the noun *ög* expressing “intellectual faculty”.

Thus, on the basis of the above arguments, I think accordingly that the verb-forms *ögrän-* ‘to learn’ and *ögrät-* ‘to teach’ are derivations of a base **ögrä-* which must be analysed as *ög+rA-*. Since the suffix *+rA-* creates intransitive verbs from adjectives, the verbal base **ögrä-* must also have been intransitive.⁸ The suffix *+rA-* in the connection *ög+rA-* must have been added to the noun *ög*, which was used as an adjective too. This is a natural occurrence elsewhere as the majority of nouns in Turkic can be used as occasional adjectives as well. This is corroborated by the attributive construction in DLT *ög at* ‘four-year-old horse’ (Dankoff & Kelly), where the *ög* is surely none other than *ög* meaning ‘understanding’ (Dankoff & Kelly) and ‘thought, meditation, reflection, mind, intelligence, memory’ (EDPT). Clauson treats the *ög* (in DLT *ög at*) separately from the DLT *ög* meaning ‘an animal which has reached maturity and grown up’, and wrongly associates the latter with the DLT

Turkish in the present day too, which provides obvious proof that this word is a derivation of the verbal base *ō-* ‘understand after thinking’.

⁸ Thus, the verbal base **ögrä-* ‘instill, accustom’ given by Dankoff & Kelly must have been only intransitive. However, common treatment of the main- and sub-meanings of the verb *ögrän-*, and the examination of their relation with the base **ögrä-* are not part of the present study. Preliminary examinations and analogies in foreign languages, however, indicate that the subordinative relation of the meanings and their logical and relative chronological order can be conceived in the following manner: ‘to understand’ → ‘to learn (by heart / rote / experience)’ → / ~ ‘get / become accustomed’ → etc.

ōg ‘mother’ (EDPT). Dankoff and Kelly, however, correctly do not separate these two word-forms: *ōg* ‘understanding; mature (animal)’. Strong proof of the common origin of the meanings ‘understanding’ and ‘mature (animal)’, the meaning ‘mature (animal)’ having come into existence secondarily as a result of semantic extension, is the way of thinking in Turkish that even today associates “maturity” partly with the word meaning ‘reason, intelligence’; cf. Turkish *akıl* (< Arabic ‘*aql*’) ⁹ ‘reason, intelligence, mind, memory, thought; age of discretion, maturity’ (RTED). What is more, the meaning ‘maturity’ developed in Turkish, and not in Arabic, which also seems to support the above conclusion. The above arguments demonstrate that the morphological and semantic connections between *ōg* and +*rA*- and their relation to *ōgrān*- and *ōgrāt*- are self-evident.

After the above confirmation of the morphological and semantical background, we can return to the question of the formation of the forms *topu+rA-k* ~ *topa+rA-k*.

The original verbal bases must have been **topura*- and **topara*- (> DLT *topra*-), to which the formative -(*O*)*k* was added. This trisyllabic verbal base was otherwise preserved as *dovura*- in Tuvan. The trisyllabic form *twparak*¹⁰ in the Insadi-Sūtra which has not been considered to date, the trisyllabic word-forms in the Turkic languages (see the Turkic data) and the Written Mongolian forms *toboray* and *tobaray* also clearly reveal that the word was originally trisyllabic. Nor is it reasonable to assume an original -*u*- in the first-syllable of *toprak* because Turkic *topu* / *topa*, Samoyedic *tobo* and Tatar and Bashkir *tuprak* with -*u*-, uniformly demonstrate that there was originally an *o* in the first-syllable. The Written Mongolian word-forms *toboray*, *tobaray*, *toyoray*, *tobray* seem to support this.

From a semantic point of view, from the connection between the base *topu* ‘soil, earth, dust’ and the suffix +*rA*- denoting “becoming / turning into”, the conclusion can be drawn that the basic meaning of the DLT *topra*- ‘become dry (plant)’ (< **topura*-) must originally have been **‘become earthy / dusty’*. This meaning has also been preserved in Tuvan (**topura*- > Tuv. *dovura*- ‘pylit’sja’ // get / become dusty). The meaning of *topra*- in DLT *yer kurup toprašdī* ‘the ground dried for lack of rain until dust almost rose from it’ (EDPT 445:a) ← **‘the ground dried and became earthy / dusty’*, lends further support to this conclusion. Both morphologically and semantically, Written Mongolian *toyusura*- ‘to be covered with dust; dust rises’ (< WMoK *toyosu* ‘pyl’, *prax*, *perst’*, *atom*, *zemplja*’ +*rA*-) is an excellent analogy. Thus, on the basis of these arguments, it appears reasonable to conclude that the meaning ‘become dry’ in DLT has emerged as a result of a metonymical semantic change from

⁹ ‘*aql* ‘sense, sentence, reason, understanding, comprehension, discernment, insight, rationality, mind, intellect, intelligence’.

¹⁰ The disyllabic *tuprak* transcription in the “*tooz tuprak*” transcribed by Tezcan (1974: 33) is not reasonable. As Tezcan remarks, “Wie *tuparaq* geschrieben”.

the meaning *‘become earthy / dusty’ through the association of the ideas of cause and effect.¹¹

Hence, the problem now is how the meanings of the word-form *toprak* ‘soil, earth, dust, something dry’, developed. Through the meaning *‘become earthy / dusty’, or through the meaning ‘become dry’? I think from the following analogies that the answer is obvious: (1) Especially the case of the Turkish dialectal TrDS *kahrak* ‘islandıktan sonra sertleşmiş, taşlaşmış toprak // earth / soil that became hard after getting wet’ clearly illustrates the process that an attributive meaning ‘dry’ (< *kak+rA-k* *‘dry, something dried’) in an attributive construction separates from the attributive construction and becomes a noun, taking up the meaning of the qualified word.¹² This was probably involved in an attributive construction such as **kakrak* [*toprak*] or **kakrak* [*yār*] (cf. Uig. *kakrañ yār* ‘vysoxšaja zemlja’). (2) This process can be seen better in the case of TrDS *kuru* ‘kuru toprak // dry earth / soil’ which (as appears from its meaning) undoubtedly became separated from an attributive construction **kuru* [*toprak*] as a result of shortening.¹³ (3) Or the case of TrDS *kur* ‘sert, kuru toprak // hard, dry earth / soil’, which must have become separated from an attributive construction **kur* [*toprak*] where the *kur* (< Old Turkic (Oghuz) *kur* ‘dry’ > Kir. *kuur*, YakPek. *kur*) is not a shortened variant-form of Old Turkic *kurug* ‘dry; empty’.¹⁴ (4) The same process might also have occurred in the case of DLT *topurgan* / *topragan* ‘bare ground’ (from a semantic point of view no matter how transcribed¹⁵), which appears in DLT *topraganda av bolmas* ‘there is no wild game on bare ground’ (EDPT), and it apparently became separated from the attributive con-

¹¹ The semantic change or extension might have occurred in the following manner (*The ground loses its vegetation*) ‘become earthy and / or dusty’ (cf. DLT *topurgan* / *topragan yār* ‘soft bare ground from which the dust rises when it is trodden on’) → (ground) become dry (cf. DLT *topurganda* / *topraganda av bolmas* ‘there is no wild game on bare ground’) → (plant) become dry (cf. DLT *ot topradī* ‘the plant became dry (and withered)’).

¹² Cf. TrDS *kakrak* ‘çamurlu yollarda arabaların, hayvanların bıraktığı ayak izleri’ (< *kak+rA-k*).

¹³ For an analogous parallelism, cf. Hungarian *száraz* ‘dry’ + *föld* ‘land, soil, earth’ → *szárazföld* ‘(dry) land, continent’ → *száraz* ‘id.’.

¹⁴ Cf. TrDS *kur* ‘sert, kuru toprak’, Kirg. *kur* ‘suhoy’ ~ *kūr* ‘zasoxšij, vysoxšij; zaskoruzlyj’, Yak. *kur* ‘staryj, zaležalyj; prošlogodnij’: *kur ot* ‘prošlogodnee seno’, YakPek. *kur uñuox* ‘staryja (suxie) kosti’ < *kur* / *kūr* > *kur+I-* > Old Turkic *kuri-* (for a different explanation of *kur* see EDPT: 642b and Dankoff & Kelly 1985: 148).

¹⁵ The second *qamma* has dropped out in the form transliterated as TUBR’TA’N by Dankoff & Kelly (1982: 380) and Erdal (1991: 387). The correct transliteration must be TUBUR’TA’N. Morphologically, otherwise, it is possible to interpret it as *topurgan* (< *topu+r-gAn*). Such an interpretation, however, can for the time being serve only as a hypothesis, because a base **topur-* is not indicated either in early Turkic or in modern Turkic, and the transcription of TUBUR’TA’N (*topurgan* / *topragan*) is quite problematic (for transcription problems, cf. Erdal 1991: 387).

struction *topurgan* / *topragan yēr* in DLT, meaning ‘soft bare ground from which the dust rises when it is trodden on’.

As regards the word-form *toprak*, all these analogies uniformly indicate that the form *toprak* might have gone through the same processes before it became a noun and took up its known meanings. On this basis, it can be supposed that the form *toprak* might also have been connected to the word *yēr* ‘ground, earth, land, soil, place, territory’ (EDPT, Dankoff & Kelly) in an attributive construction, as its former attributive, and it might well have separated from this attributive construction and become a noun (i.e. *toprak* < **toprak* [*yēr*]). Thus, it is highly likely that, similarly to *kaharak*, *kuru*, *kur* and *topurgan* / *topragan*, the meanings of the word-form *toprak* might also have developed through the meaning ‘become dry’. This meaning, however, must have come into existence from an earlier meaning **‘become earthy / dusty’*, which has been preserved in Tuvan also.

In connection with modern data on the Turkic side, some remarks should be made on Tofan *tōferak* and Tuvan *dovurak*. TofaCast. *tōferak* [*toʷφʳak*]¹⁶ (cf. Tofan *toʷprak*, TofaRass. *toʷpʳak*) is a regular development of a word-form **topurak* in which a spirantization *-p- > -φ-* has occurred in the intervocalic position, and this at the same time caused the phenomenon of pharyngalization.¹⁷ According to Räsänen, Tuvan *dovurak* must be traced back to a form **towuray* (VEWT: 489b). This is not a considered opinion, however, because the Tuvan word-forms *dovurat-‘pylit’* (<**topurat-*) and *dovura-‘pylit’sja’* (<**topura-* > DLT *topra-*) make it perfectly clear that Tuvan *dovurak* ‘zemplja; pyl’ is an inner-Turkic development. The form *dovurak* might have developed from a sound change such as *topurak > *toburak > *toβurak > dovurak*.

As regards the Mongolian correspondences of the word-form *toprak*, the view of Ščerbak that Written Mongolian *tobaray* and Buriat *toborog*, *toorog* must be traced back to a **toβoroy* (1997: 232), runs into difficulties. In my opinion, the Buriat word-forms *toborog* and *toorog* (and also the Khalkha *toorog* ‘nežidkaja primes’ (v židkosti)) in all probability developed from two different Written Mongolian forms.

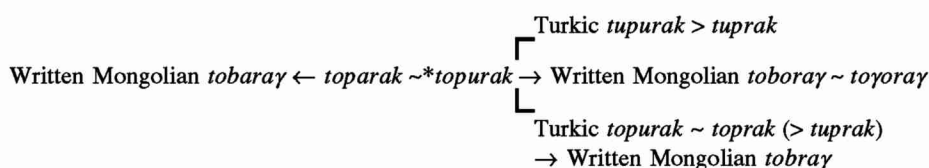
I think that the form *toborog* goes back to Written Mongolian *tobaray* (< Old Turkic **topurak* ~ *toparak*) and, because of the preservation of the intervocalic *-b-*, it may be considered a “second-period” (8-12th century) Turkic loan-word in Mongolian, if we use Clauson’s periodization (i.e. Buriat *toborog* < Written Mongolian

¹⁶ Menges transcribes this word as *tōferak* (1939: 22-23, 1959a: 653, 1959b: 107), whereas Räsänen (1949: 146) and Tekin (1995: 137), do so as *tofirak*. Menges’ transcription *tōferak* is not reasonable because the small sign over the *ô*, also used as a sign of length by Castrén, does not indicate a length here, but pharyngalization. The *e* in the transcription of Menges and the *ι* in the transcription of Räsänen and Tekin cannot be a vowel of full value because the *e* is a reduced vowel in medial position (s. TofaCast: 2-3, 5).

¹⁷ The forms such as *tofrak* in some Turkic languages might also have emerged through the change *topurak > toφʳak > tofrak*.

toboray < Old Turkic **topurak* ~ *toparak*). The Buriat form *toorog*, however, must be traced back to WMoK *toyoray*, which probably developed from Written Mongolian *toboray* as a result of the early Mongolian alternation between the intervocalic velar consonant *-*γ*- and the bilabial voiced plosive *-*b*- (cf. Ancient and Written Mongolian *-*γ*- ~ *-*b*-: Written Mongolian *toboray* ? > WMoK *toyoray* > Buriat *toorog*). However, in consideration of the correspondence of Turkic intervocalic -*p*- and Mongolian velar consonant -*γ*-, it is uncertain at the present time whether or not WMoK *toyoray* is a first-period (3rd-7th century) Turkic loan-word in Mongolian. The chronological determination, of course, demands further examinations.

On the basis of the above arguments, the probable changes in the word-form *toprak* can be summarized in the following manner:



toyosun 'dust'

In light of the above results, we can now touch upon the problem of the connection between Turkic *toγ*, *tōz* and the Mongolian *toyosun*, and other problems concerning *toγ* and *tōz*.

As regards the etymology of the word-form *toyosun*, I think it is obvious from the above results that the Mongolian *toyosun* (as Ramstedt stated correctly earlier, cf. 1912: 186, 1935: 405a) is a regular derivation of the above-mentioned Samoyedic and Turkic word-form *topo* / *topu* / *topa* with the Mongolian suffix +*sUn*. Ramstedt's opinion, however, has not been accepted and has been rejected without reason by many scholars. In contrast, I fully agree with Ramstedt and consider that this is a correct etymology in every respect.

It has been known since Ramstedt that there are many instances where Turkic intervocalic *-*p*- corresponds to the Mongolian *-*β*- > -' - / -*γ*- (~*b*-). Accordingly, on the basis of this sound-correspondence and the other criteria, it is reasonable to conclude that the word-form *topo* / *topu* / *topa* (whatever its origin) was borrowed from Proto-Turkic or another language into Old Mongolian and then changed, as a result of the above-mentioned sound changes and / or substitutions, first into **toβu* and then into **toγu* (see below under *toγ*). After this, different Mongolian endings were attached to it, and in this way Sienpi-Tabgach **toγusin* and WMoK *toyosun* emerged. In my opinion, therefore, the word-forms **toγu-sin*, **taγu-šin*, **toγo-čin* in the Sienpi-Tabgach fragment-record transcribed and considered by Ligeti to be from the 3rd century, as mentioned above, are derivations of these word-forms *topu*,

topo.¹⁸ This means at the same time that the earlier point of the “first-period” (i.e. 5th-7th century) determined by Clauson must be shifted to the 3rd century.

On the above basis, I think it is not reasonable to originate the Mongolian *toyosun* from Turkic *toy* or from a hypothetical Proto-Altaic word-form.

Some of the above-mentioned etymological interpretations have been founded on Proto-Altaic in part because they could explain the connection presumed between *toyosun* and *toy* or *tōz* in this way. In my opinion, however, there is no need for this at all. The above results furnish the possibility of a different etymological interpretation.

tōz ‘dust, dusty, powder’

As concerns the etymology of Turkic *tōz*, I believe that this word-form developed from Qitañ **to’us* (> Turkic *tōz*) or one of its precedents. A change such as **toγusi(n)* > **to’usⁱ* (> Turkic *tōz*) also seems possible if we start from a word-form like Sienpi-Tabgach **toγusin*. (1) The Qitañ gloss read as **to’us* by Ligeti (1986: 429, cf. 1938b: 198, 1970: 287-288) or as *taγwəsə* ‘dust’ by Doerfer (1993: 83), (2)

¹⁸ On this basis, I think it is reasonable to assume as a working theory that this form *toγu* / *taγu* appearing in Sienpi-Tabgach **toγu-sin*, **taγu-šin*, has also been preserved in the name *Tabgach* occurring in Old Turkic sources as *Tabγač* or *Tawγač*. This supposition seems very probable not only phonologically but also morphologically and semantically.

The ethnonym *Tabγač* / *Tawγač* itself is otherwise known to be a metathetical form. The *ṛāk-b’uāt*, which is the ethnonym *taγ-bat* meaning ‘lord of the soil’ and appearing in former Chinese sources, points to a former phonetic form **Taybač* (i.e. **taγbač* > *tabγač* ~ *tawγač*, Ligeti 1970: 290). Since this word means ‘lord of the soil’ in Chinese sources, it is possible to analyse the name **Taybač* as **toγu* / **taγu* ‘soil’ + (? Bulgar-) Turkic **bač* ‘head; leader’ > **taγbač* > Old Turkic *tabγač* ~ *tawγač* (for the **bač* see Volga-Bulgarian inscription *bač*, in: *bačne* ‘at the beginning of’; for the meaning of ‘leader’ see QB *baš* ‘leader’ and YakPek. *bas* ‘glava, gospodin’). If this solution is tenable, then two explanations may arise concerning the formation of this compound word: (a) Both items, **toγu* / **taγu* and **bač*, are loan-words in Tabgach. Other Turkic items in Tabgach seem to support this possibility. (b) However, I think it much more possible that the layer of rulers might have been some (? Bulgar-)Turkic-speaking ethnic unit and the name *Tabγač* / *Tawγač* might have preserved the memory of their language.

The latter conclusion is not baseless. As Ligeti postulated: “The Tabgach, or at least an important branch of it, stood for a strong Turkic component” (1986: 430-431). In any case, considering the morphological, phonological, semantic and other criteria and other Turkic loan-words in Tabgach, the Turkic origin of the supposed **toγu* / **taγu* and **bač* seems very probable. The question, of course, is not so easy and undoubtedly necessitates further examinations. However, if it is really so, then we could obtain an insight into the questions of (Bulgar-)Turkic-Mongolian language contacts that scholars have so long been striving to answer.

Dagur *tos*, *tōs* ‘Staub’ and Ordos *t’ōs* ($\sim t’ōsy < \text{WMoK. } toyosu$), etc., which obviously also developed from this Qitañ gloss, and (3) other Mongolian loan-words in Old Turkic seem to support the first conclusion (i.e. $*to'us > tōz$). For the final voicing, cf. DLT *bōz* ‘cotton cloth’, *kāz* ‘goose’: $-z \leftarrow *-s$.

On the basis of these arguments, I think that there is no reason to explain the word-form *tōz* through the Proto-Altaic or to assume a zetacistic change in.

toy ‘dust’

To return to the question of Turkic *toy*, in contrast with Clauson (1964: 155, 1969: 22, EDPT: 463b) and Doerfer (1985: 161, cf. 1967: 103), who regard it as a Turkic loan-word in Mongolian, I am of the opinion that this word (like Turkic *tōz*) must be considered a Mongolian loan-word in Turkic. We can exclude its being a Turkic loan-word in Mongolian because the Mongolian *toyosun* was derived not from Turkic *toy*, but from the word-form *topo* / *topu* \rightarrow *toyo* / *toyu* with the Mongolian formative $+sUn$. Otherwise, as stated by Doerfer: “it is likely that $-sUn$ often lacked in S[ien-pi-Tabyač] / Q[itañ]” (1993: 81). At the same time, this means, in my opinion, that in early Mongolian there might have been a form $*toyu$ with or without a suffix $+sUn$. On the basis of these arguments, I believe it is not unreasonable to conclude that an Ancient or an Old Mongolian form $*toyu$ entered Turkic, where its final vowel was lost (i.e. Turkic *toy* $<$ Turkic *tōy* $<$ Mongolian $*toyu$) and in this way the DLT *tōy* and QB *toy* emerged. Other Mongolian loan-words in Old Turkic and the total lack of the word-family of the noun *toy* seem to support this conclusion in part. The Anatolian dialectal form for TrDS *toğu* ‘vatan, toprak // native land / country, land’, which must also be considered a Mongolian loan-word in Turkic (i.e. TrDS *toğu* $<$ Mongolian $*toyu$), supports this conclusion. Its meaning must have developed as a result of a metonymical semantic change, as in many other cases (e.g. YTS *toprak* ‘yurt, il, memleket’, Tkm. *toprak* ‘rodina’). The above arguments lead me not to agree with Tekin that Turkic *toy* goes back to a hypothetical form $*tow$ (see Tekin 1969: 65).

tōy(-), *tōz(-)* ‘dust; (of the dust) to rise’

tōy(-): One more important question must be clarified in connection with Turkic *tōz* and *toy*. According to Doerfer, *tōz* and *tōy* are noun-verbs. Therefore, he treats *tōz* as a “sure noun-verb”, and *tōy* as a “probable noun-verb” (1982: 106, 108).

Although Doerfer advances some arguments in respect of a noun-verb of the form *tōy(-)*, in fact the sole fixed point behind his supposition is the *plene* vowel writing in the DLT *tōy*g-. (1) This circumstance, however, does not by any means guarantee that here an $-ō-$ must be read, and not a $-ū-$. Clauson, who reads it as *tūy* instead of *tōy*g-, thinks about this *plene*-writing that “the $-u:-$ is prob[ably] an error, there is no other evidence for it” (EDPT: 465b). Clauson’s opinion otherwise is not unfounded. Since Dankoff & Kelly’s edition (1982: 10-31), it has been established that the copy of Kāšyārī’s *Diwan* contains emendations and corrections to the Turkic text from one or more later hands that touch upon the vocalism of the Turkic words in the *Diwan*.

However, Clauson's opinion is weakened by the fact that Dankoff and Kelly do not indicate such an error or correction. (2) It is a fact, however, that an alleged verb-form **tōγ*, taken as a "sure noun-verb" by Doerfer, has not been confirmed either in Old or Middle Turkic sources or in modern Turkic languages. (3) The transcription of long *-ō-* in the verb-form transcribed as *tōγ-* and interpreted as 'emporsteigen (vom Staub)' in the QB by Doerfer is not reasonable either, because the vowel is defective in it (cf. QB *tuy-*, EDPT: 465b). Consequently, it must be regarded as *tuy-* or *toγ-*, and for the sake of simplicity, rather as *twγ-*. (4) The meaning of *twγ-* in QB is not necessarily 'emporsteigen (vom Staub)' as Doerfer thinks, and the "*tuğa keldi*" in QB (5672) does not mean 'the dust rose' in itself, as Clauson (1964: 155) believes. In the QB (5672) phrase *twγa kaldi toy* 'the dust rose', the *twγa käl-* means merely 'to rise, arise' and not 'emporsteigen (vom Staub)' or not '(of dust) to rise'. The fact that the verb-form *twγ-* does not only occur with the noun *toy* in QB (see QB (4968): *twγa kaldi örläp čikardī yüzin* '[the sun] rose and showed its face'), furnishes clear-cut evidence that the *twγ-* surely does not mean 'emporsteigen (vom Staub)'. (5) Doerfer's opinion (1982: 106) that "Das Verb *to:γ-* ist scharf zu scheiden von *tuy-* 'geboren werden' (-u- u.a. in Brahmischrift)", runs up against difficulties: (a) The transcription of the open labial **-ō-* is not sure, and thus it cannot be compared with the *-u-* of the verb-form *tuy-*. (b) Although the instances in Brāhmī writing are very important, their vocalism (like their consonantism) is not relevant in itself as concerns the primary form. Thus, their status cannot be generalized for Proto- or Pre-Turkic. The fact that, in contradiction with the instances of *tuy-* 'geboren werden' in Brāhmī texts, *toγ-* 'id.' occurs in an Old Turkic catechism in Tibetan writing on several occasions (see Maue & Röhrborn) also speaks in favour of this. At the same time, this means that the Proto- or Pre-Turkic reconstructions must not be made to conform to the instances in Brāhmī and Tibetan writing because their spelling represents dialect variants and thus they cannot be relevant from the aspect of the primary form.

The above arguments lead me to believe that we have no substantial reasons or certain criteria to prove that **tōγ(-)* is a noun-verb. The QB *twγ-* is none other than the well-known *toγ-* ~ *tuy-* 'to be born; to rise'.

tōz(-): For the alleged word-form *tōz(-)* taken as a "probable noun-verb" by Doerfer, the situation is the same. Doerfer's opinion (1982: 108) is based on the following arguments: (1) There is a verb-form for *tozar-* 'to be dusty, turn to dust' in DLT (cf. Turkish *tozar-* 'to become dust; to go to powder; to drizzle', RTED), (2) and another verb-form for *toz-* in QB (5028), which Doerfer takes to mean 'sich erheben (Staub)', and (3) there is also a verb-form for *toz-* 'sich erheben (Staub)' in *Kitābu'l-idrāk* (14th century).

Although, similarly to Doerfer, Clauson thinks of a verb-form *tōz-* 'to become dust; to volatilize' (on the basis of the base of the forms *tozgak* 'powder; the pollen of maize cobs' and *tozut-* 'to raise the dust', which he analyses as *toz-gAk*, and *toz-(X)t-*), he does not regard it as a noun-verb. He considers that this *tōz-* 'to become dust; to volatilize' verb-form is apparently homophonic with *tōz* 'dust' (EDPT). I

touch upon Clauson's opinion below separately in connection with *tozut-* and *tozgak*.

I consider that Doerfer's and Clauson's suppositions involve difficulties: (1) It is not absolutely necessary, but we can speak of a noun-verb only if we can confirm a form for **toz-* 'sich erheben (Staub) / (of dust) to rise; to become dust' in Old Turkic sources, but such a form has not been established to date. (2) The form *tozar-* 'to be dusty, turn to dust' must be analysed as *tōz+(A)r-*, and not as *tōz-(A)r-*, as Doerfer thinks. This is done correctly by Clauson (EDPT), Dankoff & Kelly (1985), Erdal (1991: 502) and Tekin (1997: 17). (3) The meaning of *toz-* in the phrase *tuman toz-* (see QB verse 5028: *yašik yerka indi yüzin kizladi / kararip tuman tozdi dünya tudi* 'the sun went down and hid his face / arose a mist it got dark and veiled the face of the earth') is merely 'sich erheben / to rise; sich verflüchtigen / to volatilize' and not 'sich erheben (Staub)', as Doerfer thinks. This meaning can be observed in another context too (see *alku täng adinčig yid yipar tozar ünär bolti* 'all kinds of fragrant odours volatilized and rose', EDPT: 572b). (4) As Doerfer remarks, *toz-* otherwise "ursprünglich i.a. eher gesagt von aufsteigenden Gerüchen" (1982: 108). (5) On the basis of the real chronology based on the written sources, the verb-form *toz-* meaning 'sich erheben (Staub) / (of dust) to rise; to become dust, to be covered with dust, etc.' can be confirmed only from the Middle Turkic period for the date (EDPT: 572b). By reason of its late occurrence, the conclusion can be drawn that it might have emerged secondarily through the change *tōz+I-* > **tōzī-* > **tōzī̃-* > *toz-*. Such instances have occurred sporadically in the Turkic languages. For example, the UigJar. *püt-* (~ *piti-* ~ *pütü-*) 'to write, to write down' and UigShaw *pit-*, *püt-* 'to write' may have developed from an earlier verb-form *biti-* through the same process.

Considering the chronological, morphological, semantic and lexicological arguments, I think that the form *tōz* is not a noun-verb either.

From the aspect of the question discussed here it is of minor importance, but the verb-form(s) *toz-* occurring under the same entry in most dictionaries has the meanings (1) 'be used up, wear out / away / down, become worn out; become obsolete', (2) '(of dust) to rise; to become dust, to be covered with dust' and (3) 'to volatilize'. Accordingly, it may be of interest to examine briefly whether there are two homophonic words with different meanings or a semantic extension of a single verb-form *toz-*, e.g. TatMi. *tuz-* ~ *toz-* 'sich abnutzen, alt werden', Uig. *toz-* ~ *tozi-* 'vetšat', *prixodit' v vetxost'*; *iznašivat'sja*; *zanašivat'sja*', Uig. *tozu-* 'razveivat'sja, raspyl'jat'sja; razletat'sja' ~ *toz-* 'padat', *razletat'sja* (o pyli)', Nog. *toz-* 'iznašivat'sja; vetšat'; *razletat'sja* (o puxe), *podnimat'sja* (o pyli)', Uzb. *tōz-* 'prevraščat'sja v pyl'; *razbredat'sja*; *raspyl'jat'sja*', etc.

As concerns this question, two likely solutions may have to be taken into consideration: (a) As a result of the association of the ideas of cause and effect, a new content, i.e. the meaning 'become obsolete', has been attached to the verb-form *toz-* (<**tōzī-* < *tōz+I-*), originally meaning '(of dust) to rise; to become dust, to be covered with dust'. A similar semantic extension has occurred in Hungarian (*por* 'dust', *poros* 'dusty, covered with dust; obsolete, antiquated', (*meg*)*porosodik* 'become /

get dusty; become obsolete'). The semantic extension here too must have occurred in the direction concrete → abstract, as in the case of *topra-*. (b) There might have been two phonetically similar or homophonic verb-forms such as Old Turkic *tōz-* 'to volatilize' and the late *tozī-* / *toz-*, and this circumstance might have caused a contamination. As a result, the verb-form *tozī-* and its meanings '(of dust) to rise; to become dust, to be covered with dust', and 'become obsolete' have been transferred to the verb-form *tōz-* 'to volatilize' with a different meaning and a similar phonetic form on the whole; such a *semantic transfer*, however, could equally have taken place in the opposite direction. The UigSin. *toz-* 'uletučivt'sja; razletaťsja // to volatilize; be scattered / dispersed', for example, might have emerged in this way.

On the basis of the chronological, morphological, semantic and lexicological arguments as well as the analogy of foreign language and preliminary examinations, both solutions seem very probable.

tozut- / *tozīt-* 'to raise the dust'

To return to Clauson's opinion that "*tozut-* (? *toz-īt-*)" is a derivation of Old Turkic *tōz-* 'to become dust; to volatilize' (EDPT), his opinion encounters primarily lexicological, chronological and morphological difficulties: (1) As revealed by the above examinations, the verb-form *toz-* 'to become dust' occurs only in the Middle Turkic period. It has not been found in Old Turkic sources. (2) Thus, the *toz-ut-* or *toz-īt-* analysis is not reasonable either. It must be analysed correctly as *tozīt-t-* (< *tōz+I-t-*) (Dankoff & Kelly 1985: 196, Tekin 1997: 17). The *-u-* in DLT *tozut-* is a "later correction" (Dankoff & Kelly 1984: 418). This means that we should assume a verb-form **tōzīt-t-* (< *tōz+I-t-*) in Old Turkic.

tozgak 'powder(y)'

As regards the analysis *tōz-gAk* > *tozgak* 'powder; the pollen of maize cobs' by Clauson (EDPT), difficulties arise here too, as in the case of *tozut-* / *tozīt-*. If we accept the above (see *tozut-* / *tozīt-*) arguments, we can not set out from a verb-form **tōz-* in the case of *tozgak* either. Thus, I agree with von Gabain (AtG. § 59) and Räsänen (VEWT: 492a), who rightly took *tozgak* as a derivation of the noun *tōz*.

The derivation from the noun *tōz*, however, raises other questions: (a) Is *+gAk* really a formative "for metaphorically motivated names for parts of the body", as Erdal thinks (1991: 74) or, (b) if not, then what is the real function of the formative *+gAk*?

Erdal's opinion seems to run into difficulties: (1) The etymologies of the majority of half a dozen names for parts of the body are not clear, or it is uncertain whether they are derivations of the formative *+gAk* or *-gAk*. The forms *kadizgak*, *kidizgak*, *münüzgak* mentioned by Erdal in his book, and the case of *tozgak*, unanimously exclude *+gAk* as a formative "for metaphorically motivated names for parts of the body." Therefore, the lack of decisive arguments appears to rule out a formative *+gAk* forming names for parts of the body. (2) In contrast, we have factual evidence that the formative *+gAk* originally formed adjectives and described a metaphorical

semantic content denoting “be or look like the characteristic indicated in the base lexeme, or to be identical with it on the whole” for its base. This assertion can be accounted for by the following instances and arguments.

kidizgäk ‘felt-like; of the consistency of felt’ (EDPT). This word has been confirmed only in the DLT *kidizgäk kâgun* ‘a melon that has lost its freshness and become just like felt’ (EDPT). Erdal analyses this word as *kidiz+gäk*, but, since he believes that +gAk creates only names for parts of the body, he states that “the only exception” to the rule is *kidizgäk kâgun* (1991: 74, note 95). This is not reasonable since the attributive construction *kidizgäk kâgun* demonstrates perfectly that *kidizgäk* serves as an attributive here because of the original function of the +gAk. If we paraphrase it, it means ‘a melon the consistency of which is reminiscent of felt’, i.e. ‘a melon resembling felt’.

kadizgak ‘a blister on the hand, from working’ (Dankoff & Kelly). According to Erdal (1991: 74), the word-form *kadizgak* ‘callosity’ in the Old Turkic phrase *kadizgaklig äligin* ‘with callous hands’ occurring in an Uigur text comes under the category of names for parts of the body. However, as Erdal notes in the same place, the word is a derivation of Old Turkic *kadiz* ‘bark of a tree’. I believe that the word *kadizgak* is not the name for a part of the body, but an attributive of it. The fact that the word occurs in DLT only with a metaphorical semantic content (see *kadizgak* ‘a blister on the hand, from working’) is evidence of attributive-formation. As in the case of *kidizgäk*, the word *kadizgak* might earlier have been in an attributive construction such as Old Turkic *kadizgaklig älig* or a similar construction. The Hungarian *kérges* ‘callous’ (< *kéreg* ‘bark’+(V)s), *börkéreg* ‘callosity’ (< *bör* ‘skin’+*kéreg* ‘bark’) and Turkish *kabuk* ‘bark of a tree; callosity, etc.’ serve as semantic analogies. The metaphorical sense of *kadizgak* must have arisen through the change *‘bark-like’ → ‘callosity, callous’.

müjüzgäk ‘hard skin on the hand which results from manual labour’ (EDPT), ‘a blister on the hand’ (Dankoff & Kelly 1982-1985). The base of the word is the DLT *müjüz* ‘horn’ (< ? *mōṣ(X)z*). Its meaning is the same as that of *kadizgak*. The metaphorical semantic change must undoubtedly have taken place because of the similarity between “with a callous skin surface” and “horny matter (from which a horn is formed)”. The German *Hornhaut* mentioned by Erdal, the English *horny* and the Hungarian *szaruréteg* ‘horn layer’ serve as semantic analogies. The word *müjüz* permits the conclusion that, like the two instances above, *müjüzgäk* might have served as an attributive in an attributive construction before becoming a noun.

tozgak ‘powder; the pollen of maize cobs’ (EDPT). In my opinion, *tozgak* is a further example of +gAk formation (i.e. *tōz+gAk*), like the forms *kidizgäk*, *kadizgak* and *müjüzgäk*. The fact that a verb-form **toz-* ‘(of dust) to rise; to become dust’ has not been found in Old Turkic, seems to support this conclusion in part. Thus, the analysis *tōz-gak* by Clauson is not reasonable either. On the strength of the meaning ‘the pollen of maize cobs’ of Old Turkic *tozgak* and the following Chagatay data, the conclusion can be drawn that *tozgak* might also have served originally as an attributive; see Chagatay *tozgak* ‘a spherical fungus the size of a small melon which grows

in the fields; it has a thin outer skin and its interior is full of a soft powdery substance; when the outer skin is touched it bursts' (EDPT).

tozan 'dust, dusty'

The Turkic word-form *tozan* should be discussed here. Its derivation is uncertain and the Turkic word-forms *tozan*, *tozaŋ*, *tozun*, *tozın* have been taken generally in the literature as different variants of the same base.

According to Bang, the "-an, -in, -un" in the word-forms *tozan*, *tozaŋ*, *tozun*, *tozın* must be taken as diminutive suffixes. He holds that the "diminutive suffixes" in the word-forms Turkic *kumak* 'Sand, Sandboden' and Ottoman Turkish *kumj̄yaz*, *kumj̄āz* 'feiner Sand' support this conclusion (1916-1917: 141). Although Ramstedt does not give any reason, he remarks in connection with *tozan* that the -an cannot be taken as a collective suffix (1952: 222). Sinor states that "It is beyond doubt, that the forms *toz* and *tozan* belong together. The exact function of the vowel+n word-ending cannot be ascertained" (1963: 141). A similar uncertainty can be observed when Eren postulates that the -n in *tozan* (~ *tozun*) might be taken as a suffix (1999: 416b).

It can be seen from this short survey of the history of the research, which in no way aims at completeness, that uncertainty prevails in the literature as concerns the derivation of the above-mentioned word-forms.

The difficulty in Bang's conclusion is that there is no such diminutive suffix as +an in Turkic. Even the word-forms *kumj̄yaz*, *kumj̄āz* which he mentions as an analogy do not alter this fact. As regards the word-form *kumak*, it is uncertain whether or not the -ak here can be taken as a diminutive suffix.¹⁹ Although it is difficult to contradict this statement semantically and morphologically (cf. Gag. *tozčaa* 'pylinka', Az. *tozjug* 'pyl'ca'), it does not follow that the -an can be taken as a diminutive suffix, even in the case of *tozan*, because there is no such diminutive suffix in Turkic.

It is also difficult to agree with Ramstedt because even Old Turkic yields forms which clearly illustrate the derivation of the collective suffix +(A)n: *oglan* 'sons, children', *toran* 'system of nets', *özän* 'innermost parts; the heart of a matter', etc. (for more, see Erdal 1991: 91-92). Thus, it is not unfounded to suppose the collec-

¹⁹ The analysis *kum*+A-k (> *kumak*) may also come into question in connection with the form *kumak*. This would be reasonable both semantically and morphologically. The KzkKat. *kumuk* 'zanestis' peskom" (kolodez') which can be analysed as *kum*+U-k (if it is not the result of a labial harmony at all), also seems to support the possibility of such an analysis. Tr. *kumul* (<*kum*+U-l) '(Sand-) Düne' also speaks in favour of verbal base *kum*+U-. Thus, it may be assumed perhaps that in early Turkic there might have been verbal bases *kum*+A- and *kum*+U- which have not yet been confirmed. Tr. *tozak* 'toz//dust', TrDS *tozak* 'tozlu yer//place / ground covered with dust' (< *toz*+A-k < *toz*+A-) and the Tr. *tozu*- 'become dusty' (< *toz*+U-) can serve as morphological and semantic analogies for this supposition.

tive suffix $+(A)n$ in the word-form *tozan*, which otherwise does not encounter semantic and morphological difficulties. In contrast with the opinion generally accepted in the literature, I think that *tozaŋ* certainly cannot, *tozun*, *tozın* probably cannot be taken as variants of *tozan*. The word-forms *tozaŋ*, *tozun*, *tozın* in question will be discussed below.

One of the reasons for the emergence of *tozan* could possibly have been the necessity to differentiate between ‘(grain of) dust as particle’ and ‘mass of dust’ or rather ‘mass of dust standing on the ground or whirling / hovering / flying up in the air’ (cf. UigShaw *tuzan* ‘dust in the air’). The semantic and morphological connection between *toz*, *tozan* ($< tōz+(A)n$) and *tozaŋ* ($< tōz+A-(X)ŋ / ? tōz+(A)ŋ$) can be shown in other words too. Among a relatively low number of instances, for reasons of the semantic content, only Old Turkic *bōr* ‘Erdkrume; Staub’, Turkic *bus* ‘mist, fog’ and Turkic *topa* ‘dust, earth, sand, soil, dusty’ are worth mentioning here:

TrSDD:

*bor*²⁰ ‘chalky / calciferous ground; (full of) dust, dusty atmosphere, etc.’, TrDS
*bor*²¹ ‘salty white layer on the ground; stony place, uncultivated hard soil, uncultivated stubble; lime; dust; chalk, white soil’ ~ *bur*²² ‘hard soil’ ~ *pur*²³ ‘stony hard soil’, YTS *bor* ~ *por*²⁴ ‘uncultivated hard soil without vegetation’, Yak. *buor* ‘zemlja; glina; pyl’ (zemljanaja), Tat., Bash. *bur* ‘mel’, Tkm-dial. *bōr* ‘Kalk’, Tuv. *por* ‘glina’, etc. $<$ Old Turkic *bōr*²⁵ ‘Erdkrume; Staub’ ($< *bora^{26}$ ($\sim *pora$) $>$ Buriat *boro* ‘glina’ ~ *bur* ‘il; glina; glinjanyj’).

²⁰ ‘(1) Kireçli / killi arazi, kireç ve kil teressübatı. (2) pas. (3) toz toprak, yollarda tekerlek izinden hâsıl olan tozuntu’.

²¹ ‘(1) Yağmurdan sonra toprağın üstünde meydana gelen tuzlu beyaz tabaka. (2) taşlık, işlenmemiş, sert toprak, ekilmemiş tarla. (3) pas, oksitlenme; sürahi, çaydanlık ve bardakta meydana gelen tortu, kireç. 4) yollarda havaya kalkan toz. (5) kireç, tebeşir, beyaz toprak’.

²² ‘sert toprak’ TrDS 12.

²³ ‘taşlı, sert toprak’ TrDS 12.

²⁴ ‘sürülmemiş, otsuz, sert toprak’.

²⁵ The word *bōr* ‘Erdkrume; Staub’ occurs twice in an Old Turkic rhymed verse:

6 “*bōr* yäki [b]uza kälti”

‘Der Dämon der Erdkrume ist zerstörend gekommen.’

9 “*yirig yırda boruy buza käläng*”

‘Die Erde zerreißen und die Erdkrume zerstörend, kommt!’ (Tezcan & Zieme 1994: 262-264).

Although Tezcan and Zieme give a form *bor* with a short vowel, on the basis of Yak. *buor* and Tkm-dial. *bōr*, it seems more reasonable to assume a long vowel. Thus, Tekin is right as concerns the primary length (1995: 177). I do not agree, however, with his supposition that the “primary meaning” of *bōr* was *‘tebeşir, sarı toprak//chalk, yellow soil’ in Proto-Turkic: (1) The meaning ‘chalk’ is attested first in

Turkish:

boran 'storm, rainstorm', Tat., Bash. *buran* 'buran; metel'; v'juga', Kr-Tat. *boran* 'buran', Tkm. *bōrān* 'buran, purga, metel'; dožd' so snegom' < OTu *bōran*²⁷ < *bōr*+(A)n / **bora*+(A)n.

Middle Turkic. This, of course, does not mean that it did not have a meaning *'chalk, yellow soil' earlier, but in such a semantic reconstruction the real chronology of the real date and real meanings which have been determined on the basis of the sequence of appearance in the linguistic records cannot be left out of consideration. (2) Semantically, it is also difficult to explain the modern Turkic meanings 'soil, clay, dust' and the Old Turkic meanings 'Erdkrume; Staub' as stemming from a meaning *'chalk, yellow soil'. The meanings 'chalk, yellow soil', however, can easily be traced back to the meanings 'Erdkrume//surface soil, soil, clay'. The meaning 'tebeşir//chalk' in all probability developed from an attributive construction like the Tat. *akbur* 'mel', Uig. *ak bor* 'mel' as a result of shortening (i.e. **ak bor* *'white / whitish soil / clay / dust' → TrDS *bor* 'kireç, tebeşir, beyaz toprak//lime, chalk, white soil', TrSDD 'chalky / calciferous ground', etc.).

On the other hand, the Turkic *bor*, *por* 'soil, dust, lime, chalk', Mongolian *bor*, *bur* 'clay' and Hungarian *por* 'dust', of unknown origin (first attested in the 12th century), all probably have a common source. Although the initial Hung. *p-* ~ Turkic *b-* (cf. YTS *por*, TrDS *pur*) seems to be problematic, we do not know whether it was taken from Turkic at all; nor is it sure that Turkic *bor*, *por* is of Turkic origin. In any case, the question requires further examinations. On the basis of the meaning of the Hungarian word *por*, however, it seems more or less certain that the meaning 'dust' is the basic meaning of *bōr* (cf. Adamović 1996: 168-172, Zieme 1999: 191-194).

In contrast with Choi's opinion (1989: 52, 1993: 76, 1995: 173), I consider that it is not so clear as Choi thinks that the Tr. *bora* 'storm' and Korean *bora* 'storm' (in: *nunbora* 'snowstorm') are connected with the Turkic *bōr* '(surface) soil, dust, etc.'; on the contrary, it can be said that it is quite problematic, primarily for semantic and morphological reasons. The alleged meaning 'snowstorm, rainstorm' of the word-form *bor* that he cites from the Orkhon inscriptions, is not to be found either in Orkhon inscriptions or in other Old Turkic sources. The derivation *bor* > *bor+a* > *bora* put forward by Choi is not reasonable morphologically because there is no denominal noun-forming suffix *+a* in Turkic.

²⁶ Ligeti (1977: 416, note) raises the question of whether or not the Turkic *bōr* and Mongolian *boor*, *bor* derive from a Proto-Altaic **boβar*.

²⁷ The word read by me as *bōran* '(Schnee)sturm' with a long vowel appears first in an Old Turkic source, the above-mentioned Old Turkic rhymed verse published by Tezcan and Zieme:

2 "buran kalsär busanur-mn"

'Wenn ein Schneesturm kommt, werde ich betrübt' (Tezcan & Zieme 1994: 262).

Although for reasons of rhyme, the transcription *buran* seems perhaps to be right to a certain extent, with regard to the other rhyming lines (s. 6 *bor* ... [b]uza; 9 *boruy buza*; 11 *köz* ... *kün*, etc.) I think that the transcription *bōran* is more reasonable. The

Tuv.:

boraj 'nenast'e, pasmurnaja pogoda; mutnyj (o židkosti)', Khak. *poraj* 'mutnyj, tusklyj', OitKuVerb. *porog* 'mutnyj (o vide)' (cf. Tuv. *bora-* 'zagrzajzjat', pačkat'; zametat', zanosit'; pugat', podvodit', Nog. *bora-* 'mesti', UigShaw *bora-* '(intr.) to blow or rage (as a storm)', etc.) < *bor+A-(X)η* / *bor+(A)η*.²⁸

Turkish:

pus 'fog, mist', TrDS *bus* 'fog, mist', Kmk., Nog., ShorKo. *pus* 'par', Tuv. *bus* 'par', etc. < Old Turkic *bus* 'mist, fog'.

TrSDD:

pusan 'fog, mist' < *pus+(A)n*.

TrDS:

pusaj 'fog, mist', TrSDD *pusang* 'fog, mist' < *pus+A-(X)η* / *pus+(A)η* (the base verb is not attested in Anatolian dialects, but cf. TrDS *pusat-* 'become cloudy /

word-forms *buran* in some Turkic languages are secondary, and most of them have in all certainty been borrowed back from Russian (cf. Rus. *buran*). The opinion that the Turkic word-forms such as *boran* are loan-words from Mongolian and can be traced back to Mongolian *boroyan* 'storm; rain' cannot be accepted. For chronological, lexicological, morphological and phonological reasons, it can be excluded that the Turkic word-forms such as *boran* are loan-words from Mongolian and developed from *boroyan*. In contrast, primarily for chronological reasons, I consider that Mongolian *boroyan* was taken from Turkic: (1) The verbal base *bora-* is not attested in Mongolian and morphologically cannot be explained from Mongolian either. (2) However, it is attested in Turkic and can be explained from Turkic: *bōr+A-* > *bora-* > *bora-ğAn*. This kind of analysis was otherwise postulated by Bang (1930: 211). (3) The original meaning has been preserved in the Gagauz micro-toponym *Borogan*, which (according to the Gagauz dictionary, p. 598) means 'celina', i.e. 'fallow land / field' and still contains the meaning of the base word (semantically cf. Tr. *bor* 'işlenmemiş, ekilmemiş (toprak)', YTS *por* ~ *bor* 'sürülmemiş, otsuz, sert toprak'. Such forms must have developed as a result of shortening from attributive constructions like TrDS *por toprak*, TrSDD *portoprak*, TrDS, TrSDD *pur yer*, etc.). All this means that the Turkic *Borogan*, *boragan* or *boran* are not loan-words from Mongolian. On the other hand, the meaning 'snowstorm' in different Turkic languages (e.g. Tkm. *boragan* ~ *bōrān* 'buran, purga, metel', OitTe. *porogon* 'id.', Kmk., Kzk. *boran* 'id.', etc.) must have come into existence secondarily. The meaning of the TrDS *tozan* 'kar fırtınası/snowstorm' (< *toz* 'dust') can also serve as a clear analogy for this. Of course, the fact that the base word secondarily means 'chalk, lime' might also have played a role in this. It must also be borne in mind that Mongolian *boroyan* and the Turkic *boran* might have caused contamination.

²⁸ The Yak. *boroñ* 'temno-seryj', however, which may come into question here, is not a derivation of *bōr* because of its meaning 'temno-seryj // dark grey', but probably a derivation of *boro* 'grey'+(A)*ñ*.

overcast, grow / get foggy / misty' < *pus+A-t-*, TrDS *pusal-* 'grow / get foggy / misty' < *pus+A-l-*).

Uig.:

topa 'počva, zemlja; glina', UigLo. *topu* 'pyl', SalGre. *topa* 'terre, argile', Kir. *topo* '(1) glina, zemlja, (2) počva, (3) teritorija', etc.

Kklp.:

topan 'mjakina; otrubi', Uig. *topan* 'mjakina' TatSib. *tuban* 'mjakina', Kir. *topon* 'mjakina, polova', ShorKo. *toban* 'pyl' hlebnaja; truha', KhakBut. *tobin* < *topa+(A)n* ~ *topo+(A)n*.

KhakBut.:

toban (~ *tobin*) 'mjakina, polova' < *topa+(A)n*.

tozan 'dust'

From the examination of *tozan*, it has already become clear that Turkic *tozan* and *tozan* are not variants of each other, but came into existence morphologically in different ways. The derivation of *tozan*, however, raises another question. It is not obvious whether we should set out from *tōz+A-(X)η* or *tōz+(A)η*.²⁹ Morphologically, both solutions are equally possible. Among some modern Turkic data, e.g. Uig., Kzk., Kklp. *tozan* 'pyl', Kir. *tozon* 'melkaja pyl' v vozduxe; pyl', podnimaemaja dviženiem' and ChagAbuš. *tozang* 'earthy soft ground where there is no stone', on the basis of the meanings of the Kirghiz and Chagatay data, *tōz+A-(X)η* seems more reasonable because the semantic content of both is characteristic rather of the verb-form *toza-* (cf. TrDS *toza-* 'toz havaya kalkmak, tozumat', Tkm. *toza-* 'pylit'sja'). This supposition seems to be supported by the fact that the suffix *-(X)η* originally "denotes the result of the action indicated by the base verb". The word-form derived with this suffix is in most cases an adjective, originally serving as an attributive, but through its function of attributive it can become a noun as well, e.g. Uig. *kakraŋ* 'vysoxšij' (< *kak+rA-(X)η*, cf. Özb. *kakra-* 'sohnut', peresyvat'), Uig. *talaŋ* 'grabež, razboj' (< *tala-(X)η*, cf. Uig. *tali-* 'grabit', otnimat'), Uig. *šorlaŋ* 'solončak' (< *šor+la-(X)η*, cf. Uig. *šorli-* 'razmačivat' kožu v solenom rastvore', Uig. *šor* 'solončak; solenyj'), Uig. *čišaŋ* 'zubastyj, derzkij' < *tiš+A-(X)η*, etc. The Kalmuk word-form *tōrŋ* 'Staub, Staubwolke' (< Mongolian *toyu+ra-η*) speaks in favour of the analysis *tōz+A-(X)η*.

tozin ~ *tozun* 'dust'

The forms *tozin* and *tozun* seem to be characteristic only of South Siberian Turkic, specifically Oirat and Khakas, e.g. Oit. *tozin* 'pyl', OitCha. *tozun* ~ *tozin* 'id.', OitTeRSK *toozin*, Khak. *tozin* 'id.', KhakVerb. *tozun* 'id.'. As concerns the forma-

²⁹ For the formatives *-(X)η* and *+(A)η*, see Erdal (1991: 160, 337).

tion of *tozun* ~ *tozîn*, we must probably take several factors into consideration. Thus, several morphological solutions are probable: (1) If we try to explain the forms *tozun*, *tozîn*, *toozîn* from Turkic, then, among others, the following solutions may have to be taken into consideration: (a) The forms *tozun* ~ *tozîn* are derivations of a form **tozi-* / *tozu-* (i.e. *tozu-Xn* / *tozi-Xn* > *tozîn* ~ *tozun*) in which the suffix vowel shows its dominance. (b) Or the suffix *-Xn* might have attached to the variant *toz-*, which probably developed from an earlier base **tozi-* (i.e. *toz-Xn*), and so the forms *tozun* and *tozîn* emerged. (c) The original form was *tozan*, but under the influence of forms such as Mongolian *to'osun*, as a result of contamination, the forms *tozun* and *tozîn* arose. If this was really so, then in this case the length of the first syllable of OitTeRSK *toozîn* must be taken as a secondary expansion which developed under the analogical influence of the Mongolian form. Although these solutions cannot be excluded with absolute certainty, the explanation of a Turkic origin can at present serve only as a hypothesis. (2) I think it very likely that these word-forms go back to a form such as Mongolian *to'osun*, so that the Mongolian *to'osun* passed into Turkic and a change *to'osun* > *tōzîn* / *tōzun* > *tozîn* ~ *tozun* occurred (phonologically cf. WMoL *elesün* 'sand, dust' > Tuv. *ēlezin* 'pesok'). The *-u-* in *tozun* might have arisen as a result of a labial harmony which is characteristic of south Oirat dialects. The first-syllable long vowels in OitTe. *toozîn*, Tuv. *doozun* and YakPek. *dōsun*, which also developed from a word-form like Mongolian *to'osun*, seem to support this conclusion.

Summary

I do not think that I have clearly explained every question referred to above. Certainly, there are still questions that demand further examination. For example, the examination of WMoL *toru* 'flying dust' and Manchu-Tunguz *toron*, *tur* 'poussière' assumed correspondences with *tōz*. In connection with these word-forms, I have not entered into the question of rhotacism-zetacism because the solution of that question depends in part on the solution of this question as well. On the basis of the results obtained here, however, the conclusion seems obvious that these forms with *-r-* may be secondary, but of course only if they belong together at all. However, I exclude in any case that *tōz* is a zetacistic form. The final word in connection with this question will, of course, be provided by the results of further research.

I have mainly examined here those fundamental questions connected with the words under discussion, pointed out the etymological relations between the word-forms for *tōz*, *toprak* and *toyosun*, and clarified and put in order the inner-Turkic materials concerning the problem, because this is one of the most important preconditions for determining the lexical correspondences and borrowings between the Turkic and Mongolian languages.

My other main goal was to work out the essential methodological aspects necessary to solve this problem. On the basis of the above results, even though they are not complete, I have formulated at least four such aspects which would be relevant as

concerns determination of the lexical correspondences and borrowings. These are as follows:

(1) An unexceptionable morphological and phonological analysis is a necessary, but it is not a sufficient condition because it has no validity as evidence in itself. At the same time, this means that “a bare sound-correspondence alone cannot be regarded as proof”.

(2) The *primary condition* is a complete etymological analysis. This means that until the connection between the base and the suffix has been made entirely clear semantically, morphologically and phonologically, the lexical correspondence or borrowing cannot be accepted. In the lack of such a complete etymological analysis, the correspondence or the borrowing can serve only as a hypothesis.

(3) In the morphological and semantic reconstruction, the *real chronology* of the real data and real meanings which have been determined on the basis of the order of appearance in the linguistic records cannot be left out of consideration. The real chronology can be neglected only if we have a substantial reason for this. The semantic changes, of course, must be supported by analogies.

(4) And finally, the Proto- or Pre-Turkic reconstructions must not be made to conform to the instances in Brāhmī and Tibetan writing because their spellings represent dialect variants and thus they cannot be relevant as regards the primary form.

Naturally, these aspects necessitate additional enlargement. This means further etymological examinations of other Turkic and Mongolian words belonging in the above-mentioned field of research.

Abbreviations

CCI	Italian part of Codex Cumanicus
CCG	German part of Codex Cumanicus
DLT	s. Dankoff & Kelly, EDPT
KarH	Galician dialect of Karaim
KarT	Troki dialect of Karaim
Tkm-dial.	s. Stachowski 1993
Tr.	Turkish, s. RTED

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A sociolinguistic study of Kashkay Turkic and its gradual extinction

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The following report concerns a study in which we have looked at different reasons for the gradual extinction of the Turkic Kashkay (Qaşqā'ī) dialect in Shiraz and Firuzabad in the province of Fars. The aim has been to determine the factors that affect the use of the dialect in different contexts.

The participants in the study were 120 male and 90 female members of the Kashkay tribe living in Firuzabad, and the same number of participants in Shiraz, in the districts of Abiverdi, Sahlabad and Koshan. The participants were asked to fill out a questionnaire consisting of 18 questions selected in order to determine which language—Turkic or Persian—was used by informants in different contexts. Some parts of our findings are also based on direct observation. The data collected relate to the domains of family, friendship, education and employment, indicating which language is used in these domains depending on the setting and the participants' age, gender and social status.

Our analysis of the data collected in Firuzabad allowed the following conclusions: In the family domain, the language used is always Turkic when the addressee is a native speaker of Turkic. When the addressee is not a native speaker of Turkic, Persian is mostly used. This also happens when the parents have different native languages. In the friendship domain, Turkic is always used when participants are Turks and the setting is informal. When one of the participants is not a Turk, Persian is always spoken. There is no difference between the education and employment domain with respect to language use in these contexts and situations. In formal settings, the language used is always Persian, no matter what the participants' native language is. When the setting is informal and the participants are Turks, Turkic is often used. Age and gender play no role in selecting the language.

A comparison with the data obtained in Shiraz shows differences between the domains of language use in the two Turkic communities. Whereas the age factor is

not important in Firuzabad, its role in Shiraz is obvious. In Shiraz, young people below twenty years of age tend to speak Persian in all situations. In the education and employment domains Persian is dominant. This may relate to demographic factors and the negative attitudes of the population in big cities towards vernaculars.

The Turkic varieties used in the family domain differ as well. More borrowed words are used by Turkic families living in Shiraz than by those who live in Firuzabad.

The mother tongue of the members of the Kashkay tribe in the province of Fars is a dialect suitable for nomadic life. It is particularly rich within semantic fields that are of importance to tribesmen, and contains, for instance, numerous lexical items pertaining to animals and plants. The nomadic way of life is, however, declining, and the dialect has no function in cities. It is unable to express ideas in the field of science and technology, and it is not used in education or mass media. The new generations of Turks who grow up in cities see no need to use their dialect. The negative attitudes towards vernaculars make the matter worse. The dialect is only used at home. Moreover, the lexicon and certain structures of the varieties spoken by Turks in cities are strongly influenced by Persian.

Linguists and other educated people should do their best to prevent the extinction of dialects in Iran. It is hoped that our study will suggest some ways to prevent or at least slow down the processes. The dialect speakers themselves should take a more positive attitude towards their dialect and encourage their children to learn and speak their mother tongue. They should try to make their dialect richer by coining new words and expressions which are needed under the new circumstances.

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It has been ninety years since Turkey in Europe was reduced to eastern Thrace, but the Turkish language continues to exert both lexical and symbolic power in the Balkans. Aside from the fact that Turkish-speaking minorities continue to live throughout the Southern Balkans and Turkish remains a prestige language for old urban families in many towns, the resurgence of Turkisms in the press of ex-communist Southeastern Europe as well as the importance of Turkisms in the standardization of Bosnian attest to the significance of Turkish for the Balkan languages both in the past and in the present. Since Miklosich's (1884-1890) path-breaking work laid the foundations for the study of Turkish lexical elements in the languages of Eastern and Southeastern Europe, numerous studies of Turkish elements in individual Balkan languages have appeared, of which Škaljić's 1966 dictionary of Turkisms in Serbo-Croatian has been the standard reference work of its kind against which all others could be measured. (We can also mention the important studies by Boretzky 1975-1976 and Jašar-Nasteva 2001, which are the most valuable contributions to the study of Turkisms in Albanian and Macedonian, respectively.) *A dictionary of Turkisms in Bulgarian* (henceforth DTB) is a worthy companion to Škaljić in its thoroughness and careful scholarship, and it surpasses the older work in many respects. At the same time, DTB demonstrates that despite the commonplace assertion that the Balkan languages share a significant component of Turkish lexical material, there are important differences between Serbo-Croatian and Bulgarian in the selection of Turkish vocabulary.

DTB begins with a concise introduction that explains the principles used in compiling the dictionary (vii-xii) followed by a bibliography of 216 items (xiii-xxi). This dictionary relies primarily on other dictionaries for its material, although specialized studies were also consulted. For each main entry, the compilers give a source, and when a word occurs in more than one source, they select the most recent. The reader can thus tell immediately the extent to which a given Turkism is considered current and standard.

Turkism is defined as a word that entered through the Turkish of Ottoman or post-Ottoman Turkey, and thus words of non-Turkish origin that entered Bulgarian via Turkish are included but words from other Turkic languages are not. Also excluded are Turkish words with Bulgarian derivational affixes when there is a non-derived Turkish item, e.g. *katran* 'tar' is given but not *katranen* 'relating to tar.' This principle extends to Turkish words with Turkish affixes when the Turkish word un-

derwent semantic shift in Bulgarian so that the affixed form is a Bulgarian development, e.g. Turkish *tarikāt* 'sect' gives the Bulgarian Turkism *tarikāt* 'wise guy' but *tarikātlāk* 'slyness' is a Bulgarian formation. DTB gives more than twice as many variants as Škaljić, but DTB is more modest in the etymologies of non-Turkish words that entered via Turkish. Whereas Škaljić attempted to etymologize every entry, DTB only goes beyond the standard or dialectal Turkish source if the ultimate origin is a language other than Arabic or Persian. Another difference between DTB and Škaljić is that the latter gives literary citations whereas the former does not (although Grannes 1996 does this for many words). On the other hand, DTB supplies definitions in English as well as Bulgarian, which is a boon both for the translator and the reader who knows English better than Bulgarian. The English translations themselves are accurate and idiomatic.

The authors also discuss their use of certain register labels. They define as *neutral* (unmarked) those words that do not have exact synonyms from non-Turkish sources, whereas stylistically marked Turkisms have neutral synonyms of non-Turkish origin. The chief categories of non-neutral items are *colloquial*, *dialectal*, and *obsolete*. DTB attempts to describe actual usage rather than reproducing the normative judgments of Bulgarian dictionaries. Thus, for example, it treats *kavarma* 'a kind of meat stew' as neutral, rather than reproducing the label *dialectal* used in the most recent Academy dictionary, since "the word is found on the menus of fine restaurants in the capital and all over Bulgaria" (ix). Also, their classification *colloquial* includes words labeled "substandard" in the most recent Academy dictionary, since the Academy usage seems to be normative rather than descriptive. Within the category *neutral* they distinguish *historical* and *Ottoman historical*, the former being for words that are stylistically neutral but that denote items "no longer a part of Bulgarian daily life" and the latter being used for "[c]oncepts and institutions relating to the Ottoman empire and its administration" (ix). DTB uses more than a dozen other register labels, including *folklore*, *ironic*, *pejorative*, *vituperative*, *vulgar*, *slang*, *professional jargon*, *technical*, etc.

The main body of the dictionary (1-304) contains 7,427 headwords and 3,917 variants. These numbers surpass Škaljić, which contains 6,878 headwords and 1,864 variants. Following the main body of the dictionary is an index (305-528) organized by Turkish source words which gives not only the headwords and variants of DTB but also those of Škaljić. This is a truly marvelous feature, enabling the scholar to compare the Turkisms of Serbo-Croatian with those of Bulgarian. Particularly interesting is the fact that out of the list of almost 10,000 Turkish words, the two languages share only somewhere between a half and two thirds of the total number of Turkish lexical items. The remainder occur only in one dictionary or the other. Thus while in the raw number of head words DTB surpasses Škaljić by only 549 entries, in fact the number of Turkish words in DTB not attested in Škaljić numbers in the thousands. This fact greatly enhances the value and importance of DTB and moreover suggests the need for a detailed comparative study. The work concludes with a

reverse alphabetical word list (529-583), which will also prove extremely useful to future investigators interested in word-formation and other questions of morphology.

DTB is a reference work that belongs on the shelf of every Turkologist, Slavist, and Balkanist. Its impeccable scholarship, thorough coverage, and useful indices set a new standard for such reference works. Alf Grannes' untimely death during the final phases of the preparation of the manuscript is noted and mourned by his two co-editors at the end of the acknowledgments. The author of these lines, too, mourns his passing. Alf devoted much of his scholarly career to the study of Turkisms in Bulgarian, and this dictionary is both a fitting monument to his scholarship and a truly significant achievement on the part of all three of the editors.

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