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Titel: Altaic etymologies: tōz, toprak, toyosun

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Altaic etymologies: *tōz*, *toprak*, *toyosun*

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 *toyosun* '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 *toyosu(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 *toyosun* 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.

* This study was presented at the 45th Meeting of the Permanent International Altaistic Conference, held in Budapest on June 23-28, 2002.

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 "*toγuruγ*" (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 *toγuruγ*, 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 *topurġan 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 *tojuray*, 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 *tojuray*, 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 *tuprâk* 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* > *toju-ray* (Ramstedt 1935); *toprak* < **toβ-us* > **toβuray* > *tojuruy* (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'orēx*; (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-ja't'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'prak* 'prax, pyl'; počva'; (TofaCast.) *to"φ'prak* 'Staub, Sand'.

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

Yakut:
(Yak.) *toburah* '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) *toyoray* 'prax, zemlja', *toboray, tobaray, tobray* 'prah, zemlja, perst'.

New Mongolian:
(Khalkha) *tovrog* 'prax, pyl', *toorog* 'nežidkaja primes' (v židkosti); (Bur.) *toborog* 'pyl', prax', *toorog* 'pyl', pylinki, sorinki'; (BurČC) *tobrog* 'pyl', prax'; (Kalm.) *towrvq* 'Staub, Erde, Sand', *tōrvq* 'Staub'; (KalmMun.) *tovrq* (*tovr'g*) 'pylinka; atom'; (Ord.) *t'awaraq, t'oworaq*, (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 *tojosun*. The related problems are closely linked to the problem of the form *toprak*.

The origins of Turkic *tōz* and Mongolian *tojosun* 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 *tojosun*, but how they are connected has not yet been clarified.

Ramstedt (1912: 186, 1935: 405a) explained Mongolian *tojosun* 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 *tojosun* 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 *tojosun*: Proto-Turkic **tōz* / **toiz* < Proto-Altaic **toβ-us* > Proto-Mongolian **toβus* (1938a: 75, 1938b: 201) > **toβus-un* > Mongolian *tojosun* (1938a: 74). Later, however, he connected Turkic *tōz* and Mongolian *tojosun* and also the Mongolian *toyoray, tobray* and Turkic *toy, toprak* with words in a fragment-record of Sienpi-Tabgach taken as of the

3rd century: **toγusin* ‘terre, poussière’, **tayušin*, **toγočin* and Qitań **to’us*, a late variant (1970: 287-288, 1986: 429, cf. 1938b: 198). For another transcription of the Sienpi-Tabgach and Qitań glosses, see **toγojin* ‘Erde, Staub’ (Doerfer 1985: 161) and **taγwəsə* ‘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:ǰ*”. 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) *tuz, to^uz, tuδ* 'Staub'; (Khoras.) *toz, tōs, tuz* 'Staub'; (Tkm.) *tōz* 'pyl'

Kipchak:

(TatBulg.) *toz* 'dust'; (TatBa.) *tos* 'pyl'; (Kr-Tat.) *toz* 'pyl'; *puđra*'; (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) *toğu* '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) **toγusin, *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'; (VocĪst.) *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-ay*, 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 *iāpra*, *tōpra* '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, 1398b: 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* (Dorerfer 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 dialectical 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. *tòpá* '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*', *tobõ*', *tobõ* 'Ton/pesok', *top* 'Sand'; Mator *taha* 'Schmutz; Asche' etc. < Proto-Samoyedic **t'əpə* 'Schmutz, Erde (von verschiedenen Bodenarten)' (Helimski 1997), cf. <**t'əp'ə* '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.:

garaŋkīra- ‘temnet’, večeret’ (< *garaŋki+rA-*), *garaŋkī* ‘temnota, t’ma, potemki, trak’, cf. Old Turkic *garaŋku* ‘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.:

kakraŋ ‘vysoxšij’; *kakraŋ yār* ‘vysoxšaja zemlja’ (< *kak+rA-(X)ŋ*), *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. *kakraŋ*.

Uzb.:

kākra- ‘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. *kākra-*.

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-* / *ārkā+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, acılaşmak // boil over / foam with rage, turn bitter’ (LehOsm.), ‘to become acrid (milk, wine, etc.)’ (RTED), Uzb. *käkrä-* ‘gorčit’, ostavljat’ 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. Sevortjan 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. Sevortjan 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 *ö-* 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 *ö-* ‘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.

$\bar{o}g$ ‘mother’ (EDPT). Dankoff and Kelly, however, correctly do not separate these two word-forms: $\bar{o}g$ ‘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 $\bar{o}g$ and *+rA-* and their relation to *ögrän-* and *ögrät-* 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 toprašdı* ‘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*, *zemlja*’ *+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, sentience, 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 dialectical 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* [*yär*] (cf. Uig. *kakrañ yär* ‘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 yär* ‘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 topradı* ‘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’ ~ *kür* ‘zasoxšij, vysoxšij; zaskoruzlyj’, Yak. *kur* ‘staryj, zaležalyj; prošlogodnij’: *kur ot* ‘prošlogodnee seno’, YakPek. *kur uñuox* ‘staryja (suxie) kosti’ < *kur* / *kür* > *kur+I* - > Old Turkic *kuri-* (for a different explanation of *kur* see EDPT: 642b and Dankoff & Kelly 1985: 148).

¹⁵ The second *damma* has dropped out in the form transliterated as TUBR’GA’N by Dankoff & Kelly (1982: 380) and Erdal (1991: 387). The correct transliteration must be TUBUR’GA’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’GA’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 *kahrak*, *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.

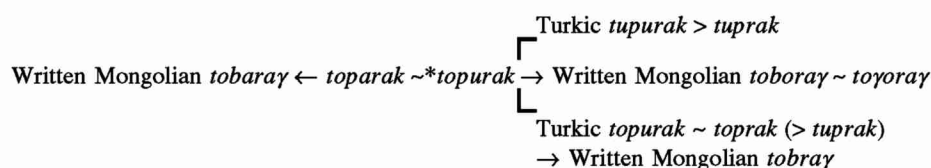
I think that the form *toborog* goes back to Written Mongolian *tobaray* (< Old Turkic **topurak* ~ *toparak*) and, because of the preservation of the intervocalic *-b-*, it may be considered a “second-period” (8-12th century) Turkic loan-word in Mongolian, if we use Clauson’s periodization (i.e. Buriat *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 *tofrak*. 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 *-*ɣ*- and the bilabial voiced plosive *-*b*- (cf. Ancient and Written Mongolian *-*ɣ*- ~ *-*b*-: Written Mongolian *toboray* ? > WMoK *toyoray* > Buriat *toorog*). However, in consideration of the correspondence of Turkic intervocalic -*p*- and Mongolian velar consonant -*ɣ*-, 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 *toy*, *tōz* and the Mongolian *toyosun*, and other problems concerning *toy* 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*- > -’- / -*ɣ*- (~-*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 **toɣu* (see below under *toy*). After this, different Mongolian endings were attached to it, and in this way Sienpi-Tabgach **toyusin* and WMoK *toyosun* emerged. In my opinion, therefore, the word-forms **toɣu-sin*, **taɣu-šin*, **toɣo-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 *toyū* / *taγū* appearing in Sienpi-Tabgach **toγū-sin*, **taγū-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 *tāk-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 **toγū* / **taγū* ‘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, **toγū* / **taγū* 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 **toγū* / **taγū* 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* (~ *t’ōsy* < 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 ← *-s.

On the basis of these arguments, I think that there is no reason to explain the word-form *tōz* through the Proto-Altaiic 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* → *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[itāñ]” (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 dialectical 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(-)*. (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-*, 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 Kāšyari’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 *toy-*, 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 čikardi 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, *toy-* '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 *toy- ~ 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 yerkä indi yüzin kizlädi / karariḫ tuman tozdı dünya tudı* '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 tāḡ adinčig yid yipar tozar ünär boltı* '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- > *tōzi- > *tōzi̇- > 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-* (<**tōzi-* < *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 homophonous 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; razletat'sja // 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*, *kidizgäk*, *münüzgäk* 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 kāgun* ‘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 kāgun* (1991: 74, note 95). This is not reasonable since the attributive construction *kidizgäk kāgun* 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 ālgin* ‘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 ālig* or a similar construction. The Hungarian *kéreg* ‘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’.

münüzgäk ‘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 *münüz* ‘horn’ (< ? *mōṅ(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 *münüz* permits the conclusion that, like the two instances above, *münüzgäk* 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 *münüzgäk*. 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. *tozčaaz* '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 “**bor** yäki [b]uza kälti”

‘Der Dämon der Erdkrume ist zerstörend gekommen.’

9 “**yirig yırda boruy buza kälینگ**”

‘Die Erde zerreiβend 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. *poroj* 'mutnyj (o vide)' (cf. Tuv. *bora-* 'zagrzaznjal', pačkat'; zametat', zanosit'; pugat', podvodit'), Nog. *bora-* 'mesti', UigShaw *bora-* '(intr.) to blow or rage (as a storm)', etc.) < *bor+A-(X)ŋ / bor+(A)ŋ*.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)ŋ / pus+(A)ŋ* (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*, *borağan* 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.:

tobaj (~ *tobin*) 'mjakina, polova' < *topa+(A)ŋ*.

tozaŋ 'dust'

From the examination of *tozan*, it has already become clear that Turkic *tozaŋ* and *tozan* are not variants of each other, but came into existence morphologically in different ways. The derivation of *tozaŋ*, however, raises another question. It is not obvious whether we should set out from *tōz+A-(X)ŋ* or *tōz+(A)ŋ*.²⁹ Morphologically, both solutions are equally possible. Among some modern Turkic data, e.g. Uig., Kzk., Kklp. *tozaŋ* 'pyl', Kir. *tozoŋ* '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)ŋ* 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)ŋ* 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)ŋ*, cf. Özb. *kakra-* 'sohnut', peresyvat'), Uig. *talaŋ* 'grabež, razboj' (< *tala-(X)ŋ*, cf. Uig. *tali-* 'grabit', otnimat'), Uig. *šorlaŋ* 'solončak' (< *šor+lA-(X)ŋ*, cf. Uig. *šorli-* 'razmačivat' kožu v solenom rastvore', Uig. *šor* 'solončak; solenyj'), Uig. *čišaŋ* 'zubastyj, derzkij' < *tiš+A-(X)ŋ*, etc. The Kalmuk word-form *tōrŋ* 'Staub, Staubwolke' (< Mongolian *toju+ra-ŋ*) speaks in favour of the analysis *tōz+A-(X)ŋ*.

tozīn ~ *tozun* 'dust'

The forms *tozīn* and *tozun* seem to be characteristic only of South Siberian Turkic, specifically Oirat and Khakas, e.g. Oit. *tozīn* 'pyl', OitCha. *tozun* ~ *tozīn* 'id.', OitTeRSK *toozīn*, Khak. *tozīn* 'id.', KhakVerb. *tozun* 'id.'. As concerns the forma-

²⁹ For the formatives *-(X)ŋ* and *+(A)ŋ*, 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 Oirod 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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