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On the Phonotactics of /r/ in Sumerian

Sahala, Aleksi

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Jan KEETMAN <jkeet@aol.com>

5) On the phonotactics of /r/ in Sumerian — The Sumerian phoneme /r/ has been characterized as an alveolar tap and its involvement in phonetic alternations has been discussed in previous Assyriological literature. It is known that the phoneme /r/ occasionally alternates with /l/ (FALKENSTEIN 1959: 28), and that it can occur as an allophone of alveolar stops in intervocalic and post-vocalic positions (JAGERSMA 2010: 53). In addition, when the phoneme /r̂/, with assumed pronunciation [ʦʰ] in IPA, disappeared from Sumerian, it was reflected in South Sumerian and later Neo-Sumerian as /r/ (JAGERSMA 2010: 45).

All this implies that the phoneme /r/ is not original in all contexts where it can be observed. One intriguing detail of the Sumerian phoneme /r/ is that it is extremely rare in word initial positions and suggests that in the earlier stages of Sumerian it might have been restricted or even prohibited by phonotactics. Without making assumptions on the Sumerian homelands and language contacts, the absence of word initial /r/ is typologically common in the Eurasian linguistic area, occurring in Proto-Turkic, Proto-Mongolian, Proto-Tungusic, Proto-Koreanic, Proto-Japonic and Southern Yukaghir (ROBBEETS 2017: 591), as well as in Proto-Uralic (AIKIO 2022: 9). Various restrictions such as allophonic shift into /l/ or /ʔ/ exist also elsewhere, as in dialects of Thai and in the Polynesian languages (VOVIN 2020: 102) to mention a few.

As of April 2025, the ePSD2 contains merely 70 /r/-initial words, which constitute 0.44% of the whole dictionary, a majority of these are Akkadian proper nouns. This, and the fact that Emesal does not have a single known confirmed /r/ initial word (see SCHRETTER 1990: 247) raises some questions on the distribution of this phoneme in Sumerian. To better understand the etymological nature of the Sumerian /r/ initial words, let us examine all the ePSD2 entries excluding proper nouns, commonly known etymologies with a confirmed initial /r̂/, and three words (rag, rin_2 and rin_5-na-ra) of unknown meaning and no attestations in the corpus. The data is split into Old Sumerian, Neo-Sumerian and the Old Babylonian and later Sumerian. In the tables below, the frequency of the word in the given time span is indicated in the second column, and its first attestation in the second-last column.

Old Sumerian

Freq.	Word	Meaning	Period	Notes
165	rah_2	'to beat'	ED III	
124	ru	'(compound verb verbal element)'	ED III	
34	ri	'to impose, lay down'	ED III	← /r̂/?
13	rig_7	'to donate'	ED III	
11	ru-ga	'(designation of calves)'	ED III	participle of rig_7
9	ra-$gaba_2$	'rider'	ED III	← Akk. *rākibum*
6	rib	'to be surpassing'	ED III	variation rib ~ lib
6	ri_2/re_2	'to be distant'	ED III	exophoric demonstrative suffix
5	ru	'to remove'	ED III	
2	ra-šum	'(a flour)'	ED III	← Akk. *rāšum*
1	ru-ru-$buru_5^{mušen}$	'(a bird)'	ED III	ornithonym
1	ru-ur-ra^{zabar}	'(an object)'	ED III	object
1	ra-bi-a-num	'commander'	OAkk	← Akk. *rabiānum*

Of the words attested in Old Sumerian, three are apparent Akkadian loanwords and one is an ornithonym, which are commonly known to be onomatopoetic and originate from communicative interactions between humans and birds (KURASHKINA 2012). In this particular case, /ruruburu/ shows a high likelihood having a phonetically motivated origin. Of the remaining nine words, seven are verbs according to ePSD2. As for ri 'to impose, lay down', lexical lists give equations RI = de-e = *ma-qa-tu* (Ea 02, 296) and RI = <(ri-i)> = *ma-qa$_2$-tum* (Karpeles 01, o iii 56), suggesting that this verb originally featured the phoneme /r̂/. As for ru-ga '(designation of calves)', this likely a perfective participle of rig$_7$ = *reʾû* 'to tend, graze (animals)' (Bauer AWL p. 297 ad 98 iii 4), and therefore etymologically related to rig$_7$ 'to donate'. The word ri$_2$ (likely to be read in Old Sumerian as re$_2$) is an exophoric demonstrative suffix {re} 'that (further away)' and not a verb stem. To my knowledge, all its uses as a verb stem (written ri) are attested in the second millennium BCE. The word rib 'to be surpassing' has been shown to alternate with lib (FALKENSTEIN 1959: 28), suggesting that the /r/ might not be original, or at least that it is unstable in this context. Finally, it has been proposed that raḫ$_2$ 'to beat' is borrowed from Akkadian *raḫāsum* 'to flood, wash' (JAQUES 2006: 396). Although this is conjectural, considering the rarity of the word initial /r/ in Sumerian, this proposition is fairly appealing. In conclusion, four words with an initial /r/ remain unetymologized: ru '(compound verb verbal element)', rig$_7$ 'to donate', ru 'to remove' and ru-ur-ra^{zabar} '(an object)'. Since names of objects are prone to be borrowed and this word looks phonotactically suspicious, the foreign (non-Akkadian) origin of /rur(r)a/ cannot be excluded.

Neo-Sumerian

Freq.	Word	Meaning	Period	Notes
23	ru-gu$_2$(d)	'to withstand'	Lagaš II	← /r̂/ cf. ru-gu$_2$ ~ du$_5$-gu$_2$
7	^{urud}ra-tum	'drain pipe'	Ur III	← Akk. *rāṭum*
3	ri-gi^{mušen}	'(a bird)'	Ur III	ornithonym
2	ra-ba-tum	'garment'	Ur III	← Akk. *rabātum*

The Neo-Sumerian examples contain two obvious Akkadian loanwords, and one word that can be shown to have contained an original /r̂/ based on the Ur III alternative spelling du$_5$-gu$_2$-dam (VAT 07131, 07). The remaining word is an ornithonym. Although it is not as clearly onomatopoetic as our previous bird name, this possibility cannot be excluded. In addition to the words listed above, Attinger (2023: 1107) mentions a word rin$_2$ in the Gudea Cylinders, but the first three occasions (Cyl. A xix 18, B v 22, B ix 15) seem to be reduced spellings of erin$_2$ 'yoke; to harness' based on their contexts. The last one is not certain as it occurs in a broken context mušen-#be$_2$ [...] rin$_2$-na-da (Cyl. B xii 10), but an interpretation "to tether ... its birds" cannot be excluded on basis of the surrounding lines.

Old Babylonian and later

Freq.	Word	Meaning	Period	Notes
270	re	'that'	OB	(developed from a suffix)
57	^{ĝeš}rab$_3$(a)	'clamp'	OB	variants: a-la-ab ~ a-ra$_2$-ab
15	rum	'perfect'	OB lex	
10	^{u_2}rib-ba	'(a plant)'	OB	
8	ra-bi-zi-ga-tum	'official'	OB lex	← Akk. *rabi sikkatim*
8	rig$_7$	'to eat'	OB lex	
8	rig$_3$	'weapon'	OB lex	object
4	rig$_7$	'to boil'	OB lex	
5	ra$_3$	'to be pure'	1st mill. lex	
2	ri-ĝeš^{mušen}	'(a bird)'	1st mill. lex	ornithonym
1	rig$_{10}$	'sheepfold'	OB lex	
1	ra-aḫ	'(a disease)'	OB lex	

The final 12 words come from the times when Sumerian was likely no longer a vernacular, if we accept the general 19th century BCE dating of Sumerian's decline as a spoken language (at least in the urban areas). Therefore these words provide slightly less certain evidence in comparison to our previous ones. Yet, we have one bird name and one Akkadian loanword. The word ^{u_2}rib-ba is possibly descriptive and etymologically connected to rib 'to be surpassing' (compare ^{lu_2}rib-ba = *šūtuqum* [AHw 1294]). The word ^{ĝeš}rab$_3$(a) 'clamp' is perhaps reduced from original /alaba/, /araba/ or perhaps /aʔaba/, since Attinger (2023: 1100) points out its non-standard late third millennium BCE spellings a-la-ab and a-ra$_2^{!?}$-ab. Yet, the later pronunciation as /rab/ is evident from Akkadian *rappu*, borrowed from Sumerian perhaps in the early OB period (CAD R: 159). The word re 'that' is likely etymologically connected to the already mentioned exophoric demonstrative suffix {re} via reanalysis of a bound suffixal morpheme into a free one. The first millennium BCE forms like re-en$_3$ and re-en$_3^{en}$ can likely be explained via analogical formation from the demonstrative {nēn} 'this'. Finally, it cannot be excluded that ra-aḫ '(a disease)' could be related to raḫ$_2$ 'to beat', but this is speculative.

We are left with six words which of all are attested only lexically (ra$_3$, rum, rig$_3$, rig$_7$, rig$_7$, rig$_{10}$). Four of these words show a phonetic shape /rig/. Considering that this coincides with the Old Sumerian word rig$_7$ 'to donate', it begs the question whether this is chance resemblance, or whether the syllable final /g/ (reconstructed as a voiceless velar stop [k]) has something to do with it. Since one of our Old Sumerian examples has also the phonetic shape /rib/ [rip] and we know that there is a sound alternation between /n/ and /l/ before velar and bilabial stops in Sumerian (compare lugal 'king' ~ Ebla nu-gal (EDZARD 2003: 18); nu-banda$_3$ 'overseer' ← *lu$_2$-banda$_3$ → OAkk. *lupattaʾum* → *lapattaʾum* (JAGERSMA 2010: 50), it would be tempting to speculate that the Sumerian word initial /r/ is not phonemic here, but a later allophone of some other Sumerian phoneme in this environment. One possibility for the original phoneme is /l/, since Falkenstein (1959: 28) has already pointed out the variation rib ~ lib 'übergroß'. The proximity of a velar or a bilabial stop seems to trigger this alternation elsewhere too, as in gibil ~ kibir (FALKENSTEIN 1959: 28); saĝ-gir-mud (OB Nippur Ura 4 174) ~ saĝ-gil-mud (Ura 16 Seg.12, 8) and the already mentioned a-la-ab ~ a-ra$_2^{!?}$-ab, but since these comparisons are anachronistic, making further conclusions on the details of this suggested allophony in Old Sumerian (or even Proto-Sumerian) is yet premature.

Were the speculation on the allophonic variation in /rig/ (or even more so /rib/) from original /lig/ and /lib/ justified or not, the distribution of word initial /r/ is undeniably extremely restricted based on our current understanding of Sumerian lexicography. Of the initial 29 examples, 12 are attested only in the Old Babylonian period or later, mostly lexically. Of the 16 third millennium BCE examples: four are certain Akkadian loanwords and one is conjectural, two are ornithonyms, two are likely derived from an original /r̂/, one is a name of an object of unknown meaning, and two share a common etymology essentially removing one of these entries. In conclusion, this leaves us only three or four words, all verbs, with an initial /r/ attested before the second millennium BCE: ru 'to remove', rig$_7$ 'to donate', ru '(compound verb verbal element)' and possibly raḫ$_2$ 'to beat'. Therefore, the Sumerian word initial /r/ can be considered as a phonological anomaly with a fair certainty and its etymological origins should be challenged.

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Aleksi SAHALA <aleksi.sahala@helsinki.fi>
University of Helsinki (FINLAND)

6) Minima Eblaitica 31: Annual documents and homonymy in personal names — Three types of administrative documents of Ebla of the third millennium B.C. are the basis of the classification of historical data: *a*) the annual accounts of the incomes (mu-DU) of metals; *b*) the annual accounts of expenditures (è) of metals as raw material to be processed into objects or employed in part in a circuit of gifts and counter gifts; *c*) the monthly documents of distribution of textile products, only dated according to the month.

a) The mu-DU texts published in ARET XIV, and classified as annual documents, present a clear structure. A first long section registers the gold and silver (in part hoarded in objects) together with clothing collected by the minister (in later texts copper is added), which constituted by far the largest revenue for the Administration. This is followed by deliveries from the "lords", lugal-lugal (the highest officials; in some later documents: ugula-ugula, probably corresponding to a period of major centralization of administrative power), and then by those from the city-state which recognized Ebla's supremacy. All these deliveries are minimal compared to the revenues registered under the name of the minister. Some later texts of minister Ibbi-zikir are closed by few other deliveries from the city-states, dated on the occasion of a festival: *in ma-wa-tim* (see the index in ARET XIV, 558), celebrated in the second part of the year.

b) Only the following documents of the second group, which concerns the "expenditures", è, of metals are dated according to an event (ARET XXI; ARET XXII forthcoming):

ARET XXI 4: *in* ud *Ib-rí-um* 2 mu "second year since Ibrium (was appointed minister)".

ARET XXI 5: è 2 mu 2 dub "expenditures of the second year of (minister Ibrium): second document".

ARET XXI 21: DIŠ mu úš *Ib-rí-um* "year of (minister) Ibrium's death": i.e. eighteenth full year of Ibrium as minister.

ARET XXII 3: DIŠ mu úš ama-gal en "year of the death (of Dusigu), the king's mother": third year of minister Ibbi-zikir.

ARET XXII 10: DIŠ mu šu-ba$_4$-ti *Ì-li-ga-ùˀ*^{ki} "Year in which the city of Iliga'u was conquered": tenth year of minister Ibbi-zikir.

The final part of ARET XXII 13: thirteenth year of minister Ibbi-zikir, is not preserved.

Only the *incipit* of the documents for years 15–16 of minister Ibbi-zikir are preserved: this is the usual registration of "1 mina of silver (for) the silver head of (the city-god) Kura", 1 ma-na kù:babbar saĝ kù:babbar ^{d}*Ku-ra*.

This author has presented already many years ago (ARCHI 2000) a study on the lugal-lugal of the mu-DU documents. A simple look at the tables at pp. 23, 39, and 45, where the names of these officials are collected, is sufficient to realize that they remained in office for a limited number of years. By then putting these names in relation, one has obtained the chronological sequence of these documents (see ARET XIV pp. 169, 303).

ARET XIV 93 is a document which registers the delivery of gold and silver from minister Ibbi-zikir for "16 years": § 15: 15 mu; § 16: [16 mu]: the goods he had collected during his mandate. The final sums of gold and silver are only partially preserved: "… 444 minas (208.68 kg) of gold in relation 1 : 2½ with silver […]. Final total. Silver: 5602[+3$^{?}$] minas (2634.3 kg) of silver […] of Ibbi-zikir (lú *I-bí-zi-kir*)". This proves that the minister was in office for seventeen years.

It is therefore proven that Ibrium and his son Ibbi-zikir held the position of minister for eighteen and seventeen years respectively.

Starting with the first document of minister Ibrium, ARET XXI 4, concerning the "expenditures", è, dated: *in* ud *Ib-rí-um* 2 mu "second year since Ibrium was minister" (in fact: his first full year he was minister), all these documents open with the registration of "one mina (470 g) of silver for the silver head of (the city-god) Kura": an evident rite of renewal which inaugurated every year. Only ARET XXI 5, because it is the "second tablet" 2 dub, of that year (see above), doesn't present this expenditure. Starting with the following year, a second expenditure (mu-ti-II) of 3 (24 g) shekels of silver (in later years of 6