Materia Medica Tocharo-Hvatanica

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Abstract
The two languages once spoken in the oases in the North of the Tarim basin, Tocharian A and B, have preserved many Iranian loanwords. These belong to different chronological layers and are of different dialectal origins. Whereas the oldest layers are now most likely seen as belonging to an unattested Old Iranian dialect, more recent layers have not yet been studied in detail. In this respect, the vocabulary of medical texts represents an important field of enquiry. Most terms come from Middle Indian, but a significant number are of Middle Iranian origin. This component, mostly ingredients and technical vocabulary, seems to be largely of Khotanese origin. The article introduces the material and examines possible scenarios for historical transmission and contact between the North and the South of the Tarim Basin.

Keywords: Tocharian medical terms, Khotanese, Language contact, Silk Road studies, Medical literature in Central Asia, Middle Iranian linguistics

1. Introduction
Tocharian vocabulary contains a large number of Iranian loanwords, belonging to different chronological layers and of different dialectal origins (Peyrot 2015). The oldest layers are now most likely seen as belonging to an otherwise unattested Old Iranian dialect (Peyrot 2018), rather than to a reconstructed “Old Sakan” (Tremblay 2005). More recent layers of borrowings, however, have so far received little or no attention. The medical vocabulary is in this respect emblematic. Whereas most technical terms are of Middle Indian origin, a significant number are Iranian (Carling 2007: 330). The scholarly literature on the subject tends to view the Iranian component as being overwhelmingly of Khotanese origin. If this is true, it will enable us to uncover scenarios of historical transmission and contact between the North and the South of the Tarim Basin.

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1.1. Siddhasāra and Yogaśataka

The preface to the Khotanese Siddhasāra,2 the great medical work preserved also in Sanskrit (Emmerick 1980) and Tibetan (Emmerick 1982), may offer us a rare glimpse into the reception of medical texts in Central Asia:

“By means of collections of prescriptions they performed (medical) practice in the whole country.3 Disease (was) unrecognised because they did not know the theory of it: the unequal humour, time and seasons, (their) intervals too. Inappropriate medicines struck them down: many beings died.”

(Emmerick 1983: 20–1)

It was R.E. Emmerick’s idea (1983: 22) that the “collections of prescriptions (yauga-mālo jsa)” could refer to the Yogaśataka, “which was popular not only in India and Ceylon but also in Central Asia”.4 Such a reading of the passage is well worth considering, although I have not found any mention elsewhere of a rivalry between the Yogaśataka and Siddhasāra traditions. No Yogaśataka manuscript has been found in the South of the Tarim basin, but this is not sufficient to justify such an enmity. Moreover, Siddhasāra traditions are present in the North, although they are quite late.5 It is possible, however, that the polemic passage of the Siddhasāra does not refer to a contrast between Southern and Northern oases. It could simply remind the reader of the contraposition existing between longer works that explained the medical theory and the popular collections of recipes such as the Jīvakapustaka, which were clearly made for practical use.6 At any rate, if Emmerick’s idea proves right, the preface of the Khotanese Siddhasāra might witness the late echoes of a contact scenario between the South and the North, which was already taking place at the time of the first Tocharian translation of the Yogaśataka in the North.7 One could surmise that not only the Yogaśataka, but also other medical texts, were circulating widely between the South and the North. This could have been the reason why the Tocharian medical lexicon seems to be so composite, and the Iranian part appears to be overwhelmingly of Khotanese origin.8 In such a contact scenario, one should obviously not under estimate the oral component, as pointed out by Carling (2007: 332).

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2 See KT I: 2–134 and Emmerick unpublished. It was translated directly from the Tibetan and collated with the Sanskrit version (Maggi 2009: 415–6).
3 Lit. “one-country”, probably referring to Khotan.
4 In the North of the Tarim basin we have fragments of a Tocharian translation, see Carling 2003.
5 For the extant Old Uyghur fragments, see Zieme 2007. Moreover, the Jīvakapustaka seems to be extant in Tocharian, see Maue 1990. For medical literature in Sogdian, see Reck and Benkato 2018 for a complete survey of the extant manuscripts. Noteworthy is a fragment with a translation of Vāgbhaṭa’s Aṣṭāṅgahīdayasamhitā (Reck and Wilkens 2015).
6 This is how Maggi (2009: 416) interprets the Siddhasāra passage.
7 The extant Tocharian fragments could be approximately dated to the late VII/VIII c. AD.
8 H.W. Bailey in 1947 had already alluded to contact between the South and the North: “The Annals of Khotan and the Krorayina documents show that the Khotanese had
In what follows, the Tocharian medical vocabulary of alleged Khotanese origin will be presented and analysed, in an attempt to verify whether such a contact scenario has to be assumed or not.

1.2. The Tocharian medical vocabulary of alleged Khotanese origin

Twelve medical lexical items have been selected. A distinction can be made between names of ingredients and technical vocabulary. Individual studies will attempt to verify whether the items have a clear Khotanese origin. Among the ingredients, we find:

- TB aṅkwaṣ(t) subst. ‘Asa foetida’
- TB ešpeṣṣe subst. ‘spreading hogweed (Boerhavia diffusa)’
- TB kuṇi-mot subst. ‘wine’
- TB kuṇcit ~ kwāṇcit A kuṇcit subst. ‘sesame’
- TB kurkamāsse ~ kwārkamāssi adj. ‘pertaining to saffron’
- TB tvāṅkaro subst. ‘ginger’

In the following, the items belonging to the technical vocabulary are listed:

- TB ampoño subst. ‘rottenness, infection’
- TB ampa- v. ‘to rot, decay’
- TB krāke A krāke subst. ‘dirt, filth’
- TB krāk- ‘to be dirty’
- TB ṣpakīye subst. ‘suppository’
- TB sanapa- v. ‘to rub in, rub on, anoint, embrocate (prior to washing)’

It is important to note the presence of three verbs in this group, a feature that might suggest deeper linguistic contact (Thomason 2001: 70).

2. Names of ingredients

2.1. TB aṅkwaṣ(t) subst. ‘Asa foetida’

Tocharian occurrences:

- aṃkwaṣ PK AS 2A a5, aṅkwaṣ PK AS 2A b2. Both forms appear in a list of ingredients belonging to the Tocharian bilingual (Sanskrit–Tocharian) fragments of the Yogaśataka. The Sanskrit equivalent is hiṅgu- ‘id.’ in both cases (Tib. śiṅ-kun).
- aṅwaṣṭ PK AS 3B b5. The word appears again in a list of ingredients, although the text has not yet been identified. It was classified as a

close connexions with the cities of Kashgar, Kuci, Argi and Krorayina in political matters. Linguistic interchange was inevitable” (Bailey 1947: 150).

9 The text is not really late but shows at least the secondary wiralom for Skt. vīḍa-lavaṇa-‘salt’ and curm for Skt. cūrṇa- ‘powder’.

10 On the Sanskrit word, which is probably an Iranian loanword, see KEWA III: 593 and EWA III: 538.

11 PK AS 3B is not an archaic text. For example, it has later sātke ‘remedy’ (next to original samtkhe) and later kliye for kliye ‘woman’. However, it does have cūrṇā (for later curm, if cūrṇā is not a Sanskritism) and aṅwaṣṭ, which looks older because -k- is not written.
medical/magical text. The title of the section to which the text should refer is given in line b4 as a generic bhūtatāntara "Treatise against the demons".

Khotanese occurrences:

- In the Siddhasāra it occurs in various orthographic shapes: angquisa Si 19r4, 128r4, 130v2, angiṣda’ 123r1, angiṣdī 126v4, angiṣdī’ 126r4, angiṣdā 10v1, 12v4, 123r5, 124v1, aghiṣdā 122r4, amgiṣdā Si P 2892.82 and 127.
- In the Jīvaka-pustaka: angiṣdī Ji 56r4, amgiṣdā 97r5, amgiṣdī 52r1, 98r2, 98v2, 100v2, amgiṣdā 61v5, 85v3, 104v5.
- In other medical fragments: angiṣdī P 2893.219, angiṣdī P 2893.165.12

The scholarly literature agrees on the Iranian origin of the Khotanese word and posits a Proto-Iranian form *angu-jatu-.13 This is seen as a compound of *angu- ‘tangy, sour’ (Bailey 1957: 51) and *jatu- ‘gum’ and is continued by New Persian angu-żad.14 From the occurrences in Late Khotanese medical texts, a Khotanese stem angiṣdā- can be safely reconstructed as the original.15 As pointed out by an anonymous referee, Plr. *-jat- > Kh. -ṣd- is not a regular sound change in Khotanese. The regular outcome would probably have been **angiṣsata- with Plr. *-j- > Kh. -js- (cf. OKh. paisjama- < Plr. *upa-jama-(Skjærve 2004: II 293)). The first necessary step in order to obtain the Khotanese form is a syncope of the -a- in **°jsata-, which would have caused secondary contact between **-js- and **-t-. Such a contact, however, exists in the cluster -ysd-, and not -ṣd-, as one can easily see in the formation of the 3sg. pres. mid. of type B verbs (SGS: 193), e.g. daijs- ‘to burn’ 3sg. pres. mid. daysdi (SGS: 43) and drjs- ‘to hold’ 3sg. pres. mid. drysde (SGS: 46). -ṣd- (/z̠d̠/) seems to point to secondary contact of original *-š- (> *-ž-) and *-t-,16 e.g. pyūṣ- ‘to hear’ 3sg. pres. mid. pyūṣde (SGS: 87).

In view of these problems with a derivation of angiṣdā- from Proto-Iranian directly, it is preferable to see in LKh. angiṣdā- a loanword from an Iranian language in which intervocalic *-j- underwent fricativization (> *-ž-). This might be e.g. Sogdian, in which old *-j- gives regularly -ž- (GMS: 42), or even Parthian, for which the same sound change is attested (Durkin-Meisterernst 2014: 96). Although highly speculative, a Sogdian or Parthian form might also be at the origin of the irregular -ž- found in New Persian angu-žad, which seems to alternate with a native form with -z- (angu-žad, Hassandoust 2015: I n° 525).

The dating of the syncope is crucial to determining whether the Tocharian form was borrowed directly from the unattested Sogdian (or Parthian, or another, 12 The edition of P 2893 is to be found in KT III: 82–93.
13 See DKS: 1, Bailey (1957: 50) and Rastorgueva and Œdel’man (2000: 166).
14 See Hassandoust (2015: I n° 525). Compounds with another second member are also present, cf. angi-yān (Hassandoust 2015: I n° 535) and angi-dān (Hassandoust 2015: I n° 523), all meaning ‘Asa foetida’.
15 For the Late Khotanese alternations ug and uau cf. Dresden (1955: 406 [4], [5]).
16 See in detail Maggi 2019.
unknown, Middle-Iranian language of the area) cognate that may be posited, or from Khotanese. It seems that the attribution of the syncope to Khotanese is not problematic: -a- was first weakened\(^{17}\) to -ä- in unstressed syllable (*āngūza-* > *āngūząta-*) and then lost. Moreover, New Persian angu-žad, if borrowed from Sogdian or Parthian, may show that the unattested form had no syncope (although this is far less certain). In other words, the Tocharian form needs a source language in which syncope has already taken place. This may be identified with Khotanese, in which the loss of -a- can be accounted for without problems. Moreover, New Persian angu-žad, if borrowed from Sogdian or Parthian, may show that the unattested Middle-Iranian antecedent. Therefore, the chance that the Tocharian form was borrowed directly from Khotanese may seem higher than the possibility that Tocharian borrowed from Sogdian or Parthian. Nevertheless, this second possibility cannot be excluded.

As far as Tocharian is concerned, Iranian *-u- was reinterpreted as w + ǝ and, more precisely, as kʷw + ǝ, so that the word takes the aspect /ankʷóst/. This phenomenon is to be observed also for a series of other Tocharian medical terms (TB kūnçit ∼ kwānçit, kurkämäṣṣ ∼ kwärkämäṣṣi and kwarm < Skt. gulma-).\(^{18}\) Since the development of u to û ∼ wā ∼ wa is thus understandable within Tocharian, the form may be derived from Khotanese without any problem.\(^{19}\) The form aṅwaṣṭ with final -t is older than the form without -t, as aṅkwaṣ can be derived from the form with final -t by sound law (Peyrot\(^{20}\) 2008: 67).

Old Uyghur ʾnkʾpwš (Röhborn 1979: 145), i.e. angabuš, probably via *ánguwaš, with the absence of final -t as in Tocharian, and Chinese 阿魏 wèi share the same semivocalic element -w- and must therefore be considered Tocharian loans. The history of the word\(^{21}\) may thus be provisionally reconstructed as follows: Proto-Iranian *-jatu- > *Sogdian (or *Parthian?) [*-j- > *-ž-] → Khotanese *-guzzda- [*-žat- > -ṣd-] → Tocharian aṅ(k)waṣ(t) [-kwaṣ < -gusd-] → Chinese and Old Uyghur (independently).

2.2. TB ěšpešše subst. ‘spreading hogweed (Boerhavia diffusa)’

Tocharian occurrences:

- ěšpešše THT 500–02 b9–10.\(^{22}\) Otherwise, the more common word for the Boerhavia diffusa is punarnaṇ, LW < Skt. punarnavā, in PK AS 3A a5,

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17 On such weakening see Emmerick 1989: 211.
18 This alternation has already been noted by Isebaert (1980: 73–5). Tremblay (2005: 438) claims that Pfr. *angu-žatu- has undergone a metathesis that resulted in *anguažt, further adapted to Tocharian phonology in the form aṅkwaṣ(t). However, this explanation is impossible because no vowel /a/ is present in the second syllable of the Tocharian form (the spelling <a> rather denotes /̥a/). See further sections 2.4 and 2.5.
19 Cf. already Bailey 1957: 50 fn. 2.
20 As noted by Samira Müller (personal communication), the first attestations of the Chinese word are from the Tang dynasty (see also Laufer 1919: 358–61). Accordingly, the Tocharian spelling squares with the reconstructed Middle Chinese form ㄠ-ngwuiH. See further Baxter and Sagart (2014: 121) for the reconstruction of the second character.
21 See further DoT: 7; Laufer 1919: 361; Bailey 1937: 913; 1946: 786; Henning 1965: 8 [= SelPap II, 604].
22 Medical, see Maue 1990.
W19 b1, W1 b4, W6 a6, W6 b5, W17 b5, W20 a5. Another *hapax legomenon* for the same plant is *wārśćik*, LW < Skt. *ṛśćika*-, in PK AS 3 A a5.

Khotanese occurrences:

- The Khotanese equivalent occurs various times in the *Siddhasāra* and in the *Jivakapustaka*, mostly preceding *bāta, bāvā, bā ‘root’*:
  - *Siddhasāra*: aīśca bāvā 100r4, ēśa bāta 133r2, ēśā bā 135v2, e’śe bāta 129v2, e’śe bāta 135v3, auśta bāta 9v5, auśe bāta 140r2, au’śe bāta 139r5, au’śtā bāta Si P 2892.71.
  - *Jivakapustaka*: aīśa bā 49r1, aīśa bāvā 58v3, aīśa bā 62v2, auśta bā 66r5, ēmśa bā 73r5, ēmśa bāvā 77v3, ēmśa bāva 84r4, ēmśa 80v5, ēm’śta bāva 79v2.
  - In other medical texts: *u’śtā bāva* P 2893.213.

The Khotanese occurrences are attested in a puzzling series of different orthographies. It is immediately clear that such a vowel alternation in the first syllable is unprecedented, and therefore difficult to assess:

| 1 | 1 | 4 | 2 | 2 | 2 | 2 | 1 | 15 |

Five of fifteen total occurrences show a back vowel (*au-, u*), whereas the rest point to a front vowel (*i-, ai-, e*). H.W. Bailey’s tentative explanation (DKS: 48) takes the forms with back vowel as original and posits a hypothetical *ā-vastyā*.

However, this leaves the forms with front vowel, i.e. the large majority, unexplained. The subscript hook, which occurs five times, might signal the earlier presence of a lost *l*-, as in the case of OKh. *bālsya-* and LKh. *ba’ysa-, be’ysa-, bi’ysa-, ba’iysa-*. Only a few occurrences of the word have a subscript hook, but in the case of *ba’ysa-*, too, the subscript hook is often omitted. Indeed, the presence of both front and back vowels in the Late Khotanese notation might also point to a lost *l*-, which is normally associated with fronting, as noted by an anonymous peer-reviewer. The case of *hālsti- ‘spear’, however, which occurs in Late Khotanese both with initial *ha’* and *hu’* (DKS: 486), apparently shows that loss of *l* could also be associated with a back vowel. For the Khotanese word for *Boerhavia diffusa*, a hypothetical Old Khotanese form *aḷśta* or *aḷśta* can be then reconstructed. *aḷśta* could be further interpreted as an inflected form of a stem *aḷśti-*, a variant of OKh. *hālsti-* (SGS: 288) without initial *h*- (< Plr. *Hṛṣṭi- ‘spear’, cf. Av. *arṣṭi-* and OP *ṛṣṭi- ‘id.’).

The use of terms for ‘spear’ to describe plants with reference to the oblong form of their leaves is documented in Latin, where the adjective *lanceolātus* ‘lanceolate’ is used as a botanical term. Since the leaves of the *Boerhavia diffusa* are not oblong or spear-shaped, the term may refer here to the form of its roots.

23 These are all different orthographies for the original *bāgā- ‘root’* (see DKS: 274–5).
24 With “Avestan avā ‘herb’”.
25 See e.g. *beysa*, quite frequent in the Late Khotanese *Aparimitāyūḥśṭra* (Duan Qing 1992: 125).
26 Kümmel (2018) discusses whether initial *h* is to be interpreted as an archaism (preservation of the Proto-Iranian laryngeal) or as a ‘prothetic’ *h*.
However, given the tentative nature of this explanation, there is always the possibility that the word could represent a borrowing from an unknown language.

Adams (DoT: 104) compares the Khotanese word with Tocharian *eśpešse. The meaning is secured by the Khotanese and Sanskrit parallel (Maue 1990: 163 fn. 20). If *-šše is an adjectival suffix, then we are left with something that closely resembles the Khotanese word, although Tocharian -śpe- for Khotanese -śt- is not paralleled elsewhere. A possibility to obtain the cluster -śpe- would be to consider the Tocharian word as a compound from LKh. *aiśtii- + *bāī(ga) > *aiśtābā > *aiśtbā > TB ešpe.27 However, this leaves the Tocharian vocalism of the final syllable unexplained, since it is very unlikely that LKh. <ā>, which probably had the value /ɔ/ (Emmerick 1979: 245), could have resulted in TB -e-.. Overall, the comparison seems rather doubtful.

2.3. kuṇī-mot subst. ‘wine’

Tocharian occurrences:
- kuṇī-mot IOL Toch 305 b1 (literary)
- kuṇī motāsse W20 a4 (medical)
- kuṇī motsa W22 a3 (medical)
- kuṇī *mot28 W38 a6 (medical)

Khotanese occurrences:
- gūra- ‘grapes’ e.g. in Siddhasāra 12r2.
- gūrāṇai mau ‘grape wine’ P 2895.29 (Paris Y).29

Adams (DoT: 193) puts forward the hypothesis that the first part of the word may derive from LKh. gūrāṇaa- (KS: 142), adjective to gūra- ‘grapes’, with loss of the medial syllable. LKh. gūrāṇaa- is an adjectival formation which was formed with the suffix -īnaa- (Plr. *-ainaka-). The long -ī- of the suffix was shortened to -ī- or -ā- in unstressed position. This phenomenon may be part of a more general tendency of vowel weakening before the nasal -n-, which is already attested in Old Khotanese (KS: 136). For the adjective gūrāṇaa-, therefore, a proto-form *gudrainaka- may be reconstructed. If TB kuṇī is really derived from the adjective gūrāṇaa-, we must reckon with a loan from Khotanese, after the shortening of the long -ī- of the suffix (already Old Khotanese) and the loss of intervocalic -k:. kuṇī < gūni < gūnī < LKh. gūrānai (< Plr. *gudrainakah). At first sight, Adams’ suggestion might appear rather far-fetched. However, the occurrence of the adjective gūrāṇaa- with mau ‘wine’ in the Late Khotanese lyrical poem contained in the manuscript P 289530 might support his hypothesis. Indeed, the parallel TB kuṇī-mot ∼ LKh. gūrānai mau seems rather striking. The Tocharian B form would then be a partial calque with TB kuṇī < LKh. gūrānai and TB mot for LKh. mau. As suggested by the

27 LKh. ai- (for /e/) may stand for TB e- without problems, see Dresden 1955: 406.
28 Cf. Filliozat (1948; 78 fn. 1) for the emendation.
29 See KT III: 41 l. 29.
30 The passage is also quoted in Bailey (1957: 51 fn. 2) and DKS: 87.
reviewer, it might be worth noting here that TB *mot* cannot have been borrowed from Sogdian, as stated e.g. by X. Tremblay (2005: 438). The form *mwọy* quoted by Gershevitch (GMS: 408) from the Ancient Letter IV, l. 5, is now recognized to mean ‘price’ (LW < Skt. *mūya-*)..

2.4. TB *kuñcit~kwäñcit* A *kuñcit* subst. ‘sesame’

Tocharian occurrences:

- TB *kuñcit* PK AS 3A a1; a3 (medical), PK AS 8C a7 (medical), THT 18 b5 (2×) (doctrinal), THT 3998 a3 (wooden tablet), W7 a6 (medical);
- TB *kuñcitā* THT 505 b2, THT 2676 b3;
- TB *kwäñcitā* THT 1535.c b3 (literary);
- TB *kwäñcitāsa* adj. (?) THT 1535.e b3 (literary);
- TB *kuñcitāsse* adj. ‘made from sesame’ IOL Toch 306 a5 (medical), PK AS 2B a6; b4, PK AS 2C b6, PK AS 3A a6, PK AS 3B a2; b1 (*Yogaśataka*), PK AS 9B b6 (medical), THT 364 b1, THT 2677.d b1 (literary), W10 a3; a4, W19 b3, W24 a3 (medical);
- TB *kuñcitāsse* adj. THT 27 a8 (doctrinal), THT 497 b4; b9, W4 a4; b2, W6 b1, W21 b2, W23 a2, W27 a3; b3, W30 b4, W31 b2, W33 b2, W34 a4, W35 a5 (medical);
- TB *kuñcitāsse* adj. THT 497 b5 (medical);
- TB *kuñcitāsse* THT 2348.i b2 (literary), THT 2347.a a2, b3 (literary);
- TA *kuñcitiṣ* adj. ‘pertaining to sesame’ A 103 a5, A 152 a3, A 153 b6 (literary);
- TA *kuñcita* PK NS 2 a2 (medical);
- TA *kuñcitaṇśāl* PK NS 3 b1 (medical).

The TB *-ṣṣe* adjective can refer to milk (*malkwer*), oil (*ṣalype*) or taste (*śūke*, only in THT 27, not medical).

Khotanese occurrences:

- In Old Khotanese the form is *kumjsata*- ‘sesame’, in *Saṅghāṭasūtra* 72.2, 73.1, 88.2, 72.2.32
- The most frequent form in Late Khotanese is *kumjṣa-*, in *Siddhasāra* 9v1, 16v2, 100r3, 101v2, 106r3, 132v3, 133r2, 142v1, 142v5, 143r1 (10x), Si P 2892.60, in other medical texts P 2893.35, 46, 48, 80, 89, 113, 120, 127, 131, 147, 158, 211, 218, IOL Khot. S. 9.2, 24, 31, 35, 40, P 2781.29, in documents P 103.52 col. 2.1 (SDTV: 158). Without anusvāra (*kujṣa-*) in *Siddhasāra* 9r4, P 2893.247, 251, 255, 262, KT IV: 26.4. 5, P 103.26.1, *kāṃṣa* in P 2893.235 and in the documents P 94.8.4 (SDTV: 98), P 94.23.4.7, P 95.6.2, P 96.4.2, P 96.4.3, P 97.3.2,

31 See Benveniste (1946: 98) and Sims-Williams (1983: 45). A form *mwdf* with *-w-* does exist, but it is attested only in the very late gospel lectionary E5, for which see Barbati (2016: 237), as kindly remarked by the reviewer.

32 Numbers refer to the edition in Canavascini 1993.

33 = Ch. 00265, see Skjærve 2002: 487. It is to be inserted between P 2893.91a and 91b, see Maggi 2008; Maggi (2018: 251 fn. 30) names the resulting medical text “Piṇḍaśāstra”. See further Luzzietti 2018–19: 29–33.
The most recent Tocharian lexicographical works consider the word a loan from Khotanese.\textsuperscript{36} This communis opinio is probably to be traced back to a note by H.W. Bailey (1937: 913). However, he does not state directly that the form is Khotanese. He writes rather that the Tocharian B word represents “an older stage than Saka kuṁsata-”. He further derives the Khotanese form (DKS: 61) from a reconstructed *kuncita-, which is based on Skt. kuṇčita-, even if this seems to be used for another type of plant, the Tabernaemontana coronaria.\textsuperscript{37} In fact, the Tocharian and Khotanese occurrences both in the Yogaśataka and in the Siddhasāra translate Skt. tiḻa- ‘Sesamum indicum’, (KEWA I: 504), not kuṇčita-. Tremblay (2005: 440) does not give any identification more precise than “Middle Iranian”. If the form is really Iranian, it might not be easy to find out if the Tocharian word actually derives from the proto-form *kuṇčita-, which seems to be at the origin of Sogdian kwyśt’yc,\textsuperscript{38} Old Uyghur künčit\textsuperscript{39} and Middle Persian kwnč(y)t (CPD: 52). For what concerns Pashto kuṇšōla, an Indian origin is preferred by Morgenstierne.\textsuperscript{40} He further extends his hypothesis to all Iranian forms, which he considers old loans from Indian. In general, the Pashto form seems to share with Khotanese the voiced affricate and a different vowel in the second

\textsuperscript{34} Not to be read kuṁjsyna, see Luzzietti 2018–19: 45–6.
\textsuperscript{35} The numbering follows Emmerick 1970: 43–7.
\textsuperscript{37} See Böhtlingk and Roth 1855–75: II 70. The word seems to be attested only in lexicographical works. Variants of the same word, used to designate other plants, are kuṇčikā- ‘Nigella indica’ and kuṇči ‘cumin’.
\textsuperscript{38} See Gharib 1995: 202. Henning (1946: 734 [= SelPap II: 252]) proposes the following: “kwyśt- (if = sesame) = kuṇšt < *kuṇšt < *kuṇšt < *kuṇčit”. A graphic explanation is preferred by Benveniste (1940: 180) (“Est-ce une mauvaise graphie pour *kwnšt-?”). The anonymous peer-reviewer noted that a form kwync’f is also attested in P 29.9 (Sims-Williams and Hamilton 1990: 33), which seems to be phonetically closer to the forms occurring in the neighbouring languages.
\textsuperscript{39} An old loan from Sogdian, according to Tremblay 2005: 440 (?).
\textsuperscript{40} See Morgenstierne 1927: 33 and EDP: 39 “certainly” old LW < Indo-Aryan (Skt. kuṇčita-) in Pashto.
syllable instead of the expected -i-.\textsuperscript{41} Whereas the voiced dental affricate instead of the unvoiced palatal is regular in both languages,\textsuperscript{42} no satisfactory explanation for the different vowel is available.

On the whole, it might be difficult to trace the history of the word. Since the Indian forms are attested rather late and occur only in lexica, it is dangerous to reconstruct a Proto-Indo-Iranian form. In this case, Tremblay’s general label “Middle-Iranian” seems the safest solution for the time being.\textsuperscript{43}

2.5. B kurkamāṣṣe ∼ kwärkamāṣṣi adj. ‘pertaining to saffron’

Tocharian occurrences:

- kurkamāṣṣi PK AS 3B b5, THT 497 b8, THT 498 a8, W4 b1; b4, W7 b3, W19 b5, W20 a5, W21 b4, W26 b4, W32 a4, W38 a5, W39 a3, W41 b3 (all medical).
- kwärkamāṣṣi W29 b1 (medical).
- THT 2676 a3 (kurkumā-) at the end of the line, it could also be restored as kurkumā(ṣṣe) (Peyrot 2014: 139, fn. 47).

Khotanese occurrences (only Late Khotanese):

- kurkāṃ Ji 97v3 and P 2893.62;
- kyrkāṃ P 2893.57;
- kūrkūṃ Ji 105v1;
- kūrkūṃ Ji 44v1;
- kurkumīṇā [.] prahaunā ‘saffron [.] garments’ KT III: 1.9r5,\textsuperscript{44} < adj. kurkumīnaa- (KS: 141).

Here is not the place to reconsider the whole history of the word, which does not seem to be specifically Iranian and can be traced back in time as far as Akkadian kurkānu and Greek κρόκος.\textsuperscript{45}

The basis for the Tocharian form must have been provided by an unattested *kurkuma-. As in the case of aṃkwaṣṭ and kuṇcit ∼ kwāṇcit (cf. 2.1 and 2.4), *ku was reinterpreted as kʷ + a, so that we obtain the spelling /kʷarkʷam/, further dissimilated to /kʷarkəm/. This (*kurkām) might have been the original form from which the adjective was derived through accent shift (/kʷarkəm/ > /kʷarkəmə/). The tiny fragment THT 2676 is one of the earliest Tocharian manuscripts (Peyrot 2014: 139 and Malzahn 2007: 267) and might have preserved the

\textsuperscript{41} C. Bernard (personal communication) draws my attention on Balochi kunčat (beside kunčit and kunčit), quoted in Korn 2005: 192, which shows the same vowel as Khotanese.

\textsuperscript{42} Cf. OKh. hamjspas- < Plr. ham-čaš- (SGS: 139) and Pashto anjór < Plr. *han-čara- (Morgenstierne 2003: 9). LKh. kumji, which translates Skt. kāčika- and Tib. rtsabs ‘vin- egar of rice, gruel’ in Si 102r2 and 131r1, shows only the voicing; it must have been borrowed later than kunjasta-.

\textsuperscript{43} On this word and on the Tocharian alternation ku ∼ kwā, see further Bernard 2020: 52–4.

\textsuperscript{44} The text is the Avalokiteśvaradhāraṇī. See SDTV: 241–2 for edition and translation of the passage in question.

\textsuperscript{45} A very short summary with further references can be found in KEWA I: 219.
undissimilated form /kʰærkwʰem/. Since all Indian forms (CDIAL: 3214, cf. Skt. kuṅkuma-) have a nasal instead of the expected -r-, it is more probable that the Tocharian word derives from Iranian. Given the fact that saffron is known to grow in Persia (Laufer 1919: 320), a Middle Persian origin (Pahlavi kwIlkwIlm and New Persian kurkum46) is suggested by Tremblay (2005: 437). Otherwise, the Middle Persian form might have reached Tocharian through Khotanese *kurkuma- (DKS: 63). In fact, this is the form which might be reconstructed for Old Khotanese based on the Late Khotanese occurrences.47 However, as noted by a referee, there is no special phonetic feature that might be attributed to Middle Persian proper. Tremblay’s idea seems thus quite arbitrary and a Middle Persian origin remains highly doubtful. For the time being, it seems safer to consider the origin of the Tocharian word as coming from a general ‘Middle-Iranian’ context, without further specification. It might be noted further that Sogdian kwrrkwnp,48 because of the final labial plosive, remains a less probable candidate. An Iranian origin has been also suggested for Tib. kur-kum (Laufer 1916: 474).

2.6. TB tvāṅkarO subst. ‘ginger’
Tocharian occurrences:
- tvāṅkarO THT 497 a7; b5, PK AS 9B a4 (medical).
- tvāṅkaro PK AS 9B b2 (medical).49
- tvāṅkaro PK AS 2A b2, PK AS 3B b5 (all Yogaśataka), PK AS 9A b7 (medical), THT 500–502 b7 (Jīvakapustaka).
- tvāṅkaraimpa (com. sg.) PK AS 2B a2.
- tvāṅkaracce (obl. sg. m. of tvāṅkaratstse) PK AS 2A a6 (medical).50
Khotanese occurrences:
- ttūṃgara Ji 78v4, 82v3, 88r2, 93v3, 98v2, 99r3, 99v2, 99v3, 101v2, 106v4, 109r5, 111v1, 112r4, 115r2, 115v5, 116r5;
- ttūgara Ji 98r2;
- ttūmgarq Ji 58v2;
- ttūngara Ji 88r4, 106r4, 110r3, 111r1, 113r1, 115r5;
- ttūgarā Ji 87r2;
- ttūngarām Si 130v5;
- ttūgare Ji 57r4;
- ttūmgare Si 146r2;
- tūmgare Si 101v5.

46 See Hassandoust 2015: IV n° 3955.
47 For the alternation -ām/-ām and u/ū, usual in Late Khotanese, see Dresden 1955: 406 [2] and [4].
49 Since the text has older forms, <a> for /á/ might be an archaic feature, rather than simply a mistake.
50 Since no phonetic explanation is available, <v> for <w> might simply signal that the word had a foreign association. For another view, see Malzahn 2007: 270.
H.W. Bailey’s initial idea (1937: 913) sought to explain TB -vā- against Khotanese -u- by comparing TB anikwaṣ(t) and Khotanese amgaṣṭa-, simply taking note of the same correspondence, without offering any further explanation. This is not possible because the Tocharian form contains here clearly /vā/ (<wā>) and not /wā/ (<wa>) for /u/ as in anikwaṣ (see 2.1). Some time later, however, he developed a new etymological proposal.51 He derived the Khotanese word from *tuwam-kara- with *tuwam° from the Proto-Iranian root *tauH- ‘to be strong, swell’ (Cheung 2007: 386). In this case, the Tocharian form would have conserved the Pre-Khotanese state of affairs and should be considered as a very old loan (Tremblay 2005: 428 and DoT: 343). Bailey’s derivation seems to imply a nominal form *t(u)v-a- from the verb *t(u)v-‘to be strong’ (DKS: 144). This root is attested as verb with causative suffix -ān in LKh. tv-ān- ‘to strengthen’ (SGS: 41). Several nominal forms from the same root are also to be found as medical terms, e.g. LKh. tv-ān-āka- ‘strengthening’ (KS: 46)52 and LKh. tv-āmā- (< *tv-āmatā- ‘strengthening’ (KS: 94)).53 The case ending of the first member of the compound would have been preserved in the nasal *-m- before the second member *-kara-, as is the case in similar compounds, cf. e.g. diramgāra- ‘evil-doing’ (SVK I: 56, Degener 1987: 39). This derivation, however, seems semantically difficult. tv-ā- must be a substantive (KS: 1) with the meaning ‘strong one’, ‘strong thing’ or ‘fat’. The resulting compound could be then approximately translated as ‘maker of strong (things or beings)’. Admittedly, such an attribute would be suitable for a person, not for a plant. It would be then desirable to have an adjective as first member of the compound. This is indeed possible if one starts with a form tv-āna-, an -āna- derivative (pres. part. mid. KS: 78) from the root tv-, which could produce a proto-form *tvāna-kara- ‘strong-maker’. This would yield OKh. *tvāngaara-.54 through syncope of internal unaccented -a-. Both Old Khotanese reconstructed forms, *tv-am-garaa- and *tv-am-garaa-, may have been antecedents of the attested LKh. ttūm-gara-, since both OKh. tvō° and tvā° may result in LKh. ttū°. For tvā° > ttū° one may compare the possessive adj. OKh. tvānaa- ‘your’ (KS: 85) which occurs in LKh. as ttūnā (IOL Khot S. 15.11) and for tvō° > ttū° OKh. tvamdanu ‘reverence’ (SGS: 219) and its Late Khotanese counterpart ttūda (IOL Khot S. 6.27). Both Old Khotanese reconstructed forms may as well have been borrowed into Tocharian B. There is indeed no need to consider TB tvānkaro as a Pre-Khotanese loanword. The evidence suggests that the word may have been borrowed from the Old Khotanese antecedent of LKh. ttūm-gara-.55

It might be worth noting that Tib. li doñ-gra, which translates Skt. nāgara- ‘ginger’ in the Siddhasāra (Emmerick 1985: 313 and Bielmeier 2012: 21–2) is

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51 First proposed apud Ross 1952: 15. See also DKS: 130.
52 This is used as a medical term to describe the properties of an ingredient, cf. Si 16v3–4 cu mi’nā guṣṭa [..] tvānāka ‘As for sheep flesh, [..] it (is) a strengthener’.
53 Also a medical term, occurring in Si 144v1.
54 According to KS: 20, the second member *-garaa- < *-kara-ka- is only attested with -ka- suffix in Old Khotanese; the forms without it are all Late Khotanese.
55 The final -o of the Tocharian B word seems now to be very frequent in loanwords from Khotanese. The analysis of this ending is the object of a thorough investigation in my PhD thesis.
also a Khotanese loan. That the borrowing took place from Khotanese is made clear by the preceding *li*, which always refers to Khotan (Laufer 1916: 455 fn. 1).

3. Technical vocabulary

3.1. TB *ampoño* subst. ‘rottenness, infection’

Tocharian occurrences:

- *ampoñaṃtse* (gen. sg.) PK AS 3A a1; a6; b1 (medical);
- *ampoñaṃtse* (gen. sg.) PK AS 3A a2 (medical);
- *ampoñai* (obl. sg.) THT 503 a3 (medical);
- *ampoño* (nom. sg.) THT 510 b6 (medical).

In the manuscript PK AS 3A it is used consistently in the gen. sg. with *sāṃtke* ‘remedy’. The text describes four remedies against *ampoño*. All other occurrences refer to medical texts.

Adams’ second edition of his Tocharian B dictionary contains the following statement s.v. *ampoño*: “A nomen actionis from āmp- ‘rot,’ q.v., from Khotanese *hambu-*, i.e., *hambu- +* the Khotanese abstract-forming suffix -oña” (DoT: 21).

In Old Khotanese there is indeed a word *hambūta-* occurring in Z 5.16 and 5.18, but two passages which present us with two literary similes involving medical terminology:

Z 5.16 trāmu māṇaṃdu kho hvā’ndā ḫambūtā ḫambādā yṣāna
cvi ye álīva nīcana ḫndā samvī ttamdu hamārgya

“Similarly, in the case of a man’s fester full of pus, when one puts ointments on it on the outside, there is only so much alleviation of it.” (Emmerick 1968a: 99)

Z 5.18 samu kho ḫambūva beītāa .
harbīśī āchai jīye . trāmu
nairātma-hvanaina uysnorī ysaṃtha fyāre

“Just as when one cuts open a fester all disease is removed for one, so through the doctrine of selflessness (nairāmya) births are removed for a being.” (Emmerick 1986: 73)

This has the aspect of a past participle from the Proto-Iranian root *pauH- ‘to stink, smell, rot’ (Cheung 2007: 302), to which a preverb *ham- has been added. In the corresponding stanzas of the Maṇjuśrīnairātmyāvatārasūtra, the word appears regularly as ha(m)bhu in both occurrences, as one would expect in Late Khotanese. It is clear from a second set of occurrences in the Late Khotanese medical text P 2893 (KT III: 82–93) at lines 184, 185 and 189 that the word is a technical term. Here the word occurs in the spelling hambva’(-(< hambuva- < hambūta-) always with the meaning ‘fester’. The reference to ‘hambu’ in DoT: 21 seems to take into consideration only one of the Late Khotanese forms, without commenting on the Old Khotanese one, which should be first compared with Tocharian. Otherwise, ‘hambu’ might stand for *hambu- and might be a reference to the unattested present stem from which

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56 Another Old Khotanese occurrence is to be found in Suv 18.91, see Skjærvø 2004: 336.
58 P 4099.133 (for MS bahu) and 135, see Emmerick 1968a: 440.
the past participle haṃbūta- is derived. However, the suffix -ūña-/auña- can be added to past or present participles but there is no example with the suffix being added directly to a present stem (KS: 159). If one were to add it to haṃbūta-, one would expect *hambūtaunña-, in line with the attested hāmāttauña- (< past part. hāmāta-) (KS: 164). The resulting intervocalic -t- seems to undergo strengthening rather than be lost altogether. However, one cannot exclude the possibility that intervocalic -t- was lost in this case already in Khotanese. In fact, as suggested a referee, -tt- in the hapax hāmāttauña- might be an example of ‘morphologische Verdeutlichung’ (KS: 162), i.e. a way to stress the presence of a morpheme boundary before the suffix. If this is correct, one could see in ampoño the past part. LKh. haṃbva- to which the suffix -auña- has been added. This would confirm the hypothesis of a Late Khotanese origin of ampoño, as suggested by Adams.

From the Tocharian point of view, however, there is still the possibility that ampoño is a genuine Tocharian formation based on the verb TB amp(a)- (borrowed from LKh. haṃbva-, see 3.2). In fact, all attested forms point to a nom. sg. ampoño or ampoña*. Because of the palatalization, ampoña would be the expected form (M. Peyrot, personal communication). THT 510, the fragment containing the only occurrence for ampoño, is normally classified as late, so the form might be simply interpreted as secondary for earlier ampoña (Peyrot 2008: 99–101). This form would have the appearance of a derivative in -eñña from a verbal root,59 which in this case could be ampa- ‘to rot’ (see 3.2). For the forms with single -ñ- for the expected -ññ- one might compare the obl. sg. of wšeñña, which is attested four times with a single -ñ- (IOL Toch 117 b4, Km-034-ZS-R-01 a7, PK AS 16.7 a4, IOL Toch 62 a3).

3.2. TB ampa- v. ‘to rot, decay’
Tocharian occurrences:

- THT 9 b7 stastaukkauwa āmpauwa spārkauw= ere : ʾai /// ‘swollen, rotten, void of colour’, parallel THT 10 a3 as preterite part. nom. pl. m. (doctrinal).

D.Q. Adams (DoT: 48) regards it as a Middle Iranian loanword from the same root as Khotanese haṃbūta-, New Persian ambusidan, etc. Malzahn (2010: 525) seems to be of the same opinion and would rather take the word as a Khotanese loanword. If from Khotanese, one might envisage the possibility that the form has the aspect of a denominative formation from LKh. hambva (< Old Khotanese hambūta-, see 3.1), resulting in TB amp(w)a-. This verb can be thus traced back with a fair degree of certainty to Late Khotanese.

3.3. TB krāke TA krāke subst. ‘dirt, filth’
Tocharian occurrences:

- A krāke nom. sg.? A 211 a1, a3, THT 2494 a2, nom. pl. krākeyāntu THT 2401 a3, obl.pl. krākes A 152 a4 (all literary texts).

59 Cf. e.g. ścmoñña ‘basis’ and wšeñña ‘dwelling place’. For the formation, see Peyrot 2010: 72. In this case, the root is attested as ampa-, see 3.2.
• B krāke gen. sg. IOL Toch 4 krāke(t)s(e) (doctrinal), IOL Toch 262 b4 (literary), PK NS 49B a2 (doctrinal, karmavibhaṅga), THT 7 a7; b2 (doctrinal), THT 159 b6 (abhidharma), THT 221 b4 (literary), THT 334 b1 (literary, vinaya, here it may refer to sperm\(^{60}\)), THT 388 a6, THT 408 b6 (both literary in THT 408 in the expression kleśanmasṣe krāke, ‘the filth due to kleśas’), THT 522 a4 (doctrinal), THT 537 b5 (doctrinal), THT 1118 (vinaya, snai krāke ‘unstained’), THT 1227.a a3 (literary, very fragmentary), THT 1258 a4 (literary), THT 2227 b1 (literary), W2 a6 (only occurrence in a medical text, ratre krāke ‘the red filth’).

The Tocharian A form is probably borrowed from Tocharian B.

Khotanese occurrences:

• OKh. khārggu acc. sg. Z 19.53.
• OKh. khārggā nom. sg. IOL Khot 150/3 r4 (Bodhisattva-compendium, Skjærvø 2002: 337).
• OKh. khārja loc. sg. Z 5.90 (kho ju ye viysu thamjāte khārja ‘as one pulls a lotus out of the mud’).
• LKh. khā′ja loc. sg. P 4099.355 (sa khu vaysa khā′ja sūrai ‘just like the clean lotus in the mud’).
• LKh. khā′je loc. sg. Si 136v3, 136v4 (in both cases tr. of Skt. kardama-), P 4099.278 (sa khu vaysa khā′je sūrai ‘just like the clean lotus in the mud’).
• LKh. khāje loc. sg. P 4 12r4 (Adhyardhaṣṭatikā, see SDTV: 29).
• LKh. khāji loc. sg. P4 12r4–5 (Adhyardhaṣṭatikā, see SDTV: 29).
• LKh. kheja loc. sg. (with further fronting of -ā-) Jātakastava 27v4.
• LKh. khājāna- loc. sg. (see SGS: 262 for the ending) Jātakastava 23v2.

It seems that the first scholar to put forward this etymological proposal was Van Windekens (1949). Issebaert (1980: §180) finds the derivation unconvincing and suggests an Indo-European origin. His main criticism of Van Windekens’ proposal is based on morphological reasons. According to him, Middle Iranian loanwords never receive the masculine -e. Whereas Bailey’s Dictionary (DKS: 74) does not seem to take note of the possibility of a loanword, Tremblay (2005: 433) returns to Van Windekens’ proposal and reports it without any further comment. The Khotanese word is formed from the Proto-Iranian root *xard- ‘to defecate’\(^{61}\) to which the suffix -ka- has been attached (KS: 181), resulting in *xardaka-. In order to obtain the attested forms, one has to assume a series of metatheses which took place very early, at least earlier than the sound change -rd- > -l- in Khotanese: *xardaka- > *xadraka- > *xadarka-. This might have been the base for Yidgha xolar yo (from a feminine *xadarkā-, EVSh: 79) and Khotanese khārgga-, through loss of intervocalic -d- and voicing of -k-.

\(^{60}\) Following Peyrot 2013: 694.
\(^{61}\) See Cheung 2007: 444. The verb is attested in Khotanese with preverb as samkhal- (SGS: 130).
Given the specificity of the formation, if the word is a loanword, it cannot come but from Khotanese. After all, it seems that Khotanese ‘mud’ refers to the same semantic areas of Tocharian ‘dirt’ and ‘filth’.\(^{62}\) In this case, the Khotanese form would have undergone in Tocharian a further metathesis to become krāke.

3.4. TB krāk- ‘to be dirty’

Tocharian occurrences:

- krākštär PK AS 7M b1 (doctrinal, Karmavibhaṅga).

As reported by Adams (DoT: 229), the meaning ‘to be dirty’ was suggested by M. Peyrot (\(\text{apud}\) Malzahn 2010: 612) on the basis of the substantive TAB krāke, from which the verb is derived. The passage in question, which refers to poor, blurred eyesight, seems to justify such an interpretation.

3.5. TB spakīye subst. ‘suppository’

Tocharian occurrences:

- spakīye THT 510 b1, W15 b3 (2×), W38 b5, W39 b1.
- spakaim W3 a3, W8 b4, W9 a3, W 10 a4, W34 b2, W42 b1 (all medical).

All occurrences of the plural come together with yamaṣṣällona, gerundive of yām- ‘to make’, e.g. in the phrase W3 a3 spakaim yamaṣṣällona ‘suppositories are to be made’. This is exactly paralleled by the Khotanese technical phrase svakiyi padīmānā (e.g. Si 122r1, part. nec. of padīm- ‘to make’), with the same meaning.

Khotanese occurrences:

- svaka Si 121v5, 150v5.
- svakyi Si 122r1, 122r3, 148v5, 149r4, 149v5, 151r1.
- svakye Si 121v5, 151r1 (2×), 151r2, 151r4, 151r5 (2×).

All occurrences of svakī- are from the Siddhasāra. It translates Skt. varti ‘suppository’ and guḍikā ‘pill’ and Tib. reng-bu and ri-lu ‘pastil’).

The first scholar to make known the word was H.W. Bailey (1935: 137). The striking correspondence with the Tocharian word was again noted by him some years later (Bailey 1947: 149). A further clarification of the meaning and the etymology is offered by R.E. Emmerick (1981: 221).\(^{63}\) There the meaning is established as ‘suppository’ against Bailey’s ‘pastil’. The etymology is given as < Plr. xšaudakā-, a formation from the root *xšaud- ‘to wash’ (Cheung 2007: 455). Since the word is a very specialized medical term, one should assume that the borrowing took place quite late, when Indian medical texts were already circulating within the Tarim basin. As it is attested only in the Late Khotanese Siddhasāra, the word was possibly borrowed from Late Khotanese, although it is not to be excluded that Old Khotanese translations of medical texts existed, even if they are no more extant. In this case, a possible

\(^{62}\) Skt. kardama- covers the whole semantic spectrum, see MW: 258 ‘mud, slime, mire, clay, dirt, filth’.

\(^{63}\) A summary is to be found also in SVK II: 147–8 and DoT: 729.
Old Khotanese form may have been *ṣṣūdakā- or *ṣṣūvākā-, as intervocalic -d- might have been lost already in Old Khotanese (see e.g. OKh. pāa- < PIr. *pāda-). The preservation of intervocalic -k- is noteworthy. The possibility that the Tocharian word was borrowed from Late Khotanese may seem more probable, as the nearest antecedent of the Tocharian initial cluster sp- may have been LKh. sv- rather than OKh. *ṣṣūv-. Thus, TB spakiye must be considered a Late Khotanese loanword in Tocharian.

3.6. TB sanapa- v. ‘to rub in, rub on, anoint, embrocate (prior to washing)’

Tocharian occurrences:

- 3sg. pres. mid. sonopträ W40 b3 (se ce salype sonopträ ‘C’est cette huile qui est ointe’ (Filliozat 1948: 88)).
- 3sg. opt. mid. sonopitär PK AS 6B a6 (sonopitär likštār wāstsanma krenta yāṣṣāt ‘anointing himself, [and] wearing beautiful clothes’).
- pres. ger. sonopälle PK AS 8C b1 (partāktaññe pitkesa śarne s(o)nopāl ‘This oil (reach)e the nos(trils). The crown of the head [is] to be anointed’, THT 497 b1, THT 2677.d b2, W7 b5, W26 b3, W40 b2.
- subj. ger. sanāpalle W27 b1 (mālkwersa kātsa sanāpalle ‘à appliquer en onctions au ventre avec du lait’ (Filliozat 1948: 85)), W35 a6, W39 a4, W41 b2.
- inf. sanāpatsi W4 b3, W14 a2, W29 b1, W34 a5.
- perl. san(apo)rsa PK AS 8C b1 (san(apo)rsa ka iweri rusesntra ‘just by smearing the doors will open’).

All occurrences are from medical texts.

Khotanese occurrences:

ysānāj-:

- 3sg. opt. OKh. Z 3.102, kho ju ye ysānāja nei’na uysnauρu samu ‘as if one should bathe a being with nectar alone’ (Emmerick 1968a: 69).
- 3pl. pres. LKh. Suv 3.47 ysināhā de muhu ba ’ysa. mu ’śdījē ūci ja pväśkye ‘may the Buddhas bathe me in the cool water of compassion’ (Skjærvø 2004: I 49).

ysānāh-:

- 3sg. pres. LKh. Jātakastava 6v1–2: tta khu ttaudāna hamthrī satvā viyśāṃjī ysināhe (< OKh. *ysināhātā) ‘just as a man tormented by heat bathes in a lotus pool’ (Dresden 1955: 424) and Sudhanāvadāna 373: haḍāi stām drai jūṅkā ahāṛṣṭi ysināhe ‘Because of that she bathes three times a day’ (De Chiara 2013: 151).
- part. nec. OKh. Suv 8.36: ysināhānu ‘he should bathe’ (Skjærvø 2004: I 189).
part. nec. in Siddhasāra 135v2 (as a medical term) LKh. vameysānā u ysāṅhāṅā ‘must be massaged and bathed’ (Emmerick unpublished), Sudhanāvadāna 235 and 233 (De Chiara 2013: 111, 139) and IOL Khot 160/4 v3 u drrai jāna hade ysināhāna ‘and three times a day one should wash’ (Skjærvø 2002: 359).

3pl. perf. tr. IOL Khot 147/1 r5 hamdāra ysinauttān[d]ā ‘some washed (themselves)’ (Skjærvø 2002: 331).

past part. OKh. Suv 13.17 + hu- ‘well-’ huysānauttī ttarandārā ‘his body well-bathed’.64

haysn-


3sg. pres. OKh. Z 4.96 o kho kāde rūmjasi thauni kṣārā biśśā haysnāte rūma ‘or as when lye cleans all the dirt on a very dirty garment’. (Emmerick 1968a: 93).

part. nec. LKh. as a medical term in Siddhasāra 100r5 haysnānā ‘(a medical herb) is to be washed’.

3sg. perf. tr. m. OKh. Z 2.170 pātro haysnāte ‘he has washed the bowl’ (Emmerick 1968a: 39), and 21.13 kvī ye haysnāte kāde ‘when one had washed it [the face] thoroughly’ (Emmerick 1968a: 299), LKh. IOL Khot 75/4 b65 pā haysnātā ‘he washed (his) feet’, IOL Khot 28/14 b3–4 kamalā haysnā[te] ‘he washed the head’. (Skjærvø 2002: 233).

Past part. in the LKh. adj. haysnālīka- (KS: 309 < haysnāta- + suffix -lika-) ‘washed (of clothes)’ in IOL Khot 140/1a6–7, 10, 11, 12.66

From the occurrences above, it seems that in Khotanese the three verbs had adopted three different semantic specializations: ysānā- ‘to wash, bathe another person’, ysānāh- ‘to wash, bathe oneself’ and haysn- ‘to wash, clean a thing or a part of the body’. This gives a meaning which is slightly different from Tocharian ‘to anoint’. Whereas haysn- can be derived without difficulties from *fra-snā-ya (with past part. haysnāta- < *fra-snāta-) and ysānāh- from *snāfa- (with past part. ysinauttā- < *snāfta-), the derivation of Khotanese ysānāh- is not straightforward. The *k/g increment hypothesized by Bailey (DKS: 351) and Emmerick (SGS: 113) seems quite arbitrary and it is not attested in any other language (Cheung 2007: 348). The voiced fricative at the beginning of the word can be explained by the vicinity of -n-, so that we might have had *snā- > *znā > *znā- (<ysānā>) with the additional development of an epenthetic -ā-.

Adams (1988: 402–3) proposed that TB sanapa- ‘to rub, anoint’67 could be derived from the Pre-Khotanese antecedent of Khotanese ysānāh- ‘to wash’, i.e. from the stage at which Proto-Iranian intervocalic *-f- had still not shifted to -h-.

64 Skjærvø 2004: I 261. See further Suv 1.9 and 6.3.16 with the same form.
65 = Ch.00275 (Vajracchedikā), see Skjærvø 2002: 302.
66 = Ch.cvi 001, see Skjærvø 2002: 321–2.
67 See also Peyrot (2013: 159) and Malzahn (2010: 934). No mention of it in Tremblay 2005.
Since no -f- exists in Tocharian, this could give only TB -p-. The vocalism he explains by arguing that the Khotanese verb was borrowed first as *senāp-, probably implying that the Khotanese vowel -ā- of the first syllable was pronounced as [ɛ], i.e. a mid-front vowel. This vowel, however, is rather to be interpreted as [a], since it occurs as an epenthetic vowel in unstressed position (Emmerick 1979: 442). Whatever the interpretation of the first vowel, however, there is no need to postulate a further metathesis (*senāp- > /sānep-), as did Adams (1988: 403), since, if the verb was borrowed as senapa-, sanapa- may be simply obtained through a-umlaut.

In conclusion, Adams is probably correct in interpreting the word as a loan from Iranian. Further, it seems clear that sanapa- can only be derived from Pre-Khotanese, as this is the only Iranian language which has a -p- increment to the root Pfr. *snaH- (Cheung 2007: 348), no word-initial palatal,68 and an extra epenthetic vowel in the first syllable.

4. Conclusion

Of the twelve lexical items analysed, one (sanapa-) can be derived from Pre-Khotanese and nine (aṅkwaṣ(t), ēpéseš, kuñi-mot, tvāṅkaro, ampa-, ampoño, krāke, krāk-, and ṣpakiye) can be ascribed to Khotanese proper. Among these, tvāṅkaro is certainly an Old Khotanese borrowing. For ēpéseš, kuñi-mot, ampa-, ampoño (if not directly from ampa-), and ṣpakiye a Late Khotanese origin can be posited, although for ēpéseš this remains for now too uncertain. There is unfortunately no way to determine whether aṅkwaṣ(t) and krāke (with its derivative krāk-) have been borrowed from Old or Late Khotanese. For the remaining two items (kuñcit and kurkamāṣše), an Iranian origin can be given as certain, although the dialect affiliation is still not completely clear.

I am aware of the fact that the dimensions of the analysed corpus are quite small. Nevertheless, from these results one may argue that contact between Khotanese and Tocharian took place uninterruptedly from prehistoric times until the epoch of the first written attestations. In particular, the medical lexicon may bear traces of contact both at an oral level in the Pre-Khotanese epoch and at a written level in the historical epoch. Five items that can be attributed to Khotanese proper, ampa-, ampoño, kuñi-mot, krāke and ṣpakiye, are in fact technical terms which show a high level of semantic specialization. They must be assigned to a period in which Indian medical knowledge was already circulating widely in written form in both the South and North of the Tarim basin.

Technical abbreviations

<table>
<thead>
<tr>
<th>acc. = accusative</th>
<th>adj. = adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. = Avestan</td>
<td>com. = comitative</td>
</tr>
<tr>
<td>gen. = genitive</td>
<td>ger. = gerundive</td>
</tr>
<tr>
<td>impv. = imperative</td>
<td>inf. = infinitive</td>
</tr>
</tbody>
</table>

68 As New Persian šināvidan. I expect word-initial š- to remain unchanged in Tocharian, represented by ṣ-.
Ji = Jīvakapustaka
LW = loanword
m. = masculine
nom. = nominative
OKh. = Old Khotanese
opt. = optative
part. nec. = participium necessitatis
per. = perative
pl. = plural
Si = Siddhasāra
Skt. = Sanskrit
Suv = Suvarṇabhāṣottamasūtra
Tib. = Tibetan
v. = verb.

LKh. = Late Khotanese
loc. = locative
mid. = middle
obl. = oblique
OP = Old Persian
part. = participle
perf. = perfect
Pl. = Proto-Iranian
pres. = present
sg. = singular
subst. = substantive
TA/B = Tocharian A/B
tr. = transitive
Z = Book of Zambasta

Bibliographic abbreviations

CDIAL = Turner 1962–85
CPD = MacKenzie 1971
DKS = Bailey 1979
DoT = Adams 2013
EDP = Morgenstierne 2003
EVSh = Morgenstierne 1974
EWA = Mayrhofer 1992–2001
GMS = Gershevitch 1954
KEWA I–IV = Mayrhofer 1956–80
KS = Degener 1989
KT I–VII = Bailey 1945–85
MW = Monier-Williams 1899
SDTV = Emmerick and Vorob’eva-Desjatovskaja 1995
SelPap I–II = Henning 1977
SGS = Emmerick 1968b
SVK I = Emmerick and Skjærvø 1982
SVK II = Emmerick and Skjærvø 1987

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