

Yet Another Suggestion about the Origins of the Sumerian Language

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Abstract

The Sumerian language still keeps the prestigious position of being the first ever written language. In this paper there are some presented linguistic data and examples, suggesting that the Sumerian is not a language isolate, as it is regarded so far, but that it may be classified as an r-Altaic language of the Bolgar branch. A proposed methodology for deducing such an inference is also presented, along with the outcomes of its application in the form of thirty-nine phonological rules.

Keywords: Sumerian, Chuvash, Bolgar, r-Altaic

1. Introduction.

Although at least three non-deciphered sets of symbols predate by far the writing system of the Sumerian language (it is not known yet whether these symbols represent letters of unknown languages or signs of non-linguistic nature, see Appendix 1), the latter is still the oldest known written language (henceforth Sumerian). Accordingly, the earliest form of written Sumerian is the Archaic, dating from the 31st to the 26th century BC. It is also estimated that there is a proto-literate period dating back since the 35th century BC. From the 20th century BC to the 1st century AD, post-Sumerian is suspected to be used only as a classical language by non-native speakers of it (Assyrians and Babylonians) for scholarly purposes (equivalently to the Latin of Renaissance). Detailed descriptions of the Sumerian are easily available from various sources, especially through internet (see Appendix 2). Thus, such a detailed description is beyond the scopes of this paper, as being unnecessary. Yet, just a very brief summary of the Sumerian grammar and dialects can be useful for referential purposes relevant to our scope.

2. The Sumerian

Sumerian is a split ergative agglutinative language. It consists of two dialects, the Emeĝir (the so-called masculine sociolect) and the Emesal (the feminine equivalent). The most distinct differentiating feature of the two sociolects is that wherever there is a {ĝ} in Emeĝir, an {m} is found in Emesal. The syntax is fairly simple, having one general rule: The main noun precedes, although a reverse tendency can be occasionally observed in genitive preceding the main noun. The word order conforms strictly to the standard pattern Subject-Object-Verb (SOV), having practically no exceptions. The crucial level of study though is the phonology.

The Sumerian phonology is reconstructed, so far, through the Akkadian one (Foxvog, 2012). The Akkadian language (henceforth Akkadian) was a Semitic one, so definitely different than the Sumerian. Akkadian phonology itself is not quite clear to us today, especially because the cuneiform script is in general inaccurate in rendering sounds, thus the transmission is regarded as both inaccurate and incomplete, considering the relevant time gap too. To the best of today's mainstream science, Sumerian consists of the following consonants:

$$\{ b, d, g, p, t, k, m, n, \hat{g}, l, r, h, s, z, \check{s}, (\square) \}$$
$$(\{\square\} \text{ not being unanimously accepted}) \quad (2.0.1).$$

Other suggestions have been presented as well but not widely published yet (Kenanidis, 1992).

It is generally recognized that the word-final consonants were not pronounced (unless followed by suffix vowels). The vowels in all cuneiform texts for all languages (i.e. Sumerian and Akkadian) appear to be four:

$$\{ a, e, i, u \} \quad (2.0.2)$$

but Driver (1948/1976) noted with certainty, that both in Sumerian and in Akkadian there was also an {o} (in a short and a long version). The most widely accepted opinion was that

Sumerian has six vowels: three open ones {a, e, o} and three corresponding closed ones {ã, ê, u} (e.g. see Appendix 2: Kramer, 1963; URL10, n.d.). In the light of a phonetic change of {e}/{i} into {u} (e.g. see Appendix 2: Falkenstein, 1964), Kenanidis (1992) concludes that this {u} is in fact {y} (front rounded narrow vowel) and {œ} (front rounded wide vowel). Therefore it is suggested here that the actual vowels were eight (see also Appendix 3. Note on transliteration):

▪ Open: {a, e, o, œ} (2.0.3).

▪ Closed: {ɪ, i, u, y} (2.0.4).

There is an indication of vowel harmony, while the observed structures of syllables in cuneiform script were CV, VC, CVC and V. The Sumerian cuneiform writing system is composed of at least 80 syllabograms (Jagersma, 2010), indicating also that the vowels must have been more than four. The oldest logographic inventory contains 939 symbols, the archaic one contains 870 symbols and the pre-Sargonian one contains 468 symbols (Appendix 2: URL11, n.d.).

3. The Origins

Much effort has been made to relate the Sumerian with known language families. None of them has gained wide acceptance, thus, Sumerian is still regarded as **language isolate**. Yet, it is an agglutinative language, while the northern Sumerian territories had been 700 km (430 miles) away from a huge “source-area” of agglutinative languages (Caucasus and Central Asia). This area has been also a “source” one for massive migrations in the past, as exhibited not only from historical / archaeological evidence but also from genetic ones (see URL3, n.d.).

The Sumerian people are believed to have originally inhabited Mesopotamia during the Ubaid period (5300 BC). It is also believed that they had shown common features with the Samarra civilization (URL7, n.d.) further north (based on artifacts, early techniques of irrigation, etc.). Thus, the attempts to relate Sumerian with the northern language families, was not just intuitive but reasonable as well.

Among other suggestions, the relevant affiliations include the Dené-Caucasian (Bengtson, 1997), Nostratic (Bomhard & Hopper, 1984), Tibeto-Burman (Braun, 2004) and Uralic (Parpola, 2007) languages. Of course, such a subject can be also prone to nationalistic approaches, as it has been observed elsewhere (Farmer et al, 2004), where it is usual to ignore the inconvenient counter-facts and/or to fabricate evidence. About another attempt to relate the Sumerian with the Turkic family of languages (Amanjolov, 2003), although reasonable, there has been a very early warning against it (URL2, 1911). The Turkish Wikipedia still today supplies “evidence” of quite unknown origin to show that Sumerian is “Turkish” (see URL8, n.d.). Note, however, that the above mentioned attempts are always associated with the existent Turkic languages, which belong to the z-Altaic type (see section 4). Besides that, eventually these attempts lead to a dead-end, so, yet another attempt wouldn't be of any harm to anyone!

There is one remaining language that is named either as Turkic or as Oghuric/Bolgar (URL6, n.d.), the Chuvash (URL5, n.d.), belonging to the r-Altaic type, which has been an important focus of the present research, since everything else has more or less failed (up to now) to gain a wider acceptance.

4. Another Suggestion

The Turkic family of languages can be classified as z-Altaic (e.g. Clauson, 1972). In the z-Altaic type, we have words ending with $[-z, \check{s}]$, while in the r-Altaic, these words end-up with $[-r, l]$. For example,

4.0.1: the common Turkic {biz} (*we*) in Chuvash is {epir}, and

4.0.2: the common Turkic {qiš} (*winter*) in Chuvash is {qhěl}.

In fact, the speakers of common Turkic (notably Azerbaijani, Kazakh, Turkish, Uzbek, etc.), although they can communicate with each other, they don't understand Chuvash, which is the only remaining spoken r-Altaic language (others were the Bulgaric, Khazar, Avar and probably the Hunnic and Tavğaç). According to recent studies (URL1, n.d.), the Proto-Bolgar (r-Altaic) was separated from the Proto-Turkic (z-Altaic) as early as 1000 BC, at least. Indeed, this separation is manifested by the exhibited relation of more than 75% among the common Turkic languages, compared to their relation to Chuvash, which is approximately 50% (URL1, n.d.). There is also an influence to Uralic languages, like Hungarian. In Hungarian, the word for *sea* is {denger}, compared to the Turkish {deniz} and to the Sumerian {engur}.

Consequently, the focus of the presented research was to discover a set of phonological and other grammatical rules (laws) that may relate the Sumerian with the r-Altaic type of languages, practically the Chuvash. This kind of research, as well, has to be framed within a certain methodology.

5. The Methodology

It is recognized that there is not any universally accepted methodology in reconstructing the grammatical system of a dead language (Foxvog, 2012). The methodology that was followed here comprised of four major tasks/principles:

- To gather and analyze the existing data. Older sources, closer to the pioneer scholars of Sumerian, are as valuable as recent ones, in order to reassure that there is nothing missing ever since. Complementary, non-linguistic data are equally valuable, in a more holistic approach.
- To find some languages suitable for affiliation, considering the previous data. In this case, there is an agglutinative language (Sumerian) of unknown classification. Thus, based on linguistic and geographical proximity, the pilot-languages (or families of them) will be the common Turkic and Chuvash. The aim is to examine the possible classification of Sumerian as an ancient r-Altaic language.
- The pilot-languages will help to remove the phonological filter of the Akkadian influence that is imposed through scripting (e.g. see 2.0.3-4).

- Considering the time-gap, to formulate a set of acceptable rules that could bridge it. The bridging process is inevitably bidirectional: from ancient forwards and from modern backwards, in order to fill in the empty slots (e.g. see 6.0.5).

The result of this methodology is presented in the form of the next thirty-nine (39) rules (5.0.1 – 5.0.39). The notational conventions are:

{“ > ” : becomes} , {“ | ” : or} , {“ = ” : is a} , {“ & ” : and}.

These rules are not so many as it seems, having in mind the few thousand years of language evolution in between. They are presented next, in order to facilitate the verifiability of the previous methodology:

- 5.0.1. [1 = a]: in Sumerian cuneiform (usually).
- 5.0.2. [o | u > a | 1]: very often, an {a} of Sumerian cuneiform originates from an older {o}. Respectively, an {1} of late scripts often comes from {a}/{u}. For example, the Sumerian **ara₃** (*designation of milk*) was originally *oro (in the light of the Greek {ορρός}, a probable loanword from Sumerian).
- 5.0.3. [a | 1 > e | i]: The {e} of late Sumerian very often originated from an older {a}. Respectively, the {i} originated from an {1}. The {e} is never converted to an {a}. If appearing so, it is because the Akkadians took the Sumerian {e} for their {a}, since their {e} was more closed than the Sumerian one. The Sumerian {e} would have been more of an Akkadian {ä}. Rarely, the Akkadians conveyed the Sumerian {e} to their {a} in order to avoid confusion with their {i}. This type of conversion has been also observed much later, between the Ukrainian-Greek and Turkic (Turkic {tezek} > Ukr.-Gr. {tizak}), because the common Turkic {e} is more open than the Greek {e}.
- 5.0.4. [e | i > œ | y]: Very often in cuneiform, an {u} appears, originating from an older {e} or {i}. Actually, it should have been an {y} coming from an {i} and an {œ} coming from an {e}. This is an important phonetic tendency, especially of Emesal (just like the conversion of {ĝ} to {m} from Emeĝir to Emesal). It seems that there was a feminine sociolect to all the Proto-Altaic languages (this may explain the frequent {o} and {m} instead of {ĝ} in Japanese, where the feminine sociolect seems to have been predominant for a time).
- 5.0.5. [u = 1]: Especially the Akkadian writers conveyed the Sumerian {1} as an {u}, mainly when it was close to sibilant or fricative phonemes, i.e. the **šuhur** of the cuneiform was pronounced as {šihır}. This is common to languages that lack {1}.
- 5.0.6. Voiced-Voiceless: Many scholars of the Sumerian suspected that the difference between {t}-{d}, {q}-{g}, {k}-{c} and {p}-{b} was not a differentiation between voiceless and voiced but between “simple” and “emphatic” consonants, the non-emphatic being aspirated. Such a distinction exists today in the consonants e.g. of the Korean and Chinese. All the consonants of the Sumerian are regarded as voiceless.
- 5.0.7. Velars-Palatals: As in all of the oldest languages of the world, so in the oldest Sumerian there were velar and palatal phonemes. It seems that there is some

confusion in the usage of the Latin alphabet to distinguish the articulating position of these phonemes. Following the history of the letters in Latin and previously in Greek and Phoenician, the usage in this paper is the following:

- i. {k} = palatal voiceless (lightly aspirated in Sumerian),
- ii. {c} = palatal voiced (emphatic instead of voiced in Sumerian),
- iii. {q} = velar voiceless (lightly aspirated in Sumerian),
- iv. {g} = velar voiced (emphatic instead of voiced in Sumerian).

- 5.0.8. [k > q & g > c]: A very general rule. Nevertheless, the Turkic languages of Asia have very faithfully preserved the articulating position of the consonants, compared to other languages. We can say that Turkic languages never changed the articulating positions of {q}, {g}, {k}, {c}, unless when both velars and palatals existed in the same word, so only one of these two positions had to prevail in the whole word. Rare exceptions may have been possible, in the light of Turkic {elic} (*roe deer*), which was *{alig} if we accept a relation with Indo-European *{el□gh} (Greek: *έλαφος, ελαχός*, etc.), because front (in Turkish “inçe” = “thin”) vowels were needed to describe the impressive slimness of the roe deer.
- 5.0.9. [k > t & c > d]: A conversion tendency of Emesal being found in several cases of cuneiform.
- 5.0.10. [g > h]: The oldest g is converted to h, as depicted in cuneiform with a hollow mark underneath. This cuneiform {h} is the corresponding of the well-known Turkic {ğ}.
- 5.0.11. [w > h]: In cuneiform, a {h} could have been a substitution of an earlier {w}. Compare the Proto-Turkic *{low} (*wash out*) to the Sumerian **luh** (pronounced as *{loh}).
- 5.0.12. In the Sumerian cuneiform there was possibly a {v} phoneme (perhaps pronounced {f} in Sumerian), originating maybe from an older {b}. Namely, the word {hubaba} or {huwawa} (Sumerian name of a monster) is found, which rather seems to have been {huvava}. In Akkadian, we may find the words {waradinu} or {baradinu} (*rose*) along with other words that interchange {w} with {b}, due to a possible {v}.
- 5.0.13. [ĝ > m]: The old Sumerian {ğ} (i.e. {ŋ}) was always converted to {m} in Emesal. This kind of conversion can be found in many languages, including Semitic and Indo-European ones. Occasionally it could happen in Emeĝir as well. A written **mu** in cuneiform is very often a {ĝu}/{ĝo} (there is no special cuneiform letter other than “mu” for {ĝu}/{ĝo}).
- 5.0.14. [b > g]: Whenever a {g} is found in cuneiform Sumerian, it usually comes from an older {b}, although sometimes the clerks used to write a {g} instead of {k} or {q}. This could have happened due to an “anti-Emesal” tendency of men converting labials to velars, in order to prevent their speech from sounding “too feminine”.
- 5.0.15. [p > ĝ]: For the same reason as rule 5.0.14, although it seems a paradox because {p} should have been converted to a {q} or {k} instead. The reason for this paradox could be explained if the Sumerian {q, k, t, p} had been also slightly “nasalized”.
- 5.0.16. The modern Turkic languages (as they are known since the 8th – 9th centuries AD) preserve very well most of the Proto-Turkic consonants (see rule 5.0.8), except from those which initialize a word.

- 5.0.17. The initial consonants of all the modern Turkic languages have been flattened, by losing the distinction between voice-voiceless for example. Thus all consonants initializing a word appear as voiceless, with the exception of {b} (originally {p}/{b}). There is no Old-Turkic word starting with {p}.
- 5.0.18. [ĝ- > Ø-]: at the beginning of words in all the modern Turkic languages. For example, compare the word {arqa} (*back*) to the oldest *{ĝarqa} or to the Sumerian *{ĝorqo} (written as **urgu**); the word *{ĝœc} (*mother*) being found as {œc}; the word *{ĝaaraa} (*between*) as {aaraa}; the word *{ĝorta} as {orta}; the last two having the same root to the Sumerian *{ĝoro-b}, written as **murub** (the {-b} here is regarded as a remainder of a {-bi} = “its”).
- 5.0.19. [ñ- > j-]: the Proto-Turkic {ñ} has been converted to {j} (and consequently sometimes even to {Ø}) at the beginning of all modern Turkic words. Compare the original {ñyz} to the modern {jyz}, in Chuvash {nër} (*face*).
- 5.0.20. [n- > d- | t-]: there is no Old-Turkic word starting with {n}, with the exception of the words {neĝ} (*thing*) and {ne} (*what?*), coming though from {ené} (in Sumerian {neĝ} and {aná} respectively). Probably it was an older *{nec} (*it is not*), hence the common Turkic {teçyl} or the Turkish {değil}.
- 5.0.21. [m- > b-]: This conversion (explaining why none Old-Turkic word starts with {m-}) is encountered both in Sumerian and in old Japanese (Kalgren, 1974/1923).
- 5.0.22. [š | ç]: The {š} of the Proto-Turkic language is found as well in Sumerian, while in most of the modern Turkic languages is found as {ç}. In Chuvash, the equivalent phoneme is mainly a {sh} (i.e. {š}). In Japanese it became simply {s}. Compare the Japanese wine “sake” to the Turkic {çağır} or {çakır} (fermented fruit juice) and to the Akkadian word {šikar} (*beer*).
- 5.0.23. [-z | -r]: The final {z} of the z-Turkic languages almost always corresponds to a Sumerian {r}. In rare occasions the Turkic {z} may have originated from an older {s} (or even a {θ}). In the Proto-Turkic language there must have been three kinds of {r} and three of {l}. So a correspondence of rhotic to lateral is rarely observed between languages, i.e. compare the Turkic {tir-} (*life*) to the Sumerian {til-} (*life*).
- 5.0.24. [-š | -l]: The {-š} ({sh} or {š}) of the modern z-Turkic languages always corresponds to an {l} in Sumerian, without any exception.
- 5.0.25. [l- > j-]: At the beginning of all the modern Turkic languages, the {l} (and the {Jb}, palatal {l}) has been converted to {j}, which in some cases disappeared later on. Compare,
- i. {jer} from *{ler} (*earth*, in Basque is {lur}),
 - ii. {jel} from *{lel} (*wind*), in the Sumerian is written as **lil**,
 - iii. {jal-an} (*lies*) from *{lol} or *{ljol} (the Sumerian **lul**),
 - iv. {jepre-} (*becoming old*), written as **libir** (*old*) in Sumerian,
 - v. {jagız} (*brown*, “the color of soil”), compared to the Sumerian **lag** (*clod of soil*).
- 5.0.26. [j- > s-]: In many cases, the initial {j} of the older Sumerian words corresponds to an {s} in the Sumerian of the cuneiform. For example, the word {sar} (*write*) originated from *{jar}, as indicated by the Turkic equivalent {jaz-}. This conversion

has become generalized nowadays in the modern North-Eastern languages of Asia, like Yakut. Compare the word {sette} (*seven*) in Yakut to the common Turkic equivalent {jedi} or {jetti}. Especially in Chuvash, {j-} has been converted to a {š} everywhere. There is also a correspondence between {j-} and {š}/{x}, as in the Turkic *{joq} (*arrow*) to the Sumerian {šukur} (*lance*); the Turkic {xekyš}/{xekyk} (*hammer*) to the Sumerian *{jog} (*adze*); the Turkic {xo-xuq} (*piglet*) to the Sumerian *{jaw} (see also 5.0.22).

- 5.0.27. [j , h , w > Ø-]: The {j, h, w} of the Proto-Turkic doesn't appear at all, neither in Sumerian nor in modern Turkic. Only the {j} of modern Turkic is occasionally original. In Chuvash, a {v} is found in place of an older {w}, i.e. compare the word for *central, authentic* in Chuvash ({var}), in Proto-Turkic ({wer}), in common Turkic ({œz}) and in Sumerian ({urum}). Compare also the word for *good, authentic* of the Proto-Indo-European ({wer}, {wes}) being reconstructed from the Ancient Persian ({vohu}), Sanskrit ({wasu}), Latin ({verum}) and the Greek *WES-ThLO-* (εσθλό-). These three phonemes ({j, h, w}), although missing, have often affected other adjacent ones.
- 5.0.28. [w = hw]: Most probably, the Sumerian {w} was pronounced as a {hw}, similar to the American English {wh} (as in *white*).
- 5.0.29. [š | l]: The older Sumerian {Jb} (palatal {l}) was converted to {š} sometime after the 3rd millennium BC.
- 5.0.30. [š | n]: The old Sumerian {ñ} was converted to {š} (rarely to {n}). This type of conversion has happened in Chinese as well (Kalgren, 1974/1923), relatively recently (AD centuries).
- 5.0.31. [t > s , d > z (θ)]: In all the Sumerian dialects, an {s} is found, originated from an older {t} and a {z} (pronounced as {θ}) originated from an older {d}. This type of conversion can be found in all of the Turkic languages, as well as in other language families.
- 5.0.32. Primary and secondary [z | δ]: Whatever is conveyed as {z} in cuneiform it was pronounced as {θ}. There were no sonorous consonants in any Sumerian dialect. The equivalent phoneme in the modern Turkic languages has been {δ} since the 8th-9th centuries AD, until the massive islamization of the Turkic tribes. The Turkic {δ} is never encountered at the beginning of words, and even in other positions it was mainly converted to {j} (remember that in a large part, the Sumerian {z} originated from an older {d}).
- 5.0.33. Traces of final consonants: The final consonants of the Sumerian words were not pronounced, unless they were followed by a vowel or an affix. Only when the word ended in a nasal consonant, this one could leave a trace of nasalization to the final vowel (similar to the nasalization of the French vowels). This nasalization seemed like a {-ĝ}. Over the centuries it was mistaken as a true final consonant, while in reality it could have been any of the nasal consonants ({ñ, n, m}).
- 5.0.34. [“l”]: The Sumerian {l} was pronounced retroflex.

- 5.0.35. [No r-]: None of the old Sumerian words (as well as the Proto-Turkic ones) initiated with an {r}. Wherever encountered so it is because of a preceding vowel or affix, which was not depicted (or because of word-loans).
- 5.0.36. [h = x]: The Sumerian {h} was pronounced close to a Greek {χ} (occipital instead of laryngeal). The original {h} was lost in the Sumerian cuneiform, where {h} almost always originated from an older {g} (see again 5.0.10).
- 5.0.37. Many emphatic consonants of the proto-languages became sonorous later on (see also rule 5.0.6): [g = qq > ĝq] , [c = kk > ñk] , [d = tt > nt] , [b = pp > mp]. The “emphatic” ones were often realized as nasalized.
- 5.0.38. The sibilant consonants (especially {s} and {š}) are conveyed inaccurately in cuneiform. This inaccuracy often includes an adjacent {h} and it is attributed to the conveying of the Sumerian through the Akkadian.
- 5.0.39. Final consonants: In cuneiform, the distinction between {b} and {p, k}, as well as {g, t} and {d} is not reliable at all, especially at the end of the cuneiform SIGN-names, where only {g}, {b} and {d} are encountered. This unreliability is attributed to the same reason as previously (see rule 5.0.38).

Some of the previous rules were observed in the past. For example, Falkenstein (see Appendix 2: 1964) observed that in Emesal {e} and {i} are usually converted to {u}, but he did not arouse any suspicion that this {u} could have been an {y} or an {œ}, in other words, that {e} and {i} could have been labialized (see 5.0.4).

For clarification and support of the herein claim about the origins of the Sumerian, except from the examples that were already presented in many of the suggested or observed rules, a sample of some more cases appears next.

6. Some Examples

A list of affixes and words is presented below, containing comparison between languages and accompanying comments. The purpose is to exhibit either similarities or differences denoting that Sumerian can be classified mainly as an r-Altaic language (Proto-Bolgar) related more to Chuvash than to any Turkic one. Through some of these examples there is also suggested a new approach to the pronunciation of Sumerian words:

- 6.0.1. The most common affix in Sumerian, in Proto-Turkic and in other old languages was {or} (with {o} changed depending on vowel harmony and the specific rules of each language). In z-Turkic languages, it usually has the following forms: {-uz, -iz, -iz, -yz} (see 5.0.23).
- 6.0.2. An old Sumerian affix is {-lim} ({-lan} in Turkic), denoting a wild animal, as in {kilim} (*mongoose*), {lulim} (*antelope*), {alim} (*buffalo*). They can be compared to the Turkic {ars-lan} (*lion*), {qap-lan} (*tiger*) and {ji-lan} (*snake*).
- 6.0.3. Another common affix in Turkic is {-ik}, forming diminutives or deriving nouns from verbs as products, i.e. {xyryk} from {xyry-} (*to decay*), while in Sumerian is encountered as **šu-ru-ug**.

- 6.0.4. Another such case is the Proto-Turkic affix {-im}, meaning something proven as in {jardim} (*help*). In Sumerian it is encountered as {urum} or {örym} (*true*), having a root related to the common Turkic {öz} (see 5.0.23).
- 6.0.5. The Sumerian {kaš₄; lu₂ kaš₄} (*runner, trotter, messenger; to run*) corresponds to the Turkic {qax-} (*to run away*). “lu₂” means a man, so “kaš₄” rather signifies “running” than “runner”. In URL4 (n.d.) for {kas₄ du (*to run*), kas₄ dug₄ (*to run*), kas₄ gun₃ (*to run*), kas₄ kar (*to run*) and kas₄ sar (*to run*)} it is the same sign being transliterated as kas₄. The transliteration kaš₄ is more accurately corresponding to the Turkic {qax-} (see 5.0.22). Also in Sumerian, kul (*to run*) should have been pronounced {qol}, in the light of the corresponding Turkic form {qoş-} (*to run, be quick*) (see 5.0.24).
- 6.0.6. The common Turkic {boz-} (*dissolve, disintegrate*) compared to the corresponding Sumerian {bur}, having the same meaning (see 5.0.23).
- 6.0.7. The Sumerian {dah} (*to add*) corresponds to the Old-Turkic {taxı} (*additionally, moreover*).
- 6.0.8. The Sumerian daġal (*wide*), pronounced *{daġil}, corresponds to the Turkic {ceġiş} (see 5.0.29). There is no exception of this rule in Sumerian, although there are a few in Chuvash, like {puś} (*head, front, start*) compared to the corresponding Turkic {baş}. See also the Sumerian {palil} (*pioneer*), the Basque {buru} (*head*) and the Indo-European {pro}, all these pointing to a common root meaning *head/ahead*.
- 6.0.9. Compare the Chuvash {viś} (*hunger*) to the corresponding Sumerian {u₂-šim; i₃-šim} (see 5.0.27) or to the common Turkic {aç}.
- 6.0.10. The Turkic {aad} (*name*) and the Sumerian {ad} (*voice, cry, noise*).
- 6.0.11. The Turkic {et} (*flesh*), in Chuvash {üt} and in Sumerian {uzu} (*flesh, body, entrails*).
- 6.0.12. The Turkic {ađıγ} (*bear*) corresponds to the Sumerian {az} (see 5.0.32).
- 6.0.13. Here is an important example of the rules 5.0.2 and 5.0.15: the word {bol-}. In Sumerian {ġal₂; ma-al; ^agal₂} the usual meaning is {to be (there, at hand, available), to exist; to put, place, lay down, to have}. The corresponding Turkic is {pol} (*to exist / come into existence*).
- 6.0.14. The Turkic {köj} (*village*) compared to the Sumerian ki (*place, position, area*), probably pronounced {kej}.
- 6.0.15. The word for *mother* is {anna} in Turkic (for obvious taboo reasons), but in Chuvash, in Basque and in Sumerian is still {ama}.
- 6.0.16. The common word for *man/person* in Sumerian is lu₂ (pronounced {ly}). In Turkic, the word {jigit} (*young man*) comes from *{li-git} ({-git} being an honorific suffix found also in {uraġut}, {alpaġut}). The rule 5.0.25 has no exception in Turkic: there is none Turkic word starting with {l} because {l} in the beginning of the word is turned to {j-} (this phonetic change is so old that in some cases even that {j-} was dropped altogether).
- 6.0.17. In Turkic, the word for *god* is {teġri} or {teġeri} (both forms attested; see Clauson, 1972). In Sumerian, the corresponding forms are {diġir; dim₃-me-er; dim₃-me₈-er; dim₃-mi-ir; di-me₂-er} (*deity, god, goddess*). The

forms with an {-m-} are of course from Emesal. The Turkic {-i} is a suffix forming adjectives (*divine*).

- 6.0.18. The most general and common word for metal in cuneiform Sumerian is {kug}/**ku₃** (*metal, silver; (to be) bright, shiny*), where the {-g} is too poorly attested. It might have been {-ĝ} (not {-g}) or it might have been derived from a {-b} (see 5.0.14). In any case, the Turkic *silver* is {kymyš/kymiš} ({kymiš} should be considered older, because the Turkic vowel harmony would change {i} > {y}, but not the opposite), corresponding to the Sumerian word being either *{kyĝ} or originally *{kyb}, with an old adjective *{-mil} corresponding to the Sumerian {**mul**; **mul₂**; **mul₄**} (*star; to shine, radiate* (light)) pronounced {myl} from *{mil} (see 5.0.4).
- 6.0.19. The Sumerian **tug₂** (*textile, garment*), see also **tuku₅** (*to weave*), corresponds to the Turkic {toquu-} (*to weave*), where {-uu-} must be a verb-forming suffix.
- 6.0.20. The Turkic {deve} (older attested {tevej}) means *camel*. In Sumerian it is {dibid} ({e} is usually represented as {i}; see Appendix 2: Falkenstein, 1964), where the final {-d} could have easily become a {-δ} and then a {-j} in Turkic (see 5.0.31-32).
- 6.0.21. Another good example of sound correspondence between r-Altaic and z-Altaic is the common Turkic {jaş} (*age, youth*), which in Chuvash is {shul} (“çyл”), corresponding to the Sumerian {šul} (*(to be) manly; youth; young man*), according to URL4 (n.d.). In Crimean Turkish (which is a conservative language), {jaş} was so common for the meaning of *youth* that became a word loan in Crimean Greek, where it is practically the only word for *young*.
- 6.0.22. The common Turkic {jyz} (*a hundred*), in Chuvash is {shör} (“çëp”), compared to the Sumerian {šar₂; šar; šar₂-šar₂} (*totality, world; (to be) numerous; 3600*). The Sumerians used a sexagesimal numbering system (Torra, 2011). This means that the Proto-Turkic word for large number came to mean “100” in Turkic and 60x60 (= 3600) in Sumerian.

About the grammar, considering that affixes should have been words originally, the Turkic languages as we know them have undergone some “rationalisation”, which has shifted the position of grammatical affixes, i.e. many Sumerian verbal prefixes have become suffixes in Turkic. A few examples:

- 6.0.23. The Turkic {-ma}, meaning the thing derived by the verb (e.g. {xatma} = whatever is made by the action of {xat-}), in Sumerian is {ba-} (see 5.0.21).
- 6.0.24. The Turkic {-maz} (*is never done, cannot be done*) appears as {bar-} in Sumerian (see 5.0.21, 5.0.23).
- 6.0.25. The possessive suffix *its* in Sumerian is {bi} from *{b₁} (see 5.0.3), corresponding to the Turkic {bu} (*this*), or the Sumerian {-ani} (*his/her*), corresponding to the Turkic {an-} (base of the personal pronoun *he/she*). The distinction between personal and non-personal class has not clearly developed in Turkic as it did in Sumerian. But it is obvious that {ani} (as well as the verbal prefix {-n-}) has derived from {ane} (*he/she*), which is the same as the Turkic {an-} (*he/she*, in the oblique cases only. For nominative, the Turkic used demonstratives, usually {ol}; compare the Sumerian **ur₅**).

The word-order of Turkic is a normal evolution of the older word-order being found in

Sumerian. The only difference is that in Turkic the modifier is placed before the noun, while in Sumerian the main noun must come first. Nevertheless, even in Sumerian it is not so rare to have a genitive before the main noun, which then must have a possessive suffix, as it is always done in Turkic.

7. Conclusions

The presented examples, so far, suggest that the connection of Sumerian to Bolgar/Chuvash is really closer than others; hence we could safely classify Sumerian as an r-Altaiic (Proto-Bolgar) language. The most basic vocabulary is common, that is words meaning “a man”, “god”, “wind”, “to write”, “written symbols”, metals, culturally important animals, and generally culturally important words. Nevertheless, this classification is not only based on vocabulary, as discussed already. Phonology, grammar and syntax, all point to the same direction.

In fact, it should be considered that the separation of the Proto-Bolgar from the Proto-Turkic must have happened much earlier than 1000 BC (URL1, n.d.), because Sumerian was well formulated since the Literate Period (3100 BC), while the Chuvash shows only moderate proximity to Turkic. Hence, the proposed language family is the Bolgar, as an r-Altaiic language, having the Sumerian as its oldest known member and the Chuvash (probably the Basque too) as its modern one.

This paper does not aspire to give all of the proofs that Sumerian is an r-Altaiic language. A detailed study, using the previously presented rules (5.0.1-39), would reveal thousands of Sumerian linguistic elements related to Turkic/Bolgar and other Altaiic languages. It only aims to open hitherto a new direction to the stagnant research, being blocked by various reasons. Apparently, whether the herein claims will be eventually accepted/proved or not, this will be anyway a gain for linguistic research.

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Appendix

Appendix 1. Undeciphered writing systems

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Appendix 3. Note on transliteration

For the Turkic languages we did not use the common Turkish alphabet, as it was used by Clauson (1972), because that alphabet is somewhat inaccurate, and because we wish to remind that we discuss about Turkic languages in general and not Turkish in particular. We also wish to avoid diacritics when possible.

We usually disregard vowel length which is not easy to confirm for Old Turkic languages; when needed, we show vowel length by duplicating the vowel. Additionally:

- {x} here corresponds to the Turkish {ç},
- for {q}, {g}, {k}, and {c}, please see rule 5.0.7,
- {j} corresponds to the official Turkish {y},
- {y} here is the official Turkish {ü},
- {œ} corresponds to the official Turkish {ö}.

For convenience, we used the Greek letters {δ}, {γ}, {θ} in place of the corresponding and similar signs of the International Phonetic Alphabet, and sometimes the Cyrillic {љ} for the palatal lateral consonant.

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