

That is to say, stridency is neutralized in position before *r*. The result is the dental spirant, voiced or voiceless respectively. This output later becomes labialized, according to the well known rule in the presence of *r*, etc.

We see that by observing this chronology the apparently complex developments of *s* are accounted for in a simple and well integrated way by the addition of but one rule with a single feature. Moreover, by assuming this chronology we now have an easy way open for understanding and motivating the early devoicing that is presumed to have occurred to yield *f* etc. For if **s* had already voiced medially by the assimilation rule assumed above, it would then have provided a model for the reverse development initially of *f* etc. Put in the form of rules, this last development would have been an instance of rule simplification. That is, in place of the temporally earlier contextual rule that imparted voicing (or lack of it) to the sibilant of underlying representations, there now came to be a rule of the same form that simply required the more general specification [+continuant]. In other words, the rule that once applied to the restricted class of sibilants now applied to the more general class of continuants, or spirants.

Again, the changes in Oscan-Umbrian of *s* to *f* which are alluded to by Untermann (§ 4.13) are best understood as having taken place via an interstage **ḡ*, a sound which may have actually persisted quite late in Oscan-Umbrian. Certainly a shift in stridency followed by a spectral movement between these two muffled spirants makes the best acoustic sense.

From all of this we see that the rhotacism, § 2.1(1), just completes a very old change.

Latin *dacrīma, lacruma* and Indo-European 'tear'

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This Latin word is notoriously troublesome in various ways. It has been supposed that **dacrūma* is a borrowing from Gk. δάκρυμα, shortened to a Hellenistic δάκρυμα; see, for example, Pokorny IEW 179, and LEW³ 746. The initial variation has been referred to the familiar "Sabine *l'*"; while there could be truth lying behind

this almost ritualistic Sabine appeal, it is hard to know in what fashion and with what constraints this formulation would apply. But of all the riddles the worst is the suffix *-ma*; on this Ernout and Meillet simply give up.

As a matter of fact, when one considers the matter more closely, it is not at all obvious that *δάκρυμα* itself is a clearly appropriate source. While *δάκρυ* is a well attested word for 'tear', it was used by poets in the form *δάκρυ* and dat. pl. *δάκρυσι* as early as Homer, and in instances where one might have seen *δάκρυον*; it is used both in the sense 'tear' and 'drop'. The verb *δακρύω* 'weep' (with long *ῥ* throughout except in late poets) is attested early (Odyssey) and is clearly derived from *δάκρυ*. Forms such as *δακρυτός* 'tearful', the diminutive *δακρυδίων*, *δακρυ-πλώω* 'swim with tears', *δακρυ-ρροέω* 'shed, run with tears', *δακρυ-σταγής* 'tearful', *δακρυ-χαρής* 'delighting in tears' further attest to the stem seen in *δάκρυ*. Yet from earliest times an ordinary term for 'tear' is *δάκρυον*, which is presumed plausibly to be back-formed from the plural *δάκρυα*. To *δάκρυ* we find the plural *δάκρυη*. The senses of *δάκρυον* embrace the range of 'tear' to 'drop (including gum and the like)'. The stem *δακρυο-* was also productive in forming compounds and such a derivative as *δακρυόεις* 'tearful, causing tears'.

When one turns to *δάκρυμα* (note the long *ῥ* and the late date of shortenings of the *ῥ* in the clearly underlying *δακρύω*) the attestation is notably sparse: In the sense of 'tear' we find it cited from Aeschylus (Pers. 134) and from Euripides (Andr. 92). In the former

*λέκτρα δ' ἀνδρῶν πόθῳ
πίμπλαται δακρύμασιν*

this derivative not only contributes its solemn weight to the lofty style but the syllable count and quantities have been clearly chosen deliberately. We are of course not surprised to find the word attested in the sense 'that which is wept for, a subject for tears'. Is it really believable that beside these isolated poetic instances in the ordinary sense of 'tear' the derivative *δάκρυμα* also occurred in everyday colonial dialect speech plentifully enough for the Romans to have picked it up and displaced their old inherited word? Furthermore, the long *ῥ*, dismissed by Ernout and Meillet⁴ (1967 rev.) as possibly shortened in the history of Latin unstressed syllables if not in Hellenistic Greek developments, is by no means unequivocally cleared up. Even Manu Leumann was prepared to accept (Die Sprache 1, 1949, 206) Bréal's unattested Hellenistic **δάκρυμα* while noting the *ῥ* used by Aeschylus. I submit then that

there remains a considerable burden of proof upon advocates of a Greek loan source merely to make the suggested Greek source minimally acceptable. Besides, I think that there are other considerations at least as important as the credibility of the alleged Greek loan source.

After the attempts at explanation by so many others it seems unlikely that we can reach certainty on so problematic a form. But at least we may try to see an avenue of approach whereby the Latin peculiarities would not be divorced from idiosyncracies or rarer configurations in related forms. On the face of it it would be preferable to trace the Latin form for such a basic and widely attested notion to a root which is known in nearly all the Indo-European territory, and to derive the observed word by developments which would exploit a series of plausible and known changes within the Latin language. Of course, there will be points of lesser certainty in the argument, or else we might expect that a clear solution would have been advanced long ago.

I have argued in a series of studies that the Greek δάκρυ, the Keltic words (OIr. *dér*, Mod. Ir. *deór déar*, Sc. Gael. *deur*, Welsh *deigr dagrau*, Mid. Bret. pl. *dazrou*, etc.)¹⁾, the Germanic words (Goth. *tagr*, ON *tár*, Eng. *tear*, Germ. *Träne*, OHG *trahan*, MHG *traher*, etc.)²⁾, Armenian *artasuk'* sg. *artawsr*³⁾, Sanskrit *ásru* (later *ásram*), Avestan *asrū-*, Tocharian A *ākār* pl. *ākrunt*,⁴⁾ Lithuanian *āšara*, *ašarà*⁵⁾ all may be traced through a set of nonanomalous changes back to a late IE pair of automatic stem alternants **(d)ákru ~ drakur*, which in turn derives from an early IE heteroclite **drakru(-r)*. It is obvious from the structure of this word (and likely because of the vowel **a*) that we have here some old more complex form—a compound or a phrase—but it is not at all clear what the original elements were. It seems quite reasonable that the origins of this unexpected Latin formation might well be found in the correct combination of features and rules offered by this unusual noun shape.

¹⁾ *Ériu.* 22, 1971, 181–7.

²⁾ PBB (Tübingen) 81, 1960, 263–6.

³⁾ PBB 81, 263–6; and an article on the words for 'bone' currently appearing in AOI Napoli.

⁴⁾ *Studies in honor of George S. Lane* (1967) 152–3; these have been claimed, needlessly I think (e.g. Pokorny IEW 23 following Fick), as a Reimwort from **akro-* 'acer(bus)'.

⁵⁾ *Studies in honor of George S. Lane* (1967) 152–3; and an article on productive suffix ablaut in Lithuanian, *Baltistica* 6, 1970, 27–32.

Let us first note that, whatever the prehistoric Italic details, the variation *d-* ~ *l-* in the initial of *lacrima* is matched in another interesting word *lingua*. I have argued in an oral paper presented before the Linguistic Society of America in 1962 that the immediate pre-form for *lingua* must have been **dlenguā*; it is also likely that *longus* reflects an earlier **dlongos*⁶). We seem therefore to be on plausible ground by positing an earlier shape for *lacrima* **dlakrumā*. This formulation would hold independently of whether *dacrīma* in its lone attestation was really just a grammarian's invention modelled on a pedantic knowledge of the Greek form. I would also suggest that the form **dlakru-* contained herein represents a dissimilation from an earlier **drakru-*; the resulting sequence of liquid features matches exactly the well known dissimilation seen in *sepulcrum*, *simulacrum*, etc., and in popular Latin *pelegrinus*.

Perhaps we may specify this dissimilation more closely in phonological features. We note that **peragrīno-*, **drakru-*, **sepel-tlo-*, and **semalā-tlo-* all dissimilate to give the sequence *l — r*. We need not be concerned with *candelabrum*, *orāculum*, *tabernāculum* and the like, for they originate in sequences of unlike liquids. However, there are words which fail to dissimilate in this fashion: *arātrum*, *cerebrum*, *terebra*, *crībrum*; the different dissimilations of the last into French *crible* and Romanian *ciur* < *cībrum* are later and separate phenomena, just as Spanish *sangre*, *hombre*, *hambre*, *muchadumbre* < *N — n* are separate from *carmen*, *germen* (: *canō*, *gignō*), etc. For an earlier period we must posit for these words which do not dissimilate **arātro-*, **kerazro-*, **teraðrā* (: Gk. *τέρετρον*, OIr. *tarathr*, with related but different suffix), **kreiðro-* (: OIr. *criathar*, OWelsh *cruitr* Welsh *crwydr*, OBret. *croitir* BN 10290, again with different suffix), respectively. Note that the intervening consonant here is always a dental. We must suppose, however, that when **sepel-tlo-* and **semalā-tlo-* dissimilated they had already passed to the stage that we know to be common Italic: **sepelklo-*, **semalāklo-*. Thus we see that the dissimilation appears to occur over non-dentals. We may sketch it provisionally in the following rule, assigning, on other grounds as well, the features [+grave] to *l* and [–grave] to *r*:

$$[\alpha\text{grv}] \dots [\alpha\text{grv}] > [+grv] \dots [-grv] / \left[\begin{array}{c} +\text{son} \\ -\text{nas} \\ \text{---} \end{array} \right] (V) \left[\begin{array}{c} +\text{cons} \\ -\text{voc} \\ +\text{grv} \end{array} \right] \left[\begin{array}{c} +\text{son} \\ -\text{nas} \\ \text{---} \end{array} \right]$$

⁶) However *leuir*, instead of **daeuer*, by virtue also of its vocalisms and of its strongly cultural semantics, remains a likely Sabinism.

This complex rule can be broken down as follows:

1. $[\alpha\text{grv}] > [-\text{grv}] / \begin{bmatrix} +\text{son} \\ -\text{nas} \\ \alpha\text{grv} \end{bmatrix} (\text{V}) \begin{bmatrix} +\text{cons} \\ -\text{voc} \\ +\text{grv} \end{bmatrix} \begin{bmatrix} +\text{son} \\ -\text{nas} \\ \text{—} \end{bmatrix}$
2. $\begin{bmatrix} +\text{son} \\ -\text{nas} \end{bmatrix} > [+grv] / \text{—} (\text{V}) \begin{bmatrix} +\text{cons} \\ -\text{voc} \\ +\text{grv} \end{bmatrix} \begin{bmatrix} +\text{son} \\ -\text{nas} \\ -\text{grv} \end{bmatrix}$

If the last two rules are correct, we might perhaps expect (2) to be productive later where (1) is not. At present I have not succeeded in finding suitable forms to test this hypothesis.

One might then be tempted to see in **drakru-* a direct survival of our oldest reachable early IE form mentioned above. I think, however, on more than one ground that this cannot be so. First, we see above that the totality of attested forms requires the assumption of an intervening stage **dākru ~ drakur*. Secondly, and more telling for our Latin problem, we will gain the necessary possibility of explaining also the presence of *-ma* by assuming the intervening stage which the other evidence additionally imposes. We are then forced to assume that Latin **drakru-* results from a conflation of two preexisting shapes. The only two shapes available are those already mentioned, originally **dakru- ~ drakur*.

Now we know from the Germanic evidence⁷⁾ that the old member of the heteroclite pair **drakur* was later matched by a form of the dominant IE heteroclite shape **drakun-*. We may posit then for pre-Italic, beside **dakru-*, a pair *drakur/n-*. From this, by elimination of the competing nominative-accusative, we arrive at the pair **dakru- ~ drakun-*.

We must now explain the feminine gender, which is not accounted for satisfactorily by a Greek source in *-ua* any more than by an impossible derivative in *-ma*. For this stage, when the nominative-accusative singular was perhaps **dakru*, we may assume a nominative-accusative plural **drakunǎ*. In morphology as well as in the adoption of the plural as the base form, this would exactly parallel *unda*, which must be an old plural **udnǎ* to the singular seen in Umbrian *utur*.

Moreover, this specialization of the plural form points to an old syntax of the plurale tantum, which in turn fits in with what we otherwise know of the behaviour of this noun in IE. Meillet has already pointed (MSL 18, 1912–14, 245–70; reprinted *Études de linguistique et de philologie arméniennes*, Lisboa 1962, esp. p.135)

⁷⁾ See fn. 2.

to this use of Arm. *artasuk* 'lacrumae' which exists beside the uninflected singular *artawsr*, the latter very rare in the classical period. The same background of a plurale tantum in some aspects of its use must also explain the proliferation of forms in Germanic, the transfers in Keltic, and the gender in Baltic.

We then assume a conflation of the consonantisms of singular and plural, producing a new form which becomes singular **drakrunǵ*. As I have already argued, a simple dissimilation of the liquids would produce an initial **dl-*, which would lead directly to the observed result in the initial and medial of our word.

The remaining problem is to motivate the change of *-n-* to *-m-*. I think that within the known framework of Latin phonology we may regard this as a simple assimilation. It will be recalled that IE **dh* > Italic **ð*, when medial, becomes labial in Latin in the presence of *u*, *r*, and *l*. This implies that prehistorically **u*, *r*, and *l* all shared some feature with **b* that **ð* did not; it may be said to have characterized labial continuants. We assume, then, that just as **ruðros* 'red' assimilated to **rubros* > *ruber* so also the nasal of **dlakrunǵ* assimilated to give **dlakrumǵ*.⁸⁾ In this fashion we are not obliged to deal with a fresh, and obscure, suffix, but merely with the consonantism of a stem form which the Germanic and the Tocharian B plural⁹⁾ forms in any case demand; which fits in with other relevant instances of Latin word formation (*unda*); and which is moreover required in order for us to understand the source of the conflated consonantisms which result in **dl-*.

⁸⁾ A well known dissimilation based on precisely this same feature in a nasal segment is seen in *tenebrae* < **temasr-* (via **temazr-* > **temaðr-* > **temaḃr-*): Skt. *támisrā*, *támaḥ*; Lith. *tamsūs*, *témti* (note accentuation), Latv. *tumšs*, *tumt*, *tīmsa*. On the Latin development **-zr-* > *-ðr-* > *-ḃr-* see my note appearing in Glotta. It will be noted throughout that I accept Untermann's thesis of the original voiced value of the Italic spirants; see Word 24, 1968, 484–7.

⁹⁾ Toch. B pl. *akrūna* < **akrunā* would be the exact analogue (minus the initial *d-*) of the Latin. This must be the original Tocharian formation; Toch. A *ākrunt* belongs to a class that is scarcely represented in Toch. B but which has enjoyed a slight productivity in Toch. A. The Toch. B *tsain* pl. *tsainwa* means a kind of weapon, and not 'tear(s)'; see on this last W. Couvreur, *Orientalia Gandensia* 1, 1964, 245–6. — W. Krause, *Mνήμης Χάρις* I, 195, identifies *ākrunt* pl. f. as a *u*-stem in *-nt*; therefore **-u-nt-ā* : *-nt-ṽ-ā* (Toch. A *-ntu*). He goes on to state (198–9) that the origin of *-nt-* is uncertain, but that it is associated with heteroclites. Thus, even though the exact source of this phonological shape is unclear, we see that Toch. A too bears witness in an indirect way to the old stem-class of this noun.

The sequence of forms which I posit is, then:

**drakru-* ~ *drakur* (late IE; and = Greek and Armenian)

**drakru* ~ *drakur/n-* (= Germanic)

**drakru* ~ *drakun-* (a widespread IE stem relation)

**drak(r)u-nā* (plural) (Italic; cf. Armenian)

**drakrunā* (singular) (cf. *unda*; δάκρυα → δάκρυον, Old Ir. *dér* etc.)

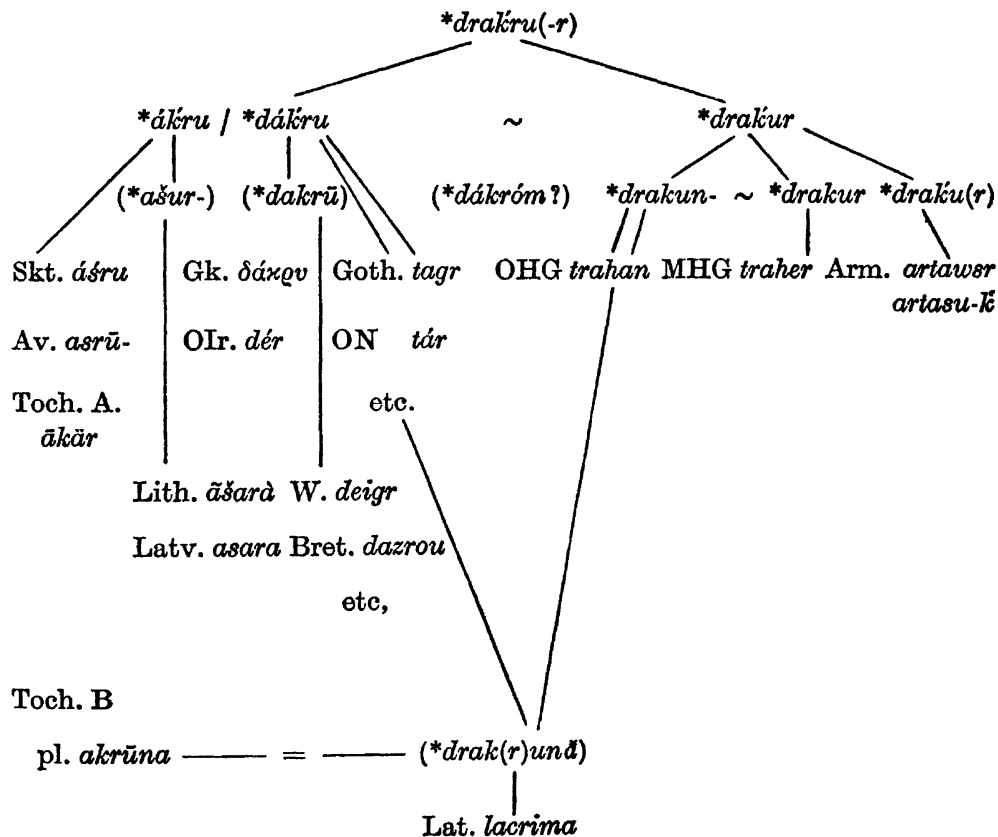
**dlakrumā* (Latin liquid_a + liquid_a > *l* — *r*; labial assimilation)

dacrīma, lacruma (**dl-* > Classical *l-*)

If the above assumptions are correct, *lacrima* is simply a singularized plural attesting indirectly both stem shapes which we posit for the IE word **drakru(-r)*.

* * *

The range of Indo-European forms and their descendants may then be schematized as follows:



The above takes us, I feel, about as far as we can go for the present with some plausibility in attempting to account for this

IE family of words. Unaccounted for there remain the Hittite, Slavic, and Albanian expressions.

The Hittite form *išḫaḫru-* ~ *ešḫaḫru-* is both tempting and troublesome. Frisk, GEW s.v. δάκρυ, simply remarks that the Hittite agrees with the other IE words in ending only, and leaves the matter at that. Sturtevant and Kronasser have mentioned the word without solving it. Most recently, V. Georgiev has turned his attention to the form and has attempted with the aid of this to explain the whole IE set.¹⁰ In brief, he proposes, by choosing the variant *ešḫaḫru-*, an assimilation of **ḫ — k* to *ḫ — ḫ* and a dissimilation of **r — r* to zero — *r*; this leads him to **esHr'kru* 'scharfes (bitteres, herbes) Blut'. Alongside this he places **udr akru* 'scharfes (bitteres) Wasser' with loss of *u-* by folk etymology on δράκος n. 'eye' etc. The variants without **d-* would be just the above adjective substantivized.

It seems to me that there are a number of objections to Georgiev's argument: Regarding the assumed assimilation *ḫ — k > ḫ — ḫ*, Georgiev illustrates with words showing *ḫ ~ k* variants after a consonant. On this argument we might expect **Vskāḫru-* rather than the form claimed. Moreover, the Hittite assimilation and dissimilation involve two changes of uncertain regularity and status; that is demanding a lot. The irregular loss of **u-* in **udr* is again unsatisfying; on this matter Georgiev does not seem to know of Sapir's guess, which I have rejected in my second footnote, PBB 81, 1960, 265. I have also pointed out there the difficulty of arriving at the desired syllabication of **r* over word boundary and before laryngeal. But, more crucial, I would now claim that the only correct nominative-accusative of 'water' was **uodr*. On the semantics, 'bitter blood' leaves something to be desired for 'tears'. While we know that tears have been called 'bitter', we must not lose sight of the fact that tears are salty, and that Balto-Slavic at least was able to shift the 'salt' etymon in meaning to 'sweet'; it is hard to say what we know of the IE semantic field at this distance. Ernst Locker, *Μνήμης χάριν* II 17, reports that the Vorarlberg says 'Augenwasser' for tears.

We must simply recognize that the Hittite form is highly ambiguous. One possible reconstruction would be **sHaHru-*. Even if this

¹⁰ Das IE. Wort für „Träne“, Acta Antiqua Academiae Scientiarum Hungaricae 16, 1968, 13–14. On Germanic and allied matters Georgiev seems not to have seen Ross's and my papers.

had undergone assimilation, **sHakru-* is still a good distance from **drakru-*, though admittedly the congruence is alluring.

There is indeed one faint possibility for **drakru-*, when we remember that it may very likely have been a plurale tantum, i.e. **drakruH_a*. If this was an old phrase which had lost its laryngeal on being combined into a single lexeme, we may speculate on **draH_a()kruH_a*; but these oddly short "words" seem to have lost some of their substance beyond recall.

The Slavic words form a compact set and another riddle. The essentials can be seen, for example, in Vasmer (REW 2.659). For the vocalism a form such as Bulgarian *slzá* or Serbo-Croatian *sùza* does not tell us all we need; but Russian *slezá* assures us that we have **slbzá*. The diagnostic forms agree on the place of the accent. The pre-Slavic form is then **slig(h)ā*. Vasmer offers the weak suggestion of Middle Low German *slik* 'Schleim', but I do not think we need take this seriously. We may however conjecture that the feminine gender of **slig(h)ā* reflects a collective, and an old neuter plural, just as in the case of *vodá* 'water'.

The Albanian word *lot* ~ *lod* has never been successfully explained. At least we may make some remarks on its phonology. Hitherto the variation amongst dialects of *t* ~ *d* has not been taken sufficiently seriously. I have discussed this question recently, *Acta Linguistica Hafniensia* 12, 1969, 154, in connexion with some other Albanian forms; we must suppose that a vowel has been syncopated between two dentals. Thus we have **lódVta-* or **lóðVta-*. Actually at an early date in Albanian, in medial position, **d* would have fallen together with **ð*; therefore there may be no real difference between the last two reconstructions. This form in turn could be interpreted as **(s)lē/āg(h)Vto-* or **(s)lē/ād(h)Vto-*. If we choose **slég(h)-Vto-* our form bears a strong resemblance to the Slavic **slig(h)ā*. However, by the conventional rules of Albanian vocalic correspondences I know of no direct way of relating an Albanian *o* to an IE *i*-vocalism. Yet one further fact is worth remarking in this context: The Albanian base *loz-* with its kindred stem *luanj* (**lod-n-*), both meaning 'play' and related notions, gives a seeming correspondence with Latin of the form *lod-* = *lūdō* < **loid-*. If we can find a way of relating these vocalisms, we then have an important Slavic-Albanian shared innovation.

Perhaps the inherited word for 'tear' in Slavic and Albanian, if it was **akru-* (> Slavic **ostrō*, Albanian **aðVr-* or **akrV-*), was eliminated by competition with the homophone 'sharp, bitter'.