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# LATIN *MEMOR* 'MINDFUL' AND *PAPĀVER* 'POPPY', AND THE LATIN REFLEXES OF PIE FINAL *r̥ [1]

**ABSTRACT**

*For the most part, the* communis opinio *holds that the Latin reflex of PIE *r̥ is or. But even a quick glance at modern handbooks that concentrate on Latin phonological developments reveals that the situation is significantly more complicated and unsettled than that. And this turns out to be particularly so in final position. I have shown in a previous paper that, because they are to be etymologized as reduplications winding up with unaccented final syllables, Lat.* memor *'mindful' and* papāver *'poppy' must both evince final *r̥. My focus in the present paper is on how the welter of Latin forms emerging from final *r̥ can be reconciled.*

**KEYWORDS**

*Final r̥; PIE; Latin.*

Generally speaking, the *communis opinio* holds that the Latin reflex of PIE *r̥ is *or*. However, even a quick glance at modern handbooks that focus on Latin phonological developments reveals that the situation is significantly more complicated and unsettled than that. Thus

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- Sihler (1995:94f.) gives the reflex before consonants and finally as *or*, but writes, "L[atin] reflexes of prevocalic \*r̥ are disputed. Some see evidence for -*ar*-, some for -*or*-....", and, moreover, goes on to argue in a discussion of Lat. *gravis* 'heavy' that "... the obvious inference is that \*g$^w$r̥- before a vowel gives L[at.] *gra*-."

- Baldi (2002:274) gives "\*r̥ > Lat. *or*", but notes the possibility that after an initial laryngeal and before a consonant \*r̥ may yield Lat. *ur*, as exemplified "in Lat. *ursus* 'bear' if it is from \*h₂r̥tko-". And he continues, "Finally after a consonant, PIE \*r̥ > *or* > *ur* in Latin: Lat. *iecur* 'liver' (< \*Hiek$^u$-r(t)-) ...".

- OHCGL (95), under the section-heading "\*r̥ > *or*", gives the following examples:

  > *\*mr̥tís* 'death' > *mors, mortis*....
  > *\*tr̥gwo-* 'grim' > *torvus*....
  > *\*kr̥d-* 'heart' > *cor, cordis*....
  > *\*wr̥t-tos* 'turned' from *\*u̯ert-* 'turn' > OL *vorsus* > CL *versus* ....

But this is followed immediately by a cautionary statement:

> There are, however, a number of instances where \*r̥ > *ur*, e.g. *\*kr̥tos* 'cut' > *curtus* 'shortened', *\*k̑r̥sō* 'I run' > *currō*.... The conditioning environment is not clear, nor is it clear whether the development was \*r̥ > *ur* or rather \*r̥ > \**or* > *ur*. If it was the latter, then these examples belong with *furnus ~ fornāx*, which is presumably a dialectal treatment....

Frotscher (2012) makes a detailed examination of final \*r̥ in Latin and argues for the following analysis (p. 83):

> Roots that end—or originally ended—in a labial take -*ur* while those ending in other consonants take -*er*. Thus, the following sound law can be formulated: PIE \*-r̥ remains, at first, as Italic \*-r̥, then becomes Latin -*ur* after labials and -*er* elsewhere:
> $\qquad$ PIE \*-r̥ > Lat. -*ur* / labial _ (cf. *femur, iecur* (< \*i̯ek$^w$r̥))
> $\qquad$ Lat. -*er* / elsewhere (*iter, aser, ūber* (< \*ūb̥r̥).

On the other hand, we find in Oettinger (1994:82 with fn. 26):

> Hinsichtlich lat. *acer* ['Ahorn'] n. gibt es zwei Möglichkeiten. Entweder gehen lat. -*er* auf uridg. \*-*er* und lat. -*ur* (über \*-*or*) auf \*-r̥ zurück, wie bisher meist angenommen wurde ..., oder aber lat. -*er* stammt unter anderem auch aus uridg. \*-r̥.

The footnote states:

> Das etymologisch unklare lat. *femur* 'Oberschenkel' könnte -*ur* analog nach *iecur* (gleiche Körpergegend) bezogen haben.

And Cohen (forthc.) strongly supports the position that—because they are to be etymologized as reduplications winding up with unaccented final syllables—Lat. *memor* 'mindful' and *papāver* 'poppy' must, as shown in the derivation below, evince final *r̥.

So we see that there is significant disagreement about the details in Latin, and that this is particularly true with respect to final position—which is our focus in the present paper. It is important to note that there are not a great many secure Latin examples of final *r̥: Frotscher's analysis is based on just the five items mentioned in the citation above; Oettinger's is phonologically based on only one of these (*iecur*); and Cohen's has added *memor* and *papāver* to the list. But the last two items establish the need for a revised analysis in order to account for the attested forms.

Hamp (1972:164) characterizes *memor* as an *e*-reduplication that "seems to be a normal derivative of the verbal base seen in Skt. *smárati*"—i.e., as given by *LIV* (569f.), < "*(s)mer-* 'denken an, sich erinnern'".[2] This variety of *e*-reduplication is encompassed by the generalized process delineated in Cohen (forthc.) that generates noun reduplications, *viz.*:

1. Copy the initial portion of the *e*-grade root up through the vowel and any immediately-following laryngeal (with consequent coloration and lengthening), and prepose it to the root;
2. (For intensive reduplications, the process is now complete.) For resultative reduplications, shift the accent to the preposed portion and, concomitantly, reduce the vowel of the (original) root to zero-grade.

*Memor* is a resultative (i.e., it is something that comes out of thinking/remembering). For the derivation, we start with the root *\*mer-* and get, via Step 1 of the reduplication process, *\*me-mer-*; this, via Step 2, > *\*mé-mr̥-* (> *\*mémr̥*). *Papāver* is an intensive based on *\*péh₂ur̥* 'fire' (i.e., it is something that, figuratively, is in intense flame). Starting with *\*péh₂ur̥*, Step 1 gives us *\*peh₂-péh₂ur̥* (and since Step 2 does not apply, the first syllable is unaccented); this thus > *\*ph₂-péh₂ur̥* > *\*pa-páu̯r̥*.

It is not clear what the Proto-Italic reflex of the PIE *r̥ of these items was: It might have remained *r̥ in both items; or resulted in *or* (in agreement with the *communis opinio*) in both,[3] or *or* in *memor* and *er* in *papāver*, or perhaps even some-

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2    Treating Lat. *memor* as some kind of reduplication antedates Hamp (1972); as pointed out to me by Michael Weiss (p.c.), *LEW* (*s.v.*) does so. And we have in *DELL* (*s.v.*): "Le latin a une forme à redoublement simple, tandis que gr. μέρμηρα 'souci' a un redoublement intensif …". The idea of *memor*'s being a reduplication seems, in fact, to go back to Uhlenbeck (1907:558), who, however, characterizes the word as "mit abweichender reduplikationssilbe".

3    Frotscher (2012:83f.) writes in the context of his rule-set: "… [T]here is—to my knowledge—no secure example of the treatment of PIE final *-r̥ (or *-l̥) in the Italic dialects other than Latin…. In other words, there is no evidence that contradicts a similar development of *-r̥ also in Sabellic, so that it is possible to date the sound law suggested above already into Proto-Italic times: PIE *-r̥ > Proto-Italic *-or after labials and *-er elsewhere. Consequently, the preservation of *-r̥ during the state of Proto-Italic is no longer a necessary assumption."

thing else. For now, we will make the working assumption that the reflex began as *or in both.

For *memor*, a special morphological consideration also needs to be taken into account. The Latin word is an adjective, but, since all other reduplications of the more than twenty of this type documented in Cohen (forthc.) are nouns, we would expect it to have been generated from an earlier noun.[4] To produce the masculine adjective, an -s would have been added to *memr̥*, yielding *memr̥s*, which in turn would regularly have become *memors*,[5] and then *memorr*, and, later, *memor*.[6]

For *papāver*,[7] a special phonological consideration needs to be taken into account. Originally, I thought its final vowel to be directly handled by *OHCGL* (117): "In non-initial syllables all short vowels merge in *e*, before *r*" and (p. 239) "... the only possible regular reflex for any short vowel before *r* in non-stressed position is *e*". But Brent Vine (p.c.) has pointed out a major problem with this formulation; under the assumption that the pre-Latin reflex of PIE *r̥ is *or, he writes:

> ... a pre-Latin *-w- might be lost before the following /o/ (and then the vowels might contract)—i.e. *-āwor > *-āor > *-ār ? (*w*-loss before /o/ Weiss 2009 [i.e., *OHCGL*]: 154).

He continues:

> ... in the end your best bet may be ... spread of /-āwer-/ from the non-nom. forms (gen. *-āwer-es*, etc.) to the nom. (whatever the phonologically regular outcome of the nom. sg. was).

And this analysis is supported by *OHCGL*'s author, Michael Weiss (p.c.):

> I see now that my formulation of weakening should have explicitly stated that the rules for final syllables are not necessarily identical to those of medial syllables and hence I should not have said just 'non-initial syllables'. If syllabic *r* became *or* in final-syllables, either generally or after a labial then I would expect -a:wr to become -a:wor and then -a:or as Brent suggested. It is pretty clear that final -or became -ur in Latin on the basis of the middle endings -tur, etc. Those themselves are probably remade from -tro, but at a very early period.[8]

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4    Indeed, we find in *DELL* (*s.v.*): "... altes redupl. Nomen *me-mor ...*".
5    Note that Szemerényi's Law is inapplicable here.
6    See the derivation of Lat. *ter* 'thrice'—from *tris* via *ters* and *terr* (scanning as such in Plautus)—given, e.g., in Sihler (1995:230).
7    I note that *papāver* and *cadāver* are the only Latin words ending in V̄ver. *Cadāver* has no generally accepted etymology; *EDLOIC* (78f. *s.v. cadō, -ere*) states: "The form of *cadāver* is difficult to explain. W[al-de-]H[ofmann] assume a ppa. *kadā-wes- 'having fallen', which is fine semantically; but where would ā come from, and why would the neuter form have been lexicalized?"
8    See *OHCGL* (390f.) for relevant details of the evolution of the Proto-Italic middle endings.

In addition to these statements, we have the Frotscher rule-set cited above, which would generate †*papāvur*; and then, in accordance with the rule in *OHCGL* (154) referred to in the Vine quotation above, which also prescribes loss of *w* before *u*, †*papāur*; and potentially then, via vowel contraction, †*papār*.

Vine's solution — i.e., that *papāver* nom. sing. acquired the *e* of its final sylla-ble analogically from the other members of its declensional paradigm that would regularly have had *e* in the corresponding nonfinal syllables — is quite plausible. Indeed, as stated by an anonymous reviewer, "In Latin, analogical leveling within the paradigms is absolutely common and it is generally the nominative that analog-ically adapts to the indirect cases (not vice versa)." Nevertheless, generally speak-ing, one prefers, where possible, a lautgesetzlich solution — i.e., one that does not rely on an unattested analogical change. To that end, let us look at some purely pho-nological alternatives. Suppose for the sake of argument that Frotscher (2012) is correct in assuming that, in the general case, the Latin reflex of PIE final *ṛ* is *er*. And, for the time being, suppose further that the *ur* of Frotscher's only two solid ex-amples after labial or labiovelar consonant, *femur* and *iecur*, is lautgesetzlich after (labial nasal) *m* and (labiovelar stop) *kʷ*. This still does not guarantee that the result after (labiovelar glide) *u̯* is *u*. Indeed, such a sound change, which would yield *u̯ur*, a string that in fact does not occur in Latin, might well be phonologically disallowed. That is, the *er* of *papāver* (and, quite possibly, *cadāver*) could be a completely regular result, either as the "elsewhere" form or because of the phonological blocking or dissimilation of *u̯ur*. Let us, moreover, look more closely at the analysis of *u̯*-loss as detailed in *OHCGL* (154). The rule, "Non-initial *u̯* is lost before *o* or *u*", is footnoted, "And the labiality of a labiovelar, if one chooses a monophonematic analysis of the labiovelars." However, of the four examples given, three are of *kʷ*. The other is of *u̯*: "*paru̯om* 'little [adv., subst.]' > *parom* > *parum*". But this item is hardly convinc-ing, since it exists side-by-side with *parvus, -a, -um* 'little (adj.)', which Vine and Weiss would presumably have to argue had its /w/ restored analogically in the non-feminine forms. As noted, Frotscher concludes that *ur* is the regular Latin reflex of final *ṛ* after a labial or labiovelar consonant based on just two examples, *femur* and *iecur*. But, perhaps his rule is correct only for labiovelar stops. And Oettinger's position that the final *ur* of *femur* may be analogically taken from *iecur* is consistent with that possibility. That is to say, it seems defensible to hold that, as evidenced by *memor*, *or* is the regular development after *m* of final *ṛ* in Latin, at least early on. Moreover, one other potentially relevant example is Lat. *sopor* 'sleep', if indeed, the form reflects heteroclitic PIE *su̯op-ṛ/-ne-*;[9] in that case, *sopor*, as Frotscher notes, would be an example having *or* as the reflex of final *ṛ* after a labial stop.

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9     This is called by Frotscher (2012:86) "a much debated issue".

So, in this view, the (pre-)Latin reflexes of PIE final *ṛ can be summarized as follows:

    a)    *ur* / *$k^w$_
    b)    *or* / *$m$[10]_
    c)    *er* / elsewhere

The rule adduced by Weiss that changes final (pre-)Lat. *or* to *ur* in, e.g., passive forms would have been operational later on. *Memor* and *sopor* would have kept their final *or* through the analogical force of the rest of their paradigms and derived forms all with *o*, and not the *e* that would be predicted from the rule, cited above, given in *OHCGL* (117, 239).

One's first impression might well be that it is counterintuitive to find a specifically different vocalic result after *m* than that after other labial consonants, but there is an analog in English: For the most part, ME /ʊ/[11] > MnE /ʌ/   / _ /l/; but immediately after labials (including labiodentals and *w*), the change did not occur (see, e.g., Moore [1951 (1964:138)]) — except when the labial was *m*.[12] Thus we have

MnE *bull* /bʊl/ < ME *bole* /bʊlə/,

MnE *pull* /pʊl/ < ME *pullen* /pʊlən/,

MnE *full* /fʊl/ < ME *ful*(*l*) /fʊl/,

MnE *wool* /wʊl/ < ME *wolle, wulle* /wʊlə/, but

MnE *mull* 'to ponder; to grind or mix thoroughly' /mʌl/ < ME *mullen* /mʊlən/.

So we see that a sound change in which a preceding *m* has a different effect from that of other labials is in fact attested.

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10    And, perhaps, *p*. I note that Frotscher also includes a formulation that has a PIt. stage with final *or* after labials (see fn. 3 above).

11    As well as shortened /ō/, which had merged with /ʊ/. The split of /ʊ/ into /ʊ/ and /ʌ/ occurred in the 17th century. See Wells (1982:1.197) on both these points.

12    The patterning is clearest when the /l/ is final, but is largely also maintained when the /l/ is non-final. And this patterning continued for items borrowed into or coined in MnE and continues today. Moreover, the same patterning occurs before /š, č/ (but not /ǰ/!). Thus we have *bush, push, squ*(*u*)*sh*, with /ʊ/ vs. *mush* with /ʌ/; and *butch*(*er*), *putsch* with /ʊ/ vs. *much* with /ʌ/; but *budge, pudge/y, fudge, squdge, smudge* all with /ʌ/.

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