An Indological transcription of Middle Chinese

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Abstract

Because most Sino-Tibetan languages with a literary tradition use Indic derived scripts and those that do not are each *sui generis*, there are advantages to transcribing these languages also along Indic lines. In particular, this article proposes an Indological transcription for Middle Chinese.

Keywords

Middle Chinese – Indological transcription

1   Introduction

The great majority of Sino-Tibetan languages with a literary tradition employ scripts that ultimately derive from a Brahmi model. Examples include Pyu (c. 5th–13th cent. CE), Tibetan (from 650 CE), Burmese (from 1113 CE), Newar (from 1114 CE), Lepcha (17th cent. CE), and Limbu (18th cent. CE). In addition, living Sino-Tibetan languages of Nepal are typically written in Devanagari.[1] The ubiquity of the International Alphabet of Sanskrit Transliteration (IAST) within Indology and related disciplines makes obvious the choice of an Indological transcription for these various scripts. Those Sino-Tibetan languages that use non-Indic derived scripts include Chinese (from 1250 BCE), Tangut (1038–1502 CE), Yi (from 1485 CE), Naxi (19th cent. CE?), and possibly Meitei (16th. cent. CE?). The scripts of this latter group are not obviously related to each other; to

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1   Meitei, although it has its own Meitei Mayek script, is typically today written in the Brahmi-based Bangla script.

adapt a transcription from one to another would not be easy. As a discipline we thus face the choice of either (a) using Indological principles to construct fundamentally mutually compatible transcription practices across all literary Sino-Tibetan languages or (b) embracing outright eclecticism.

Examples from Hill 2019 make clear the infelicity of mixing transliteration systems. In this book one finds both many-to-one mappings and one-to-many mappings between symbols and their phonetic interpretation.

> Tib. འཇོལ *ḥjol* 'hang down', Chi. 垂 *dzywe* < *[d]oj (19–17a) 'hang down'
>> ibid., 36

Here the letter ⟨j⟩ in Tibetan and the series of letters ⟨dzy⟩ in Middle Chinese both indicate a voiced palatal affricate. Although the reader will not be para-lyzed by confusion in face of this inconsistency, issues such as this again and again impose small hurdles to comprehension.

> Tib. འགྲོད *ḥgrod* < *gʷrat 'go, walk', Chi. 越 *hjwot* < *ɢʷat (22–05e) 'pass over'
>> ibid., 20

Here the sound [ɣ] is written ⟨ḥ⟩ in Tibetan and ⟨h⟩ in Middle Chinese. On the other hand, the letter ⟨o⟩ in Tibetan transcription means [o], but in Mid-dle Chinese it means [ʌ]. Such many-to-one and one-to-many mappings give the reader a lot to keep track of.

There are good reasons to use Indological conventions even in the transcrip-tion of those scripts without Indic origins. First, using Indological transcription across all literary Sino-Tibetan languages would lower the transaction costs of both teaching and learning, since the principles learned in the transcription of one script would apply *mutatis mutandis* to all others. This benefit is espe-cially salient inside of a single piece of research and in specifically Sino-Tibetan (as opposed to say Sinological) research. Of course, whatever our current or future practice may be, students as they pursue their studies will inevitably con-front Karlgren's, Li's, and Baxter's systems for Middle Chinese, Nishida's, Gong Hwangcherng's, and Arakawa's for Tangut, Jaeschke's and Wylie's for Tibetan, etc. A transliteration scheme to rule them all, as once envisioned by William Jones, is a fruitless and unachievable goal. Nonetheless, the application of anal-ogous principles in the transcription of literary Sino-Tibetan languages would make it easier for students to set off down this arduous road. Second, the Indic linguistic tradition had a substantial influence on Chinese and Tangut indige-nous phonological works. Thus, the analysis of Chinese and Tangut syllables in Indological terms is quite straightforward and remains respectful to the Chi-

nese tradition. Third, many of the sources relevant for the phonetic interpretation of these materials are themselves in Indic inspired scripts. In the Han period we have loans from Indo-Aryan languages in Buddhist texts (Coblin 1983); in the Tang period and subsequently there are transcription of Chinese and Tangut syllables into the Tibetan script (Takata 1988, Dai 2008); in the Yuan there are transcriptions of Chinese syllables into 'Phags-pa script, found in the *Menggu Ziyun* 蒙古字韻. Thus, even in strictly Sinological works the occasion will arise when Middle Chinese needs to be presented on the same page with evidence that by its very nature is amenable to Indological transcription. Fourth, in the same way that important works in Indo-European linguistics appear in German, French, Italian, and Russian, we may hope that in the future important Sino-Tibetan research will appear written in Tibetan, Burmese, and Newar. Since the orthographic systems of these languages already possess conventions for writing Sanskrit, Indological transcriptions of Chinese, Tangut, etc. in Roman letters are easily adopted into Tibetan, Burmese, or Newar. For example 厪 *ḍien* could be written ཌེན with the Tibetan script.

The fast pace of research in Tangut phonology (Gong 2020, Gong 2022) recommends against hastily parting from the system of Gong Hwangcherng, but the categories of Middle Chinese and their overall phonetic interpretation is not in flux. In particular, Baxter (1992) proposed a transcription system that exactly encodes the categories of the rhyme books and rhyme tables in a straightforward way. The purpose of this essay is to bring Baxter's transcription system into line with Indological principles, and to rectify those few places where his choices are misleading.

2   Disadvantages of IPA-based transcription practices

One might accept that all literary Sino-Tibetan languages should be transcribed in kindred ways but yet not favor an Indological approach. If Sino-Tibetan historical linguistics is more affiliated with other domains of linguistics than with other areas of oriental studies, transcription based on the International Phonetic Alphabet (IPA) may in particular recommend itself. Guillaume Jacques (2012) writes that since "the pronunciation of Old Tibetan is relatively better known in comparison to that of many other old languages … it seems more sensible to represent the Tibetan letters by their IPA equivalents" (ibid., 89).[2]

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2 Jacques' 'more' is not contrasting with an Indological transcription but with the 'Wylie' system (Hill 2012).

However, no matter how well understood a language's phonology is, an IPA transcription is not sufficiently agnostic about precise phonetics. For example, Jacques transcribes ཞ as ⟨ɕ⟩ whereas Shen (2020, 235) writes the same letter as ⟨ʃ⟩. To my knowledge no existing research treats the question of whether ཞ was [ɕ] or [ʃ] in Old Tibetan. If one transcribes ཞ as ⟨ś⟩ or ⟨š⟩ or the like, it is clear enough that this transcription is a mechanical replacement of a written symbol in one system with a symbol form another. If one instead writes ⟨ɕ⟩, the act of transcription is obscured, instead becoming the claim that any word written with ཞ in fact was pronounced with the segment [ɕ].[3] Despite his claim that the phonology of Old Tibetan is sufficiently well understood to represent Tibetan letters with IPA symbols, Jacques himself admits that the 23rd letter is controversial (2012, 91–92). Following Coblin (2002), he thinks this letter has different phonetic interpretations in each of the phonotactic positions in which it appears; Hill rejects this understanding (2005, 2009, 2019, 5 n. 4).

Prematurely prejudicing the solution to ongoing controversies points to a more deep-seated failing of the IPA when applied to transcription. "One of the most obvious rules of Romanization is that Romanized sequences of letters should contain no more and no less information than the original text" (Balk and Janhunen 1999, 21). The major merit of Baxter's 1992 transcription is exactly that it is *not* a reconstruction of how Middle Chinese was pronounced.

> The notation I introduce here is not intended as a reconstruction; rather it is a convenient transcription which adequately represents all the phonological distinctions of Middle Chinese while leaving controversial questions open.
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> BAXTER 1992, 27

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3   An anonymous referee objects that the conventions of writing ⟨a⟩ for writing, /a/ for phonemes, and [a] for phones is perfectly satisfactory for making clear whether one intends phonetic precision. One could in principle transcribe ཞ as ⟨ɕ⟩, and still claim that it is phonologically /ç/ and phonetically [ʃ]. The referee is quite right in principle and by implication is well satisfied with Baxter's ⟨o⟩ for ʌ and ⟨h⟩ for ɣ and with Hill's ⟨j⟩ and ⟨dzy⟩ for the same /dʒ/. Nonetheless, in practice neither students nor seasoned researchers will perceive an IPA symbol as a purely conventional representation of a philological artefact, even if explicitly told to do so. Human beings are creatures of habit. In principle one could transcribe ཞ as ⟨k⟩ or ⟨¥⟩ or whatever you like. The classroom is the crucible to assay these principles.

Thus, even if it were known with absolute certainty that the 23rd letter of the Tibetan alphabet in Old Tibetan represented two distinct phonemes, it would still be illegitimate to Romanize the same Tibetan letter in two ways. The IPA cannot transcribe the available philological information without offering a phonological reconstruction.

Mongolian offers a lesson in the pitfalls of conflating Romanization and phonetic reconstruction. The Mongolian script massively underspecifies the phonemes of Middle Mongolian, for example using the same letter for [a], [e], and [n]; traditionally in Romanization these three phonemes are distinguished.

> Needless to say, this approach allows no distinction to be made between the graphic information contained in the written message and the corresponding phonemic sequences, which the writing only imperfectly reflects.
>
> BALK and JANHUNEN 1999, 18

A single Romanization for the Greek script will serve well from the Archaic period right through the Ottoman, because the Greek writing system did not fundamentally change across these eras, but an IPA-based transcription of Greek would be comically misleading already by the Alexandrian period. A transcription should not aim to reflect the concrete pronunciation of a language at any period but should reflect the *sonus grammae* (Yabu 2014) of the writing system qua system. In sum, IPA-based Romanizations are methodologically inadequate; they obscure the primary philological data by tainting it with the phonemic analysis that must be the output and not the input of our lucubrations.

3   Concrete proposals for an Indological transcription of Middle Chinese

To present concrete proposals for an Indological transcription of Middle Chinese, it is convenient to survey the components of the Middle Chinese syllable: initials (§3.1), medials (§3.2), vowels (§3.3), codas (§3.4), and tones (§3.5).

3.1   *Initials*
For the velars (*yá* 牙), labials (*chún* 唇), dentals (*shétóu* 舌頭), and dental sibilants (*chǐyīn* 齒音) Baxter's system and an Indological system would in any case be the same; Baxter's ⟨y⟩ and ⟨l⟩ also remain as they are. For the palatals (*zhāngzǔ* 章組) and retroflex stops (*shéshǎng* 舌上) the Indological equivalent

is obvious, viz. ⟨c⟩ etc. in place of ⟨tsy⟩ etc. and ⟨ṭ⟩ etc. in place of ⟨tr⟩ etc.[4] For the retroflex sibilants (*zhuāngzǔ* 莊組), one might be tempted either to write ⟨ç⟩ or ⟨tṣ⟩. The second option has a number of advantages. First, there is no typographically feasible way of putting a dot under a ⟨j⟩ to stand as equivalent to ⟨dẓ⟩. Second, the letter ⟨ç⟩ does not occur in Indological transcription, so its interpretation is less obvious than that of ⟨tṣ⟩, which consists of two letters that do appear in Indological transcription.[5] A third point against ⟨ç⟩, albeit a small one, is that there is not a Unicode code point for this character. As such, its employment would give rise to technical inconveniences. Fourth, the transcriptions ⟨tṣ⟩, ⟨tṣh⟩, and ⟨dẓ⟩ match Li Fang-Kuei's Middle Chinese reconstruction (Li 1974–1975, 226).

The Middle Chinese laryngeals (喉 *hóu*) require somewhat more comment. Here we confront 影 *yǐng* [ʔ-], 曉 *xiǎo* [x-], and 匣 *xiá* [ɣ-]. Indological conventions do not offer a solution for transcribing the glottal stop; I propose ⟨ · ⟩.[6] In Sanskrit ⟨h⟩ represents a voiced glottal fricative and ⟨ḥ⟩, the visarga, its voiceless counterpart. One might therefore write ⟨ḥ⟩ for 曉 *xiǎo* [x-] and ⟨h⟩ for 匣 *xiá* [ɣ-], but there are good reasons for not doing so. First, Tibetan ⴰ and Burmese ဟ, the structural equivalents of Indic ⟨h⟩, represent the voiceless glottal fricative [h]. Second, in some systems of Tibetan transliteration ⟨ḥ⟩ represents the infamous 23rd letter འ, which represents a voiced fricative, and in Burmese the visarga ◌ঃ is a marker of the high tone. Thus, neither ⟨h⟩ nor ⟨ḥ⟩ have their Sanskrit meaning in the major written languages of the Sino-Tibetan family. Since the Tibetans and the Burmans decided to associate Indic ⟨h⟩ with their voiceless glottal, it is best to defer to their choice. Similarly, the letter ⟨ḥ⟩ should be left for representing those phenomena that, in particular writing systems, have a structural or graphic tie with the Indic visarga. Following Li (1974–1975, 226) and the IPA, one could write 曉 *xiǎo* as ⟨x⟩ and 匣 *xiá* as ⟨ɣ⟩, since ⟨x⟩ is a standard Roman character and ⟨ɣ⟩, although Greek, figures in other Romanization systems, such as the standard system for Mongolian. Still, in order to keep our Romanization Roman and to avoid the frequent association of ⟨x⟩ with [ks], I do not find ⟨x⟩ and ⟨ɣ⟩ good choices. For lack of a better solution and in keeping with Hill's (2019) use of ⟨ḥ⟩ for Tibetan འ, I propose to write 曉 *xiǎo* as ⟨h⟩ and 匣 *xiá* as ⟨ḥ⟩.

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4 Note that the sound change of OChi. medial -r- giving rise to MChi. retroflex initials is rather more intelligible as *tr- > *ṭ- than in Baxter's *tr- > *tr-.

5 I acknowledge that writing tṣ, tṣh, and dẓ but not tś, tś, and dź is inconsistent, but this inconsistency is a worthy sacrifice in order to stick to the most obvious Indological solution.

6 I would like to thank an anonymous referee for this suggestion.

TABLE 1   Middle Chinese initials in Baxter's system and the Indological conventions pro-
            posed here

velars (*yá* 牙)	Baxter	k	kh	g		ng	
	Indological					ṅ	
retroflex sibilants (*zhuāngzǔ* 莊組)	Baxter	tsr	tsrh	dzr		sr	zr
	Indological	tṣ	tṣh	dẓ		ṣ	ẓ
palatals (*zhāngzǔ* 章組)	Baxter	tsy	tsyh	dzy	ny	sy	zy
	Indological	c	ch	j	ñ	ś	ź
retroflex stops (*shéshǎng* 舌上)	Baxter	tr	trh	dr	nr		
	Indological	ṭ	ṭh	ḍ	ṇ		
dental sibilants (*chǐyīn* 齒音)	Baxter	ts	tsh	dz		s	z
	Indological						
dentals (*shétóu* 舌頭)	Baxter	t	th	d	n		
	Indological						
labials (*chún* 唇)	Baxter	p	ph	b	m		
	Indological						
laryngeals (*hóu* 喉)	Baxter	'	x	h			
	Indological	·	h	ḥ			

3.2   *Medials*

In this section we treat the problem of division-iii syllables (§3.2.1), 合口 *hékǒu*
syllables (§3.2.2), and the 重紐 *chóngniǔ* problem (§3.2.3).

3.2.1   Treatment of division-iii syllables

The divisions of Middle Chinese are too complex to introduce here (Baxter
1992, 42–43, Hill 2019, 95–99). It suffices to to say that division-iii (type B) and
non-division-iii (type A) is a major cleavage in the phonological system of both
Old and Middle Chinese. It is traditional to associate division-iii with a medial
-y- [j], although the exact phonetics of the distinction is controversial in both
periods. Baxter writes division-iii with -j-, this is clearly not a good option for
us, since ⟨j⟩ we already use for the voiced palatal affricate (Baxter's *dzy-*).

I believe that -i- is a good choice for indexing division-iii. One advantage is that with rounded syllables we get easy to read things like 誑 *kiwanH* (Baxter's *kjwanH*). Also, we get very Chinese looking things like 是 *jieX* (Baxter's *dzyeX*). A risk of using -i- to mark division-iii is that it would be ugly and confusing before the vowel -i-, since this would yield a double -ii-, in a word like 積 *ciin*. However, in the same way Baxter writes 積 *tsyin* and not 積 *tsyjin* we can write 積 *cin* instead of *ciin*, since initial *c*- itself already indexes division-iii.[7]

3.2.2 Treatment of 合口 *hékǒu* syllables

The Song dynasty rhyme tables allow for the identification of rounded (合口 *hékǒu*) versus unrounded (開口 *kāikǒu*) syllables (Baxter 1992, 62, Hill 2019, 99–100, § 84). I follow Baxter in writing rounded syllables with -w-. Indologically speaking -v- would be the better choice. Nonetheless, since -w- is typically used in the transcription of Tibetan and Burmese, this letter perhaps has more to speak in its favor.

3.2.3 The 重紐 *chóngniǔ* problem.

Eight rimes of the *Qièyùn* (viz. *zhī* 支, *zhī* 脂, *zhài* 祭, *xiāo* 宵, *qīn* 侵, *yán* 鹽, *zhēn* 真, and *xiān* 仙) contain a pair of homophone groups that have incommensurate chains of *fǎnqiè* rime spellers and cannot be distinguished on the basis of *hékǒu* versus *kāikǒu* (Baxter 1977, 56, 60–64). Looking at the treatment of pairs of *chóngniǔ* homophone groups in the rime tables, the one homophone group is put into rank-iii and the other group in rank-iv. As a matter of terminology characters of a relevant *Qièyùn* homophone group that is put in rank-iii are called '*chóngniǔ* rank-iii' characters (重紐三等 *chóngniǔ sānděng*) and characters of the other *Qièyùn* homophone group, the one put in rank-iv, are called '*chóngniǔ* rank-iv' characters (重紐四等 *chóngniǔ sìděng*). In Baxter's transcription, *chóngniǔ* rank-iv are marked with an additional i or j. For instance, the *chóngniǔ* rank-iii word 碑 he transcribes as *pje* while the *chóngniǔ* rank-iv word 卑 he transcribes as *pjie*. I propose to write these respectively as *pie* and *pyie*. A merit of this solution is that medial -y- in the proposed system immediately and uniquely indexes *chóngniǔ* rank-iv syllables.

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7 There remains syllables like Baxter's 鏐 *ljiw* and 樛 *kjiw*, which according to the principles so far elaborated would still have a double -ii- (i.e. Indological 鏐 *liiw* and 樛 *kiiw*). However, following Baxter and Sagart (2014, 301), I propose to treat these with the same notation as used for 重紐 *chóngniǔ*, i.e. 鏐 *lyiw* and 樛 *kyiw*.

3.3   *Vowels*

The vowels -ae-, -ea- and -i- appear in Baxter's system, but not in the IAST.[8] There is no reason to write them any differently in an Indological transcription. In contrast, Baxter's use of -o- to represent [ʌ] causes much confusion with students; a better solution should be sought. I do not find ⟨ʌ⟩ itself is a good solution. Although one is presumably meant to see here an ⟨A⟩ without the crossbar, in my experience students do not recognize here a vowel symbol at all, but instead the 'wedge' ⟨∧⟩ of mathematics. A better option is the 'schwa' ⟨ə⟩, which is known even to those who know no other IPA character; it is quite obviously a vowel, and represents more or less the correct phonetic value.

3.4   *Codas*

Baxter's system of finals can be adopted as is, with one exception, namely the letter ⟨y⟩ in place of the letter ⟨j⟩.

3.5   *Tones*

Middle Chinese has four tones: level tone (平聲 *píngshēng*), the rising (上聲 *shǎngshēng*), departing (去聲 *qùshēng*) and entering (入聲 *rùshēng*) tones. In Baxter's system the capital letters -*X* and -*H* represent the 'rising' and 'departing' tones respectively. Both the 'level' and 'entering' tones are represented with no final capital letter, but a syllable in the 'entering' tone ends with a final stop whereas a syllable in the 'level' tone is either open or ends with a nasal. Baxter's excellent notation for the tones can be adopted as is in an Indological transcription.

4   Conclusion

Table 2 gives two samples of the Indological system proposed here, paired with Baxter's system for comparison. Most striking is how little difference there is. This fact itself is an advantage to the proposed Indological system. This system will benefit those who are unfamiliar with Baxter system without burdening those who are already used to his system.

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8   In fact, in his 1992 book these vowels appear as -æ-, -ɛ-, and -ɨ-, whereas more recently he writes them as -ae-, -ea-, and -+-. I cannot countenance the use of + to represent a vowel; apart from aesthetic considerations, ⟨+⟩ is encoded in Unicode as a 'math symbol', so using it as a vowel will cause technical problems in a digital environment.

TABLE 2   Ode 179, stanza 1

Characters	Baxter	Indological	Translation
我車既攻、 我馬既同。 四牡龐龐、 駕言徂東。	*ngax tsyhae kj+jн kuwng* *ngax maex kj+jн duwng* *sijн muwx luwng luwng* *kaeн ngjon dzu tuwng*	*ṅax chiae kiiyн kuwṅ* *ṅax maex kiiyн duwṅ* *siyн muwx luwṅ luwṅ* *kaeн ṅiən dzu tuwṅ*	Our carriages are well-worked, our horses are (assorted:) well matched; the four stallions are fat, we yoke them and march to the East.

KARLGREN 1950, 123

TABLE 3   Climbing the Yueyang Tower with Xia Shi'er

Characters	Baxter	Indological	Translation
樓觀岳陽盡	*luw kwan ngaewk yang dzinx*	*luw kwan ṅaewk yaṅ dzinx*	From the tower I look afar to where the Yueyang region ends,
川迴洞庭開	*tsyhwen hwengx duwngн deng khoj*	*chiwen ḥweṅx duwṅн deṅ khəy*	The river winds along to where Dongting Lake opens.
雁引愁心去	*ngaenн yinx dzrjuw sim khjoн*	*ṅaenн yinx dẓiuw sim khiəн*	The wild geese, taking along the heart's sorrow, have gone,
山銜好月來	*srean haem xawн ngjwot loj*	*ṣean ḥaem hawн ṅiwət ləy*	The mountains, carrying the fine moon in their beak, come.
雲間連下榻	*hjun kean ljen haeн thap*	*ḥiun kean lien ḥaeн thap*	In the midst of clouds I reach the honored guest's bed.
天上接行杯	*then dzyangн tsjep haeng pwoj*	*then jiaṅн tsiep ḥaeṅ pwəy*	In heaven above I receive the passing wine cup.
醉後涼風起	*tswijн huwx ljang pjuwng khix*	*tswiyн ḥuwx liaṅ piuwṅ khix*	After I have gotten drunk a cool wind rises,
吹人舞袖回	*tsyhwe nyin mjux zjuwн hwoj*	*chiwe ñin miux ziuwн ḥwəy*	Blowing on me, sending my sleeves dancing and fluttering.

CAI 2008, 176–177

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