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The Tocharian Adjectives in B -tse A -ts*

HANNES A. FELLNER

University of Vienna

0. Nouns in Tocharian are traditionally classified according to their inflectional patterns, a system established in Tocharisches Elementarbuch (TEB = Krause and Thomas 1960). Tocharian adjectives are divided by TEB (144–57) into four classes according to their nominative and oblique masculine plural endings in Tocharian B: class I with nom. pl. m. -i, obl. pl. m. -em; class II with nom. pl. m. -nī, obl. pl. m. -(nā)ṃ; class III with nom. pl. m. -nīc, obl. pl. m. -ntāṃ; class IV with nom. pl. m. -s, obl. pl. m. -sāṃ.

0.1. Class I adjectives are subdivided by TEB (144–50) according to the presence or absence of palatalization of their stem-final consonants and the formation of the feminine plural in Tocharian B. This class goes back to various PIE thematic adjectives.

Class Iaα has no paradigmatic alternation of the stem-final consonant and a nominative plural feminine in -ana. Its prominent members, the productive relational adjectives in B-ṣṣe A-ṣi (e.g., B ọraṣṣe A oroṣi ‘wooden’: BA or ‘wood’), and B-ṅñe A-ṅi (e.g., B ọstaṅñe A ost ‘house’), exhibit gemination of the stem-final consonant in Tocharian B.

Class Ibα also has no alternation of the stem-final consonant and has a nominative plural feminine in -ona. The gerundives in B-lle A-l (e.g., B pralle A präl ‘to be carried’: BA pär- ‘carry’) with gemination of stem-final consonant in Tocharian B and a subset of the adjectives in B-re A-r (e.g., B ratre A rtär ‘red’) belong to this class.1

Class Ibβ shows paradigmatic alternation of the stem-final consonant and has a nominative plural feminine in -ona. Palatalization is found in the masculine oblique, the entire masculine plural, and the feminine singular. The so-called privatives in B-tte A-t (e.g., B etaṅkātte A atāṅkāt ‘unhindered’: BA tāṅk- ‘hinder’) with gemination of the stem-final consonant and the ordinal numbers in B-te A-t (e.g., B trite A trit ‘third’) belong to this class.

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1 Tocharian B has another subset of these adjectives in B-re, which inflects according to adjective class II: nom. sg. -e, obl. sg. -em, nom. pl. -eṅ, -e(nā)ṃ.

The Tocharian adjectives in $B\text{-}tse$ \( ^A-ts \) belong to class Ia$\beta$ (\textit{TEB}:147–8) and are characterized by nom. pl. m. \(-i\), obl. pl. m. \(-em\), alternation between palatalization and non-palatalization of the stem-final consonant, and nom. pl. f. \(-ana\) in Tocharian B. The palatalization of the stem-final consonant appears in the masculine oblique and the entire masculine plural in Tocharian B. Tocharian adjectives in $B\text{-}tse$ \( ^A\text{-}ts \) inflect in the following way:\(^2\)

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<th>TB</th>
<th>TA</th>
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<tbody>
<tr>
<td>m.</td>
<td>-tse</td>
<td>-ts</td>
</tr>
<tr>
<td>f.</td>
<td>-tsa</td>
<td>-tsi</td>
</tr>
<tr>
<td>obl. sg.</td>
<td>-ce</td>
<td>-tsa</td>
</tr>
<tr>
<td>nom. sg.</td>
<td>-ci</td>
<td>-tsana</td>
</tr>
<tr>
<td>obl. pl.</td>
<td>-cem</td>
<td>-tsana</td>
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The adjectives in $B\text{-}tse$ \( ^A\text{-}ts \) consist of synchronic primary (cf. $B\text{ktsaitstse}$ ‘old’ \( ^A\text{ktsets} \) ‘perfect, accomplished’, $B\text{wartse}$ ‘broad, wide’ \( ^A\text{wärts} \) ‘id.’) and secondary formations. As secondary formations, these adjectives are productive in Tocharian B and can be derived from every word class, but are only occasionally found in Tocharian A: $B\text{kramartse}$ \( ^A\text{krämärts} \) ‘heavy, weighty’ $\leftarrow B\text{krämār} \) ‘weight, heaviness’; \( B\text{orkamotse} \) ‘dark’ $\leftarrow B\text{orkamo} \) ‘darkness’, adj. ‘dark’; \( B\text{aletse} \) ‘foreign, strange’ $\leftarrow B\text{allek} \) ‘other’; \( B\text{oktatse} \) \( ^A\text{oktuts} \) ‘eightfold’ $\leftarrow B\text{okt} \) \( ^A\text{okät} \) ‘eight’.

From a synchronic point of view, there are two interesting observations concerning these adjectives.

1. First, \textit{tse}-adjectives in Tocharian B show variation between non-geminated and geminated forms of the stem consonant throughout the paradigm.

   The geminated forms themselves vary between the spellings \( \langle\text{tsts}\rangle \) and \( \langle\text{tts}\rangle \), which represent \( /t^{s:\prime}/ \), in the nominative singular masculine and the entire feminine paradigm.

   This difference in the treatment of the stem consonant can be exemplified by looking at the attestation of one of the most prolific adjectives of the class in question, namely, \textit{orotse} ‘great, big’:\(^4\) nom. sg. m. \textit{orotse} (e.g., THT 17a3), \textit{orots-}

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\(^{2}\) For the present study only nominative and oblique forms are relevant.

\(^{3}\) In the nominative/oblique feminine plural forms in \( -tsam \) are occasionally attested. The alternation of \( -am \sim -ām \) in the feminine plural endings in Tocharian A corresponds to the one found in Tocharian B \( -ona \sim -ana \) (see Fellner forthcoming a and Fellner 2014).

\(^{4}\) Since it has no bearing on the present discussion the variation \( \textit{orotse} \sim \textit{wrotse} \) (for which see Malzahn 2013) can be ignored.
The Tocharian Adjectives in B-\textit{tse} A-\textit{ts} \hfill 51

tse (e.g., THT 94a2), orottse (e.g., THT 338b5); obl. sg. m. orocce (e.g., THT 81b3), oroce (e.g., THT 333a1); nom. pl. m. orocci (e.g., THT 521b4), oroci (e.g., PK AS 131 b7); obl. pl. m. oroccem (e.g., PK AS 71 b1), orocem (e.g., THT 1192a6); nom. sg. f. orotsa (e.g., B85b5), orotsa (e.g., IOL Toch 739a2); obl. sg. f. orotsatsai (e.g., THT 305a3), orotsai (e.g., PK AS 15B a4); nom. sg. f. orotsatsana (e.g., PK AS 7B a4), orotsana (e.g., PK AS 17G b6); obl. sg. f. orotsatsana (e.g., PK AS 4B a3), orotsana (e.g., THT 290 3).

1.2. Second, in Tocharian B the stem consonant of the adjectives in B-\textit{tse} appears as -c(c)- in the oblique masculine singular and the whole masculine plural, just like in the ordinals and the privatives which also belong to class I:

<table>
<thead>
<tr>
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<th>B-\textit{tse}-adjectives</th>
<th>ordinals</th>
<th>privatives</th>
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<tbody>
<tr>
<td>nom. sg. m.</td>
<td>-ts(ts)e</td>
<td>-te</td>
<td>-tte</td>
</tr>
<tr>
<td>obl. sg. m.</td>
<td>-c(c)e</td>
<td>-ce</td>
<td>-cce</td>
</tr>
<tr>
<td>nom. pl. m.</td>
<td>-c(c)i</td>
<td>-ci</td>
<td>-cci</td>
</tr>
<tr>
<td>obl. pl. m.</td>
<td>-c(c)em</td>
<td>-cem</td>
<td>-ccem</td>
</tr>
</tbody>
</table>

However, the stem allomorph -c(c)- is not found in the feminine singular:

<table>
<thead>
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<th>ordinals</th>
<th>privatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom. sg. f.</td>
<td>-ts(ts)a</td>
<td>-ca</td>
<td>-cca</td>
</tr>
<tr>
<td>obl. sg. f.</td>
<td>-ts(ts)ai</td>
<td>-cai</td>
<td>-ccai</td>
</tr>
</tbody>
</table>

Moreover, the stem allomorph -c(c)- is not attested in Tocharian A at all (cf. above).

2. Both of these synchronic problems of the \textit{tse}-adjectives in Tocharian B, the gemination and palatalization of the stem consonant, can be explained by analogy with other class I adjectives.

2.1. The gemination must be due to analogical influence of adjectives that regularly show gemination throughout the paradigm, namely the adjectives in B-\textit{ṣṣ}e and B-\textit{ññe}. This analogy is likely to have spread from cases where it was possible to derive an adjective in B-\textit{tse} and an adjective in B-\textit{ṣṣ}e or B-\textit{ññe} from the same base, e.g., \textit{kenaṣṣe} ‘earthly’, \textit{kenatsse} ‘id.’ ← \textit{ke}ṃ ‘earth’; \textit{pyapyaiññe} ‘flowery’, \textit{pyapyaitstse} ‘id.’ ← \textit{pyāpyo} ‘flower’.

2.2. The palatalization in the \textit{tse}-adjectives in Tocharian B must be analogous to adjectives also with a stem-final dental, i.e., privatives, ordinals, and the pronouns. These regularly alternated between unpalatalized (nom. sg. m.) and palatalized (obl. sg. m., nom. and obl. pl. m.) stem consonants in their paradigm. The following proportion can be assumed:
Regarding the prehistory of the suffix \( ^{\text{B}}{\text{-}}\text{tse} \ ^{\text{A}}{-}\text{ts} \), Meillet (1911:146) suggests that it reflects PIE \(^{-}\text{tjo}\). This view is usually repeated in the more recent literature (e.g., Hilmarsson 1986:260, Adams 2013:749 and passim). There are no problems from a phonological point of view: the sequence PIE \(^{-}\text{ti} \hat{o}^{-}\) and/or PT \(^{-}\text{ty}^{-}\) gives \(^{-}\text{ts}^{-}\) in both Tocharian languages, cf. \(^{\text{B}}\text{epetsa} ‘\text{fiancée}’ < \text{PT} \ ^{-}\text{pæty} \hat{a} < \ ^{-}\text{t}-\text{ih} \_2 \) (cf. Ved. \( \text{sapátmi} ‘\text{rival; bride}’ \)); \(^{\text{B}}\text{lānts} \ ^{\text{A}}\text{lānts} ‘\text{queen}’ < \text{PT} \ ^{-}\text{nty} \hat{a} < \ ^{-}\text{nt}-\text{ih} \_2 \) (feminine of \(^{\text{B}}\text{walo} \), obl. \(^{\text{B}}\text{lānt}; \ ^{\text{A}}\text{wāl}, \text{obl.} \ ^{\text{A}}\text{lānt} ‘\text{king}’). However, the prehistory of PIE \(^{-}\text{tjo}\) as reflected in Tocharian has not yet been discussed.

3.1. Dunkel (1983; cf. also Balles 1997 [2000]:161–2 and Schulze 1907) discusses a type of formation in \(^{-}\text{tjo}\) by which relational adjectives were originally derived from local adverbs. Some of these are inherited, e.g., Hitt. \( \text{appezz\text{ī}ya} ‘\text{rear}’ \); Ved. \( \text{āpatya} ‘\text{descendant}’ \) (cf. also the Greek adverb \( \text{ὀπίσσω} ‘\text{backwards}’ \) from \(^{*}\text{op}^{-} ‘\text{away, back, behind}’ \); Ved. \( \text{nitya} ‘\text{native}’, \text{Go. nih\text{ī}s, ‘relative}’ \) from \(^{*}\text{ni}^{-} ‘\text{in}’ \); Ved. \( \text{sant\text{ī}ya} ‘\text{benign}’, \text{OHG sam\text{ī}ť ‘gentle}’ \) from \(^{*}\text{som}^{-} ‘\text{together}’ \); cf. also Lat. \( \text{vitium ‘fault, defect}’ \) derived from \(^{*}\text{u}^{-} ‘\text{apart}’ \) and Go. \( \text{au\text{ī}j\acute{a} ‘bleak}’ \) from \(^{*}\text{au}^{-} ‘\text{away}’ \). The general derivational mechanism is productive in a number of branches: Hitt. \( \text{šar\text{ā}zz\text{ī}ya} ‘\text{upper}’ \) (cf. Lyc. \( \text{hr̄zz̄e} \ / \text{i}^{-} ‘\text{id.}’ \) ← \( \text{š̄ar} ‘\text{up(wards), above}’ \); Hitt. \( \text{hantezz\text{ī}ya} ‘\text{first}’ ← \( \text{hant} ‘\text{forehead, front}’ \); Ved. \( \text{n\text{ī}ś\text{y}̄a} ‘\text{foreign}’ ← \( \text{nīs} ‘\text{out}’, \text{am\text{ā}y\acute{a} ‘cohabitant}’ ← \( \text{am\acute{a} ‘at home}’ \); Gk. \( \text{εἴσω ‘into}’ ← \( \text{ἐν ‘in}’, \text{ἐπι\text{σσαι ‘after-born daughters} (Hsch.) ← \( \varepsilon\pi\acute{a} ‘on, upon}’ \).

It is safe to say that the continuant of PIE \(^{-}\text{tjo}\) in the Tocharian adjectives in \(^{\text{B}}{-}\text{tse} \ ^{\text{A}}{-}\text{ts} \) is exactly this inherited type. This is shown by \(^{\text{B}}\text{snais(t)s}e ‘\text{d'estitute}’ \) (cf. Ved. \( \text{s\text{ā}n\text{ā}y\text{ā} ‘being at a distance’} \) derived from \(^{\text{B}}\text{sn\acute{a} ‘without} \) (cf. Lat. \( \text{sine ‘without} \), OIr. \( \text{sain ‘separate, different}’ \). The old pattern of deriving relational adjectives from local adverbs enjoyed a mild productivity in Tocharian:

5 The speakers of Tocharian B were able to adopt \( -\text{c(c)} \) as the palatalization product of \( -\text{ts(ts)} \) due to the lack of a paradigmatic alternation non-palatalized vs. palatalized \( ts \) anywhere else in their synchronic grammar. In Tocharian A, alternation of \( ts \) with its regular palatalization product \( š \) is found in verbal paradigms (cf. pret. ptcp. \( \text{tsmo ‘grow}’ \), prs. III 3. pl. \( \text{śamantār [ ‘tsām-} \) ‘grow’’ \), prs. I 3. pl. \( \text{tsipīc vs. imperf. 3. pl. šepār [ ‘tsi̯p̄ ‘dance}’ \).)

6 Pinault (2009 [2010]:36) shows that this is the correct interpretation of the word previously understood as \(^{\text{B}}\text{petso ‘husband}’ \).
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3.2. In the prehistory of Tocharian, *-tjo- must have spread from its original locus to become productive as an all-purpose adjective marker. This scenario can be supported by a parallel development in the Luvo-Lycian branch of Anatolian. As Melchert (2014:262) points out (following Hajnal 1994:151–2 and Gusmani 1961), the suffix *-tjo- > Luv. -zza/-i-, Lyc. -zze/-i- (e.g., Lyc. hrzzel- ‘upper’, cf. Hitt. šarāzziya- ‘id.’ ← šarā ‘up(wards), above’) became productive. In Lycian, formations going back to *-tjo- are made from place names (e.g., Atâneze ‘of Athens’ ← Atâna- ‘Athens’, neleze- ‘of the agora’ ← nele- ‘agora’) and also make denominal derivatives in Luvian (e.g., wašhazzal- ‘holy’ ← wašha- subst. ‘the sacred’, urazzal- ‘great’ ← ural- adj. ‘great’).7


4.2. Interestingly, there are also names of professions and agent nouns in Tocharian that have the same shape as the adjectives in B-tse A-ts (< *-tjo-), including Bkāryorts(ts) ‘trader, merchant’ (: Bkaryor ‘trade, commerce, business’), Bwerpiskats(ts) ‘gardener’ (: Bwerpiške ‘garden’), Byāmāts(ts) ‘doer’ (: yām- ‘do’), Brināts(ts) ‘renouncer’ (: Brin-n- ‘leave, give up’), ³amokāts ‘artist, craftsman’ (: ³amok ‘art’), ³tspokāts ‘taster’ (: ³tspok- ‘enjoy [food]’). The use of formations in B-tse A-ts to derive substantives originally goes back to nominalizations of B-tse A-ts-adjectives, as evidenced by derivational chains such as: BA amok subst. ‘art’ → B amokā(ts)ts adj. ‘artistic’ → subst. ³amokāts ‘artist’, Bkaryor, ³kuryar.

7 On the use of adjectives in -zza- to mark the superlative in Luvian alone see Yakubovich 2013.
subst. ‘trade, commerce, business’ → Bkâryortst(e) subst. ‘trader, merchant’, Bñuw adj. ‘new’ → Bñwets(t)e subst. ‘novice’. The names of professions and agent nouns in Tocharian B-tseatsu are in principle parallel to the Lycian nouns in -za-8 except that they are not formed with the individualizing suffix *-eh2-.9 This fact has so far remained largely unnoticed.

5. In conclusion, the synchronic problems of the inflection of the B-tse-adjectives, the gemination and the palatalization of the stem consonant, can be explained by analogy to other class I adjectives. The adjectives in B-tseatsu go back to PIE *-tjo-, an inherited formation that originally was used to form relational adjectives from local adverbs that is found across different IE languages. There are remarkable parallels between Tocharian and Luvo-Lycian concerning the development of PIE *-tjo- that can be summarized as follows: (1) both branches inherited the derivational mechanism of deriving local adjectives in *-tjo-; both branches extended the use of the continuants of *-tjo- (2) (probably) first to place names and then (3) to other nouns; (4) both branches started to use the continuant of the *tjo-suffix for marking names of professions/agent nouns:

(1) Lyc. hrzze/i- ‘upper’
   (cf. Hitt. šarâzziya- ← šarâ ‘up(wards), above’)

8 The evidence of Luvo-Lycian and Tocharian taken together might suggest that the Lycian substantives in -za- are originally (re)characterizations of ze-substantives to specifically mark them as substantive in contrast to adjectival -ze-. While some of the ethnica in Lyc. -ze- (which are usually adjectives) leave room for both adjectival and substantive interpretation, there is only one clear case of a substantive in -ze- attested in Lycian so far. This is the collective prinnzeei- ‘household’ (cf. CLuv. parnz- ‘house’), which is a direct nominalization of a ze-adjective (Melchert 2014:262); an individual member of the household is expressed by the ije-derivative prinnzeei(je)-.

9 In Tocharian the names of professions/agent nouns in -ts follow class I inflection, but there are also attestations where they followed the a-inflection of the so-called agents (Paknâtsa Aâknats subst. ‘fool’, adj. ‘ignorant’; formations in Bnts like Bwâpânts ‘weaver’ (Bwâp- ‘weave’); formations in Bnts-nt like Bukausenta Bukosant (Bkau- ‘kau- ‘kill’); formations in Buca like Bkârstauca (Bkârst- ‘cut’); verbal governing compounds in Bu like Byolo-rita ‘seeking evil’ (Byolo- ‘seek, long for’) and Bsotre-lyâk ‘seeing signs’ (Bsotre- ‘see’), e.g., nom. pl. tspoktsâi. If these cases are not just influenced analogically by the class of agents, they also reflect old *-tîn- with the continuum of PIE individualizing *-âon- (cf. Fellner forthcoming b). This would provide another parallel to Lycian, where next to the continuum of *-ehr- in tewînezê- we find the continuum of *-tîon- in a similar function in the personal name Tewînezêi, both “the tewineze- one” (Melchert 2014:262).
Toch. B *snai̯s(ts)e ‘destitute’ ← B *sne ‘without’
(cf. Ved. sānuta- ‘being at a distance’ : OIr. sain ‘separate’ etc.)

(2) Lyc. nele/έ- ‘of the agora’ ← nele- ‘agora’
Toch. B *kenāstse ‘earthly’ ← kem ‘earth’

(3) Luv. urazza/i- ‘great’
Toch. B *orots(ts)e ‘great, big’

(4) HLuv. kumaza/i-, Lyc. kumaza/i- ‘priest’ ← CLuv. kumma- ‘the sacred’
Toch. A *amokāts ‘artist’ ← amok ‘art’
Toch. B *nwets(ts)e ‘novice’ ← nwwe ‘new’

References


10 Luv. urazza- and Toch. B orots(ts)e were already equated by Van Windekens (1960; cf. also Melchert ap. Adams 2013:128), but the details remain to be worked out.


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