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Footnotes on a Parthian sound change

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To the memory of Jochem Schindler (1944–94)

Abstract
The treatment of Proto-Iranian *θw (PIE *tu) is one of the isoglosses distinguishing Middle Persian from Parthian and thus important for Western Iranian dialectology. The re-discussion of the Parthian development of this consonant cluster by Nicholas Sims-Williams presents a welcome opportunity for some notes on the matter. I will argue that there is some additional evidence in favour of his suggestion that the Parthian result is not -f- as previously assumed, but a consonant cluster. I will also suggest a modification of the steps that the development takes. The Middle Persian development of *θw as well as some related issues of historical phonology and Pth. orthography and Western Ir. are likewise discussed.

Keywords: Parthian, Middle Persian, Western Iranian, Historical phonology, Isoglosses, Iranian dialectology


This interpretation of the Parthian data needs to rely on explaining the additional -t seen in -īft, the variant of the abstract suffix seen in Manichean Parthian, as an additional suffix (Tedesco 1921: 200 suggests a derivation from *-iya-θwa-tā-). However, this approach does not offer an explanation for the Pth. verb (present stem) <nydfār-> niδfār- / (past stem) <nydfwrd>

1 The present article is a revised version of a German paper. For reasons of typographical simplicity, θ, w and y are used instead of θ, u and j for Proto-Iranian. As per Iranological tradition, italics represent the transcription (phonemical form) for Parthian and Middle Persian, but the transliteration (graphical form) for Sogdian. Manichean, Middle Persian and Parthian are quoted from and in the form of DMD unless otherwise noted.

Abbreviations: Av. = Avestan; B = Buddhist Sogdian; C = Christian Sogdian; Ir. = Iranian; Manich. = Manichean; M = (Sogdian in) Manich. script; MP = Middle Persian; Olnd. = Old Indic (Vedic and Sanskrit); OP = Old Persian; PIE = Proto-Indo-European; Pth. = Parthian; S = (Sogdian in) Sogdian script. For bibliographical abbreviations see the references at the end of the article.

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niδfurt ‘to hurry (intr. and tr.),’ which is likely to derive from *ni-thwāraya- (cf. OInd. ɳrvar), and the noun <nydfʾr> niδfar ‘haste’ (Henning 1958: 97 n. 2).2 While Henning’s etymology is certainly convincing, his further suggestions are less so: he assumes that the word-internal result of Proto-Ir. *θw is Pth. -f-, while δf in niδfar- would show the result in word-initial position (for which there is no other example), and that δf would have been adopted from the (untested) simplex *δfar-. This scenario is improbable not only because it implies the unlikely assumption that a cluster that is reduced to -f- in word-internal position would be retained word-initially, but also because the parallel consonant cluster PIE *du>Proto-Ir. *δw is reduced to Pth. b- word-initially (Sims-Williams 2004: 540).

Sims-Williams (2004: 540, 545) thus suggests the alternative solution that δf is the regular result of *θw in word-internal position. For čafar ‘four’ he assumes a dissimilatory loss of the dental elements of the consonant cluster (*[tσafar] > [tσafar]), a development that also occurred in this word in other Ir. languages (e.g. Bactrian σοφαρ ‘four’ vs. regular λφ< *δf in αλφανζ- ‘attain’ < *θwanja-, abstract suffix -ίλ, Sims-Williams 2004: 542). For the word-final position, he posits a dialectal difference in the further development of *-δf>-f for inscriptive vs. -ft for Manichean Parthian (Sims-Williams 2004: 543, 546).

2.

This set of changes is so far based on one example of each, but there seems to be additional evidence confirming Sims-Williams’ assumption that *θw gives Manich. Pth. -ft, also implying that the abstract suffix -ft does not contain an additional suffix.

2.1.

The word <pwrt> ‘bridge’ occurs in the Pth. hymn cycle Angad Rōsnān VI 57b.3 Although this is a hapax legomenon, its reading and meaning are reasonably clear. The existence of such a word in North-West Iranian is also confirmed by Gilaki purt, purd and Zazaki pırd ‘bridge’.4 Etymologically it is obviously related to Avestan pəɾtu- (cf. Boyce 1954: 194; “< *pəɾtu-”). However, a derivation from Proto-Ir. *pṛtu- would raise a problem on the phonological side:

2 If the root had the shape PIE *tνerH (as sometimes assumed), the past stem would be *tνerH-to-*θwarta-, in which case Pth. <nydfwrd> could be read niδfoɾd (thus DMD 252b for the derivative <nydfwrdg> ‘hurried’). However, there are good arguments against the laryngeal (EWAia I: 685, de Vaan 2003: 56, LIV p. 655), so niδfur< *-θwarta-< *-tνr-to- seems preferable (thus e.g. Ghilain 1939: 74; Boyce 1977: 64).

Weber (1994: 111 n. 11) interprets <nydfʾr> as a compound related to MP dwār- ‘run, move’ (according to Weber an Avestan borrowing), but MP dwār- differs from the Pth. <nydfwrd> verb in its past stems (MP dwārist and dwārd). Weber’s etymology also involves the problem that word-internal *dw gives Pth. <db> doctrine (Sims-Williams 2004: 540).


4 None of the contemporary varieties is a direct descendant of Parthian, but they can hint at the existence of otherwise unattested words and word forms in Middle West Iranian.
Proto-Ir. *ṛt following a labial otherwise, and expectedly,5 gives Pth. <wrđ>
-wrd, e.g. <bwrd> burđ <*bṛta- (past stem of <br-> ‘carry’), <mwrd> murđ <
*mṛta- (past stem of <myr-> ‘die’). Proto-Ir. *ṛtu- should thus have given
†<pwrd> purd.

So it is worth considering whether Pth. <pwrt> could derive from the oblique
stem *prθw-, i.e. from the form that has already been seen as underlying the MP
cognate puhl (*prθw- > *purθ > puhl, Hübbschmann 1895: 195, 207, Hoffmann
1986: 171, 181 n. 20).6 The application of the change suggested by
Sims-Williams for Manich. Parthian (see Section 1) yields *prθw- > *purθ >
*purft. Since a consonant cluster -rt is not permitted by Pth. phonotactics,7
*purft could have been reduced to purt by a dissimilation vs. the initial p-
that is not unlike that in ʾçasār.

2.2.
A derivation of <pwrt> purt from *purft <*prθw- suggests a parallel expla-
nation for Pth. <mwrt> murt ‘death’8 from *murft <*murθf <*mrθw-
(Nicholas Sims-Williams, personal communication). A dissipimilatory loss of
in *murft is surely as motivated as it is in *purft. On the other hand, *mrθw-
would be the oblique stem of an as yet unknown Ir. stem *mṛtu- besides the
otherwise attested *mrθyu- (Avestan mərθiy-ıu, Old Persian (uβa-)mərθiyu-,9
Oln. mṛtyú-) but a stem *mṛtu- / *mrθw- ‘death’ is indeed reflected in
Sogdian mwṛw /muθu/.10 This is likely to derive from the nominative and
accusative forms *mrθuš and *mrθum11 while a derivation from *mrθyu-
should effect a palatalization of the vowel (Sims-Williams, personal communication).
Similarly, the derivation of Pth. <mwrt> from Proto-Ir. *mṛti- suggested by
Henning (1937: 85) should probably give †<myrđ>, cf. *mrta- > <kyrd> (past
stem of <kr-> ‘do’), *mṛya- > <myr-> ‘die’.12

So far as the existence of *mrθw- in Sogdian is concerned, the word is found in
B pyšmwṛwô13 ‘after death’ and in the phrase M zʾdṃmrwô ‘birth-death’, B zʾt

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5 *r > Pth. unsafe is the regular development in labial context (Rastorgueva and Molčanová
6 The word is likely to have had an “amphidynamic” paradigm PIE *pṛtu- / *pṛtu- É-
(Hoffmann 1986: 171). New Persian (classical) pul cannot come from *pṛtu- since
this would have given purd here as well.
7 There are no Pth. tautosyllabic clusters of three consonants (DMG 3.1.1.2.3); in order to
avoid them, *r in old sequences of *ṛt does not yield *r, but probably gives *r from
the outset, cf. *gyṛft, grypt < *gyṛta- (past stem of *gyrw- ‘seize’).
8 Found in Angad Rōṣṇān VII 4a (cf. Boyce 1954: 154) in several copies.
9 On this word, see Gippert 2001.
10 In the alphabets used for the Manich. (M) and Buddhist (B) Sogdian texts, <δ is used
for δ and θ while the script of the Christian texts (C) has an extra letter <θ> for θ.
11 *mrθu- with generalized θ (from the oblique stem *θw) is parallel to OP gāθu- from a
paradigm *gātu- / gāθu- (cf. note 24).
12 †<myr- > shows that the palatalizing effect of a following *γ is stronger than the labializing
effect of m-.
13 Two attestations in Benveniste 1940 (for the attestation “8, 52” in Benveniste 1940: 269
and Gharib 1995: 337a read “8, 72”) and one in the British Library Frag. 6 line 5 (rather
fragmentary context), where Sims-Williams (1976: 49) reads p[yš]ṃmwô, but there
seems to be a final -w also in this attestation (p[yš]ṃmwôwôhô), cf. the photo of Or.
8212/82 on the webpage of the International Dunhuang Project (http://idp.bl.uk).
(‘t) mwrōw ‘birth (and) death’ (i.e. circle of reincarnation, samsāra), where zʾδ- shows a change of Old Ir. *-t that otherwise does not occur in Sogdian. So Benveniste (1940: 216) assumes a Pth. origin while the original Sogdian phrase would be ’ʾzy myry ‘birth-death’.14 Indeed, Pth. <zʾdmwr dépzdāmjurd is quite well attested, and Pth. influence in the Sogdian Buddhist lexicon has been noted for other words as well.15 However, while Pth. influence in the use of Sogdian (*p)mwrōw and in the formation of zʾdmwrōw is possible, the assumption of a direct borrowing is faced with the difficulty that the attested Pth. forms are in fact <mwrt and zʾdmwr dépzdāmjurd.16 It would also be unlikely that Sogdian borrowed mwrōw from the stage of Pth. *murḏf, since one would expect Pth. *ḏ to be rendered by Sogdian <ḏβ>. Such an output may be seen in Sogd. pwtyśbδ ‘Bodhisattva’ (besides variants such as pwtʾōystbδ), which could owe its <ḏβ> to Pth. <bwd(y)sdf bōdisaḏf (thus Sims-Williams 2004: 544 f., see also Section 3).17

If mwrōw is thus an inherited Sogdian form, Sogdian would show several words for ‘death’ (cf. mrc, B mwrtk(y)). The stem *murṭu- underlying Sogdian mwrōw would derive from a paradigm *mṛtu- / *mṛṭw-, the oblique stem of which yields Pth. <mwrt>.18

3.

Another item to be considered in the discussion of the Pth. result of Proto-Ir. *ḏv is the inscriptive Pth. form <nytryprt ‘hurried’, corresponding to Manich. Pth. <nydfʾr> etc.19 It seems that the most straightforward interpretation of the <tp> is tf. In this case, one might consider a modification of the changes noted in Section 1.

Proto-Ir. *ḏv could have yielded Pth. tf first, which would be shown by inscriptive <nytrp> niṭfār-. In ‘four’, a dissimilation *[tšatfār] > [tšafār]

14 ’ʾzy myry ‘birth-death’ is found only in Benveniste (1940: 56, line 1194). Gershevitch (1946: 148) considers zʾdmwr dépzdāmjurd as a loan translation. Gharib (1995: 453b) follows this view, which might be the reason for her reading Sogd. zʾdmwr dépzdāmjurd [sic] /zādmurd and pyʾšmwrōw(y) /pišmurd (the paragraphs referred to in Gershevitch 1954 only note (*p)mwrōw, though). On the other hand, she reads mwrōw /murūd (Gharib 1995: 221a).
16 The -d of the latter against the -t in <mwrt> can be explained by association (not only by popular etymology) to the past stem murḏ, perhaps additionally motivated by the final of the first member of the compound.
17 However, Yoshida (2008: 344–53), who provides a list of variants and attestations, argues against Parthian influence in the Sogdian word for Bodhisattva.
18 In Parthian, other terms in this semantic field include <wš> ʾḏš ‘death’, <zgʾm> izyām ‘flight, exit (of the soul from the body)’ and Ind. loanwords found in Buddhist contexts (〈mrn〉 marān, ʾprnybrʾn) parnikrān, cf. Sims-Williams 1983: 140). MP shows marg ‘death’, but nothing that would correspond to Pth. <mwrt>. Conversely, marg is not found in Parthian. The MP hapax ʾzydmrgyḥ (or ʾzyrmrgyḥ) (Sundermann 1984: 504) ‘-death’ is unlikely to be an error for <zʾdmrgyḥ ‘birth-death’ (Desmond Durkin-Meisterernst, personal communication), MacKenzie (apud Sundermann 1984: 504) considers a connection to Avestan jītī- ‘life’, Sundermann (ibid.) a reading <ʾzwdrʾ (fast) or <ʾzwrdʾ (force).
19 Paikuli inscription 21 d1, 03 (cf. Skjærø 1983/I: 49, II: 79 f.).
20 Word-final *-tf would have undergone a metathesis to -ft in Manich. Parthian and a reduction to -f in the dialect of the Pth. inscriptions, thence the abstract suffix Manich. -ftf <pyft>, inscriptionsal -fpy <py>. The output of Proto-Ir. *prbw- and *mrθw- would have been reduced to <pwrt> purt and <mwrt> murt by the phonotactic ban on tautosyllabic clusters of three consonants (cf. note 7), either at the stage of *purft and *murtf or in the metathized stage of *purfti and *murtf.

The next stage would assimilate the tf to əf. This would have concerned word-internal cases of tf other than ‘four’, thence Manich. <nydf>r- niδf̣ar- and derivatives vs. inscriptionsal nif̣ar-, as well as borrowed tf, which is likely to be seen in <bwd(y)sdf> bōdisaʃf ‘Bodhisattva’ and <sdf> saδf ‘being (sattva)-’.21

This approach appears to account for the data in an economic way and motivates the dissimilation in əcafār particularly well. A development of word-final *θbw > *tf > -ft(f) also seems to be more straightforward than *θbw > *δf > *-fδ? > -ft(f). Pth. *θbw > tf is also quite parallel to Sogdian and Khwarezmian *θbw > θf (Sims-Williams 2004: 541, 543), agreeing with these being “closely related languages” (Sims-Williams ibid.), and Bactrian *δf > λφ would correspond to the stage of Manich. Pth. word-internal -δf-.

Alternatively, we could consider an interpretation of both inscriptionsal <tp> and Manich. <df> as θf (Jost Gippert, personal communication), comparing it to Avestan faδr- (oblique stem of πιτα- ‘father’), which is likely to reflect /θfr-/, and to the development of word-internal *δw > Pth. <db>, if this is əδv as per Sims-Williams (2004: 540). However, the assumption implies that one would need to posit word-final developments of *θf > -f; *θf > -ft; plus *-tf > -θf for loanwords to account for <bwd(y)sdf> and <sdf>, a set that is perhaps not altogether compelling. Hence a development *θbw > *tf > -ft(f) appears to be preferable.

4.

There is another piece of evidence which is incompatible with the classical view of the development of *θbw in Western Iranian. MP niΧwār- (Manich. <nyxw>r- > Pahlavi <nswb1->) ‘hurry, hasten, incite’ is obviously a cognate of Pth. niδf̣ar-, but əcahr ‘four’ and əhil ‘forty’ would lead one to expect MP ənihr-.

20 *-θbw- > Pth. -tf- also seems to be assumed by Weber (1994: 111 n. 11; his only example <ctfr> ‘four’ is not attested, however). For word-final position, Lentz (1926: 253) and Huyse (2003: 85 n. 125) assume a development *-θbw- > -ft (with dialectal variant -f) and interpret this as a metathesis, i.e. both also assume an intermediary stage *-tf-. Rastorgueva and Molčanova (1981: 172) posit a development *θbw > *θf > f for the word-internal position. One could also consider a dissimilation of the dentals in əcafār ‘forty’ < əcafrast and/or əcfārdas ‘fourteen’ < əcatfārdas, to which əcafār < əcafṛ could have been adjusted; but such an explanation would only account for Parthian, not the parallel developments in other Ir. languages.

21 Bactrian βαδσατφο suggests that <bwd(y)sdf> was borrowed from a form with -tf (Sims-Williams 2004: 544).

22 Cf. Beekes (1988: 73, 86 and 235 s.v. pta⇒). I am grateful to Michiel de Vaan for pointing out this reference to me.
In view of the discussion above and of the laconic note by Sims-Williams (2004: 540) “[nixwa]-< [nihwa]-]”, one may wonder whether the MP development of *θw is not as traditionally assumed either, and could posit the assumption that nixwär- < *nihwär- < *niθwär- shows the regular MP result of *θw in word-internal position. The reduction seen in čahār and čihil would then need to be due to a specific development here as well, which could have operated at the stage of *hw. A development of the consonant cluster would seem particularly likely in the multiple clusters arising in *caθwɨrθatam (cf. Av. caθθar*satam) > *caθwɨrθatam23 (> via *ciθwɨθl or *ciθɨθr̥) > čihil ‘forty’, whose -h- would have been transferred also to *caθwɨr > čahār. In word-final position one would need to assume a reduction *θw > *hw > h, which would operate in the abstract suffix -iθ (< *iwaθwa-) and in *prθw- ‘bridge’ > *prθw > puhl.24 The adverbial suffix -iθā would need to have generalized h by paradigmatic levelling from -iθ.25

This approach implies ad hoc assumptions for čahār, čihil and -iθā, but accounts for nixwār-, which is otherwise left without explanation.26 Moreover, a development *θw > *hw > xw agrees quite well with other MP sound changes: *θ yields MP h generally (e.g. pahn ‘wide, broad’, méθan ‘home’ vs. Avestan paθāna-, maθdāna-, Hübschmann 1895: 203). The sequence *hw < *θw merges with old PIE *su, both resulting in MP xw.27 Also parallel is the development of *fw > MP hw (kahwan ‘old’ < *kafwana, Bailey 1979: 62b, 64b). But this development needs to be later than the change *hw > xw discussed above, as the hw arising from *fw does not yield xw.28

5.

5.1.

The interpretation of Pth. <pwrt> purt ‘bridge’ and <mwrt> murt ‘death’ suggested in Section 2 implies that Manich. Pth. <t> and <d> encode two different phonemes also in the position after r. Now there appear to be exceptions exactly in this context: according to Boyce (1975: 17), <t> otherwise encodes t, but “rarely” also d when in the position “after r (an archaic spelling), e.g. wrt- besides wrd- (ward-)”. This raises the question whether <rt> and <rd>

23 Under any assumption (*θw > *hw or directly > h), *r gives ir here in spite of the neigh-
24 boursing *w.
24 MP čah ‘spring’ and gāh ‘place; throne’ can be explained as deriving from *-θu- (Old Persian gāθu-; cf. note 11) with θ generalized from the oblique case (cf. Hübschmann 1895: 195, 203; Brandenstein and Mayrhofer 1964: 121); the same applies to Pth. čāh and gāh.
25 Gauthiot (1918: 67) explains -iθā as ablative-instrumental *-iwaθwādā of the stem *-iwaθwa-.
26 Henning’s note (1939: 105) about nixwär- as a “developed form of niθwär-” does not explain anything, and the borrowing from Parthian cautiously considered by Weber (1994: 111 n. 11) needs to assume an unprecedented substitution of df by xw.
27 On the possibly monophonematic status of MP <xw>, see Weber 1994.
28 The New Persian merge assumed by Weber (1994: 113) for MP hw and xw (or rather /sʷ/) is obscure to me; in fact, MP hw yields NP hu (kahwan, kuhan ‘old’ < MP kahwan) while xʷ gives NP xu (saxun, suxan ‘speech’ < MP saxwan).
are written indiscriminately and refer to the same pronunciation.\textsuperscript{29} The data are as follows:\textsuperscript{30}

- inflectional forms of the verb <wrt>/war/d- ‘turn’;
- its derivatives <war(d)> ‘prisoner’, <wrd(y)w> ‘wagon’;
- <rt> (<art>-, Avestan aša-, Old Persian arta\textsuperscript{5}, OInd. rt-) besides <rd>’w> (*art>an-, cf. Avestan ašauvan-, OP artavan-, OInd. rtavan-); both occur only in connection with <prwr> in a designation of the ether (one of the Manich. elements of light).<rt> could be an archaism of the religious language as is its cognate wrt-/urta- in the Sogdian version of the prayer Ašm vohū (Nicholas Sims-Williams, personal communication, cf. Gershevitch 1976).

If one explains <rt> as an archaism or a borrowing from an older stage of the language, Pth. wart/d- ‘turn’ with compounds and derivatives is the only case of a variation <d> / <t> in Manich. Pth. orthography.\textsuperscript{32} At the same time, wart/d- is the only instance of Pth. <rt> other than <pwrt> and <mwt>.\textsuperscript{33} The remaining cases are loanwords or unclear:

- <srt> sārt ‘caravan’ and <srt’w> sartwā ‘caravan leader’ are borrowed from OInd. sārt\textsuperscript{a} and sārt\textsuperscript{b}avāhā (as is Sogdian s‘rth, Sims-Williams 1983: 133, 135, 140);
- two items are unclear: the hapax <wrt’dgyft> (thus Sundermann’s reading of < wr(t)gyft> , cf. DMD 70a), perhaps it belongs to <wrt/d->; and <mrtyn> (twice attested), for which Henning (apud Sundermann 1973: 115) assumes a connection to Avestan aša-.\textsuperscript{34}

\textsuperscript{29} This phenomenon needs to be distinguished from cases which show a variation <d> / <t> (cf. Durkin-Meisterernst 2000: 169 ff.). These cases include <bwrt> / <bwd> bōd (past stem of <bw> - baw- ‘be’) in a proportion 1:4 (Durkin-Meisterernst 2000: 172), a similar proportion holds for pad ‘to, in’ (<pg> / <pd>). The variation <d> vs. <t> is found in instances deriving from Old Ir. t. Conversely, the Pth. result from Old Ir. d is always written <d> (e.g. <kd> kad ‘when’, Durkin-Meisterernst 2000: 172 n. 36). The remaining cases of <t> are orthographic variants of <t> (Boyce 1975: 17).

\textsuperscript{30} Corresponding Manich. MP words (where attested) have only <rd>.

\textsuperscript{31} Sims-Williams (1989: 325) connects Pth. <prwr/d- to Sogdian prwt ‘turn, change, become’ (<pari-wart>) and translates the attestation <wd w’d tfw dyg | wwd ny prwrdy> (verse) as “(…) and the searing wind does not prevail there”. Perhaps one could also consider a meaning within the semantic range of the other <(w)r>rt/d->, e.g. “and the searing wind does not swirl there” or even “and the wind does not turn there”, interpreting <prwrd> in the light of its Sogdian cognate.

\textsuperscript{32} Boyce’s statement quoted at the beginning of this subsection and the note by Durkin-Meisterernst (2000: 173) to the same effect thus need to be adjusted.

\textsuperscript{33} Pth. art is also found in names from other languages (Sanskrit, Turkic).

\textsuperscript{34} Another example might be the unclear hapax <hw’rt>, perhaps “having good?” (but maybe this is not a complete word, cf. DMD 192a), if <t> here is a graphic variant of <t> and not of <d> (cf. note 29).
5.2.
The following points may be relevant in evaluating the orthography <rt/d>: Old Ir. t usually gives Pth. <d> post-vocally and after sonorants, and also after r, e.g. <mrd> mard ‘man’ (Av. marta-), <mrdyft> mardift ‘manliness’, <srđ> sard ‘cold’ (Av. sar’ta-), <srđ g> sardag ‘cold (noun)’, <wxrd> wxard ‘eaten’ (< *hwar-ta-), <wxrdyg> wxardig ‘meal’, <nbrd> nibard ‘battle’, <nbrdγ> nibardag ‘warlike’, <kyrd> kird ‘done’ (Av. kɔrɔta-), <kyrd r> kirdagär ‘mighty’, <dyrd> dird ‘held’ (Av. dɔrɔta-). The voiced counterpart, Old Ir. rd, mostly yields Pth. ṛ, e.g. <zyrδ> zir ṛ ‘heart’ (< Proto-Ir. *zrdaya-). However, Old Ir. ard gives Pth. ʾăr (Rastorgueva and Molčanova 1981: 162), e.g. <w r> wār ‘flower’ (Av. var’dā-), <s r> sār ‘year’ (Av. sar’dā-). So there is an opposition between -rd < Old Ir. -rt and -rō < Old Ir. -rd only for vowels other than a, but no ūarδ < ard vs. ard < art.

Connecting the Pth. data to developments in other Ir. languages, one might wonder whether the mixed orthography <rt/d> after a intended to mark a specific pronunciation for which there was no orthographic convention – perhaps voiceless r + t as Durkin-Meisterernst (2000: 173) assumes. Similarly, Av. <s >, which is the result of rt in certain contexts, has been assumed to represent voiceless ṛ, retroflex t, or a fricative similar to Czech ř (Hoffmann 1986: 173 ff., de Vaan 2003: 602). Also noteworthy is the occasional lengthening of Av. a preceding <s >, e.g. x’āša- ‘food’ < *hwar-ta-. In Balochi, Old Ir. *art gives ārt and *ard gives ār (e.g. wār-t ‘eats’ vs. war- otherwise; gwārāg ‘blossom’ vs. Av. var’dā-) while rt and rd after other vowels are preserved. Pashto likewise has retroflex r from Old Ir. rt and rd, but this is independent of the preceding vowel. So if the Pth. orthography <rt/d> did indicate a specific sound or sound cluster, the result of *art would arrange itself with similar phenomena in other Ir. languages.

It is not clear, though, why a variation <rt/d> is only found with the family <wrt/d-> and not with other contents containing Old Ir. *art, or why a “specific pronunciation” is only marked for wart/d-. Perhaps the variation <rt/d> marks the

35 For examples of *rt in labial context see Section 2.1.
36 The opposition between voiced stops (from Old Ir. word-internal voiceless stops) and fricatives (from Old Ir. word-internal voiced stops) is not marked in the Manich. script, but has generally been assumed at least for the older stages of Parthian. Sundermann (1989: 123) assumes a merge of both series for “Late Middle Parthian” (sixth c. AD), thus also Rastorgueva and Molčanova (1981: 160). See Korn (2010: 424 f.) for further discussion.
37 Cf. de Vaan (2003: 54 f., 104, 596). Among the instances relevant here is ʾḍḥāša- ‘quick; firmament’ (from the same root as Pth. nīḍfār-), if this does not contain old ʾā (de Vaan, ibid.)
40 Cf. Skjærvø (1989: 404). A change of r + dental to retroflexes is common cross-linguistically (thus e.g. in Swedish and in Franconian dialects).
41 Sogdian influence cannot be responsible for the orthography of Pth. <wrt/d->: the variation of <d> and <t>, specifically after r, noted by Gershevitch (1954: 42 f., § 268 ff.) does not exist; rather, a late stage of Sogdian probably had [d] as an allophone of [t] in voiced contexts, thence some cases of C <d> for what is otherwise <t> (Nicholas
word-internal development, which is exclusively found in the only Pth. present stem with Old Ir. *art, while the word-final position shows the expected *rd ard. Inflectional forms and derivatives such as *mr’d n mardān (plural), *mr’dyt mardift, etc., were surely related to *mr’d mard ‘man’ by the speakers and thus do not undergo word-internal development, while a present stem mostly occurs with endings. If *rt/d is the word-internal development, it is perhaps less likely that *rt/d stands for a devoicing which would not have taken place in word-final position, and a retroflex or fricative output would seem more likely.

6.

Summarizing the argument above, Manich. Pth. *t and *d encode two different phonemes also in the position after r, and Pth. *pwrt purt ‘bridge’ and *mwrt murt ‘death’ are to be read as purt and murt. These words are likely to go back to *prtθw- (the form from which MP puhl also derives) and *mrθw- (while Sogdian mwθw derives from *mrθu- with generalized θ). These are the oblique stems of *prt- and *mrθu-, the former familiar from Av. pəwrθu-, the latter otherwise only found in Sogdian.

Pth. *pwrt ‘bridge’ and *mwrt are, then, additional evidence for Sims-Williams’ claim that Proto-Ir. *θw does not yield Parthian f as previously assumed, but results in a consonant group, which would be reduced in Pth. *purθt and *murθt. By the logic suggested here, -θt would be the Pth. word-final outcome of *θw in Manich. Parthian (vs. -f in inscriptional Parthian) vs. -θf- (thus in inscriptional Parthian) > -θf- (Manich.) in word-internal position.

Middle Persian may likewise show a consonant cluster as the result of *θw, yielding *hw > xw. In čahār ‘four’ and čihil ‘forty’, specific processes must then have been at work to effect the simple h; these would be parallel to cluster reductions in these numbers in other Ir. languages.

Table 1 presents the Pth. sound changes of r and *t + dental discussed in this paper in comparison with some data of selected Western Ir. languages.

Examples for Zazaki include the cognates of Pth. words mentioned above: for *ard: sef ‘year’; *rd: zefi ‘heart’ (Paul 1998: 169), vilike ‘flower’; *rt: kerdi-, berdi- (past stems of ‘do’ and ‘carry away’); *art: serd ‘cold’; *rθw: purd ‘bridge’ (cf. Section 2.1). Since *rt appears to give erd also in labial context (berd-*breta-), one could perhaps consider vilike a loanword (thus Paul 1998: 169), so that the regular output of *rd in labial context could be erθ or perhaps ɨθ (cf. e.g. pɨf ‘full’, which at least shows *t in labial context although not *tθ).
In Balochi, the contexts in which \( *r \) yields \( ir \) and \( ur \) are not identical to those of MP and Pth. \( ir \), \( ur \). While \( ir \) is the result in palatal contexts and \( ur \) in labial ones, the neutral context shows Balochi \( ur \), but MP / Pth. \( <yr> \) \( ir \), e.g. Balochi turs- vs. MP, Pth. <tyrs-> 'be afraid', kurt vs. MP, Pth. <kyrd> 'done'. Other examples include \( *r \)d: zird 'heart', \( *ard \): gwārāg 'blossom', \( *art \): sārt 'cold'. Owing to the absence of other examples for the context \( *r \theta w \), it is impossible to decide whether Balochi puhl 'bridge' is a MP loanword or not (Korn 2005: 143–8, 328, 121).

### Table 1. Development of \( *r \), \( *r + \) dental

<table>
<thead>
<tr>
<th>Proto-Iranian</th>
<th>Parthian</th>
<th>Zazaki</th>
<th>Balochi</th>
<th>Middle Persian</th>
</tr>
</thead>
<tbody>
<tr>
<td>( *\text{i}r )d</td>
<td>( &lt;\text{yrd}&gt; ) ir( \delta )</td>
<td>( e\tilde{r} )</td>
<td>( \text{ird, } urd )</td>
<td>( il, ul )</td>
</tr>
<tr>
<td></td>
<td>( &lt;\text{wrd}&gt; ur\delta )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( *\text{i}t )</td>
<td>( &lt;\text{yrd}&gt; ird )</td>
<td>( erd )</td>
<td>( \text{irt, } urt )</td>
<td>( \text{ird, urd} )</td>
</tr>
<tr>
<td></td>
<td>( &lt;\text{wrd}&gt; urd )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( *\text{r}\theta w / [+ \text{lab.}] )</td>
<td>( &lt;\text{wrt}&gt; urt )</td>
<td>( \text{urd} )</td>
<td>( \text{uhl?} )</td>
<td>( \text{uhl} )</td>
</tr>
<tr>
<td>( *\text{ard} )</td>
<td>( &lt;\text{r}&gt; ) ār</td>
<td>( ar )</td>
<td>( \text{ār} )</td>
<td>Manich. ( &lt;\text{r}&gt; ) Pahl. ( &lt;1&gt; )^{43}</td>
</tr>
<tr>
<td>( *\text{r}Hd )</td>
<td>word-internal ( &lt;\text{rt/d}&gt; -\text{a(r)d}- )</td>
<td>( \text{erd} )</td>
<td>( \text{ārt} )</td>
<td>( \text{ārd} )</td>
</tr>
<tr>
<td>( *\text{r}Ht )</td>
<td>word final ( &lt;\text{rd}&gt; -\text{ard} )</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

43 The Pahlavi orthography is ambiguous and could also stand for ār (then identical with the Pth. output), cf. Hoffmann (1986: 183 n. 38). At any rate, New Persian has āl in relevant words.

### Bibliography


108 AGNES KORN


