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# Footnotes on a Parthian sound change<sup>1</sup>

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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

## 1.

According to the classical treatments by Tedesco (1921: 199 f.) and Henning (1958: 96 f.), Proto-Ir. *\*θw* (PIE *\*tu*) gives Middle Persian *h* (MP *čahār* ‘four’ vs. Avestan *čaθβārō*, OInd. *catvāraḥ*; MP *čihil* ‘forty’ vs. Avestan *čaθβar<sup>ə</sup>sat-*, OInd. *catvāriṃśát-*; abstract suffix MP *-ih* < *\*-iya-θwa-*), but *f* in Parthian, as in *čafār* ‘four’, *čafrast* ‘forty’, and the abstract suffix *-īf* in inscrip-tional Parthian.

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) <nydf<sup>r</sup>-> *niđfār-* / (past stem) <nydfwr>

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; OInd. = 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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*niḍfurd* ‘to hurry (intr. and tr.)’, which is likely to derive from *\*ni-θwāraya-* (cf. OInd.  $\sqrt{tvar}$ ), and the noun <nydf’r> *niḍfār* ‘haste’ (Henning 1958: 97 n. 2).<sup>2</sup> 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 *ḍf* in *ni-ḍfār-* would show the result in word-initial position (for which there is no other example), and that *ḍf* would have been adopted from the (unattested) simplex *\*ḍfār-*. 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 *ḍf* is the regular result of *\*θw* in word-internal position. For *čafār* ‘four’ he assumes a dissimilatory loss of the dental elements of the consonant cluster (*\*[tšaðfār]* > *[tšafār]*), a development that also occurred in this word in other Ir. languages (e.g. Bactrian  $\sigma\phi\alpha\rho$  ‘four’ vs. regular  $\lambda\phi$  < *\*ḍf* in  $\alpha\lambda\phi\alpha\nu\zeta-$  ‘attain’ < *\*θwanjā-*, abstract suffix  $-\lambda(\alpha)\phi\sigma$ , Sims-Williams 2004: 542). For the word-final position, he posits a dialectal difference in the further development of *\*-ḍf* > *-f* for inscriptional 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 *-ift* does not contain an additional suffix.

### 2.1.

The word <pwr> ‘bridge’ occurs in the Pth. hymn cycle *Angad Rōšnān* VI 57b.<sup>3</sup> 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 *pird* ‘bridge’.<sup>4</sup> Etymologically it is obviously related to Avestan *pərətu-* (cf. Boyce 1954: 194: “< *\*pərətu-*”). However, a derivation from Proto-Ir. *\*pṛtu-* would raise a problem on the phonological side:

2 If the root had the shape PIE *\*t<sub>u</sub>erH* (as sometimes assumed), the past stem would be *\*t<sub>u</sub>rH-to-* > *\*θwarta-*, in which case Pth. <nydfwr> could be read *niḍford* (thus DMD 252b for the derivative <nydfwr> ‘hurried’). However, there are good arguments against the laryngeal (EWAia I: 685, de Vaan 2003: 56, LIV p. 655), so *niḍfurd* < *\*-θwṛta-* < *\*-t<sub>u</sub>r-to-* seems preferable (thus e.g. Ghilain 1939: 74; Boyce 1977: 64).

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

3 Cf. the edition of Boyce (1954: 148). DMD 287a reads “/purt/, /purd/?”; Boyce (1977) does not note the word.

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.  $*_r t$  following a labial otherwise, and expectedly,<sup>5</sup> gives Pth.  $\langle wrd \rangle$   $\rightarrow$   $\langle urd \rangle$ , e.g.  $\langle bwr d \rangle$   $\rightarrow$   $\langle bur d \rangle$   $\leftarrow$   $*_b r t a-$  (past stem of  $\langle br \rangle$  ‘carry’),  $\langle mwr d \rangle$   $\rightarrow$   $\langle mur d \rangle$   $\leftarrow$   $*_m r t a-$  (past stem of  $\langle myr \rangle$  ‘die’). Proto-Ir.  $*_p r t u-$  should thus have given  $\dagger \langle pwr d \rangle$   $\rightarrow$   $\langle pur d \rangle$ .

So it is worth considering whether Pth.  $\langle pwr t \rangle$  could derive from the oblique stem  $*_p r \theta w-$ , i.e. from the form that has always been seen as underlying the MP cognate *puhl* ( $*_p r \theta w-$   $\rightarrow$   $*_p r u h$   $\rightarrow$  *puhl*, Hübschmann 1895: 195, 207, Hoffmann 1986: 171, 181 n. 20).<sup>6</sup> The application of the change suggested by Sims-Williams for Manich. Parthian (see Section 1) yields  $*_p r \theta w-$   $\rightarrow$   $*_p r u \delta f$   $\rightarrow$   $*_p r u f t$ . Since a consonant cluster  $\langle r f t \rangle$  is not permitted by Pth. phonotactics,<sup>7</sup>  $*_p r u f t$  could have been reduced to *purt* by a dissimilation vs. the initial *p*- that is not unlike that in *čafār*.

## 2.2.

A derivation of  $\langle pwr t \rangle$  *purt* from  $*_p r u f t$   $\leftarrow$   $*_p r \theta w-$  suggests a parallel explanation for Pth.  $\langle mwr t \rangle$  *murt* ‘death’<sup>8</sup> from  $*_m u r f t$   $\leftarrow$   $*_m u r \delta f$   $\leftarrow$   $*_m r \theta w-$  (Nicholas Sims-Williams, personal communication). A dissimilatory loss of *f* in  $*_m u r f t$  is surely as motivated as it is in  $*_p r u f t$ . On the other hand,  $*_m r \theta w-$  would be the oblique stem of an as yet unknown Ir. stem  $*_m r t u-$  besides the otherwise attested  $*_m r \theta y u-$  (Avestan *mərəθiiu-*, Old Persian (*uvā-*)*məršiyu-*,<sup>9</sup> OInd. *mṛtyu-*), but a stem  $*_m r t u-$  /  $*_m r \theta w-$  ‘death’ is indeed reflected in Sogdian *mwrδw* /*mu*<sup>1</sup>*θú*/.<sup>10</sup> This is likely to derive from the nominative and accusative forms  $*_m r \theta u s$  and  $*_m r \theta u m$ <sup>11</sup> while a derivation from  $*_m r \theta y u-$  should effect a palatalization of the vowel (Sims-Williams, personal communication). Similarly, the derivation of Pth.  $\langle mwr t \rangle$  from Proto-Ir.  $*_m r t i-$  suggested by Henning (1937: 85) should probably give  $\dagger \langle myr d \rangle$ , cf.  $*_k r t a-$   $\rightarrow$   $\langle kyr d \rangle$  (past stem of  $\langle kr \rangle$  ‘do’),  $*_m r y a-$   $\rightarrow$   $\langle myr \rangle$  ‘die’.<sup>12</sup>

So far as the existence of  $*_m r \theta w-$  in Sogdian is concerned, the word is found in *B pyšmwrδw*<sup>13</sup> ‘after death’ and in the phrase *M z’ δmwrδw* ‘birth-death’, *B z’ t*

- 5  $*_r$   $\rightarrow$  Pth. *ur* is the regular development in labial context (Rastorgueva and Molčanova 1981: 172). For Old Ir.  $*-t$   $\rightarrow$  Pth. *d* see Section 5.
- 6 The word is likely to have had an “amphidynamic” paradigm PIE  $*_p r t u-$  /  $*_p r t u-\acute{E}-$  (Hoffmann 1986: 171). New Persian (classical) *pul* cannot come from  $*_p r t u-$  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  $*_r f t$  does not yield  $*_r$ , but probably gives  $*_r \delta$  from the outset, cf.  $\langle gryft, grypt \rangle$  ( $\langle \rangle$ ) *grift*  $\leftarrow$   $*_g r f t a-$  (past stem of  $\langle gy r w \rangle$  ‘seize’).
- 8 Found in *Angad Rōšnān* 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,  $\langle \delta \rangle$  is used for  $\delta$  and  $\theta$  while the script of the Christian texts (C) has an extra letter  $\langle \theta \rangle$  for  $\theta$ .
- 11  $*_m r \theta u-$  with generalized  $\theta$  (from the oblique stem  $*_m \theta w$ ) is parallel to OP *gāθu-* from a paradigm  $*_g ā t u-$  /  $*_g ā \theta w-$  (cf. note 24).
- 12  $\langle myr \rangle$  shows that the palatalizing effect of a following  $*_y$  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[y](š)m(wr)δ*, but there seems to be a final *-w* also in this attestation (*p[y](š)m(wr)δ(w)*), cf. the photo of Or. 8212/82 on the webpage of the *International Dunhuang Project* (<http://idp.bl.uk>).

(*t*) *mwrδw* ‘birth (and) death’ (i.e. circle of reincarnation, *samsāra*), where *z’δ*- 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 *’zy myry* ‘birth-death’.<sup>14</sup> Indeed, Pth. <*z’dmwrδ*> *zādmurd* is quite well attested, and Pth. influence in the Sogdian Buddhist lexicon has been noted for other words as well.<sup>15</sup> However, while Pth. influence in the use of Sogdian (*o*)*mwrδw* and in the formation of *z’dmwrδw* is possible, the assumption of a direct borrowing is faced with the difficulty that the attested Pth. forms are in fact <*mwrt*> *murt* and <*z’dmwrδ*> *zādmurd*.<sup>16</sup> It would also be unlikely that Sogdian borrowed *mwrδw* from the stage of Pth. \**murδf*, since one would expect Pth. *δf* to be rendered by Sogdian <*δβ*>. Such an output may be seen in Sogd. *pwtysδβ* ‘Bodhisattva’ (besides variants such as *pwt/δystβ*), which could owe its <*δβ*> to Pth. <*bwd(y)sdf*> *bōdisaδf* (thus Sims-Williams 2004: 544 f., see also Section 3).<sup>17</sup>

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

### 3.

Another item to be considered in the discussion of the Pth. result of Proto-Ir. \**θw* is the inscriptional Pth. form <*nytpryw*t> ‘hurried’, corresponding to Manich. Pth. <*nydf’r*> etc.<sup>19</sup> 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. \**θw* could have yielded Pth. *tf* first, which would be shown by inscriptional <*nytp*r-> *nitfār-*. In ‘four’, a dissimilation \*[*tšatfār*] > [*tšafār*]

14 *’zy myry* ‘birth-death’ is found only in Benveniste (1940: 56, line 1194). Gershevitch (1946: 148) considers *z’dmwrδw* as a loan translation. Gharib (1995: 453b) follows this view, which might be the reason for her reading Sogd. *z’dmwrδ* [sic] /*zādmurd*/ and *pyšmwrδ(w)* /*pišmurδ*/ (the paragraphs referred to in Gershevitch 1954 only note (*o*)*mwrδw*, though). On the other hand, she reads *mwrδw* /*murδu*/ (Gharib 1995: 221a).

15 Cf. Sims-Williams (1983: 139; 2004: 544), Sundermann 1982.

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 *murd*, 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*> *ōš* ‘death’, <*zg’m*> *izγām* ‘flight, exit (of the soul from the body)’ and Ind. loanwords found in Buddhist contexts (<*mrrn*> *maran*, <*prnybr’n*> *parniβrān*, 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 <*zydmrgyḥ*> (or <*zyrmrgyḥ*> (Sundermann 1984: 504) ‘?-death’ is unlikely to be an error for <*z’dmrgyḥ*> ‘birth-death’ (Desmond Durkin-Meisterernst, personal communication), MacKenzie (apud Sundermann 1984: 504) considers a connection to Avestan *jūti-* ‘life’, Sundermann (ibid.) a reading <sup>+</sup><*zwd*> (fast) or <sup>+</sup><*zwr*> (force).

19 Paikuli inscription 21 d1, 03 (cf. Skjærvø 1983/I: 49, II: 79 f.).

<cf' r> would have taken place.<sup>20</sup> 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. *-ift* <-yft>, inscriptional *-if* <-py>. The output of Proto-Ir. *\*p<sub>r</sub>θw-* and *\*m<sub>r</sub>θw-* 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 *\*purtf* and *\*murtf* or in the metathized stage of *\*purft* and *\*murft*.

The next stage would assimilate the *tf* to *δf*. This would have concerned word-internal cases of *tf* other than 'four', thence Manich. <nydf' r> *niδfār-* and derivatives vs. inscriptional *ni<sup>h</sup>fār-*, as well as borrowed *tf*, which is likely to be seen in <bwd(y)sdf> *bōdisaδf* 'Bodhisattva' and <sdf> *saδf* 'being (*sattva-*)'.<sup>21</sup>

This approach appears to account for the data in an economic way and motivate the dissimilation in *čafār* particularly well. A development of word-final *\*θw* > *\*tf* > *-f(t)* also seems to be more straightforward than *\*θw* > *\*δf* (> *\*-fδ* ?) > *-f(t)*. Pth. *\*θw* > *tf* is also quite parallel to Sogdian and Khwarezmian *\*θw* > *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 inscriptional <tp> and Manich. <df> as *θf* (Jost Gippert, personal communication), comparing it to Avestan *fəδr-* (oblique stem of *pitar-* 'father'), which is likely to reflect /fθr-/,<sup>22</sup> and to the development of word-internal *\*δw* > Pth. <db>, if this is *δv* 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 *\*θw* > *\*tf* > *-f(t)* appears to be preferable.

#### 4.

There is another piece of evidence which is incompatible with the classical view of the development of *\*θw* in Western Iranian. MP *nixwār-* (Manich. <nyxw' r->, Pahlavi <nswb'l->) 'hurry, hasten, incite' is obviously a cognate of Pth. *niδfār-*, but *čahār* 'four' and *čihil* 'forty' would lead one to expect MP †*nihār-*.

20 *\*-θw-* > Pth. *-tf-* also seems to be assumed by Weber (1994: 111 n. 11; his only example <ctf' r> 'four' is not attested, however). For word-final position, Lentz (1926: 253) and Huysse (2003: 85 n. 125) assume a development *\*-θw-* > *-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 *\*θw* > *\*θf* > *f* for the word-internal position. One could also consider a dissimilation of the dentals in *čafrast* 'forty' <*\*čatfrast* and/or *čafārdas* 'fourteen' <*\*čātārdas*, to which *čafār* <*\*čātāfār* could have been adjusted; but such an explanation would only account for Parthian, not for the parallel developments in other Ir. languages.

21 Bactrian βωδοσατφο 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. *ptar-*). 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:r-] < [nihwa:r-]”, one may wonder whether the MP development of  $*\theta w$  is not as traditionally assumed either, and could posit the assumption that  $nixwār-$  <  $*nihwār-$  <  $*niθwār-$  shows the regular MP result of  $*\theta w$  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 reduction of the consonant cluster would seem particularly likely in the multiple clusters arising in  $*čaθwγθatam$  (cf. Av.  $čaθβar^2 satəm$ ) >  $*čahwirhat$ <sup>23</sup> (> via  $*čihwihl$  or  $*čihird$  ?) >  $čihil$  ‘forty’, whose  $-h-$  would have been transferred also to  $*čahwār$  >  $čahār$ . In word-final position one would need to assume a reduction  $*\theta w$  >  $*-hw$  >  $-h$ , which would operate in the abstract suffix  $-ih$  (<  $*-iya-θwa-$ ) and in  $*pγθw-$  ‘bridge’ >  $*purh$  >  $puhl$ .<sup>24</sup> The adverbial suffix  $-ihā$  would need to have generalized  $h$  by paradigmatic levelling from  $-ih$ .<sup>25</sup>

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

## 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 ( $*\theta w$  >  $*hw$  or directly >  $h$ ),  $*γ$  gives  $ir$  here in spite of the neighbouring  $*w$ .

24 MP  $čāh$  ‘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  $-ihā$  as ablative-instrumental  $*-iya-θwāδā$  of the stem  $*-iya-θwa-$ .

26 Henning’s note (1939: 105) about  $nixwār-$  as a “developed form of  $niθvār-$ ” does not explain anything, and the borrowing from Parthian cautiously considered by Weber (1994: 111 n. 11) needs to assume an unprecedent substitution of  $df$  by  $xw$ .

27 On the possibly monophonemic status of MP < $xw$ >, see Weber 1994.

28 The New Persian merge assumed by Weber (1994: 113) for MP  $hw$  and  $xw$  (or rather  $/x^w/$ ) is obscure to me; in fact, MP  $hw$  yields NP  $hu$  ( $kahun$ ,  $kuhan$  ‘old’ < MP  $kahwan$ ) while  $x^w$  gives NP  $xu$  ( $saxun$ ,  $suxan$  ‘speech’ < MP  $saxwan$ ).

are written indiscriminately and refer to the same pronunciation.<sup>29</sup> The data are as follows:<sup>30</sup>

- inflectional forms of the verb <wrt-> / <wrd-> *wart/d-* ‘turn’;
- its derivatives <wrd(g)> ‘prisoner’, <wrđy(y)wn> ‘wagon’;
- its compounds and their derivatives: inflectional forms of <mwrt-> / <mwrd-> *am-wart/d-* ‘collect’ with <mwrdn> ‘assembly (place)’, <mwrdyšn> ‘collection’, <mwrt dnyft> ‘assembly’; one inflectional form of <zwrt-> *iz-wart/d-* ‘return’ with <zwrdyšn> ‘return’; one inflectional form of <prwrt-> *par-wart/d-* ‘prevail’<sup>31</sup> vs. *fra-wart/d-* in <frwrdg> ‘letter (roll)’;
- <’rt> (<\*arta-, Avestan *aša-*, Old Persian *arta*<sup>o</sup>, OInd. *ṛtá-*) besides <’rd’w> (<\*artāuan-, cf. Avestan *ašauuan-*, OP *artāvan-*, OInd. *ṛtāvan-*); both occur only in connection with <prwht> 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 *Ašəm 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.<sup>32</sup> At the same time, *wart/d-* is the only instance of Pth. <rt> other than <prwrt> and <mwrt>.<sup>33</sup> The remaining cases are loanwords or unclear:

- <s’rt> *sārt* ‘caravan’ and <s(’)rtw> *sartwā* ‘caravan leader’ are borrowed from OInd. *sārt<sup>h</sup>a-* and *sārt<sup>h</sup>avāha-* (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.gy)ft>, cf. DMD 70a), perhaps it belongs to <wrt/d->; and <’mrty> (twice attested), for which Henning (apud Sundermann 1973: 115) assumes a connection to Avestan *aša-*.<sup>34</sup>

29 This phenomenon needs to be distinguished from cases which show a variation <d> / <t> (cf. Durkin-Meisterernst 2000: 169 ff.). These cases include <bw> / <bwd> *būd* (past stem of <bw-> *baw-* ‘be’) in a proportion 1:4 (Durkin-Meisterernst 2000: 172), a similar proportion holds for *pad* ‘to, in’ (<pt> / <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).

30 Corresponding Manich. MP words (where attested) have only <rd>.

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

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.

33 Pth. *art* is also found in names from other languages (Sanskrit, Turkic).

34 Another example might be the unclear hapax <hw’wrt>, perhaps “having good?” (but maybe this is not a complete word, cf. DMD 192a), if <t> here is a graphic variant of <d> 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> *mardīft* ‘manliness’, <srđ> *sard* ‘cold’ (Av. *sar<sup>o</sup>ta-*), <srđ’g> *sardāg* ‘cold (noun)’, <wxrd> *wxard* ‘eaten’ (<*\*hwar-ta-*), <wxrdyg> *wxardīg* ‘meal’, <nbrđ> *nibard* ‘battle’, <nbrdg> *nibardag* ‘warlike’, <kyrd> *kird* ‘done’ (Av. *kərata-*), <kyrdg’r> *kirdagār* ‘mighty’, <dyrd> *dird* ‘held’ (Av. *dərata-*).<sup>35</sup> The voiced counterpart, Old Ir. *rd*, mostly yields Pth. *rō*, e.g. <zryrd> *zirō* ‘heart’ (<Proto-Ir. *\*zrdaya-*).<sup>36</sup> However, Old Ir. *ard* gives Pth. *ār* (Rastorgueva and Molčanova 1981: 162), e.g. <w’r> *wār* ‘flower’ (Av. *var<sup>o</sup>da-*), <s’r> *sār* ‘year’ (Av. *sar<sup>o</sup>da-*). So there is an opposition between *-rd* <Old Ir. *-rt* and *-rō* <Old Ir. *-rd* only for vowels other than *a*, but no †*arō* <*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. <š>, which is the result of *rt* in certain contexts, has been assumed to represent voiceless *r*, 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 <š>, e.g. *x<sup>v</sup>āša-* ‘food’ <*\*hwar-ta-*.<sup>37</sup> In Balochi, Old Ir. *\*art* gives *ārt* and *\*ard* gives *ār* (e.g. *wār-t* ‘eats’ vs. *war-* otherwise; *gwārag* ‘blossom’<sup>38</sup> vs. Av. *var<sup>o</sup>da-*) while *rt* and *rd* after other vowels are preserved.<sup>39</sup> Pashto likewise has retroflex *r* from Old Ir. *rt* and *rd*, but this is independent of the preceding vowel.<sup>40</sup> 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 words containing Old Ir. *\*art*, or why a “specific pronunciation” is only marked for *wart/d-*.<sup>41</sup> 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 *θβāša-* ‘quick; firmament’ (from the same root as Pth. *nīdār-*), if this does not contain old *ā* (de Vaan, *ibid.*)

38 Thus *Sayad Ganj*, p. 704. Barker and Mengal (1969/II: 463) note *gwārig* ‘wild yellow tulip’.

39 Cf. Korn (2005: 97, 189, 220).

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 <δ/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*,<sup>42</sup> while the word-final position shows the expected <rd> *ard*. Inflectional forms and derivatives such as <mrd'n> *mardān* (plural), <mrdyft> *mardīft*, etc., were surely related to <mrđ> *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 \**prθw-* (the form from which MP *puhl* also derives) and \**mrθw-* (while Sogdian *mwrδw* derives from \**mrθu-* with generalized *θ*). These are the oblique stems of \**pṛtu-* and \**mṛtu-*, the former familiar from Av. *pərətu-*, 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. \**purft* and \**murft*. By the logic suggested here, *-ft* would be the Pth. word-final outcome of \**θw* in Manich. Parthian (vs. *-f* in inscriptional Parthian) vs. *-tf-* (thus in inscriptional Parthian) > *-δf-* (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 \**r* + 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*: *seṛ* 'year'; \**rd*: *zeṛi* 'heart' (Paul 1998: 169), *vilike* 'flower'; \**rt*: *kerd-*, *berd-* (past stems of 'do' and 'carry away'); \**art*: *serd* 'cold'; \**rθw*: *pird* 'bridge' (cf. Section 2.1). Since \**rt* appears to give *erd* also in labial context (*berd* < \**brta-*), one could perhaps consider *vilike* a loanword (thus Paul 1998: 169), so that the regular output of \**rd* in labial context could be *eṛ* or perhaps *iṛ* (cf. e.g. *piṛ* 'full', which at least shows \**r* in labial context although not \**rt*).

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Sims-Williams, personal communication, cf. Sims-Williams 1985: 163 n. 1). Sogdian compounds and derivatives corresponding to Pth. <wrd/t-> are well attested, and always written with <rt>, e.g. *prw'(')rt-* 'turn', *zw'(')rt-* 'return', *wrtw* 'wagon'; the interpretation of *w'rδ't* (Frag. Len. 93, 8) is not clear, but it is unlikely to show \**w'rδ-* 'turn' (Pavel Lurje and Nicholas Sims-Williams, personal communication). Perhaps a denominative verb *w'r-* 'rain' is present here (Yutaka Yoshida, personal communication).

42 Pth. and MP (Pahlavi) *nibard-* 'fight' are probably denominative formations from *nibard* 'battle', cf. the secondary past stems Pth. *nibardād* (which is the only attested form of the Pth. verb) and MP *nibardīd* (not from the zero grade), cf. OInd.  $\sqrt{prt}$ .

Table 1. Development of \*r, \*r + dental

<i>Proto-Iranian</i>	<i>Parthian</i>	<i>Zazaki</i>	<i>Balochi</i>	<i>Middle Persian</i>
*r̥d	<yr̥d> <i>ir̥δ</i> <wr̥d> <i>ur̥δ</i>	<i>eṛ</i> <i>il</i> ?	<i>ird</i> , <i>urd</i>	<i>il</i> , <i>ul</i>
*rt	<yr̥d> <i>ird</i> <wr̥d> <i>urd</i>	<i>erd</i>	<i>irt</i> , <i>urt</i>	<i>ird</i> , <i>urd</i>
*r̥θw / [+ lab.]	<wrt> <i>urt</i>	<i>ird</i>	<i>uhl</i> ?	<i>uhl</i>
*ard *r̥Hd	<'r> <i>ār</i>	<i>ar</i>	<i>ār</i>	Manich. <'r> Pahl. <'l> <sup>43</sup>
*art *r̥Ht	word-internal <-rt/d-> word final <-rd> -ard	-a(r)d- ? <i>erd</i>	<i>ārt</i>	<i>ārd</i>

In Balochi, the contexts in which \*r̥ 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 \*r̥d: *zird* 'heart', \*ard: *gwārag* 'blossom', \*art: *sārt* 'cold'. Owing to the absence of other examples for the context \*r̥θw, it is impossible to decide whether Balochi *puhl* 'bridge' is a MP loanword or not (Korn 2005: 143–8, 328, 121).

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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.

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