The Proto-Germanic shift *ā > *ō
and early Germanic linguistic contacts[*]

Post-PIE *ō and *ā from all possible PIE sources are both reflected in Germanic by a single sound which, because of the sounds that continue it in the individual Germanic languages, is usually reconstructed as *ō for the latest stage of Proto-Germanic.[1] This merger is paralleled by the merger of the post-PIE short non-high back vowels *o and *a in PrGmc. *a. The merger of non-high back vowels is – at least in descriptive terms – a northwestern IE areal feature,[2] encompassing Germanic, Baltic, Slavic and Celtic, with differences in the details. In Baltic, only the short vowels merged, but the reflex of *ā remained distinct from that of *ō; the opposite is the case in Celtic, where only the long vowels were affected by the merger, whereas short *o and *a remained distinct.

The resultant vowel system of Proto-Germanic is oddly imbalanced, with the short vowels lacking a rounded mid-high back vowel and the long vowels lacking a long low back vowel. Therefore it has been suspected that the parallelism of developments within Germanic had indeed been perfect and that the erstwhile outcome of the merger had been not a trapezoid or triangular vowel system, but a quadrangular one in which the short and long low back vowels correlated with each other in quality. These vowels could be written phonemically *a and *ā, or, if greater allowance is made to phonetics, [ɑ(ː)] or rather rounded [ɒ(ː)], if not [ɔ(ː)]. For the sake of clarity and in contrast to the later vowel system, here the symbols *å and *ā̊ will be used with reference to the low back vowels *before* the emergence of the classical reconstructable Proto-Germanic stage.

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[1] The hypothesis of Schrijver 2003 that *ā and *ō remained distinct in Germanic in final syllables and before tautosyllabic *n in initial and final syllables, is of no consequence for the lexical items discussed here and will not be examined further.

[2] It may be noted here that also Proto-Finno-Ugric as well as Proto-Finno-Lappic possessed a quadrangular long vowel system consisting of *ī–ē–ō–ū (see Sinor 1988: 268, 297, 523).

Given the ultimate divergence in quality between the short and the long vowel, it seems rational to surmise that despite their phonemic correlation there must have existed slight allophonic differences in their phonetic realizations, with the long vowel *ā̄ tending stronger towards roundness. This is inferable from the very fact that it ultimately resulted in *ō some time in the Proto-Germanic period (thus basically Hollifield 1984: 65, but the scenario sketched by him is rather vague). Why then the phonological correlation between the two sounds was ultimately broken, can only be conjectured.[3] Perhaps the long vowel came under pressure from the incipient shift *ē > *ǣ > *ā, at least in the western and northern variants of Germanic. Furthermore, *ā may have been introduced as a marginal phoneme by the Proto-Germanic loss of *j between identical vowels, i.e. *aja > *ā (Þórhallsdóttir 1993: 35–36, citing Cowgill 1973: 296). On the other hand, the monophthongization of *a and a tautosyllabic nasal before a velar fricative did not help to fill the gap in the long-vowel system, because it resulted in a nasalized vowel *ą̄ (i.e. *anχ > *ą̄χ), not in an oral long vowel *ā. Thus around the beginning of the historical period, Germanic was on the verge of acquiring a new *ā. In words that were borrowed into Germanic or its dialects from Latin in the imperial period, Lat. ā is not reflected by *ō (<*ā̄), but by the new *ā by default (Kluge 1913: 23–24, 128), e.g. OHG phāl 'stake' ← pālus, OHG strāzza 'street' ← strāta, OHG kāsi 'cheese' ← cāseus, the OHG agentive suffix -āri ← -ārius. Cases where Lat. ā seems to be reflected by Gmc. *ă are actually borrowings from Vulgar Latin with pretonic shortening, e.g. OHG ratih, retih 'radish' ← VLat. rădīc- < Lat. rādīx 'root'. Two conclusions can be drawn: first, early Proto-Germanic *ā̄ had been moved up the phonetic triangle towards *ō by the time of those loans, so that to the speakers of Germanic it was not a phonetic or phonological equivalent to Lat. ā. Secondly, loans from Latin helped establish *ā as a more or less marginal or even erstwhile loan phoneme in Germanic.

Nevertheless, a handful of words (partly transmitted in secondary sources, partly foreign loans into Germanic) have been cited as evidence for a relatively late date for the conjectured shift *ā̄ > *ō during the Proto-Germanic period. In particular, it has been claimed that some of the evidence proves that the shift must have taken place after the first contacts of Germanic-speaking peoples with Rome, that is, in the 1st century B.C. or even as late as the 1st century A.D (see, for example, Ringe 2006: 145–146). In this article, this evidence will be reviewed

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[3] See also, for example, Tops 1973, Van Coetsem (1994: 76–81).

and it will be argued that its chronological value is not as unambiguous as has been assumed hitherto.

1. The Gothic placename *Ruma** (dat. sg. *Rumai*, Gal exp A) 'Rome' and the accompanying i-stem ethnonym *Rumoneis** (dat. pl. *Rumonim*, Rom exp; 2 Tim 1, 17) 'Romans', together with Old High German *Rūma* 'Rome', *rūmisk* 'Roman', etc. (beside innovated *Rōma*, *rōmisk*, etc.), Old Norse *Rúm*, *Rúmaborg* 'Rome', etc. (beside innovated *Róm*, *Rómaborg*, etc.), and once Old English *Rūmwalas** 'the Romans' (beside ordinary *Rōm*), allow us to set up a Proto-Germanic pair of toponym plus ethnonym **Rūmō* 'Rome', **Rūmōnaz* 'Roman' (the shift in stem-class of the ethnonym to the i-inflection in the plural is a specifically Gothic development, see Lühr 1985: 142–143, 147). The two names obviously go back to Latin *Rōma*, *Rōmānus* in some way. However, in them Lat. *ō* is represented by Gmc. **ū*,[4] and Lat. *ā* by Gmc. **ō*, very much unlike the regular substitute **ā* mentioned above. This has been used as the prime piece of evidence for an early loan from Latin when the shift in Germanic had not yet taken place. It has been suggested that the names were borrowed at a time when **ā̆* was still a closed, rounded sound in Germanic (perhaps approximately [ɒː]), but nevertheless suitable to represent Lat. *ā*, whereas the best approximation for Latin closed *ō* was to substitute it with Gmc. **ū*. Thus **Rūmō* would allow us a rare glimpse at phonetic developments within the reconstructed Proto-Germanic period. This is the line of argument, for example, of Noreen (1894: 11–12), Streitberg (1896: 48–49), Jellinek (1926: 182–185), Schwarz (1951: 21–22), Corazza (1969: 39–40), Hollifield (1984: 65), Ringe (2006: 146).

This explanation is quite plausible and cannot be disproved on purely linguistic grounds. But there exists a less straightforward alternative to explain Gmc. **Rūmō* 'Rome' and **Rūmōnaz*, an alternative which nevertheless accounts better for the historical and political environment in which the borrowing took place in Iron-Age Central Europe. Gmc. **Rūmō*, **Rūmōnaz* could be loans from a Central-European Celtic language like Gaulish (Gaulish will be used here as a shorthand term for any Central-European Celtic language; such a source of **Rūmō* was already suspected by Luft and Schwarz, according to Corazza 1969: 40;

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[4] Lat. *ō* is regularly substituted by Gmc. **ū*, e.g. OHG *mūrberi* 'mulberry' ← Lat. *mōrus*, OHG *lūrra* 'pomace' ← *lōrea*, Middle Ripuarian *ūr* 'hour' ← *hōra*, and perhaps, with shortening, OHG *wīnzuril* 'winemaker' ← Lat. *uīnitōr* (Streitberg 1896: 48–49, Kluge 1913: 25).

cf. also Öhmann 1919). The Gaulish exonyms for the city of Rome and for its citizens are not directly attested, but that such words must have existed is beyond doubt, and it is not unlikely that they were *$R\bar{u}m\bar{a}$ and *$R\bar{u}m\bar{a}nos$, themselves loans from the Latin words with adaptation to the Old-Celtic phonological system by substituting rounded high *$\bar{u}$ for Latin closed $\bar{o}$. In Proto-Celtic, the pentadic long-vowel system *$\bar{\imath}$–$\bar{e}$–$\bar{a}$–$\bar{o}$–$\bar{u}$, inherited from post-PIE, had been first reduced to a triangular long-vowel system *$\bar{\imath}$–$\bar{a}$–$\bar{u}$ (the question of possible remains of *$\bar{e}$ are passed over here), a stage that still obtained in early Gaulish. The gap left by *$\bar{o}$ had not yet been filled again at the time when Gauls and speakers of other Central-European Celtic languages were confronted with the rising Roman power in the second half of the 1st millenium B.C. The process of introducing a new $\bar{o}$ into the system by the monophthongization of Proto-Celtic *ou < Pre-Celtic *eu, *ou and partly *uu happened only as late as the historical stages of the Celtic languages and is observable in the preserved linguistic material. A rare further instance of the Gaulish substitution of $\bar{u}$ <ου> for Lat. $\bar{o}$ is the feminine name Κουαδρουνια (G-106) ← Roman gentilic $Quadr\bar{o}nia$ (Stüber 2007: 6).

Alternatively, it is conceivable that there was an intermediary between Latin and Gaulish, for instance Etruscan *$Ruma$ (cp. Etr. $ruma\chi$ (Vc 7.33) 'Roman, from Rome', and the Etruscan gentilic names $rumate$ (Co 1.32), $rumlnas$ (Vc 1.99), etc. < *$rumele$-na ← *$r\bar{o}melo$, Steinbauer 1999: 461), or Venetic *$Ruma$ (cp. Ven. $ruma.n.na$ (Es 49) and $ruman$ (Es 50), which are perhaps to be derived from the etymon $R\bar{o}ma$, see Pellegrini & Prosdocimi 1967: 162–163; sceptical Untermann 1961: 164).

In any case, the names of the city of Rome and of its citizens in Gaulish, probably *$R\bar{u}m\bar{a}$ and *$R\bar{u}m\bar{a}nos$, are likely to have belonged to the earliest stratum of Latin loans into Gaulish. While there is no direct inscriptional evidence for them, the words may be indirectly reflected in names. A Roman-age titulus from St. Andrä im Lavanttal (near ancient Virunum, province of Noricum) contains the genitive $Rumonis$ (CIL 3, 4966 = $Ubi\ erat\ Lupa$ 1999),[5] which may belong here. And the stem rum- recurs in the names of $matronae$ in Germania Inferior: $Matron(is)$

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[5] The name of the contractor of the inscription is traditionally read as $Auaro\ Rumonis$ $f(ilius)$, but Weber (1973: 74; see also Diether Schürr in $Ubi\ erat\ Lupa$ 1999) suggests that a letter may be missing at the beginning. It would then be possible to read it as the well-known Celtic name $Cauaro$ = *$kauar\bar{u}$. It is noteworthy that this same name is attested as $kavaron..s$. in the Venetic inscription Gt 4 from the Gurina in southern Carinthia, while the name *$r\bar{u}m\bar{u}$, which possibly underlies the spelling $Rumonis$, may be a loan from Venetic into Celtic (Pellegrini & Prosdocimi 1967: 163).

Rumanehi[s] (Bonn, CIL 13, 8028), *Matronis Rumanehis* (Rommerskirchen, AE 1977, 574), *Matronis Rumnaehabus* (Jülich, CIL 13, 7869), *Matronis Rumanehis* (Uellekoven, CIL 13, 8149), *M[a]tronis Rumanehis* (Weilerswist, AE 1977, 561), and once with *o* in *Matronis Romanehis* (Lommersen, CIL 13, 7973). For the apparently ethnical component of these names one may compare *Matronis Romaniscis* (Romanèche, ILTG 311) in Gallia Lugdunensis, or *Matribus meis [Ger]manis Suebis, Matribus Frisauis paternis, Matronis Hamauehis* (from the ethnonym *Chamaui*), or *Matribus Kannanef[atibus]* (see Neumann 2001: 439 and Birkhan 1997: 515–516; Nedoma 2010: 119 calls them probably detoponymic, but without a clear derivational basis). Delamarre analyses *Rumanehis* as **ro-māni-i̯ā-* 'the very good ones' (Delamarre 2007: 155–156; 226), but this is obviated by the preponderant spelling *u* in the first syllable, which is hard to square with Gaul. *ro-* < **pro*, the prefix for the excessive degree. For Neumann (1987: 104), the names contain the ethnicon 'Roman', but they attest to the phonetic merger of *o* and *u*. That means that for him the adjectives are based on recent loans of the ethnonym. But it cannot be excluded that the names are of much greater antiquity and that their vocalism is due to the native Gaulish phonology.

Whereas Gaulish-Roman contacts and in consequence a knowledge of the name of the Roman capital among the Celtic-speaking peoples of Western Europe can be taken for granted for the 4th century B.C. at the latest, for all we know Germanic-speaking people came into the focus of Roman attention only in the 2nd century B.C., when first the Bastarnae and the Sciri, and later the Cimbri and Teutones moved southward from their original homelands and caused disturbances within the sphere of Roman influence. Naturally, it is difficult to say when Rome in its turn had come into the focus of Germanic peoples, but it involves not too much speculation to assume that for their part some Germanic peoples had become aware of Rome and of its rising power by the 3rd or early 2nd centuries B.C. Given the fact that Germanic peoples in western Central Europe bordered on Celtic peoples in all those directions that led to and from Rome and the Roman power sphere, it is quite natural to suppose that any information about Rome that reached them first had had to pass through Celtic lands and mouths. The close cultural connections across the Germanic-Celtic transitional zone and the Celtic lexical influence on Germanic have been noted long before (see, for instance, Birkhan 1970, Beck et al. 1998 *passim*, Mees 1998, Rübekeil 2002, Schumacher 2007). Loan relations and parallel developments especially

in the semantic fields of social institutions and organisation attest to the close interrelationship between the two linguistic groups. At the same time, borrowings occurring before the operation of Grimm's Law like Gmc. *$r\bar{\imath}kija^n$ 'realm' ← Celt. *$r\bar{\imath}gii̯on$ virtually guarantee the early date of Celtic-Germanic contacts, and borrowings unaffected by Grimm's Law like Gmc. *$amba\chi taz$ 'servant' ← Celt. *$amba\chi tos$ attest to the long persistance of the contacts.

In such a socio-political environment it would not be surprising to find that the name of the Roman capital city had entered the Proto-Germanic language via the transmission of speakers of Celtic, in a phonological shape that can be postulated for an Old-Celtic language. The ordinary traffic and exchange of people and information between the cultural groups would have allowed the intrusion of the name into Germanic at almost any time while the channels of communication were open. It is most unlikely that the name of Rome had not been passed on to Germanic by the time when the Cimbric-Teutonic expedition was underway, an enterprise which had a notable Celtic component. In consequence, Goth. *Rumoneis* and the related words in younger Germanic languages cannot be adduced as evidence for a relatively late shift of *$\bar{\bar{a}}$ > *$\bar{o}$ within the Common Germanic period, because this particular word could have been borrowed from Celtic, not directly from Latin, very early in history.

2. Goth. *siponeis* 'disciple' (for Greek μαθητής) and the OHG *hapax seffu* gl. *satelles* (AhdGl. II 444, 50; 11th century) have been suspected to be loans from a Gaulish *$sep\bar{a}nii̯os$ 'follower' (from the PIE root √sek^u 'to follow'; e.g. Wissmann 1961, Delamarre 2003: 271; for a survey of the research up to his time see Birkhan 1976 who himself proposes a non-Celtic explanation). The relationship between these words would exhibit the same correspondence between Gaul. *$\bar{a}$ and Gmc. *$\bar{o}$ as the one postulated above for the word 'Rome'. However, a Celtic etymology faces the severe morphological obstacle that a suffix *-$\bar{a}no$- or *-$\bar{a}n(i)i̯o$- is foreign to Celtic languages as we know them (*-$\bar{a}no$- in presumed *$R\bar{u}m\bar{a}nos$ is of course a loan suffix). It is in principle thinkable that there was an agent noun Gaul. *$sep\bar{u}$, gen. *$seponos$ 'follower' < amphikinetic Pre-Celtic *$sék^u\bar{o}(n)$ that could underlie OHG *seffu* (for the inflectional type $R(é)$-$\bar{o}(n)$, cp. the Gaul. ethnonyms *Rēdones* < *$rei̯d^h\bar{o}(n)$ 'rider', or *Lingones* < Pre-Celtic *$pleng\bar{o}(n)$ 'jumper', Schaffner 2005: 77–78, 105–106). But in order to arrive at a basis from which Goth. *siponeis* could be borrowed, a

considerably larger amount of unprecedented morphological restructuring would be required. Without a certain etymology (see Lehmann 1986: 305–306 for alternative suggestions), this word does not qualify as an item relevant to the discussion about the chronology of the shift $*\bar{a}$ > $*\bar{o}$ in Germanic.

3. Another item that has been cited for an absolute dating of the inner-Germanic phonetic development is *Bācenis silua* (presumably meaning 'beech wood'), the name of a forest in Germania, reported by Julius Caesar in the *Commentarii de Bello Gallico* 6, 10, 5. This is an adjective *bōkeniz* 'beechen' derived from an n-stem-derivative of the Gmc. root noun *bōk-* 'beech' < PIE $*b^heh_2g$- (see Neumann 1973: 572 and Griepentrog 1995: 60–77, esp. 70–71; sceptical, but non-committal Rübekeil 2002: 175–180). But this example is not probative either for the hypothesis that the shift from earlier $*\bar{a}$ to directly reconstructable $*\bar{o}$ had not yet taken place by the middle of the 1st century B.C., when the Romans encountered Germanic peoples habitating the *Bācenis silua*. Again it is more likely from the entire political and historical environment in the first half of the 1st c. B.C. that the name reached the Romans via Gaulish transmission (thus already Hirt 1898, see Neumann 1973: 572), i.e. in a Gaulicized phonetic guise with substitution of Gaul. $*\bar{a}$ for Gmc. $*\bar{o}$. Again, the Gaulicization could have occurred much earlier than the 1st century B.C. If at the time of the substitution the donor language Germanic had already arrived at its final reconstructable phonological system $*\bar{\imath}$–$\bar{e}$–$\bar{o}$–$\bar{u}$, it is important to note that a different kind of substitution from the one in Lat. *Rōma* → Gaul. *Rūmā* above has to be invoked here. Whereas for Latin closed [oː] Gaul. $*\bar{u}$ seemed most appropriate as a substitute, for open Germanic [ɔː] Gaul. $*\bar{a}$ offered the better phonetic approximation, even more so as in all likelihood it too was phonetically rounded, to judge from the further fate of Proto-Celtic $*\bar{a}$ in the Insular-Celtic languages.

4. Possibly the same situation obtains in the next example, but the direction of borrowing is disputed. OE pl. *brēc* (sg. *brōc*), OHG *proh*, *bruoh*, ON *brók*, pl. *brœkr*, etc. (see Griepentrog 1995: 81–83) continue the Proto-Germanic feminine root noun *brōk, pl. *brōkiz* 'breeches, short trousers'. Latin and Greek authors make reference to a similar word in Gaulish. Although the word is not attested in native Gaulish sources, it has been borrowed – with the object – into Latin as pl. *brācae*, beside rare *brācēs* 'trousers', repudiated by the grammarians.

Brācae is first attested between 116 and 110 B.C. in the works of the satirist C. Lucilius (ca. 180–103 B.C.), and frequently afterwards (see Kramer 1996: 119–120 for the attestations). Diodorus 5, 30, 1 (first half of 1st century B.C.), most likely drawing on Posidonius (beginning of 1st century B.C.), speaks of Gaulish βράκας (Greek acc. pl.); Hesychius (5th or 6th century A.D., but using older material) mentions Celtic βράκες · ἀναξυρίδες. The word also occurs as an ā-stem βράκαι[6] and Greek papyri from Egypt attest to a derivative βρακίον[7] (see Kramer 1996: 119–124 for references) that is continued as βρακί in the modern language. The Posidonian-Diodorian testimony βράκας is perhaps direct evidence for the word in Gaulish; as is well known, Posidonius spent some time in the Narbonensis. The form is ambiguous as to the word's original stem class in Gaulish: Gaul. *brākās could be the acc. pl. both of an ā-stem (< Pre-Celt. *-āns) and of a consonant stem (< Pre-Celt. *-n̥s). In the latter case, the word would be a root noun in Gaulish. The Latin evidence points in the same direction. The rare pl. *brācēs* could continue a Gaulish consonant stem inflection, and *brācae* could be due to 'feminine thematization', the starting point for which would be precisely the Gaul. acc. pl. This double treatment finds a parallel in the Gaul. compound root noun *dru̯id- 'druid', which appears in Latin on the one hand as a consonant stem pl. *druidēs, druidum*, and on the other hand as *druidae, druidārum*, having undergone 'feminine thematization' on the basis of the Gaul. acc. pl. *dru̯idās. Still, on the basis of the evidence in classical literature two different stem classes cannot be excluded for Gaulish, even though the root noun is more likely.

Since an 'Urverwandtschaft' of Gmc. *brōk- and Gaul. *brāk- is excluded, the question arises which of the languages borrowed from the other (the third logical alternative that both languages borrowed from a third, unknown party is not pursued here). No consensus has been reached as to the diachronic analysis of the word. While some scholars favour a Germanic origin, others speak out in favour of Celtic/Gaulish. Since the matter is not essential to the main argument of this article, I

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[6] The gloss βράκκαι · αἴγειαι διφθέραι παρὰ Κελτοῖς, frequently ascribed to Hesychius in the scholarship, must be a phantom.

[7] Kramer (1996: 123–124) mentions also a by-form βρεκίον, first attested between 317 and 324 A.D., the *e* of which he ascribes to the effects of Germanic i-*umlaut*. Such an early date, however, would be quite remarkable for Germanic i-*umlaut*. Krahe & Meid (1969: 59) speak of a date several centuries later for the first occurrences of its effects. In Old High German, *a before weakly stressed *i starts to be written <e>, <ę>, <æ> around 800; for Old English and Old Norse, a date one or two centuries earlier is usually assumed.

just want to sketch the main points in the discussion and refer to Grie-
pentrog (1995: 79–90, esp. 85–89) for the details: 1. Gmc. *brōk-,
which beside 'short trousers' has also the meaning 'tail-bone', has been
compared with Lat. *suffrāgō*[8] 'hinder part of four-footed animals', and
both words have been referred to the PIE root $\sqrt{b^h reg/\hat{g}}$ 'to break (intr.)'
(LIV 91). However, the relationship of the two words to the root is not
particularly striking on the semantic side, and the long vowels of the
nominal forms have been said to be morphologically obscure (but see
fn. 9 below). 2. It is undecided whether 'tail-bone' is the primary
meaning of Gmc. *brōk-*, or whether it has been secondarily transferred
from 'trousers'. 3. Not even a distantly acceptable Celtic etymology has
been proposed for Gaul. *brāk-* thus far. Szemerényi's (1989: 117–118,
122) attempt to etymologize the word within Gaulish from *brāgikā* (in
its turn related to Lat. *suffrāgō*) via syncope of the middle vowel is *ad
hoc* and without parallel. 4. Outside Gaulish the word lacks continuants
elsewhere in Celtic. Related words in Insular-Celtic are late loans from
Latin or medieval Germanic languages.

Because of the objections raised under nrs. 1. and 2., Griepentrog
(1995: 85–89) emphatically rejects a Germanic etymology for *brōk-*
and dismisses possible connections with *suffrāgō* by arbitrarily
redefining the meaning of the PIE root $\sqrt{b^h reg/\hat{g}}$ as 'to bow'. He apodic-
tically assigns the breech-word to Gaulish, but does not offer even the
slightest clue to an etymology and does not comment on the
conspicuous absence of the word elsewhere in Celtic. All of this does
not help to instil confidence in Griepentrog's position, rendering it
rather unconvincing and inconclusive. Although it must be conceded
that the connections of *brōk-* to *suffrāgō* and its further root
etymologies are far from certain, I still consider a weak Germanic ety-
mology better than an isolated one in Gaulish. But I explicitly state that
this is a provisional opinion in a matter which has not yet been finally
decided.[9]

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[8] The relationship of *suffrāgō* to Lat. *suffrāgium* 'vote, voting' is an additional
problem. Since I do not assume that the two words necessarily be related I do not enter
into the discussion (differently Vaahtera 1993).

[9] I want to sketch three conceivable explanations of the words:

1. Derivation from $\sqrt{b^h reg/\hat{g}}$ 'to break (intr.)': In view of OIr. *braigid* 'to fart', which
is cautiously referred to this root in LIV 91 (but see below), it could be postulated that in
Germanic, too, the root possessed the meaning 'to fart' in addition to its primary
semantics. In that case, an agentive root noun *$b^h rōg/\hat{g}s$ > Gmc. *brōk* 'farter' could be
postulated. For the long vowel of this formation, cp. other agentive root nouns like Gr.
κλώψ 'thief', Lat. *fūr* 'thief', *uōx* 'voice', etc. In a further semantic step, the word
'farter' must then have been transferred to the 'buttocks' and finally to the 'tail-bone'.

In any case, no matter whether Germanic or Gaulish is the place of the word's origin, what *brōkiz and *brākes demonstrate is that there exists among them the same equivalence between Gmc. *ō and Gaul. *ā as in the examples discussed before.

5. In the certain examples discussed so far possibly three or more linguistic links are involved in complex chains of transmission: 1. *Rūmō: Latin (→ Etruscan/Venetic) → Gaulish → Germanic; 3. Bācenis: Germanic → Gaulish → Latin; 4. brācae: Germanic → Gaulish → Latin (?). The next example is limited to only two. The name of the river Danube was *Dānoụịos in Gaulish (the basis of the following are Schmid 1986 and Schumacher 2007: 181–182). Apart from the name of the river Donwy in North Wales, identical in formation to *Dānoụịos, the name of the river is tangible for us only through Latin transmission, i.e. Dānuuius and Dānubius, and through Greek Δα-νούβιος and Δανούιος, which itself is a loan from Latin. The b of the Latin spelling Dānubius is most probably simply orthographic for [β], [v] or [w], i.e. for the Latin sound that substituted Gaul. *ụ. Whether *Dānoụịos is an original formation in Celtic or continues something earlier, for example an Old-European rivername *Dāneụịos or an Iranian *dānu-, is irrelevant here. From Gaulish, Gmc. *Dōnawjaz must have been borrowed. Gaul. *d is represented by Gmc. *d, which

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From there, it would have been carried over metonymically to the piece of clothing that covered that body-part. This, in its turn, was subsequently borrowed into Celtic. Apart from the chain of semantic shifts, which notwithstanding its many stages involves no controversial steps as such, the main problem with this explanation is that the meaning 'to fart' is not attested for √bʰreg/ǵ in Germanic.

    2. Derivation from √bʰreHg/ǵ 'to smell (intr.)': It is better to refer OIr. braigid 'to fart' to a root √bʰreHg/ǵ 'to smell (intr.)' (not recorded in LIV; cp. Schrijver 1995: 170–171, Stüber 1998: 62, Schumacher 2004: 232–233). From this could then be derived Gmc. *brōk 'tail-bone' < root noun *bʰreh₂/₃g/ǵs or *bʰrōHg/ǵs, and Lat. suffrāgō 'hinder part of four-footed animals' < *bʰr̥Hg/ǵen-, unless an agentive root noun *bʰrEHg/ǵs 'tail-bone < *farter' existed already in the proto-language. The further development of *brōk within Germanic and the loan into Celtic would be parallel to that outlined in the preceding section.

    3. Derivation from √bra(n)k 'to lock in, constrict': Finally, just for the fun of it, Celt. *brāk- could be explained as a root noun with lengthened grade generalized from the Pre-Celt. nominative *brō/āks, derived from the root √brak 'to lock in, constrict' (not recorded in LIV) that appears also as √brank with 'prenasalization' in Gmc. *pranga-'narrowing, tightness' and in Lith. brañ(k)tas 'part of harness for a horse', Latv. brankti 'adjacent' (EIW 103, Lehmann 1986: 32). 'Prenasalization' is one of the features that have been claimed for a particular stratum of loanwords from an unknown source in northwestern IE languages (see Kuiper 1995: 68–69). Pre-Celtic *brō/ākes would thus be the 'tights'. In this case, Celtic would be the donor, Germanic the borrower. But this is strict speculation.

demonstrates that the loan took place after the operation of Grimm's Law. In the vowels we find the expected phoneme correspondences Gaul. *$\bar{a}$ → Gmc. *$\bar{o}$, and *o → *a. For Gothic, the Germanic form is attested as Δούναβιν (acc.) in a Greek text of the 6th century A.D. (Pseudo-Caesarius of Nazianzus 1, 68; 3, 144), a spelling that presumably reflects a very closed, high articulation of *$\bar{o}$ that was substituted by Gr. $\bar{u}$, or (Ostro-)Gothic raising of *$\bar{o}$ > $\bar{u}$. In Old High German, the name surfaces as fem. *Tuonouwa*. The suffix has been remodelled after Germanic *$awj\bar{o}$ 'island, river meadow', so that no strict substitution rules can be set up between the rear portions of the two words.

A three-link chain of loans (Gaulish → [†]Latin → Germanic), i.e. via intermediary Latin *Dānubius*, is excluded by the first syllable of *Tuonouwa*. Whereas the rest of the sound correspondences would be essentially unproblematic (but in view of the folk etymology that operated on the suffix an exact phonological equivalence must not be expected in the first place), loans from Latin into Germanic never substitute *$\bar{o}$ (< *$\bar{a}$) for Lat. $\bar{a}$ (Kluge 1913: 128; the apparent case of *$R\bar{u}m\bar{o}$ for Lat. *Rōmā* has been disposed of above). For all that is known, when Germanic people started to encounter Romans at the Danube on a regular basis, approximately in the Augustan period, Germanic or its dialects represented Lat. $\bar{a}$ by the new marginal phoneme $\bar{a}$. Unlike with Gaulish, with Latin there existed no established pattern of substituting Gmc. *$\bar{o}$ for $\bar{a}$. Furthermore, the name of the Danube is likely to have entered Germanic much earlier than the Augustan period. Those peoples and tribes that made incursions into the south in the 2nd century B.C. naturally had to cross the river. For the first half of the 1st century B.C., in the archaeological phase Latène D2a (85–45 B.C.), archaeology has unearthed Germanic settlements in the foothills of the Alps in southeastern Bavaria (Rieckhoff 1993; 2007: esp. 418–420, 423–427), that is seven decades before a Roman military presence was established in the region. And apparently by the middle of the 1st century B.C. at the latest, Germanic (Marcomannic?) and Celtic (Boian) elements started to blend in the area immediately to the north of the Danube in modern Austria, as displayed by Germanic names (*Ainorix, Biatec[, Fariarix*) in an otherwise Celtic environment on 1st century B.C. coins of the Boii (Birkhan 1971 and Birkhan in Göbl 1994: 69–71, 73–74).[10] In any case, as

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[10] This early presence of Germanic people along the Danube, north of the Alps is of great relevance for the question of the origins of the Runic script. The chronological and spatial gap between the Germanic peoples and the various North Italic alphabets that

with *$R\bar{u}m\bar{o}$ above, it is most economic to assume that Germanic peoples first learned the name of the river Danube from their immediate Celtic neighbours, not from more distant parties.

In conclusion it can be said that none of the pieces of loanword evidence assembled above suffices to prove a particularly late date (say, for instance, 1st century A.D.) for the inner-Germanic shift from early Proto-Germanic *$\bar{\ddot{a}}$ > *$\bar{o}$. What is more, for none of the words that were borrowed into Germanic can it be shown that they must have entered Germanic through direct contacts with Romans. Instead, all of the relevant examples (i.e. *$R\bar{u}m\bar{o}$, *$R\bar{u}m\bar{o}naz$, *$D\bar{o}nawjaz$) most probably were transmitted by speakers of Gaulish or a related Central-European Celtic language. Likewise, all those words that were ultimately exported from Germanic into Latin (i.e. $B\bar{a}cenis\ silua$, perhaps $br\bar{a}c\bar{e}s,\ -ae$) are likely to have been transmitted by Celts. Therefore the primary pertinent question is the one regarding the relationship between Gaulish and Germanic, a relationship that has all appearances of having been extremely close and intertwined across the Celtic-Germanic contact zone in western Central Europe during the greater part of the 1st millenium B.C. What there may have existed across this contact zone is a state of bilingualism with an intuitive linguistic awareness of the properties of the other group's phonological system. As long as this particular historical situation persisted there may have operated a rule of automatic phoneme substitution between Gaul. *$\bar{a}$ and Gmc. *$\bar{o}$ (or *$\bar{\ddot{a}}$, for that matter) when one lexical item was transferred from one language to the other. In more abstract terms it can be stated that there existed a bidirectional equivalence between Gaul. *$\bar{a}$ and Gmc. *$\bar{o}$ (represented by the symbol ↔ below), as against unidirectional equivalences like postulated early Gaul. *$\bar{u}$ ← Lat. $\bar{o}$ (against, presumably, Gaul. *$\bar{u}$ → Lat. $\bar{u}$). If that was the case, the basis for establishing a chronology of loanwords containing those respective sounds becomes very thin. Only if it could be shown that there were Gaulish loanwords in Germanic that represented Gaul. *$\bar{a}$ by the new Gmc. *$\bar{a}$, or Germanic loanwords in Gaulish with new Gaul. *$\bar{o}$ for Gmc. *$\bar{o}$ it could be said with certainty that the bidirectional equivalence had ended. If pressed hard, with Germ. *$\bar{o}$ and Gaul. *$\bar{a}$ being the only non-high back long vowels available, the previously discussed material does not even yield evidence that

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may be regarded as the models for the Runic script is constantly shrinking (see, for example, the new identifications of specimens of Venetic and – perhaps – Raetic script in the south of Austria edited in Stifter 2010).

there ever was a shift of $*\bar{\mathring{a}} > *\bar{o}$ in Proto-Germanic. Evidence for an original stage $*\bar{\mathring{a}}$ in early Proto-Germanic must be sought elsewhere.

The foregoing discussion now permits to set up the following provisional chronology of loans and substitution rules:

1. Lat. *Rōma* (→ Etr. **Ruma*? or Ven. **Rūmā*) → Gaul. **Rūmā* (Lat. *ō* (→ Etr. *u*/Ven. *ū*?) → Gaul. **ū*, probably by the 4th century B.C.)
2. Gaul. **Rūmā* → Gmc. **Rūmō* (Gaul. **ū* ↔ Gmc. **ū*, Gaul. **ā* ↔ Gmc. **ō*, after 1. and before the 2nd century B.C.)
3. Gmc. **bōkeniz* → Gaul. **bākenis* (Gaul. **ā* ↔ Gmc. **ō*, between Grimm's Law and the first half of the 1st century B.C.)
4. Gaul. **bākenis* → Lat. *Bācenis* (Gaul. **ā* ↔ Lat. **ā*, after 3. and before the first half of the 1st century B.C.)
5a. ? Gmc. **brōkiz* → Gaul. **brākes* (Gaul. **ā* ↔ Gmc. **ō*, between Grimm's Law and the 2nd century B.C.)
5b. ? Gaul. **brākes* → Gmc. **brōkiz* (Gaul. **ā* ↔ Gmc. **ō*, after Grimm's Law)
6. Gaul. **brākes* → Lat. *brācēs, -ae* (Gaul. **ā* ↔ Lat. **ā*, after 5a. and before the end of the 2nd century B.C.)
7. Gaul. **Dānoụịos* → Gmc. **Dōnawjaz* (Gaul. **ā* ↔ Gmc. **ō*, after Grimm's Law)

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