Abstract
This article argues that the opposition between Old Iranian *č and *ǰ was preserved in Manichaean Parthian not only word-initially, but also in post-vocalic position, at least at the time of the introduction of the Manichaean script. The approach is phonological, and attempts to show that Pth. /č/ (< OIr. *č), written <c> and <z̈>, and Pth. /ž/ (< OIr. *ǰ and *ž), written <j>, are consistently distinguished in the Manichaean script. Pth. /č/ may have developed a postvocalic allophone [ǰ] (not affecting the phonematic opposition), which might have been a motivation for the use of the letter <z̈>. Transcriptions into Sogdian script and the cantillations suggest a coalescence of the Pth. phonemes, but it is not clear whether this is a later development of the Pth. language itself or a peculiarity of the liturgical pronunciation of Parthian as practised by Manichaeans in Central Asia.¹

In Parthian, Old Iranian č is preserved in word-initial position while OIr. *ǰ yields Parthian ž. For the word-internal position, it has generally been assumed that OIr. *ž, *ǰ and postvocalic *č all come out as ž (with an allophonic ǰ after n), and that the Manichaean letters φ (transliterated <c>), Σ (〈j〉), and Γ (〈z̈〉)² in word-internal position all encode the (one)

* This paper owes much to discussions with Desmond Durkin-Meisterernst, who is, however, not responsible for its conclusions. I am also very grateful to Thomas Jügel for his close and critical reading of this paper and to Nicholas Sims-Williams for valuable comments. The essential points of this article were presented at the conference “The sound of Indo-European: Phonetics, phonemics, and morphophonemics”, University of Copenhagen, April 2009. A list of abbreviations is given at the end of the article.

¹ The data used for this paper were extracted from the TITUS text database (http://titus.uni-frankfurt.de/texte/etcs/iran/miran/manich/mirmankb/mirma.htm), from Boyce 1975, Durkin-Meisterernst 2004 and its reverse index at http://www.bbaw.de/bbaw/Forschung/Forschungsprojekte/turfanforschung/de/iranischeTexte. I also used Durkin-Meisterernst’s collection of transliterated texts at http://www.bbaw.de/forschung/turfanforschung/dta/mirtext/wmirtext.html, and the photos of the Berlin fragments at http://www.bbaw.de/forschung/turfanforschung/dta/. As a rule, details about attestations of word forms, their numbers, etc. refer to the data in Durkin-Meisterernst 2004 (i.e. to fragments published before 2004).

Transliterated Pth. and MP words are noted without brackets here (e.g. bwj); phonemic transcription is noted as /bōž/. <> mark transcription of individual letters, e.g. 〈j〉. Transliterations and transcriptions follow Durkin-Meisterernst 2004 unless otherwise noted. OIr. words and phonemes are noted with an asterisk to indicate the underlying phonemic form, disregarding the specifics of Old Persian and Avestan. Quotations from works in languages other than English are given in translation.

² This letter is now commonly transliterated <ž̈>, probably because of the general assumption that it encoded /ž/. Since this assumption is one of the topics of the present article, I follow Henning 1958 (e.g. pp. 74 f.) and use the more descriptive transliteration <ž̈>

Parthian ž

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phoneme /ž/. In what follows, I will investigate some evidence speaking against this assumption chiefly by looking at the Manichaean Parthian orthography and the Pth. loanwords in Armenian. Parthian in Sogdian script and cantillated Pth. texts will also be discussed.

1. The distribution of the Manichaean letters <c>, <j> and <ž> in Parthian

A look at the available Manich. Pth. material indicates that the letters <c>, <j> and <ž> are not used arbitrarily. Grouping the words by their spellings, the categories described in sections 1.1–1.4 emerge.

1.1

As in other Middle Ir. orthographies, a letter corresponding to the Semitic letter sâde َ is used as <c> in the Manich. script.4 It is regularly employed to write word-initial /č/.5 As far as the word-internal position is concerned, many words are found exclusively with <c>, for instance those in Table 1.

1.2

The letter transliterated <j> was newly developed in the Manich. script.6 Many Pth. words are written consistently with word-internal <j>, such as those listed in Table 2. <j> is also the orthography for the Pth. outcome of OIr. word-initial *ǰ (see section 4.1). For the pronunciation of Pth. <j>, a comparison with the loanwords in Armenian is particularly interesting.

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3 Thus e.g. Rastorgueva and Molčanova (1981: 159, 168 f., 176 f.), Sundermann (1989a: 122) and Durkin-Meisterernst (2000: 169), implicitly also Boyce (1977 etc.) and Ghilain (1939: 42 f.). Henning (1958: 75) differs a bit from this and classifies the voicing of postsonantal voiceless stops as “not being entirely completed yet” at the time when the Manich. script was introduced, and compares this to the “use of َََ for original ḍ also after sonorants” (cf. n. 4).
4 Henning (1958: 75). “Conversely, Iranian ِ is frequently rendered by َ (specifically in Arabic)” (Henning 1958: 60, n. 3), e.g. Arabic rasâd “tin, lead” vs. Armenian (from Parthian) arčê (Tafažzolî 1987: 232, Hübschmann 1897: 111, 511). Replacement by š also occurs, “specifically in Old Aramaic, thence probably also in Parthian later on” (Henning ibid.).
5 In a few instances, <ts> is written instead of <c> in the word ḍê “what”. Most attestations of ṭṣ(ṭṣ) (also with enclitic pronoun) occur in alphabetic hymns in the position of the letter ṭ (Desmond Durkin-Meisterernst, personal communication). I have been unable to confirm the existence of other words using <ts> for <c> implied by Henning (1958: 75).
6 There have been various suggestions concerning its graphical basis: it could have been developed from <c> (Lentz 1926: 254) or also from <š> (Boyce 1975: 16), or from <z> (Durkin-Meisterernst 2000: 177, n. 50) or “have the same origin” as the Christian Sogdian letter transliterated <ž> “and may be related to Tumshuqese Brahmi ׳” (Skjærvø 1996: 533). In early Iranological works the letter is transliterated by the Hebrew letter zayin with macron above: Ž.
1.3
Several words show either <c> or <j>. In the position after n, <j> is used nearly consistently (e.g. ʾnjmn “assembly”, nydrynj- “to oppress”, frhynj- “to educate”, etc.). The number of instances with <nc> is very small, and at

Table 1. Pth. words with word-internal g <c> (examples)

<table>
<thead>
<tr>
<th>Parthian</th>
<th>cognates</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>w(y)c'r-</td>
<td>Av. vi+ čar-</td>
<td>“to perform”</td>
</tr>
<tr>
<td>w'c-</td>
<td>Av. νναč</td>
<td>“to speak”</td>
</tr>
<tr>
<td>wcn,</td>
<td></td>
<td>“voice; word”</td>
</tr>
<tr>
<td>pdw'c-</td>
<td></td>
<td>“to reply”</td>
</tr>
<tr>
<td>nm'c</td>
<td>Olr. *namâč-</td>
<td>“praise”</td>
</tr>
<tr>
<td>pçg</td>
<td>Av. Ṉpač</td>
<td>“cook”</td>
</tr>
<tr>
<td>wrc</td>
<td>Av. varčah-</td>
<td>“deed; energy”</td>
</tr>
<tr>
<td>swc-</td>
<td>Av. ḳṣuč</td>
<td>“to burn”</td>
</tr>
<tr>
<td>pdyc</td>
<td>Olr. *paţič-</td>
<td>“towards”</td>
</tr>
</tbody>
</table>

Table 2. Parthian words with 3 <j> (examples)

<table>
<thead>
<tr>
<th>Parthian</th>
<th>cognates</th>
<th>loanword in Armenian</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bwj-,</td>
<td>Av. ḳbuř</td>
<td>buž-</td>
<td>“to save”</td>
</tr>
<tr>
<td>bwj'gr</td>
<td></td>
<td></td>
<td>“saviour”</td>
</tr>
<tr>
<td>ʾrj'n</td>
<td>Av. arajah-</td>
<td>a(r)žan</td>
<td>“worthy”</td>
</tr>
<tr>
<td>prywj</td>
<td>Olr. *pari-aujah-</td>
<td></td>
<td>“victory”</td>
</tr>
<tr>
<td>djn⁹</td>
<td>Olr. *dať-</td>
<td>dažan</td>
<td>“hot, spicy”</td>
</tr>
<tr>
<td>drwj-,</td>
<td>Olr. *druť</td>
<td>drž-, džr-</td>
<td>“to tell lies”</td>
</tr>
<tr>
<td>drwjn, etc.</td>
<td></td>
<td>družan</td>
<td>“lying, false”</td>
</tr>
<tr>
<td>dwj⁰</td>
<td>Av. duž°</td>
<td>dž°</td>
<td>“bad”</td>
</tr>
<tr>
<td>xwj</td>
<td>*xwyžu-</td>
<td>axorž</td>
<td>“good”</td>
</tr>
<tr>
<td>mwjd</td>
<td>Av. mižda-</td>
<td></td>
<td>“wages”</td>
</tr>
<tr>
<td>'jdh'g</td>
<td>Av. aži- dahāka-</td>
<td></td>
<td>“dragon”</td>
</tr>
</tbody>
</table>

7 The interpretation and further derivation of this word is not entirely clear (see Sims-Williams 2007: 238 for discussion and references).
8 Bartholomae (1904: 862).
9 For this word, see Korn (2005a: 210).
10 The word may be derived from PIE *sul'g-su- “tasty” (Sims-Williams 2007: 280).
11 cmn is not a variant of jm'n “hour” (pace Andreas in Lentz 1926: 255; and Andreas and Henning 1934: 898), but a derivative of cm- “to move” (Durkin-Meisterernst 2004: 125b). ḫj, which is noted as a variant of ḫc “back; again” in Durkin-Meisterernst (2004: 7b), does not exist: its one occurrence in the St. Petersburg fragment S 32 B 3 (= SI (Kr IV/841) 30) is clearly ḫz (see the photo in Sundermann 1996: plate 180 top, and the correct form in Boyce 1977: 4). Salemann’s transliteration (1912: 7b) by the Hebrew letter zayin ȥ with a somewhat slanted dot above is surely a misprint for zayin with two dots above, i.e. ʢ (cf. n. 19, vs. ʢ for <j>, see n. 6). So ḫc / ḫz is an instance of the variation <ç> / <ç>, which is discussed in section 1.4.
12 There do not appear to be any examples of <nc> for OIr. *ŋj.
least some of them might be discounted as not being Pth., or not a real sequence of \(<\text{nc}>\), while the others could be cases of MP orthography:\(^{13}\)

- the hapax legomena ʿšync “twisted rope”,\(^{14}\) tncyšn “?”,\(^{15}\) and plync “bronze”;\(^{16}\)
- pnc (once\(^{17}\) “five” vs. pnj(\(^{c}\)) (c. 100 occurrences, including derivatives like “fifteenth”, “fifth”, etc.);
- dynycyhräft “behaviour in conformity to religion” is one of the compounds with cyhr “essence, being; seed; shape” (dyn-cyhr-yft); these are always written with \(<\text{c}>\);
- zyncyhr\(^{18}\) (twice) “chain” vs. zynjyhr (once), the former surely being due to association with the compounds with cyhr.

The few words showing a variation \(<\text{c}> / <\text{j}>\) in positions other than after \(n\) will be discussed in section 3.1.

1.4
\(<\acute{z}\>\), i.e. a sign corresponding to the Semitic letter zayin ז with two dots above,\(^{19}\) occurs only in a limited number of words (listed in Table 3). Apart from one unclear hapax legomenon (which would at the same time be the only case of word-initial \(<\acute{z}\>\), all of them are also found with \(<\text{c}>\), and the occurrences with \(<\text{c}>\) outnumber those with \(<\acute{z}\>\). So from a functional point of view, \(<\acute{z}\>\) is an orthographic variant of \(<\text{c}>\).\(^{20}\)

In some cases, the use of \(<\acute{z}\>\) appears to be motivated by space restrictions (as the letter is much narrower than \(<\text{c}>\)). This is likely to hold for the variants occurring at the end of the line (marked with “#” in Table 3), e.g. Ḩz (which also omits the -y- and uses the abbreviation dots instead, see n. 19), and for

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\(^{13}\) There is occasional confusion on the part of the scribes as to which language they are copying; i.e. a MP word may slip into a Pth. text and vice versa (cf. Durkin-Meisterernst 2000: 169, n. 32, Korn and Durkin-Meisterernst 2009: 18, n. 61), e.g. Pth. bwjʾwmn “save us” (M 448 A 5) and wijydgʾn “Elect” (M 221 v 11; for this word, see also section 1.4) in MP texts, etc.

\(^{14}\) The line of the fragment reads [ʾhynd cw]ʾgwn ʿšnc “(the souls) are like a twisted rope (?)” (M 6300 B 12, Sundermann 1997: § 105).

\(^{15}\) The attestation is pnjwm kw pd tncyš(n) [“fifthly, that to the prohibitions(?)...”] (M 4450 v 5, Sundermann 1992: 115, § 67).

\(^{16}\) The word agrees with Arm. plnj, etc. (Sundermann 1981: 168, Hübschmann 1897: 231); Hübschmann (1895: 28) considers the Ir. word a borrowing from an unknown source. See also n. 31.

\(^{17}\) The relevant line is extremely fragmentary, but the context confirms the topic: [ṃnḫʾg p](nc r)[wšn] “like the five Lights” (M 5185 r 4, Sundermann 1992: § 6).

\(^{18}\) According to Henning (apud Boyce 1952: 447, n. 2), the word may be derived from *zynčarr.\(^{18}\)

\(^{19}\) In early Iranological works the letter is transliterated by the Hebrew letter zayin with trema above: Ũ. Two diacritic dots below or above a letter may also be used to indicate the omission of a following aleph, yod or waw (cf. Boyce 1975: 19). However, I have not come across a case of \(<\acute{z}\>\) with abbreviation dots. For more discussion about \(<\acute{z}\>\), see n. 2 and section 5.

\(^{20}\) This implies that statements like \(<\acute{z}\>\) has “the same value as the letter j” (Boyce 1975: 17) and \(<\text{j}>\) “usually represents the same sound as z [i.e. \(<\acute{z}\>\)], with which it alternates in all but initial position” (Boyce 1975: 16) are not quite supported by the data.
ʾb ʾz̈ in S 32 B 3 at the end of a line where <c> would not have fitted at all. Other examples include a squeezed ʾz̈ “from” at the end of the line M 5815 I r 13 vs. the prolonged ʾc at the end of the preceding line, and M 5815 II v 18, the second half of which reads byc rwc rwz̈. However, shortage of space cannot always have been the motivation for the use of ʾz̈. For instance, there would have been quite enough space at the end of the line in M 801a folio c verso 7 (Henning 1937: 30, line 396) for rwz̈ instead of rwc. Moreover, the words marked with “(#)” in Table 3 also occur in the middle of lines, and the unmarked ones only so. Nevertheless, it is striking that ʾz̈ is particularly frequent in the middle of a line.

<table>
<thead>
<tr>
<th>variant with &lt;c&gt;</th>
<th>variant with ʾz̈</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>rwc (c. 130 instances)</td>
<td>rwz̈ (#) (9)</td>
<td>“day”</td>
</tr>
<tr>
<td>wʾc (1); pdwʾc (1)24</td>
<td>wʾz̈ # (1, MP)</td>
<td>“speech”; “reply”</td>
</tr>
<tr>
<td>ʾmwcʾ(ʾ)g (27)</td>
<td>hmwʾz̈ʾgʾn (1, MP)26</td>
<td>“teacher”</td>
</tr>
<tr>
<td>ʾbʾc (9)</td>
<td>ʾbz̈ # (1)</td>
<td>“back; again”</td>
</tr>
<tr>
<td>present stem (ʾ)sʾc-: sʾc- (5), p-sʾc- (2), ny-sʾc- (1)</td>
<td>ny-sʾz̈yd # (1)</td>
<td>“to prepare”</td>
</tr>
<tr>
<td>present stem ʾcyn-: wy-cyn- (1)</td>
<td>wʾz̈myd # (1)</td>
<td>“to elect”</td>
</tr>
<tr>
<td>nʾcyn- (1)</td>
<td></td>
<td>“to build”</td>
</tr>
<tr>
<td>-ʾ(y)c in: ʾmʾh-yʿc (6), mnʾyc (6), Ṿʾnc (10), byʾc (c. 50),</td>
<td>-ʾ(y)z̈ in: ʾmʾh-yʾz̈ (1, MP), mnʾyʾz̈ # (1), Ṿʾnyʾz̈ # (1), ʾbyʾz̈ # (2), dʾlwgʾnʾz̈ # (1)</td>
<td>“also” suffixed to /am(m)jāḥ/ “we”27</td>
</tr>
<tr>
<td>and many more</td>
<td></td>
<td>/ʾēw/ “one”</td>
</tr>
<tr>
<td>ʾc (over 500)</td>
<td>ʾz̈ (#) (c. 50)</td>
<td>“from”</td>
</tr>
</tbody>
</table>

The numbers given in this column refer to the attestations in Pth. texts. Additional instances might be found within MP texts (see n. 13). # indicates that the form occurs at the end of a line, (#) that it occurs at the end of a line and elsewhere. In this column, “MP” means that the item occurs within a MP text. For discussion of this word, see section 5. MP also uses zʾ(wrwʾg “lying”.

hmwʾzʾgʾn (in a Pth. text) is a mixed form from MP hmwʾcʾg (also hmwzʾ) and Pth. ʾmwcʾ (rarely also ʾmwcʾg).

For the possible geminate in the Pth. word, see Korn and Durkin-Meisterernst (2009: 11). Sic; not ʾb ʾj (see n. 11).
Also, the number of fragments in which \(<z\hat{\imath}\) occurs is quite small,\(^\text{29}\) with the manuscript M 5815 featuring an unusually high number of instances (three cases of \(\hat{z}\) and five other words with \(<z\hat{\imath}\)). Four of the nine occurrences of \(rwz\hat{\imath}\) are in just two lines of M 533 r 4a (an abecedary hymn), and two others are doublets of the same text line (M 667 v 1 and the combined set of M 502h & M 2751 v 3).

2. Interpretation of the distribution of the letters \(<c\)\, \(<z\hat{\imath}\) and \(<j>\)

The fact that almost all Parthian words are consistently written either with \(<c / \hat{z}\) or with \(<j\) (see section 3.1 for the exceptions) suggests the possibility that the scribes intended to encode two different Pth. sounds, and that these may have been two phonemes. Combining the spellings with the etymologies of the words yields the following preliminary results:\(^\text{30}\)

- words written with \(<c\) (section 1.1) and those written with \(<c\) and \(<z\hat{\imath}\) (section 1.4) show the Pth. outcome of OIr. \(\*{\hat{c}}\);
- words written with \(<j\) (section 1.2) reflect the Pth. outcome of OIr. \(\*{\hat{j}}\) and \(\*{\hat{z}}\), and of OIr. \(\*{c}\) and \(\*{j}\) in the position after \(n\) (see section 1.3).

This speaks for Parthian preserving the OIr. distinction of \(\*{\hat{c}}\) (> Pth. /\(\hat{c}\)/) vs. \(\*{\hat{j}}\) (> Pth. /\(\hat{z}\)/) not only in word-initial position, but in all positions of the word. The only exception is the position after \(n\), where the opposition was lost. The pronunciation of \(<nj\), \(<nc\) is likely to have been \([nj]\),\(^\text{31}\) so that \(/\hat{c}/\) and \(/\hat{z}/\) have a post-nasal allophone \([j]\).

\(^{29}\) Fragments with only instances of \(\hat{z}\), but no other words with \(<z\hat{\imath}\), are: M 4b, M 30 (= M 347 = M 468a), M 42, M 67, M 88 (= M 96), M 93 & 289a, M 94 + , M 168, M 208 (& M 638), M 229, M 311, M 502b, M 741 (= Otani 6208 + ), M 858e (= M 6220), M 871f, M 905, M 1026, M 2315, M 2339, M 4570, M 5263, M 6041, M 6222, M 6223, M 6300, M 6680 + , M 6726, Otani 6192, Otani 6205, P.M. 914.2.

\(^{30}\) This applies to the Pth. lexicon as extracted from the sources quoted in n. 1 insofar as the words are etymologically clear.

\(^{31}\) Thus e.g. Rastorgueva and Molčanova (1981: 177) and Sundermann (1989a: 122). The issue of OIr. \(\*{n\hat{c}}\) in Western Iranian might merit another investigation. Potentially relevant points include the fact that there are examples of -\(n\hat{c}\) in Armenian (where, however, voiced and voiceless stops vary after \(n\) in the manuscripts, obscuring the Ir. reflexes, Hübschmann 1895: 225, 231). Also noteworthy are the MPM spellings \(pnz\) “five” (besides only two instances of \(pnc\) and \(hnzmn\) “gathering” (Pth. \(\hat{hjmn}\)) and the substitution of \(nz\) by \(nj\) in Parthian, e.g. \(\hat{h}jw\hat{g} “narrow”\) vs. MPM \(hnzwg\) (OInd. \(an\hat{h}u\), Av. \(\hat{a}\hat{z}ah- “hardship”\). The reason may be that \(n/z\) was “unusual” in Parthian (Henning 1963: 196; 1965: 32, n. 4). Indeed, there does not seem to be any example of tautosyllabic Pth. \(nz\) without an intervening morpheme boundary. The only candidate would be \(b\hat{r}nz\)- “roast”. In Durkin-Meisterernst (2004: 111a), the lemma is marked as Parthian, but its only occurrence is marked as MP; \(b\hat{r}nz\) - is found in a fragmentary word-list contrasting Sogdian words with MP or Pth. counterparts. A couple of words with Arm. \(nj\) [\(ndz\)] instead of \(nj\) (Hübschmann 1895: 231 f.) have been assumed to reflect Ir. dialectal variation (see Gippert 1993/I: 122 f. for a summary of the discussion). According to Olsen (2005: 478), these words belong to a group that also shows
3. Is the Manichaean Parthian orthography archaizing?

Although the Manich. script is as a rule very accurate,\textsuperscript{32} there are several possible arguments that appear to speak against the statement made in the preceding paragraph.

3.1

One such argument is the existence of the doublets listed in Table 4.

Table 4. Exceptional cases of Pth. orthography \(\text{CBC} < c > \) vs. \(\text{CBC} < j > \) (full list)

<table>
<thead>
<tr>
<th>Etymological orthography</th>
<th>Unetymological orthography</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{twj-} / \text{twj-} ) “to expiate, pay back” (2 occurrences), (&lt;\text{OLR.} *\text{tauj} (?))\textsuperscript{33}</td>
<td>(\text{twcyyd} (1))</td>
</tr>
<tr>
<td>(\text{pdmwc-} ) “to clothe” (24), (&lt;\text{OLR.} *\text{mauch} (?))\textsuperscript{34}</td>
<td>(\text{pdmw}j\text{h} (1))</td>
</tr>
<tr>
<td>(\text{ʃ}([b][r][w]))\textsuperscript{1} \text{cyd} ) “illuminates” (1), (&lt;\text{OLR.} *\text{rauch} - \text{(see section 1.4)})?</td>
<td>(\text{ʃ}r\text{wj}j\text{gyn} ) “bright” (1)</td>
</tr>
<tr>
<td>(\text{ʃ}c / \text{ʃz} ) “from” (c. 600, see section 1.4) (&lt;\text{OLR.} *\text{hača})</td>
<td>(\text{ʃj} (2))</td>
</tr>
<tr>
<td>(\text{wcyd} ) “chosen”, (\text{wcyd}g ) “Elect”, (\text{wcydgyft} ) “the (group of) Elect” (5), (&lt;\text{OLR.} *\text{vi-čita-})</td>
<td>(\text{wijd}, \text{wijdg}, \text{wijdgyft} ) (over 90)</td>
</tr>
</tbody>
</table>

However, except for the last item, the unetymological spellings are very rare: \(\text{ʃbrwj}j\text{gyn} \) (if it is to be read this way at all),\textsuperscript{35} \(\text{pdmwj-} \) and \(\text{twc-} \) occur only once each, vs. 24 instances of \(\text{pdmwc-} \) (plus 28 \(\text{pdmwcn} \) “garment”) and two of \(\text{twj-} \). Unless some specific factors are at work in these three instances,\textsuperscript{36} they might appear at times as a mere peculiarity in the Arm. stem class they are assigned to, and they might have been borrowed from an Eastern Ir. variety.

\textsuperscript{32} Cf. e.g. Sundermann (1985: 111): “With regard to what had been common until that point in the practice of writing and reading Iranian, Mani’s innovation [= the Manich. script] amounted to something like a revolutionary deed. The letters rendered the phonemes of Middle Persian and Parthian of the third century as accurately as possible for an Aramaic script; there were no historic orthography, no letters of same shape but with different value, and no heterograms.”

\textsuperscript{33} The origin of the Ir. root *\text{tauj} is not clear; Cheung (2007: 388) suggests a relationship to Sogdian \text{twdy} etc. “masses”, in which case *\text{tauj} might be *\text{tau}d + *j(?). Note also the OInd. root variants \text{tu}j and \text{tu}d “push” and the possible identity of \text{tu}j- and \text{tuc-} “offspring” (Mayrhofer 1992–2001/l: 652, 670).

\textsuperscript{34} Cf. Cheung (2007: 139 f.).

\textsuperscript{35} For the attestation of \(\text{ʃbrwj}j\text{gyn} \), see Henning (1940: 29), for \(\text{ʃ}[b][r][w]cyn(d)\), see Sundermann (1997: § 97).

\textsuperscript{36} \(\text{pdmwj-} \) occurs in \(\text{ʃpyxt pdmw}g \text{pdmwj}j\text{h} \) “Thou shalt put on a radiant garment” (combined fragment M 93 & M 289 II r 7, Boyce 1954: 100 f.). Perhaps the figura etymologica (which reoccurs in M 737 v 5 in the form: nys\text{ʃ}gyn \(\text{pdmw}g \text{pdmw}c\text{yd} \) “[t]hey put on the resplendent Garment”, Boyce 1951: 915) may have motivated a comparison with parallel sets of words such as pr\text{wy}g /paryōgi/, pr\text{wj} /paryōzi/, both “victory” (see Table 2), pr\text{wj}- /paryōzi-/ (past stem pr\text{wy}xt /paryōxt/) “to overcome”, and could
perhaps be attributed to a stage where the Pth. phonemes /č/ and /ž/ coalesced (see section 6.2).

The two occurrences of \( j \) (vs. hundreds of examples of \( č / ž \), see section 1.4) have also been seen in the context of \( <c> \) vs. \( <j> \) and have been interpreted as an “allegro” or sandhi variant produced by the affixation of the “hymnic element” -\( j^{-} \) (/\( ā\)/) to \( č / ž \) “from” (Durkin-Meisterernst 2000: 169, n. 32), and are noted as a variant of \( č / ž \) in Durkin-Meisterernst 2004. However, \( j \) (strictly speaking \( j^{-} \)) is not an “allegro” variant of \( č / ž \), but its cantillated version (see section 6.3).

The only word that shows a major variation in its spelling is \( wcyd \) (five instances) vs. \( wjyd \) (over 90) “chosen” (including the derivatives \( wcydg / wjydg \) “Elect” and \( wcydgfty / wjydgfty \) “the (group of) Elect”). It is noteworthy that this word is a key term of the Manich. church while the present stem of the associated verb (\( wycyn- / wžyn- \) “to choose”, see section 1.4) agrees with the rest of the Pth. lexicon in showing a remarkably consistent use of the letters. So one wonders whether some special phenomenon might be involved. A possible explanation of the appearance of an unexpected \( <j> \) besides \( <c> \) might be that MP /wizād/ could have been borrowed\(^{37} \) with an adaptation to make it look like a Pth. word:\(^{38} \) there may have been a hypercorrect application of the correspondence “Middle Persian /ž/ equals Parthian /ž/”, which speakers and scribes could surely have deduced from obvious cognates such as Pth. /\( ĵ\)yw-/ /\( ž\)yw-/ vs. MP /\( w\)yw- /\( w\)žw-/ “to live”, Pth. /\( b\)wj-/ /\( b\)ōž-/ vs. MP /\( b\)wz-/ /\( b\)ōž-/ “to save”, Pth. /\( j\)m\( n\)/ /\( ž\)mān/ vs. MP /\( z\)m\( n\)/ /\( ž\)mān/ “time”, etc.\(^{39} \) For instance, such a logic seems to be responsible for the unetymological ž in Pth. /\( m\)yj-/ /\( ź\)mēž-/ vs. MP /\( m\)yz-/ /\( ź\)mēž-/ “to mix” (Av. *\( maiz\) -, PIE *\( meiġ\) -, cf. Cheung 2007: 261), another important term in Manich. theology. Alternatively, one might assume a dissimilation *\( wjīd \) [\( wžīd \)]\(^{40} \) > \( wžīd \) to account for the spelling \( wjyd \) (Nicholas Sims-Williams, personal communication).

3.2

If one assumes that the distinction of \( <c> / ž\) and \( <j> \) reflects a writing tradition dating back to times before the beginning of the Manich.


\(^{37} \) Several MP terms of pre-eminent religious importance have been borrowed into Parthian, among these /\( g\)yān/ “soul”, /\( f\)arrox/ “glory” and /\( w\)urraw-/ “to believe” (cf. Korn and Durkin-Meisterernst 2009: 12–16, 18), /\( x\)rwhxw\( n\)/ “preachers” (Henning 1937: 24 line 220 [MP], line 270 [Pth.]).

\(^{38} \) Maybe \( wcyd / wjyd \) might also have been associated by popular etymology with its quasi-synonym \( \text{wxy}\( t\)g) “selected, chosen” (for which cf. Korn and Durkin-Meisterernst 2009: 10, n. 15), which does not have a verbal paradigm in Parthian and could have given rise to speculation as to whether it should be associated with a present stem *\( w\)yc- or *\( w\)yf-. The MPM word and its derivatives are found as \( wzyd \) only twice, but otherwise as \( wcyd \) (c. 40 instances).

\(^{39} \) The fragment (in Sogd. script) So 14152 (cf. Reck 2007: 328) seems to reflect such a scribal logic, presenting MP /\( x\)w\( h\)n (v 6), Pth. /\( z\)-\( m\)n (v 11), both correct for the respective languages, and – in the next line – \( <c> \) for Pth. /\( ž\)/ in /\( x\)w\( ž\)-\( m\) [sic] (Manich. script /\( w\)x\( ž\)-\( m\) “we want” (corresponding to MP \( x\)wāh-), apparently thinking “for Parthian, \( <z> / ż\) is the right choice”.

\(^{40} \) For a possible change Pth. /\( č\)/ > \( [J] \), see section 4.2.
orthography, potential candidates for a model include other scripts used for Parthian and Middle Persian.

However, the possible models are not quite similar to the Manich. Pth. orthography. The script used in the MP and Pth. inscriptions did not develop a separate letter <j>, but the Pth. epigraphic texts do distinguish the Pth. results of OIr. *č and *ǰ/*ž (presumably Pth. /č/ and /ž/). These are written <š> and <z> respectively; i.e. in the orthography of the inscriptions, Pth. /č/ and /ž/ are represented by the same letter, while /ž/ and the post-nasal allophone [j] are written with the letter also used for /ž/.

So if the inscriptional orthography had been the model, one would expect that the orthography of <š> for /č/ would have been maintained (either regularly, or at least in a number of cases) in the Manich. texts, and that <z> would be used for /ž/ either regularly or alongside the newly developed <j>.

3.3

Another potential candidate for a model for the Manich. Pth. orthography is Manichaean Middle Persian; it is possible that the Manich. script was used for MP first, and later on also employed for Parthian and other languages (Henning 1958: 73), but this is hard to prove (Durkin-Meisterernst 2000: 163–9). However, there is a major difference between MP and Parthian as far as the use of <c> etc. is concerned: in MP, <c> for MP /ž/ < OIr. *-č is regularly used besides <z>, indicating systematic historical orthography, while in Parthian, the few exceptions (discussed in section 3.1) to the etymological use of <c> are hardly a solid basis for assuming (pseudo-)historical orthography. To a certain extent, the assumption of the Pth. orthography being based on Middle Persian implies the underlying idea of a parallel development as sketched in Table 5. It could be assumed that there is a common Western MIr. development producing a coalescence of OIr. *ǰ, *ž and postvocalic *č into one sound, which only differs in the language-specific articulation of the resulting sibilant. This is indeed the communis opinio, but there is some evidence to the contrary.

41 Thus Skjærvø (1996: 521): “The Manichean script shares with the Parthian and Middle Persian [epigraphic] scripts the archaizing use of c (or j) for intervocalic Parth. ž and MPers. z”. (For the latter issue, see section 3.3.)
42 This term includes the Arsacid and Sasanian inscriptions, the ostraca from Nisa and Dura-Europos and the parchments “Awroman III”.
43 This orthography is unlikely to imply that /č/ and /ž/ coalesced in a certain variety of Parthian (Henning 1958: 60, Rastorgueva and Molčanova 1981: 153, Sundermann 1989a: 120, n. 80). Epigraphic examples for /č/ are (transliterations based on Gignoux 1972 with a few modifications): šwgwn /čawâyôn/, ššmk /Čašmak/, šýhr /číhr/, pšhr /Pā-číhr/, BTRš /paš-ič/; for /ž/: ršṭ /rash/. It is not quite clear why the letter <c> is used for /č/ in the MP inscriptions (e.g. cygwn /čiyôn/, cšmk /Čašmak/) and in the Sogdian ones, but is only employed for heterograms in the Pth. ones. See also n. 4.
44 Examples for /ž/: wyzkn /Wēžanakan/, zmân /ţamân/; for /ǰ/: brzmtrk /Barz-mihrag/, dyzpt /dēžbad/. For [j], Rastorgueva and Molčanova (1981: 154) quote rnz /ranj/ (not in Gignoux 1972) from unspecified “inscriptions of the third century”.
46 Thus explicitly e.g. Tedesco (1921: 190–92), Lentz (1926: 254) and Paul (1998: 167, 170); the same view is usually also implied in grammars of Parthian and MP (cf. n. 3).
Table 5. Communis opinio on the development of OIr. affricates and *z

<table>
<thead>
<tr>
<th>Old Iranian</th>
<th>*č / _; *f; *ž</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Iranian</td>
<td>Northwest Ir. (Parthian)</td>
</tr>
<tr>
<td>Manich. orthography</td>
<td>*č &lt;c&gt;, č &lt;j&gt;, č &lt;ž&gt;</td>
</tr>
</tbody>
</table>

The use of etymologically unjustified <c> for cases of OIr. *z and *f in the early Sasanian MP inscriptions shows that OIr. *-č had already resulted in MP ź by that time (Henning 1958: 67, MacKenzie 1967: 21, Back 1978: 135), e.g. *ćʾāt and *zzʾātāš (< OIr. *ā-zāta-), py[l]wč /pērōz/ (< OIr. *pari-aufah, cf. Table 2), etc. Armenian and Georgian also demonstrate that at a time when the intervocalic voiceless stops were still preserved in Western Middle Iranian, MP already had ź < OIr. *f.47 e.g. Arm. zatik “Pessah” < OIr. *jātika- “immolation”, Georgian tozik- “feast, banquet”.48 For Parthian, on the other hand, the Armenian loanwords show a preservation of intervocalic č and stops alike, e.g. spitak “white”, ṭočik “daily bread”.49 So the MP and Pth. developments of OIr. *-č, *f, *ž are not parallel.

3.4

The orthography of certain stops might appear to be parallel to that of the Pth. results of OIr. *-č and *f as far as the preservation of a difference is concerned: the output of OIr. postvocalic *t (presumably Pth. /d/) may be written either <t> č or <d> č (e.g. ptč and pdč /pad/ “in, at, on”, OIr. *pati) while the result of OIr. postvocalic *d (Pth. /ð/) is always written <d> (e.g. kd /kað/ “when”, OIr. *kādā).50 Similarly, <q> č may be used for /g/ < OIr. *k in Parthian and Middle Persian (besides <g> č), but not for /q/ < OIr. *g>.51

47 Korn (2005: 287, 2009: 206). See also section 4.1 for another argument in favour of the early date of *f > MP ź.
48 Note that tōz- (“*something paid”) appears to have been widely known in its MP shape as it was also borrowed into Aramaic (nɔzɨk), cf. Gippert (2004: 108–110). For the corresponding verb, see section 3.1.
49 These words belong to the Arsacid / Pth. layer of Ir. loanwords in Armenian (cf. Hübschmann 1897: 12–15), which is also characterized by (Pth.) ź for OIr. f (see section 4.1). The t of Arm. zatik and jatuk shows that not all MP loanwords are necessarily younger than the Pth. ones. Conversely, the o of Arm. ṭočik (< Pth.) indicates that the word is a more recent borrowing since most loanwords from the Arsacid period show Arm. i and u for Mfr. ē, ē, respectively, in non-last syllables while later ones have e, o (cf. Hübschmann 1897: 14). spitak (< *spētak) and tuž- “punish” (from Mfr. tōž-, for which the preceding sentence of the text) are thus from an older layer than ţočik.
50 Henning (1958: 75), Korn (forthcoming, n. 27), Durkin-Meisterernst (2000: 169–72). The latter – set in other terms than those applied here – notes that <t> for *t is very rare in Middle Persian. One possible interpretation is that the voicing of the OIr. postvocalic voiceless stops happened earlier in MP than in Parthian (cf. Durkin-Meisterernst 2000: 172). However, OIr. postvocalic *d and *g yield MP -y (vs. OIr. postvocalic *t and *k > MP d, g) so that there was no opposition to be noted anyway.
51 <q> may also be written for /k/ in various positions, including the postvocalic word-final one (Durkin-Meisterernst 2000: 170).
However, the parallel is again only partial: <t> and <q> for /d/ and /g/ only appear alongside <d> and <g>, and only word-finally, while <d> and <g> are much more common (and the only orthography in word-internal position); <t> and <k> are not used at all for these purposes (cf. Henning 1958: 75, n. 2). So the opposition (if any) between /d/ and /δ/ and between /g/ and /γ/, is only marked in a minority of cases, and the Manich. orthography essentially uses <b>, <d>, and <g> to represent the Pth. outcome of both the OIr. postvocalic voiced and voiceless stops. The opposition between the Pth. results of OIr. *-č and *j */*ž/, on the other hand, is marked systematically, and the former is written (in all positions of the word) with the letter that is etymologically expected for the voiceless member of the series. For instance, there is no variant <t> alongside <t>, and no <t> alongside <bwj> (with the few exceptions noted in section 3.1).

So the coalescence of the OIr. postvocalic voiceless and voiced stops is likely to have been “close to its completion” at the time of the introduction of the Manich. script for Parthian, while /č/ and /ž/ were still distinct in all positions in the word (except after n).

4. Pronunciation of the Parthian graphemes

Concerning pronunciation, the evidence of the Armenian loanwords shall be considered more closely.

4.1

The transliteration <j> has been assigned to the letter  for reasons of the MP evidence: MPM <j-> from OIr. *y- corresponds to Arm.  in MP loanwords, e.g. Jatuk “sorcerer” (Av. yātu-, New Persian jādū, cf. MPM jʾdwgy “sorcery”). On the other hand, Arm. loanwords from Parthian show  throughout for the outcome of OIr. *j and *ž. Examples include Arm. žahr “poison” (Pth. jhr), žamanak “time” (Pth. jmʿn), tuž- “punish” (see n. 49), džox-k  “hell” (Pth. 52 Durkin-Meisterernst’s (2000: 173–6) explanation of the non-use of <t> for postvocalic OIr. *t, viz. that <t> may have been a device for writing “foreign t”, is not convincing because both <t> and (more commonly) <t> are regularly used for /t/ (< OIr. *t in post-consonantal, word-initial and morpheme-initial position). Rather, one wonders whether the Manich. orthography might reflect Aramaic phonology. Semitic stops have fricative allophones in postvocalic position (for instance, <t> 7 denotes [t] word-initially, but [θ] after vowels). Since the emphatic consonants do not show such a lenition, <t> 2 (whence the Manich. letter <t>) is an unambiguous orthography for a voiceless stop.

<t> appears to stand for the result of OIr. *t in Pth. pwrt “bridge”, mwrt “death”, and in words with OIr. *-art- while OIr. *rt gives Pth. rd otherwise (cf. Henning 1958: 75, n. 2). The special conditions at work here are discussed in Korn (forthcoming).

Henning (1958: 75 with n. 2, see also n. 3 above), similarly Sundermann (1989a: 123), Durkin-Meisterernst (2000: 171 f.). For further discussion of the Pth. development of the stops see section 6.

54 For the pronunciation of <nj>, <nc> see section 2.
55 Hübschmann (1897: 232). Note that this j- must be older than the voicing of postvocalic stops, but younger than the change of OIr. *j > MP z (see section 3.3) as otherwise OIr. *y- (> MP j) would have resulted in MP z.
56 Hübschmann (1897: 229–31).
Also, some orthographic peculiarities seem to indicate that Pth. <j> alone was not pronounced [j], e.g. djrtbwhr for the place name Jatāpura (Henning 1947: 57) and the use of diacritic dots in the borrowing j’dyšmr (OInd. jātismara-) “recollection of a former existence” (Sims-Williams 1983: 134, n. 23, Sundermann 1993: 167). Moreover, the position of <j> “in an alphabetical list of letters of the Manichean script after z, not after c” may also indicate that its pronunciation was “more like z than like č, i.e. it was ž rather than ĝ [= j]” (Sundermann 1993: 167).

4.2

For /č/ (see section 1.1), the Armenian evidence would suggest a pronunciation [č], e.g. včar “payment” (Pth. w(y)cʔ- “to perform”), avač “voice” (Pth. w’c “word”), patmučan “garment” (Pth. pdmwcν, see section 3.1), etc. (cf. Hübschmann 1895: 225 f.). However, the stage of Parthian reflected in the Arm. loanwords is earlier than that of the Manich. texts since these words preserve the OIr. voiceless stops in postvocalic position, e.g. Arm. spitak vs. Pth. ʾspyd “white”, ročik “daily bread” vs. Pth. rwc “day”, rwcg “fast(-day)” (cf. section 3.3).

It is thus quite possible that in postvocalic position, the Pth. phoneme /č/ was subject to lenition; i.e. /č/ may have acquired an allophone [j] not only after n, but also after vowels (see section 5 for additional discussion). This would still not disturb the phonemic opposition with /ž/, though. The Pth. orthography situation at the time of the establishment of the Manich. script may be summarized as in Table 6.59

<table>
<thead>
<tr>
<th>Middle Persian orthography</th>
<th>MP phoneme</th>
<th>&lt; OIr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPM orthography</td>
<td>MPZ orthography</td>
<td></td>
</tr>
<tr>
<td>&lt;c&gt;, &lt;z&gt;</td>
<td>/č/</td>
<td>*Voč, *ʃj, *ʃz</td>
</tr>
<tr>
<td>&lt;j&gt;</td>
<td>/ʃ/: [ʃ]-, [n], elsewhere [ž]</td>
<td>*ʃ-, *nčʃʃ (plus ŋ from loanwords etc.)</td>
</tr>
</tbody>
</table>
This system is similar to Sogdian (see Table 7), which likewise has the phonemes /č/ and /ž/ with the allophone [ǰ] in the position after nasalized vowels (Gershevitch 1954: 8 f., Sims-Williams 1989a: 178 f.).

5. The letter <ž>

One might ask whether the general practice of transliterating the Manich. letter ɺ with “ž” is adequate. The letter is not used to represent the Pth. (or Sogdian) outcome of OIr. *ž and *ǰ. If <ž> had denoted [ž], it should have been used for writing e.g. Pth. žahr (Arm. žahr) or dužō (Arm. džō), but all instances of Pth. /ž/ only appear with <ǰ> (jhr, dwjọ, etc.). So it seems preferable to transliterate the letter with something different from <ž>, e.g. with <ǰ>, indicating that the sign is formed from the letter <ž> by the addition of two dots above.61 Such a notation would be parallel to the one common for the Sogdian script, where <ž> with one or two dia-critic dots below is transliterated as <ž> or <ż>, respectively.62

It is possible that <ž> was invented for Parthian ģ (thus Henning 1958: 74),63 i.e. for the postvocalic allophone of Pth. /č/ suggested in section 4.2. This would agree with the fact that it only occurs (see Table 3) in postvocalic position, except for žyśm(r.), which might be connected with Pth. jḏysmṛ “recollection of a former existence” (from OInd. jātismara-) as suggested by Sundermann.

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60 See section 6.1–6.2 for discussion.
61 See also n. 2. Conversely, one might consider transliterating ɺ <ǰ> as <ž>, which would describe its most common value in Parthian and Sogdian adequately and would even be justifiable for Middle Persian (see n. 57). However, such a change would result in confusion with the transliteration convention hitherto observed.
62 See section 6.2.
63 The occasional use of <ž> in MP texts is attributed to the “later Turkestan scribes” by Henning (1958: 74). This includes the cases labelled “MP” in Table 3.
and Yoshida. It would also fit with the fact that the letter is derived from $<z>$, probably indicating a voiced consonant.

6. Specific developments of the Parthian consonants

The fact that the MP and Pth. texts were preserved by Central Asian Manichaean communities, who also further developed liturgical traditions, had some consequences for the Pth. sound system as reflected by the fragments.

6.1 The speakers of Sogdian and Turkic who used the MP and Pth. texts in religious ceremonies transcribed them into scripts with which they were more familiar (Henning 1958: 76), the most important of which is the so-called Sogdian script. The Pth. fragments in Sogdian script do not distinguish /b/, /d/ from /β/, /δ/ respectively, confirming that the opposition of the two series of OIr. stops (yielding Pth. postvocalic voiced stops vs. fricatives) is likely to have been lost at some point after the third century AD (see section 3.4).

6.2 If the Sogdian orthography mirrors a development of the Pth. language (rather than the Sogdians’ liturgical pronunciation of Pth. texts), the question arises as to whether postvocalic /č/ and /ž/ also coalesced at some stage of Parthian, so that the Manich. orthography would have become historical with respect to these two phonemes. If so, this stage of Parthian would exhibit a development also found in modern North-Western Iranian languages like Zazaki and Kurdish, which show no difference in the products of OIr. postvocalic *č and *ǰ, e.g. Zaz. /vāj-/ (to say) (cf. Pth. wʾc-/wāč-), Zaz. /rōf/, Kd. /rōž/ “day, sun”, Zaz. /jinike/, Kd. /žin/ “woman” (cf. Pth. /jn/žan/), Kd. /dirēzh/ “long”, Zaz. /pānį/, Kd. /pēnį/ “five”.

The Sogdian script regularly uses $<c>$ for Sogd. /č/ and the postnasal allophone [ǰ], and $<z>$ for /ž/ and /ż/ (Sims-Williams 1989b: 322); some manuscripts employ diacritic dots under $<z>$ ($<ξ>$ and $<τ>$) to differentiate /ž/ from /z/ (see

64 In Kudara, Sundermann and Yoshida (1997: 211). For further discussion of jʾdyšmr, see section 4.1.
65 Perhaps the comparatively high number of instances of $\breve{z}$ “from” (see section 1.4) could then be attributed to the clitic character of the word, effecting an earlier or clearer voicing, cf. the irregular development in its Balochi cognate až (besides regular ač etc., Korn 2005: 85, 179).
66 For details on the Sogdian script, see Sims-Williams 1981.
67 A list of the Pth. fragments in Sogd. script in Berlin is provided by Reck (2006: 326), who also lists their previous numbers and editions where available.
68 An example of $<β>$ for Pth. /b/ is kyrbk “virtuous” (Manich. script kyrbg); $<β>$ can also render Pth. /β/, e.g. abstract suffix -ųft (Manich. script -ųft /-iθ/). The opposition between postvocalic /g/ and /γ/ appears to be preserved, though (Henning 1958: 76).
69 Cf. Henning (1958: 72), who assumes that the Manich. script generally became historical due to language changes after its introduction.
70 The pronunciation in Zazaki depends on the dialect involved (cf. Gippert 2009: 81–7); some have ž or dz for the j noted here.
71 Postvocalic stops are lost in most cases, e.g. Kd. /bā/, Zaz. /vā/ “wind” < OIr. *vāta-; Kd. /pē/, Zaz. /pā/ “foot” < OIr. *pād-, etc., showing a development that clearly had not yet taken place in Parthian.
72 In its use for Parthian, the Sogdian script shows <z> with or without dots for Pth. /ž/;73 <c> and (more commonly) <z> with or without dots in places of expected Pth. /č/;74 and <nc> for [nʃ].75 While this blurs the difference between

<table>
<thead>
<tr>
<th>Sogd. script</th>
<th>Fragment</th>
<th>Word in Manich. script</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ẉ-yə́(k)[k]</td>
<td>So 18060</td>
<td>the parallel texts in M 75 r 8 and M 544 r 4 have ẉỵ(y)dg (see section 3.1)</td>
<td>“chosen”</td>
</tr>
<tr>
<td>prỵẉ-ṇ</td>
<td>So 20187</td>
<td>prỵwj̣n (see section 1.2)</td>
<td>“victory”</td>
</tr>
<tr>
<td>[dy]̣ẉ-ẉ-ṛỵ-(βṭ)</td>
<td>So 14155 (cf. Reck 2007: 325)</td>
<td>dỵẉṛỵft</td>
<td>“hardship”</td>
</tr>
<tr>
<td>z- ṃṇ</td>
<td>So 14152 (Reck 2007: 328)</td>
<td>jṃṇ (see section 4.1)</td>
<td>“time”</td>
</tr>
<tr>
<td>z- wỵṇ(k)</td>
<td>So 20187</td>
<td>jyẉnḍg</td>
<td>“alive”</td>
</tr>
<tr>
<td>z- yẉ(x)</td>
<td>So 10650(9)</td>
<td>jyẉhr</td>
<td>“life”</td>
</tr>
<tr>
<td>pẉ-</td>
<td>So 14290</td>
<td>bẉ- (see section 1.2)</td>
<td>“save”</td>
</tr>
<tr>
<td>ḳṇz- nỵ-βṭ</td>
<td>So 20208 (Sims-Williams 1989b: 322 f., 330 f.)</td>
<td>q̣mj̣nỵft</td>
<td>“passion”</td>
</tr>
<tr>
<td>q̣mj̣nỵft</td>
<td></td>
<td>jỵṛỵft</td>
<td>“wisdom”</td>
</tr>
</tbody>
</table>

73 Examples are:

<table>
<thead>
<tr>
<th>Sogd. script: &lt;c&gt;</th>
<th>Sogd. script: &lt;z&gt; etc.</th>
<th>Word in Manich. script</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ụ̄ (e.g. in So 14290)</td>
<td>ụ̄ (several instances in So 20224 (see Waldschmidt and Lentz 1926: 95 f.) and So 10201(5))</td>
<td>ụ̄ (So 10650(9), So 20208, Ch/So 20501)</td>
<td>“from”</td>
</tr>
<tr>
<td>wcn (Ch/So 20135, Sundermann and Yoshida 1992, line 1)</td>
<td>ẉṇ (So 18120)</td>
<td>wcn</td>
<td>“voice”</td>
</tr>
<tr>
<td>ṣ’ḍg̣-ṇ</td>
<td>Ṣ’dc̣n</td>
<td>“happy”</td>
<td></td>
</tr>
<tr>
<td>rwẓ (So 13505, Reck 2007: 329)</td>
<td>rẉc̣, rẉẓ</td>
<td>“day”</td>
<td></td>
</tr>
<tr>
<td>ṇṃẓ (So 18130)</td>
<td>ṇṃc̣ in parallel text M 5262 r 6</td>
<td>“praise”</td>
<td></td>
</tr>
</tbody>
</table>

75 Examples are ʰhevwk “life-giver, saviour”, syncyn “salvation” (both in So 20153 and So 20224) vs. ʰ̣j̣yẉg̣, (s)ynj̣yn in the parallel text in Manich. script (Waldschmidt and Lentz 1926: 95 f.) and pnc̣wm (So 10202, Sundermann 1981: 50) “fifth” (see section 1.3).
/č/ and /ž/, it does not necessarily exclude the existence of two different sounds, as the scribes may have tried to render [ǰ] (the postvocalic allophone of /č/, see section 4.2) by a letter that they commonly used for the nearest voiced sound, all the more since a modification of <z̈> (i.e. <ž>) was regular for [ǰ] also in the Manich. script (see sections 1.4, 5). So the evidence of the Sogdian script is not entirely conclusive for Parthian.

6.3
The cantillations (something like songbook versions of hymns, in Manich. script) are another reflex of Central Asian liturgical pronunciation of Manichaean Middle Persian and Parthian. Henning (1958: 76, n. 2) observes that they point to the same coalescence of the two series of stops that is indicated by the versions in Sogdian script (see section 6.1). The published specimens of cantillated text indicate that such a coalescence also applied to word-internal Pth. /č/ and /ž/ (Table 8). Both phonemes are written <j> in the cantillations while the Pth. verses in plain text preceding the cantillated versions present the usual orthography described in Table 6 above.

So in the versification and singing tradition which developed at some stage among the Manichaesians – probably in Central Asia, and rather late according to Brunner 1980 – Pth. /č/ and /ž/ may both have been pronounced as [ž] (written <j>) in postvocalic position.

7. Summary
The Manichaean letters <c>, <j> and <z̈> show a characteristic distribution in Parthian, forming two groups of words: <j> is regularly employed for the Pth. result of OIr. *ǰ and *ž while <c> and <z̈> are used for the Pth. output of OIr. *č. <ž> occurs in a limited number of fragments; it is found in ten different words (attested in c. 50 instances of ž “from” plus 25 other occurrences), all of which (with the exception of the hapax ẓyšm(r.)) are also found with <c>.

The use of the letters is remarkably consistent. The only exceptions in the available Pth. lexicon are one case each of unetymological twc- “to expiate”

76 Conversely, the Sogdian words ṯzyk “Arab” and ṯzykʾnk “Arabic” (found in early eighth-century AD documents), and ṯ̱y̱̱g nyv in a Sogdian phrase in the Manichaean fragment M 339 v line 7a could reflect a Pth. word *tāẓīg, both possibly from OIr. *tāčk- (thus Sundermann 1993). This would imply a Pth. result [ž] from OIr. *-č at the time relevant for these Sogdian sources. However, it would seem daring to base far-reaching conclusions on this widely travelled word, whose precise path of transmission is difficult to ascertain.

77 For Manich. cantillation, see Brunner 1980.

78 A list of fragments with cantillated text is given in Boyce (1960: 149). The vast majority of these are unpublished.

79 A survey of the unpublished cantillated Pth. fragments on http://www.bbaw.de/forschung/turfanforschung/dta/ appears to confirm this: <ž> does not seem to occur in the cantillations, and the cases of <c> could be instances of word-initial č- (but this is difficult to substantiate since the highly fragmentary state of preservation often makes it very difficult to determine the word from the elaborately embellished cantillations). However, it is possible that I have overlooked something and that there are instances where these letters are used just as they are in the plain text versions.
Table 8. Examples for Pth. words with postvocalic /č/ and /ž/ in cantillation

<table>
<thead>
<tr>
<th>Lemma</th>
<th>Cantillation(^{80})</th>
<th>Fragment</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nm‘c</td>
<td>nm(^2)-YG(^2)-YG(^2)-YG(^2)-j...</td>
<td>S 6 v 8 f.,</td>
<td>“praise”</td>
</tr>
<tr>
<td>(m)n-yc / -y(^{2})</td>
<td>[ ]YG(^2)-ny(...)(y)-j- (ž) (^{-})</td>
<td>M 66 r 10(^{82})</td>
<td>“me too”</td>
</tr>
<tr>
<td>(ž) / (ž)</td>
<td>(ž)-j- (M 64 v 6); (ž)-j- (M 64 r 7)</td>
<td>M 64(^{83})</td>
<td>“from”</td>
</tr>
<tr>
<td>bwj-(gr)</td>
<td>bw-...w-w-w-...j-Yg(^2)-YG(^2)-YG(^2)-j-...</td>
<td>S 6 r 7–9(^{84})</td>
<td>“saviour”</td>
</tr>
<tr>
<td>ʔj-(n)</td>
<td>ʔj-y-YG(^2)-yG(^{2})-j-YG(^{2})-G(^{2})-n- ...</td>
<td>M 759 II v 12(^{85})</td>
<td>“worthy”</td>
</tr>
<tr>
<td>jywnd(g)</td>
<td>jy-...w-YG(^{2})-md((...)).YG(ʔYG(^{2})).YG(^2)- ...</td>
<td>M 759 II r 5 f.(^{86})</td>
<td>“alive”</td>
</tr>
</tbody>
</table>

(alongside twj- and pdmwj- “to clothe” (alongside pdmwc-), plus the special case of wjyd “chosen, elect” (including its derivatives wjydg and wjydgysf). The latter term might agree with other Manichaean technical terms in showing Middle Persian influence.

There is a clear difference between the Manich. Pth. orthography and those used for Middle Persian, as the latter employ historical orthography to a considerable extent. Evidence, e.g. from the MIr. loanwords in Armenian, demonstrates that the MP changes of the OIr. affricates are earlier than the Pth. ones, so one need not expect the Pth. orthography to be parallel to the MP one anyway. The Pth. use of <č> / <ž> for postvocalic OIr. *č is also different from the use of <č> and <č> for OIr. *t and *k respectively, because the orthography is consistent for the Pth. result of the OIr. affricates, but the spellings with <č> and <č> only occur in a minority of instances, and only in word-final position.

The consistency of the Manich. Pth. orthography speaks against its being historical or archaic, and suggests that at least at the time of the introduction of the Manich. script, the Pth. phonemic system included the two phonemes /č/ ( < OIr. *č) and /ž/ ( < OIr. *ť and *ż) not only word-initially, but also postvocally. The phonemic distinction was lost only in the position after n.

\(^{80}\) I follow Brunner (1980: 357, 360–67) in noting the letter group yG’ with capitals, indicating that this element is likely to imply information for the recital rather than for the pronunciation of the text (see Müller 1904: 29 for a possible interpretation). Note that Brunner 1980 (maybe misinterpreting Salemann’s transliteration by zayin with macron above ã, see n. 7, and/or Müller’s transcription) rather unfortunately transliterates the instances of 促使 ţ <j> in the fragments S 6 and M 64 as <ž>, which otherwise is a common transliteration of 促使 ţ <ž> (see n. 2), while he correctly has <j> in other instances.

\(^{81}\) The fragment has the alternative number Kr IV/875. See Salemann (1912: 2 f.), Brunner (1980: 365–7) and the photos in Sundermann (1996, plate 162) for the attestation, and section 1.1 for the word.

\(^{82}\) Durkin-Meisterernst (2006: 112 f.). See section 1.4 for this clitic.

\(^{83}\) Müller (1904: 92 f.), Brunner (1980: 361–3). An additional occurrence (in the form YG’) is in M 759 II v (Durkin-Meisterernst 2006: 126 f.). See also sections 1.4, 3.1.

\(^{84}\) See n. 81. A similar version of this word occurs on M 759 II v (Durkin-Meisterernst 2006: 126 f.). See sections 1.2 and 4.1 for the words with <j>.

\(^{85}\) Durkin-Meisterernst (2006: 126 f.), see section 1.2.

\(^{86}\) Durkin-Meisterernst (2006: 124 f.).
Pth. /č/ may quite well have developed a postvocalic allophone [j] at some stage, but this change does not disturb the phonemic opposition.

It follows that it would be appropriate to differentiate the Pth. phonemes /č/ and /ž/ in phonematic transcription (all the more since it is common to differentiate e.g. /d/ from /d̪/ although they are for the most part not distinguished in Manichaean writing). This would be easy to do since the transliteration indicates the phoneme, so that e.g. wč- can be transcribed /wâč-/; rwc, rwd̠ /râč/; bwj-/bōč/-, etc. The lexemes in section 3.1 could be transcribed /tōž/- “to expiate”, /padmōč/- “to clothe” (because the single instances of twc- and pdmwj– are insufficient reason to assume a phonemic change in these two words), and /wižī/, /wiždag(ift)/ (where specific conditions apply), while the assumption of a variant /ažā/ alongside /ač/ “from” is not necessary.

There is a different orthography in the cantillations of Pth. hymns and in the transcriptions of Pth. text into Sogdian script. Both appear to indicate that the Pth. phonemes /-č/ and /-ž/ coalesced into /ž/ (written <j> in the cantillations and <z> with or without diacritic dots in Sogdian script, while <c> in cases of expected Pth. /č/ also occurs). It is not quite clear, however, whether the coalescence of the phonemes mirrors a change of the Pth. language in the strict sense (i.e. if it dates to a period when there were native speakers of Parthian), or whether it is to be attributed to the liturgical use of the Pth. language by Sogdians (and others), who may have developed their own “accent” in their pronunciation of Parthian.

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Salemann, Carl. 1912. “Manichaica III”, *Izvestija imperatorskoy Akademii nauk* (St. Petersburg) 6, 1–32.


Abbreviations

Arm. Armenian
Av. Avestan
Ir. Iranian
Kd. Kurdish (Kurmanci)
Manich. Manichaean
MIr. Middle Iranian
MP Middle Persian
MPM Manichaean Middle Persian
MPZ Zoroastrian Middle Persian
OInd. Old Indic
OIr. Old Iranian
PIE Proto-Indo-European
Pth. (Manichaean) Parthian
Sogd. Sogdian
Zaz. Zazaki