Abhandlung

Carsten Peust

The Apparent Lambdacism of Eblaite and Eblaite Word Accent

Abstract: A peculiarity of Eblaite spelling, unparalleled in the other Semitic languages, is the interchange between l and r. This phenomenon is examined based on the glosses of the so-called "Vocabolario di Ebla" (VE). It is argued that the interchange pertains to the graphic rather than the phonological level, and that, at least in manuscript B of VE, the interchange is subject to a precise phonological conditioning: /r/ is spelled r when occurring as a geminate or as the onset of a stressed syllable, and l elsewhere. This hypothesis, in turn, provides first insights into Eblaite word accent.

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The Vocabolario di Ebla

The *Vocabolario di Ebla* (henceforward "VE"), a list of logograms accompanied by phonetic glosses,¹ published by Pettinato (1982) with important corrections and collations by Krebernik (1982, 229–236) and Conti (1990, passim), is our most reliable source for the lexicon of Eblaite. Pettinato did not yet recognize in his 1982 publication that his numerous fragments can be joined to no more than five physical text sources, for which I will use the sigla A₁, A₂, B, C and D following Archi (1992, 18; 2006, 108 f.), Conti (1989, 45) and Fronzaroli (2011, 59 n. 6).² While the ex-

Carsten Peust: Konstanz; Email: cpeust@gmx.de

pected republication of the VE by Archi/Fronzaroli (*in preparation*) will certainly arrange the text in this way, we can already now assign nearly all fragments published by Pettinato to one of the five sources. This is achieved by departing from a couple of known attributions and then applying the evident principle that two fragments must belong to different sources if they overlap in at least one gloss. While some attributions were already communicated by Archi (1992) and Conti (1989; 1990), the only exhaustive list that reassigns Pettinato's fragments to sources was published as an appendix to Bonechi's (2008b) short article. Let me repeat it here:³

¹ The VE has always (as already in the title of Pettinato's 1982 publication) been described as a Sumerian-Eblaite bilingual list. I prefer to interpret it not as a bilingual list but rather as a list of logograms. It is not important from a synchronic Eblaite point of view that the same logograms were used in other cuneiform languages including Sumerian. This argument will become clearer from the following example. Assume that a list was found with the content "1 =one, 2 =two, 3 =three, ...". We would certainly describe it as a list of numerical symbols with English glosses and not as an Arabic-English glossary, even though the numerical symbols were derived from Arabic and are used in similar shapes in that language. Only once we transcribe the logograms by means of their Sumerian sound values, as is assyriological practice, does the VE appear to be a bilingual text. It should also be noted that the logogram column includes entries such as DINGIR-KALAMtim (VE 795), which are evidently not Sumerian words but logograms with Eblaite phonetic complements.

² Bonechi (2008b) employs another set of sigla, namely $\text{EBL}_1 = D$, $\text{EBL}_2 = A_1$, $\text{EBL}_{3a} = C$, $\text{EBL}_{3b} = A_2$, $\text{EBL}_4 = B$. Since both A_1 and C finish with item 1089 and A_2 starts with 1090, A_2 might be considered as being the continuation either of A_1 (as implied by Archi's/Conti's/Fronzaroli's labelling) or of C (as implied by Bonechi's labelling). In any case, there is no physical join whatsoever but A_2 constitutes a separate tablet.

³ Since the chain of argumentation has not been presented anywhere, I will sketch at least the start of the argument. Source A₁ is primarily Pettinato's "A", A₂ his "AZ" and B his "B" (Archi 1992, 18; Conti 1989, 45). We learn from Archi (1992, 18) and Conti (1990, 63, 97, 122, 133 and 162) that D mainly consists of Pettinato's "C", "O", "V", "AD" and "AK". Since the glosses VE 138–142 and 184–186 are attested in Pettinato's "A", "B", "C" (= D) and "K" (Pettinato 1982, 212 f.; 218 f.), it follows that "K" is a fragment of C. Similarly because of VE 39, "F", too, must belong to C, which is explicitly confirmed by Conti (1990, 4). Since Pettinato's "M" overlaps with "A", "C" (= D) and "F" (= C) in VE 164, with "A", "C" and "K" (= C) in VE 197 f. and with "A", "K" and "O" (= D) in VE 225–230, it must belong to B. Other B fragments include "N" which again overlaps with "A", "K" and "O" in VE 213 f., "R" which overlaps with the same sources in VE 231–235 and

 A_1 = Pettinato's fragments A, G, H, I

 A_2 = Pettinato's fragments AZ, BG

B = Pettinato's fragments B, M, N, R, S, T, AI, BA, BB, BC, BD, BE, BF

C = Pettinato's fragments F, J, K, L, P, Q, U, W, X, Y, Z, AA, AB, AC, AE, AF, AG, AH, AL, AM, AN, AO, AQ, AR, AS, AT, AU, AV,

AX, AY, BH

D = Pettinato's fragments C, O, V, AD, AK, AP, AW

This reallocation of fragments will be vital for my argument because the orthographic conventions differ substantially between the individual sources. Three small fragments are difficult to locate and might either belong to source B or to source C, namely Pettinato's D, E⁴ and AJ⁵. The location of these three uncertain fragments is irrelevant to my argument since they do not contain any text concerning my point.

Presentation of VE identifications

In order to investigate the Eblaite spelling rules, spellings must be confronted with phonemic interpretations. Phonemic interpretations can be derived from those VE entries that are identifiable, that is, from whose glosses one can recognize Semitic lexical items that agree with the semantic interpretation of the logograms. I will not propose any new identifications in this article but will base my argument entirely on identifications that have already been suggested by others. They will be cited in a brief manner, with a reference to the most recent discussion rather than to the original proposal, and without repeating the argument in detail. The identifications will be written between slashes as if they were phonemic renderings even though the phonemes can, given the present state of our knowledge, only be presented in a reconstructed Proto-Semitic shape and may not precisely indicate the pronunciation they had in actual Eblaite.

Asymmetry of the *l/r*-interchange

I will now come to the central topic of this paper, the l/rinterchange, which I prefer to call "lambdacism" since it is a directed change. While several phonemic distinctions of Semitic never surface in Eblaite spelling (such as between *p* and *b*, between *t*, *d* and *t*, etc.), there are in principle distinct syllabograms for the *l*- and the *r*-series.⁶ It has, however, been observed almost since the beginning of Eblaite studies that there is some amount of disagreement with the etymologically expected phonemes. The first important rule to note is that the interchange is asymetric. While Pettinato (1979, 68) still believed in a general interchangeability of *l* and *r* at Ebla, it has become accepted knowledge by now that etymological r can display both the spellings *r* and *l*, whereas etymological *l* is never written *r*.⁷ The last presumed example of *l* written as r (ri_2 -ga-dum in VE 394 as understood by Pettinato 1984, 19 with n. 20, who furthermore posited a graphical metathesis) found a better explanation by Conti (1990, 126 f.). Another candidate for that direction of change would have been na-bar-su-um (VE 993), for which Krebernik (1983, 25) suggested /naBalŚuHum/ as one of the possible readings, but later he himself (Krebernik 1996, 239) and Bonechi (2000, 100) abandoned this interpretation.

Geminate *r* never spelled *l*

There is another rule suggested here for the first time, stating that geminate r/rr/ is consistently spelled r and never l, neither anywhere in VE nor in any other Eblaite text.

The presence of a phonological geminate is evident when two consonants are explicitly spelled out in at

^{272-275, &}quot;S" which overlaps with the same sources in VE 308-313, and "T" which overlaps with the same sources in VE 236-238. Other joins include: "I" to A₁ because it overlaps with "B", "C" (= D) and "K" (= C) in VE 135 and with "M" (= B), "C" and "K" in VE 171–174; "P" to C because it overlaps with "A", "O" (= D) and "R" (= B) in VE 316, with "A", "O" and "S" (= B) in VE 310–312 and with "A", "O" and "T" (= B) in VE 277–285 and 317; "Z" to C because it overlaps with "A", "B" and "V" (= D) in VE 407–409; "X" to C because it overlaps with "A", "B" and "V" in VE 354–356 and 389, with A, "S" (= B) and "V" in VE 388 and 418-420 and with "A", "B" and "AK" (= D) in VE 583 f. We now recognize that "AI", which overlaps with "A", "X" (= C) and "AD" (= D) in VE 551–553, must belong to B. The remaining fragments can easily be assigned along the same lines. The information provided by Archi (1992, 18) and Conti (1989, 45) that the glosses VE 1090 ff. are attested only in A₂ and B makes it trivial to conclude that "T", "BA", "BB" etc. all belong to B.

⁴ See Conti (1990, 64 n. 7) concerning "D". The same holds for "E" which is an evident join to "D". Bonechi (2008b) decides to join both of them to source C.

⁵ See Conti (1989, 46). Bonechi (2008b) decides to join it to source B.

⁶ The most typical CV- and VC-signs in Ebla are for *l*: *la*, *li*, *lu*, $al_6(MAH)$, *il*, *ul*; for *r*: *ra*, $ri_2(URU)$, $ru_{12}(EN)$, *ar*, *ir*, *ur* (see Krebernik 1982, 210; Catagnoti 2012, 13 f.).

⁷ Thus Archi/Piacentini/Pomponio (1993, 17), Bonechi (1993, xxxii), Catagnoti (2012, 40), Conti (1990, 41), Huehnergard/Woods (2004, 237), Krebernik (1982, 210 f.; 1988, 28; 1996, 237), Krecher (1984, 150), Müller (1988, 72 f.), Sjöberg (2003b, 255), Streck (2011, 343), Tonietti (1992, 113), and others.

least one of the textual variants of VE, whether or not lexical identifications have been proposed for these glosses:

*ar-ra-bu*₃ ~ *a-ra-bu*₃*-um* (VE 873) /*Harrabum*/ (Krebernik 1983, 33 f.) or /*arrabum*/ (Conti 1990, 205)

 ar_3 (HAR)-ra-dum ~ a_3 -ra-dum (VE 315 + 065)

bur-ra-zu-um ~ bu_3 -*ra-zu-um* (VE 195) /*purrāsum*/ (Krebernik 1983, 8)

hur- ri_2 -lu ~ hu- ri_2 -lu (VE 274) (unidentified, but probably approximately /hurrirum/)

*hur-rum*₂ ~ *hu-ru*₁₂*-um* (VE 839 + 852) */hurrum/* (Krebernik 1983, 33)

*ir-ru*₁₂ (VE 51) /*irrū*/ (Sjöberg 2003a, 530 f.)

ma- gar_3 - ru_{12} (VE 214) (interpretation uncertain, see Conti 1990, 97)

 $[m]ar-ru_{12}-um$ (VE 884) /marrum/ (Krebernik 1983, 34) mar-ru_{12}-^fx¹ (VE 0012)

In other instances, the gemination is not written but can be inferred from the proposed etymologies:

*du-da-ri*₂-*bu*₃-*um* (VE 126 + 0233) /*tuttarriBum*/ (Hecker 1984, 219)

ga-ra-dum (VE 271) /qarrādum/ (Conti 1990, 111)

*ga-ru*₁₂*-um* ~ *ga-ra-um* (VE 225). The first variant has been understood as a D-stem infinitive /*Garru?um*/ (Krebernik 1983, 18 n. 65). The root may either be \sqrt{qr} ? (Krebernik) or \sqrt{gr} ? (Sjöberg 2003a, 542).

*gi-du-ru*₁₂-*um* (VE 088) /*kitturrum*/ (Sjöberg 2004, 278) *hu-ri*₂ *bu*₃-*bu*₃-*dim* ~ *hu-ru*₁₂-*dum* (VE 468) /*hurri būbtim*/ (Bonechi 2000, 101)

ma- ri_2 -dum (VE 1236), root \sqrt{mrr} (Fales 1988, 208)

*mu-ru*₁₂*-um* (VE 676) */murrum/* (Conti 1990, 178)

sa-ra-du-um (VE 260) */śarratum/* (Krebernik 1983, 47; differently Sjöberg 2003a, 543 f.)

*wa/wu-ru*₁₂-*šum*₂ (VE 1214) */wurruṯum/* (Conti 1996, 198 f.; Sjöberg 2003a, 557)

If this rule is accepted, the following proposed interpretations need to be abandoned. I believe that none of them is so reliable as to invalidate my generalization:

There are two attestations in Eblaite of a term *du-lum*, one in VE 629 as a gloss of A.NIGIN₂, and another in an Eblaite incantation in the phrase NIGIN₂ *du-lum-ma* (Krebernik 1984, 164). Both are probably the same word. No less than four different readings have been suggested, namely /*dōrum*/ (Krebernik 1983, 23 n. 78), /*durrum*/ (Krebernik 1984, 166), /*tūrum*/ (Conti 1990, 173) and /*dūl(um)*/ (Sallaberger 2003, 621 n. 23). All of them are compatible with my rule except /*durrum*/.

ga-la-dum (VE 258) /karratum/ ("very tentatively" suggested by Civil 1987, 238) ir_3 - $^{I}lu^{1}$ -um (VE 1232), for which a rather far-fetched derivation from a root \sqrt{srr} was suggested by Fronzaroli (2003a, 93 f.)

ma-ga-lu-um ~ *ma-ga-ru*₁₂*-um* (VE 432), compared to Akkadian *magarru* "wheel" by Sjöberg (1999, 530). I have to assume either that the equation is incorrect or that the nominal formation was a different one in Eblaite.

The sequence *mar*-LUM (VE 302, 602, 648) must never be read */*marrum*/ as has occasionally been assumed (e. g. by Krecher 1984, 150). This can be proved for two of the three instances, which in fact read -*mar*-*num*₂ (VE 648, variant reading -*mu*-*ra*-*nu*-*um*) and *mar*-*gum*₂ (VE 602, variant reading *ma*-*la*-*gu*-*um*, interpreted as /*marqum*/ by Conti 1990, 167 and as /*markum*/ by Krecher 1984, 151).

 $šar_x$ (NE)-*la-dum /darratum/* (VE 514), tentatively suggested by Conti (1990, 145). The sign NE is ambiguous and can also be read bi_2 or ni_5 , which multiplies the possibilities of interpretation.

Single r in source B of VE

This leaves us, up to this point, with the rule that a geminate /rr/ is written r, whereas a single /r/ can be written ror l in Eblaite. The different sources of VE often vary r and lspellings for the same gloss, which may create the impression that Eblaite spelling is chaotic. The r/l-variation is in fact one of the features that Krecher (1987, 183) gave as an example of what he perceived as characteristic "inconsistencies" in the texts from Ebla. However, Conti (1990) demonstrated that the spelling of a single source of VE (source D in his case) is much more consistent than that of all five sources lumped together.⁸ In his study of the graphemic system of source D of VE, Conti (1990, 20 f.) found that the spelling of /r/ as l is very rare in that text. Source D would therefore not be a useful candidate for investigating the r/l-interchange.

I will examine another source, namely source B of VE, in which the exchange is frequent. In all that follows, the attestations are taken exclusively from source B, and all statements will pertain to this individual source. When variants from other sources are cited (introduced by "o.s."), this is only to add evidence for the phonemic interpretation of the entry.

⁸ Fronzaroli (1977, 42) already suggested that the l/r-alternation, or the lack of it, might have been consistent for each individual scribe. He believed that the scribes who produced the interchange had a non-Semitic native language. Archi (2006, 109), too, is well aware of differences between the sources of VE: "*D*, with very few exceptions, uses *r*-signs for /r/; *C*, instead, prefers *l*-signs, more than *A* and *B*."

The stress rule

It goes without saying that we have no prior knowledge of Eblaite word stress. Nevertheless, one assumption can almost be taken for granted, namely that nominal case endings were unstressed. This is because case endings were never stressed in any known Semitic language, but were, on the contrary, subject to reduction and loss in all branches of Semitic.

If this reasoning is accepted, it will follow that the first syllable of disyllabic nouns, being the only syllable apart from the case ending, must have been stressed. There are two known examples in source B of VE of /r/ at the onset of such a presumed stressed syllable, and in both these cases /r/ is spelled out as r:

*ri*₂-*du-um* (VE 838) /*rīdum*/ (Conti 1990, 201) *ri*₂-*mu-um* (VE 324) /*reḥmum*/ (Krebernik 1983, 14)

I therefore advance the hypothesis that, in source B of VE, the single phoneme /r/ was spelled r when followed by a stressed vowel but l when followed by an unstressed vowel.

Spelling of *r* as the final consonant of nouns

Next, the striking fact merits attention that /r/ as the final consonant of a noun is consistently spelled l, for which documentation is abundant. This agrees with the stress hypothesis since the final consonant is followed by the case ending which is assumed to be unstressed. Note that some of the following items are spelled with *-r*- in other sources. This proves on the one hand that the word really had an etymological /r/ and on the other that sources other than B of VE follow different spelling conventions.

*a*₃-*da-lu-um* (o.s. *a*₃-*da-ru*₁₂-*um*) (VE 595) /*hadrum*/ (Fronzaroli 1984a, 165; Krebernik 1983, 14)

a-lu-um (VE 826) /wa?rum/ (Conti 1990, 198)

*a-šu-bi*₂*-lum* (VE 273) /*adupīrum*/ (Conti 1990, 111)

'*a*₅(NI)-*za*-*lu*-*um* (VE 1059) /'*a*s*ārum*/ (Bonechi 1999, 24) *ba*-*da*-*lu* (o.s. *ma*-*ba*-*di*₃-*ru*₁₂) (VE 532), probably /*BaD*(*a*)*rum*/, the variant reading representing a different stem formation

[ba]-ga-lu (VE 243), root \sqrt{bkr} (Krebernik 1983, 13)

ba-ga-lum (VE 1101) /baqarum/ (Sjöberg 2004, 271)

 $[bu_3]$ -ga-lu (o.s. bu_3 -ga-ru₁₂) (VE 270) /bukrum/ (Conti 1989, 46 and 1990, 111)

 $[da-a\check{s}-d]a-mi_3-lum$ (VE 1377), root $\forall\check{s}mr$ (Sjöberg 2003a, 559)

da-ba-lum (VE 1283) /*Dappārum*/ (Bonechi 2006, 88)

da- gu_2 -lum (o.s. da- gu_2 - ru_{12} -um) (VE 646) (unidentified, see Conti 1996, 198)

dal-da-gi-lum (VE 186) */tadtak(k)irum/* (Conti 1990, 95 f., with hesitation)

du-ba-lu-um (VE 277) /*dubrum*/ (Conti 1990, 111f.; Rendsburg 2002, 204)

dub-da-lu-um (VE 990) /tubtārum/ (Kienast 1984, 252)

du- di_3 -lum (VE 609) /tuttirum/ (Krebernik 1983, 23; Sjöberg 2004, 266)

du-uš-da-gi-lum (VE 164), root √*zkr* (Krebernik 1983, 6; differently Conti 1990, 90 f.)

ga-ša-lum (VE 415) /gad(ā)rum/ (Conti 1990, 130)

gi-lu-um (VE 586) /qiwrum/ (Conti 1990, 165)

gi-na-lum (o.s. *gi-na-ru*₁₂*-um*) (VE 572) /*kinnārum*/ (Krebernik 1983, 21)

gi-za-lu (VE 651) /*kiz*(*a*)*rum*/ (Conti 1990, 175 f.; differently Sjöberg 2003b, 257 f.)

gi-zi-lu-um (VE 992) /*kiẓrum*/ (Krebernik 1983, 36; reading with *k*- rather than *q*- following Conti 1990, 40)

*gu*₂-*'a*₃-*lu* (o.s. *gu*₂-*lum*) (VE 657) /*guHrum*/ (Conti 1990, 177)

ha-lu-um (o.s. *ha-a-lum*) (VE 724) /*hayrum*/ (Conti 1990, 184)

i-ša-ba-lu-um (VE 1175) /*itbārum*/ (Fronzaroli 1991, 467) *iš-ħa-la* (o.s. *iš-ha-ra*) (VE 809) /*išħara*/ (Lambert 1984, 400)

lu-lum (o.s. $lu-ru_{12}$ -um) (VE 430) / $l\bar{u}rum$ / (Pasquali 2010) [m]a-[ba]-da-la (o.s. ma-ba-da-ra) (VE 354) / $mabtar\bar{a}(n)$ / (Fronzaroli 2011, 60)

sa-i₃-lu-um (VE 679) /šaḥīrum/ (Conti 1990, 179)

sa-su-ga-lum (VE 1097) (belongs here if Rendsburg's 1992 equation with Hebrew *ssSgr* is correct)

si-gi-lum (o.s. *sa-gi-lum*) (VE 348) /*šākirum*/ (Conti 1990, 122, with hesitation)

si-gi-lum (VE 817) /*šiqrum*/ (Conti 1990, 196 with n. 612) *su-mu-hu-lum* (VE 431) /*šumhurum*/ (Civil 1987, 238 f.) *ša-ha-lum* (VE 1112) /*dakarum*/ (Krebernik 1983, 39, with hesitation)⁹

wa-zi-lu-um (VE 1012) */wāṣirum/* (Krebernik 1983, 36) *za-lum* (VE 692) */zarûm/* (Sjöberg 2004, 267)

This rule is overridden by the requirement to spell geminate /*rr*/ as *r*. This concerns the following items from source B of VE, which were discussed above: hu- ru_{12} -um(o.s. hur- rum_2) (VE 839 + 852), ma- gar_3 - ru_{12} (VE 214), [*m*]ar- ru_{12} -um (VE 884), mu- ru_{12} -um (VE 676).

⁹ I consider Krebernik's interpretation, with a slight correction to $/\underline{d}a\underline{k}rum/$, convincing because the spirantization of syllable-final velars is otherwise attested in Eblaite (see Krebernik 1988, 29 for $k > \underline{k}$, Pasquali 2009 for $g > \overline{g}$).

I thus suggest that the following items with a written r as their final consonant, for which identifications are either absent, controversial or otherwise doubtful, should be posited with a phonological /rr/:

*hu-ru*₁₂-*um* (o.s. *hu-ru*₁₂-*du-um*) (VE 890) (unidentified, see Sjöberg 2004, 269)

 $na-ba-sa-ru_{12}-um$ (VE 564)

si-da- ru_{12} (VE 1075). Sjöberg (2003a, 553) compares an Arabic plant name *sidr*. This is either wrong or would require me to assume a different nominal formation for Eblaite.

*si-ru*₁₂-*um* (VE 316). Competing identifications by Rendsburg (2002, 204 f.), Sjöberg (1999, 527) and Vattioni (1987, 213), none of which would imply /rr/.

 u_9 - ru_{12} -um (VE 438). Competing identifications by Krebernik (1983, 16) and Sjöberg (2003a, 548), none of which would imply /rr/.

[*za-r*]*a-ba-dum* (o.s. *za-ra-ba-dim*) (VE 1199). Both Fronzaroli (1988, 20 n. 9) and Bonechi (1999, 32 f.) read the last two signs as */baytim/* "... of the house" but disagree in their interpretations of the first element.

*zi-ru*₁₂-*um* (VE 935), connected with a root \sqrt{zwr} by Vattioni (1987, 214)

G-stem infinitives

If we accept the validity of the stress rule, then we get a clue to investigating word stress in Eblaite. This method will first be applied to infinitives of regular G-stem verbs. They have the same shape *CaCāCum* in Eblaite as in Akkadian. The following entries from source B of VE have been suggested to represent such infinitives with an etymological /r/ as one of their radicals:

 a_3 -*la-lum* (o.s. a_3 -*a-lum*) (VE 590) was tentatively connected with a verbal root \sqrt{hrr} by Krebernik (1983, 23), probably with an infinitive $*/har\bar{a}rum/$ in mind. But the reading can only be */Halālum/* as shown by the variant spelling that drops the liquid altogether.¹⁰

*a*₃-*ra-bu*₃-*um* (VE 1027) */harābum/* (Krebernik 1983, 37)

ba- ia_3 -lum (VE 701) /baharum/ (Conti 1990, 182). Another source has ba-i-ra-dum which must be a different stem formation.

ba-da-lu (VE 532) /batārum/ (Conti 1990, 151)

ba-la- $g[u_2$ -um] (VE 851). Conti (1990, 204) reads this as an infinitive / $par\bar{a}kum$ / "to obstruct", but it could equally well be an adjective /parkum/ "obstructed" (see CAD P 187 f.). Bonechi (2006, 90) considers an interpretation as */parrākum/*, which I have to reject.

i-sa-lum (VE 1119) /*yišarum*/ or /*yišārum*/ (Fronzaroli 1984a, 187; Krebernik 1983, 39)¹¹

*la-'a*₅(NI)-*lum* (o.s. *ra-'a*₅-*lum*) (VE 580) /*raḥālum*/ (Conti 1990, 163) or /*raṢālum*/ (Sjöberg 1999, 534)

ma-ḥa-lum (VE 947) */maḥārum/* (Fronzaroli 1984a, 170; Krebernik 1983, 35)

na-za-lum (VE 908) /*naẓārum*/ (Archi 1998; Bonechi 2006, 87; Krebernik 1983, 34)

ša-la-um (VE 659) /*darSum*/ or /*darāSum*/ (Krebernik 1983, 26; Sjöberg 2004, 266)

Among these items, the spelling of /r/ as r occurs exclusively in *harābum*, where /r/ figures as the second radical. Three other examples of a similar structure (**darā*Sum, **ḥarārum*, **parākum*) would contradict this but can be explained differently. This suggests that Eblaite G-stem infinitives were stressed on the penult: /CaCaCum/, which is certainly in agreement with most Assyriologists' expectations.

Stress in nouns with a long penult

The insight of the preceding paragraph can be extended to the more general rule that nouns are stressed on the penult when their penult is long (= contains a long vowel or is a closed syllable). There are a good number of examples where the onset of a long penult is written *r* in source B of VE:

*'a*₃-*ga*-*ra*-*gu*₂ (VE 706) */hagarakkum/* (Conti 1990, 183) *a*-*ru*₁₂-*gu*-*um* (VE 601) */'aruqqum/* (Conti 1990, 167)

ba-ra-su (VE 374) /*barāSu*/ (Krebernik 1982, 217 and 1983, 14)

*dam-ri*₂-*gu* (VE 611) */tamrīqum/* (Conti 1990, 169; Sjöberg 2003b, 257)

da- ri_2 -ma-dum (o.s. da- ri_2 -dum) (VE 691). Conti (1990, 37 f. and 180 f.) assumes a morphological variation here: / $tarim\bar{a}tum$ / plural vs. /tarimtum/ singular. I prefer to consider both variants as spellings of a uniform /tarimtum/ with one of the spellings omitting the sonorant¹² and the

¹⁰ On the suppression of */l/* ("L-Reduktion"), another peculiar feature of Eblaite spelling, see e.g. Tonietti (1992), Catagnoti (2012, 40 f.), Conti (1990, 21), Krebernik (1982, 210 f.), Krecher (1984, 157).

¹¹ Both readings would conform to my rule. But the easier reading is /*yišarum*/ "right" (= Akk. *išarum*). The infinitive "to be right" (= Akk. *ešērum*) should be */*yašārum*/ in Eblaite, so that one would have to assume either an imprecise spelling of /*ya*-/ as *i* or a by-form /*yišārum*/ of the infinitive.

¹² The graphic omission of sonorants at the end of a syllable is a well-known phenomenon in Eblaite (Conti 1990, 32–35). Conti does not include examples for /m/, but the omission of /m/ is copiously documented for the mimation of nominal case endings.

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other inserting a silent vowel. As Tonietti (2011/12, 70–73) says, the silent vowel of Eblaite spelling is either identical with the preceding spoken vowel or else an invariant a; the second option was chosen here.¹³

ga- ri_2 -LUM (o.s. gar_3 -a-nu) "short" (VE 570). The Semitic root is \sqrt{krh} as for Akkadian $kar\hat{u}$. Both Conti (1990, 160) and Krebernik (1983, 21; 32 n. 104) read the spelling of source B as ga- ri_2 - num_2 , but this would be morphologically opaque. I prefer a reading ga- ri_2 -hum (see Krebernik 1982, 195 for this sound value), so that we arrive at the interpretations $/kar\bar{n}hum/ \sim /karh\bar{n}num/$, both of which are well-known Semitic adjectival patterns.

*za-ri*₂-*iš-dum* (VE 488) /*dārištum*/ (Krebernik 1983, 10)

Stress on the penult can be proved not only by a spelling r- in the onset of the penult, but also by a spelling l- for /r/ in the onset of the antepenult. Demonstrable examples of /r/ in that position are less frequent, but two cases in point are:

*la-di*₃-*ba-d*[*um*[?]] (o.s. *la-di*₃-*dum*) (VE 1270) /*rațibtum*/ (Krebernik 1983, 42)

la-hi-lu-um (o.s. *ra-ha-um*) (VE 878). The variants seem to represent different stem formations $/rahilum/ \sim /rahlum/$ of a single root.¹⁴

Stress in nouns with a short penult

While there are good grounds for assuming that a long penult carried stress, the evidence is less clear concerning stress in nouns with a short penult. It appears that nouns of the pattern *CVCCVCum* had penult stress as well:

ma-ba-ra-zu-um (VE 760) */mapraSum/* (Krebernik 1983, 29)

sa-ra-dum (VE 972) /*śaSratum*/ (Bonechi 2008a, 2f.) *su-da-ra-gu* (VE 618) /*śutawraqum*/ (Krebernik 1983, 24)

There are two pertinent items that have been interpreted as G-stem participles:

14 On this item see Bonechi (2001, 140 n. 26) who reads /raħilum/ ~ /raħlum/.

ra-gi-um (VE 892) /*rāqiḥum*/ (Fronzaroli 1982, 114; see CAD R 173 f. for a close Akkadian parallel)

za- ri_2 -um (VE 740) /SariHum/ (Krebernik 1983, 28; his suggestion that this is a participle does not seem certain)

They contradict each other, but I give preference to the first term, which seems more reliable. This admittedly sparse evidence suggests that the participle had antepenult stress (*CáCiCum*). There is another item which, if the stress rule is accepted, must have carried stress on the first syllable:

ra-ma-nu-um (VE 1026) "self" (Krebernik 1983, 37). This word has a somewhat abnormal stem formation in Akkadian (*/ramanum*/ with a short but unsyncopated internal vowel, see Peust 2009, 227). I cannot judge whether the Eblaite pronunciation of this item was */rámanum*/, */rấmanum*/ or even */rámnum*/.

There remain a number of items whose stem formation is highly uncertain but which could easily be reconstructed with a stressed penult:

*ba-a-ri*₂-*dum* (VE 197) (approximately:) /*pa*S*ritum*/ (Conti 1990, 96)

*ba-ri*₂-*u*₃ (VE 591) /*bāriḥum*/ or /*barīḥum*/ (see Sjöberg 2004, 265)

ga-ra-dum (VE 449), root √qry (d'Agostino 1996)

la- a_3 -*dum* (o.s. *ra-* a_3 -*dum*) (VE 516 f.), read /*rāḥatum*/ by (Conti 1990, 145) but /*raḥ*(*a*)*tum*/ by Krebernik (1983, 19; adopted by Militarev/Kogan 2000, 202). My rules predict (approximately) /*raḥátum*/ or /*raḥátum*/.

ma-zi- ri_2 - gum_2 (o.s. ma-za- ri_2 - gu_2) (VE 407) /mazriqum/ or /mazriqum/ (Sjöberg 2003b, 255)

*wa-ri*₂-<*gu*₂>-*um* (VE 864) (approximately:) /*warikum*/ (Dattilo 1997)

Considering the rule that geminate /rr/ is written r in all positions, the r-spelling cannot provide any information on stress in words such as ga- ru_{12} -um (VE 225), hu- ru_{12} -dum (VE 468) or wa- ru_{12} - \check{su} (VE 1214) for which readings with /rr/ are to be assumed (discussed in detail above).

Syllable-final r written by (C)VC-signs

As is well known (see footnote 13 above), Eblaite spelling can write syllable-final consonants to some extent but often prefers to approximate them by CV-signs, that is, by inserting silent vowels. The scribe of source B of VE in fact possessed a sufficient inventory of VC-signs to write *l* and *r* at the end of a syllable: $al_6(MAH)$, *ar*, *il*, *ir*, *ul*, *ur*, alongside a choice of relevant CVC- (for the most part *Car*-) signs

¹³ On the issue see also Krecher (1984, 150–154). Since the use of -*a*- as an invariant silent vowel is not yet well known, it is appropriate to cite some further supporting examples from VE (including sources other than B) for confirmation: bu_3 -ga- ru_{12}/lu (VE 270) /bukrum/ (Conti 1989, 46 and 1990, 111); du-ba-lu-um (VE 277) /dubrum/ (Conti 1980, 111 f.; Rendsburg 2002, 204); du-la- bu_3 (VE 292) /dulbum/ (Conti 1990, 114; Sjöberg 1999, 527); mu-sa-dum (VE 1359) /muštum/ (Sjöberg 2004, 276); ni_5 -sa-gu-um (VE 849) /nišqum/ (Conti 1990, 203); u_3 - ri_2 -ba-dum (VE 548) /uribtum/ (Conti 1990, 154 f.).

such as *bar*, *dal*, *dar*, *dur*, *gal*, *gar*₃, *mar*, *sar*, *zar*₃(SUM). Nonetheless, spellings that involve silent vowels were frequently employed instead.

When syllable-final l and r are rendered by (C)VCsigns in source B of VE, it turns out that spelling is always, or nearly so, consistent with etymological expectation. (*C*)*Vr*-signs are employed in all positions irrespectively of word stress:

 a_5 -*dar-dim* (VE 684, gloss with the same spelling in VE 619) */hadārtim/* (Conti 1990, 179)

ar- gu_2 -um (VE 1042) /'argum/ (Fronzaroli 1984a, 149 f.) ar-ma-LUM($lum/num_2/gum_2$) (VE 1102)

bar-ša-цим (VE 343)

da-ir-iš-du-um (VE 790) */teḥrīštum/* (thus Conti 1990, 190 f., but it seems to me that the spelling rather wants to denote something like */*taḥirštum/*)

 $[da]r-zu-um (VE 163) / tarzūm/ (Sjöberg 2003a, 539 f.) \\ dur-NE(bi_2/ni_5)-lum (o.s. dur-za-NE-lum) (VE 1262) \\ dur-zu-um (VE 1162) / turṣum/ (Sjöberg 2003b, 264) \\ ga-bar-dum (VE 747) / gabartum/ (Sjöberg 2004, 267) \\ gar_3-su-um (VE 576) / karśum/ (Krebernik 1983, 22)$

 gu_2 -mar-num₂ (o.s. gu_2 -mu-ra-nu-um) (VE 648), root \sqrt{kmr} (Civil 1987, 236)

ir₃-'a₃ (VE 957)

*ir-bi*₂*-num*₂ (VE 1094) /*Serbēnum*/ (Bonechi 2008a, 17) *ir-gi-lum* (VE 1095) /*ḥergilum*/ (Bonechi 2008a, 17)

ir-i-lum (o.s. *ir-i-lu-um*, ${}^{\text{I}}r_3$ -*rum*₂¹) (VE 685), identified with a root $\sqrt{h}rr$ by Sjöberg (2004, 266 f.). The reading, at least of the variant *ir-i-lum*, seems to be /*hirhirum*/ or /*hirhirum*/.

mar-ba-a (VE 414), root \sqrt{rb} (Sjöberg 2004, 262, with hesitation)

maš-ar-dum (VE 899) (see Fales 1988, 208)

*maš-gar*₃-*dum* (VE 1023), root √*śkr* (Fales 1988, 208 f.) *na-bar-su-um* (VE 993) /*naparšuḥum*/ (Bonechi 2000, 100)

[*na-s*]*ar-du-lu-um* (VE 1129) (see Sjöberg 2004, 272) *ša-ar* (VE 774) /*SaHar*/ (Krebernik 1983, 29)

*šar-u*₃ (VE 684) /*darSum*/ (Krebernik 1983, 26)

*ur-bu*₃*-um* (VE 1263) */'urbum/* (Fronzaroli 1984b, 131)

zar₃-ba-dim (VE 657) / Şarbatim/ (Krebernik 1983, 26)

There is almost no attested use of a *(C)Vl*-sign to render an etymological */CVr/*. The only example to that effect would be *ma-ga-ba-al*₆-*dum* (VE 428) if Bonechi's (1998/9, 280) interpretation as */makbartum/* is correct.

Syllable-final r written by CV-signs

When, by contrast, an *-rC*- cluster is written by a graphically open syllable, we invariably find the *lV*-spelling; or in other words, /r/ before the silent vowel is always written *l*:

ba-la-nu (VE 445) /*par?ānum*/ (Sjöberg 1999, 531, with hesitation)

da-la-za (o.s. *te-ra-za*) (VE 550) */tarHaẓay*/ (Krebernik 1983, 20 f.). It is undisputed that both VE 550 and the following item *mar-a-za* (VE 551) belong to the root \sqrt{rhz} like Akkadian *râṣum* "to help". But Conti (1990, 157), followed by Fronzaroli (2011, 61), thinks that VE 550 reflects a form */tehrāṣān*/ with metathesis. I prefer Krebernik's unmetathesized reading – at least for source B – since it is consistent with my rules.

ma-la-gu-um (o.s. $mar-gum_2$) (VE 602) must be /marGum/ (see above on this item)

ni-ga-la-du (o.s. ni-ga-ra-du) (VE 798) /ninkardu/, a theonym borrowed from Sumerian ^dnin-kar-du (Lambert 1984, 399)

si-li-sa (VE 781) /*ŚirŚay*/ (Krebernik 1983, 30, with hesitation)

za-la-sa (VE 1134) /*daršay*/ (Krebernik 1983, 10; cf. Sjöberg 2004, 272)

za-la-sum₆ (VE 227) /daršum/ (Krebernik 1983, 10)

Unidentified glosses

A lot of Eblaite glosses of VE are still unidentified. In what follows, glosses will be cited that have not been discussed above and for which an underlying /r/ can be assumed despite the missing identification. This requires that at least one source of VE explicitly spells out the *r*. In principle, my rules should help in narrowing down the possibilities of phonemic interpretation and thus in establishing interpretations of the glosses, but I will not try to elaborate any new interpretations here.

In the following items, source B writes *r*. Most of them may well have /r/ in the onset of a stressed penult. Some might also contain /rr/:

a-nu-ru₁₂-dum (o.s. a-nu-ru₁₂-ra-dum) (VE 396) ba-ra-dum (VE 694) dam-ri₂-gu (VE 611) di₃-ra-dum (VE 1115) ga-ba-ra-šu (VE 1078) (see Catagnoti 2007, 226) ga-ri₂-dum (VE 1137) gu₂-gu₂-ru₁₂-dum (VE 938) ha-ra²-nu (VE 762) i-ra-dim (VE 1166) (see Krebernik 1983, 9 n. 32) ma-ha-ri₂-nu-um (VE 1202) *su-ra-um* (VE 165) (see Sjöberg 1999, 522) *wa-ri₂-gi* (VE 698)

Four items likewise lacking an interpretation are likely to involve a reduplication because /r/ and /l/ do not usually co-occur in a Semitic root. Conforming to the rules suggested here, /r/ as the final radical is written l:

ar-'a₃-lum (VE 466), presumably /HarHārum/

*bu*₃-*ri*₂-*lum* (VE 1138), presumably /*Burīrum*/

*gi-sa-ri*₂-*lum* (o.s. *gi-sa-ri*₂-*ru*₁₂-*um*) (VE 408), presumably /*GiS(a)rīrum*/

gu-ra-lu (o.s. *gu-ra-ru*₁₂) (VE 939), presumably /*Gurārum*/

In a few cases where *r* appears to form the onset of an antepenult syllable, *r* might in fact belong to the penult if a spelling with silent vowel is assumed:

 $^{r}a_{3}^{1}$ - ru_{12} -ma-gi (VE 952), separated into a_{3} - ru_{12} ma-gi but left without interpretation by Sjöberg (2003b, 262), possibly /HarumGi/

*ri*₂-ga-dum (VE 188), possibly /*riGDum*/

Another interesting case is u_3 - $\check{s}u$ - ru_{12} -um (o.s. u_3 - $\check{s}u$ -lum) (VE 1031) (see Sjöberg 2004, 270 and Bonechi 2008b who remain agnostic as to this item). This cannot be $/u\check{s}(\bar{u})$ -rum/ because /-rum/ ought to have been spelled with -l- in source B, nor can it be / $u\check{s}urrum$ / because /rr/ ought not to have been spelled -l- in any source. Only a reading / $u\check{s}(u)$ - $r\hat{u}m$ / would agree with my rules. Alternatively, the variant spellings might be taken to represent two different stem formations, the more so as the corresponding logograms are also different ones.

I conclude this section with two glosses in which source B writes *l* but other sources have *r*:

*la-'a*₃-*dum* (o.s. *ra-'a*₃-*du*) (VE 746), whose semantics is discussed by Pasquali (2003), should be /raHáDum/

mu-mu-la-dum (o.s. *mu-mu-ra-dum*) (VE 523) should be */mumuRDum/* whereas Sjöberg (2003b, 256) tentatively suggests a reading */mumra?tum/*.

Remaining problems

Three or four problematic items remain in which two *r*'s occur in a sequence, and in which I have to assume that this fact caused some confusion to the scribe of source B:

*a-za-ra-ra-ri*₂-*dum* (o.s. *a-za-ra-ri*₂-*dum*) (VE 741) /'*aŞrarrītum* (?)/ (Krebernik 1983, 28). In this difficult gloss, the *r*-spelling which would only be appropriate to the geminate *r* seems to have been generalized to the other instance(s) of *r* in the same word.

*a-ša-ru*₁₂*-ru*₁₂ (VE 437), unidentified. I assume again that the second *r* should ordinarily have been spelled *l* but failed to be so by influence from the preceding *r*.

sa-la-lum (o.s. *sa-ra-ra-du*) (VE 543), interpreted as $/\check{s}ar\bar{a}r(t)um/$ by Conti (1990, 153). If his interpretation is correct, I will have to assume a generalization this time of the *l*-spelling to an /r/ before stressed vowel.

da-la-dum (o.s. *da-ra-dum*) (VE 1123), interpreted as */tarārtum/* by Fronzaroli (2003b, 228 f.) "comme hypothèse de travail". This might again be a confusion caused by two *r*'s in a word, but I rather suspect that the reading is mistaken and would better be (approximately) */DarDum/*.

Conclusions

Opinions have differed as to whether the r/l-interchange is a graphic or a phonological phenomenon, but most researchers have located it on the level of language and not of writing (see the overview in Conti 1990, 20)¹⁵. I want to defend the opposite view that the Proto-Semitic distribution of /r/ and /l/ remained intact in the Eblaite language, which is to say that the interchange is primarily a peculiarity of spelling, even though spelling may have been influenced by subphonemic aspects of articulation. Three arguments can be adduced in favour of this view:

(1) The interchange is not consistent but varies greatly across the texts. It is easier to believe in the existence of different scribal conventions than of different spoken dialects in a speech community so restricted in place and time that was Ebla.

(2) It has been shown above that the conventions for rendering a syllable-final *r* differ fundamentally according to whether *(C)VC*-signs or *CV*-signs (silent vowels) are employed. This definitely plays on the graphic level.

(3) If the interchange had a phonological basis, this would imply a sound change |r| > |l| (under some conditions) on the way from Proto-Semitic to Eblaite. In that case, we should expect only inherited vocabulary to have been affected but not recent foreignisms. But the spelling of *r* as *l* is also found in phonetic glosses of Sumerian vocabulary: *din-gi-li* for dingir "god" (Krebernik 1984, 122 f.), u_3 -ga-lum for ugur₂ "field" (Archi 1987, 94), and

¹⁵ To which add von Soden (1988, 325) and Krebernik (1996, 248) who see influence from non-Semitic contact languages that might have lacked the *l*/*r*-distinction, Streck (2011, 343) who expresses mild doubts about the contact language hypothesis, Müller (2003, 431–433) according to whom the *l*/*r*-interchange points to the existence of more than two *l*/*r*-phonemes in Eblaite, and Catagnoti (2012, 40–42) who seems to consider it a graphic phenomenon, though she is not very explicit on the matter.

in spellings of non-Eblaite toponyms: bu_3 -la-na-dim for "Euphrate"¹⁶ (Edzard 1984, 22 f.), ha-sa-sa-ki ~ ha-sa-sa-lu^{ki17} (Archi *et al.* 1993, 263 f.; Bonechi 1993, 177).

In the final section of this paper, a scenario will be proposed that is able to explain the rationale behind all the observations made above. While this is no proof of its correctness, I consider it the most probable scenario until someone will outline a better alternative in the future.

First, the closeness to the phoneme /l/ presupposes that Eblaite /r/ was a dental rather than a velar r.¹⁸ This is inherently probable in any case because a dental r is by far the most common type of r both in the Semitic languages and world-wide.

I further suggest that the phoneme /r/ of Eblaite had a fortis articulation, possibly as a strong trill, before stressed vowels and generally when geminated, but a lenis articulation, possibly as a weak trill or flap, before unstressed vowels. It would seem plausible for a language to favour fortis articulations in the neighbourhood of stress. The closest parallel that I can offer is from the Oceanic language Roviana, about which Corston-Oliver (2002, 467) says: "The liquid /r/ is lightly trilled [r] in unstressed syllables, and more strongly trilled in stressed syllables".¹⁹ A somewhat less close parallel is the pronunciation of the interdental fricative written *th* in English, which is usually voiceless (= fortis) before stressed vowels: "*thing*", but voiced (= lenis) before unstressed vowels: "*the*" (proclitic), "*weather*".

When scribe B of VE was taught to write the signs ra, ri_2 , ru_{12} , (s)he memorized them as stressed syllables and thus associated their sound values with a strong trill. These signs were then felt to be suited to writing /r before stressed vowels as well as geminate /rr/, but less so for writing the phonetically weaker /r before unstressed vowels, for which the scribe resorted to the signs of the *l*-series. In other words, the scribe did not recognize that the two different realizations of /r/ as a trill and as a flap belonged to the same phoneme.

At the end of a syllable, Eblaite /r/ had the same lenis pronunciation as before unstressed vowels. This is why lV-signs were chosen for its rendering whenever silent vowels were employed. But when the scribe learnt (*C*)*VC*signs such as *ar*, *ir*, *ur*, they were necessarily memorized with the lenis pronunciation as characteristic of syllablefinal rhotics, and not with a strong trill. For this reason, the distinction between (*C*)*Vr*- and (*C*)*Vl*-signs presented no difficulties and was in complete agreement with the phonemes of the language.

Spelling usage in source B of VE suggests that Eblaite word stress most frequently fell on the penult syllable, that is the last stem syllable, of nouns, especially when the penult was long. The existing data are insufficient for drawing conclusions on stress in other word classes such as finite verbal forms.

While geminate /rr/ was written exclusively with *r*-syllabograms in all Eblaite texts, scribes had varying practices regarding the spelling of a single /r/. It remains to be explored whether any other Eblaite texts share the usage of B, or whether there are texts whose spelling, while different from that of B, can be consistently explained by another set of rules.

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¹⁶ Sumerian ⁱ, buranun, Akkadian purattum.

¹⁷ Name of a town spelled with *r* in external sources: Mari *ha-za-za-ark*i, Hittite uru*ha-ša-šar*.

¹⁸ This obvious conclusion was already made by Hecker (1981, 167 n. 19) and Müller (1988, 73).

¹⁹ Effectively, "in stressed syllables" means before stressed vowels, because syllables are usually open in this language.

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²⁰ Announced e.g. in Fronzaroli (1996, 51).

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