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The Tocharian Gender System: A Diachronic Study

Tomba, A. del

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Author: Tomba, A. del

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CHAPTER FOUR

GENDER

IN THE PRONOMINAL AND ADJECTIVAL INFLECTION

The present chapter aims at investigating the evolution of the category of gender in the inflection of pronouns and adjectives. The final goal is to understand what type of gender system Tocharian inherited from Proto-Indo-European and how it has evolved. Considering that the feminine has given rise to debate within the diachronic investigation of Tocharian nominal morphology, particular attention will be paid to the development of this gender. Furthermore, the evolution of the neuter will be investigated, in order to test the theory of its merger with the masculine in the singular and with the feminine in the plural, and to understand how the Tocharian *genus alternans* has come to light as a result of these mergers. In order to achieve these aims, we will consider endings and forms of the relevant declensions in both pronouns and adjectives. The final goal of this study is to clarify if Tocharian inherited a different gender system with respect to the other non-Anatolian Indo-European languages and to what extent this reconstructed system differs from that attested by Tocharian.

4.1. GENERAL AIM AND STRUCTURE OF THE CHAPTER

As pointed out above, the general aim of the chapter is to understand how the system of gender developed in the Tocharian system of nominal modifiers. This leads to a large and heterogeneous number of issues, which are sometimes different if approached from the point of view of the pronouns or from that of the adjectives. The structure of the chapter had to mirror this fact and it has therefore been divided into two sections.

In the first section, the development of the Tocharian demonstratives and other pronouns based on these is investigated, in tandem with the peculiar inflection of the pronominal adjective TchB *allek*, A *ālak* ‘other’.

In the second section, a synchronic overview of the Tocharian adjectival system is offered. The main part is devoted to the diachronic evolution of both thematic and athematic adjectives from Proto-Indo-European to Proto-Tocharian and from Proto-Tocharian to Tocharian A and B.

4.2. GENDER IN THE PRONOMINAL INFLECTION

4.2.1. OVERVIEW OF THE TOCHARIAN PRONOMINAL SYSTEM

As in most of the ancient Indo-European languages, Tocharian retains a large number of different pronouns, which have different functions and origins. They are also distinguished according to their inflection. We find:

- Personal pronouns for the first and second persons, i.e. TchB *ñäs*, A *näs* ‘I’, TchB *tuwe*, A *tu* ‘you’ (and suffixes for the first, second, and third persons);
- Demonstrative pronouns, e.g. TchB *se*, A *sa-* ‘this’;
- Indefinite pronouns, e.g. TchB *ksa* ‘some, any’;
- Interrogative and relative pronouns, e.g. TchB *k_use*, A *kus* ‘who, which’;
- Pronominal adjectives, e.g. TchB *allek*, A *alak* ‘other’, TchB *makte*, A *mättak* ‘self’.

Some of these are inflected according to gender, number, and case (i.e. the demonstratives, the relative and interrogative pronoun TchB *mäksu* ‘which’, the interrogative pronoun TchA *äntsam* ‘which’,³⁰⁵ the pronominal adjectives TchB *makte*, A *mättak* ‘self’ and TchB *allek*, A *alak* ‘other’, the personal pronoun TchA *näs* ‘I’ [fem. *ñuk*]), some other according to number and case (e.g. the personal pronouns TchB *ñäs* ‘I’ and TchB *twe*, A *tu* ‘you’, the interrogative and relative pronoun TchA *kus* ‘which’, etc.), and others yet according to case only (e.g. the indefinite TchB *ksa*, the interrogative TchB *intsu* ‘who? which?’, etc.). A synthetic table of the Tocharian pronouns is the following:

Table IV.1. Tocharian pronouns

	PRONOUNS AND PRONOMINAL ADJECTIVES
GENDER-NUMBER-CASE	^A <i>näs</i> ‘I’; ^B <i>se</i> ^A <i>säs</i> ‘this’; ^B <i>su</i> ^A <i>säm</i> ‘(s)he’; ^B <i>samp</i> ^A <i>saṃ</i> ‘that’; ^B <i>seṃ</i> ‘±this’; ^A <i>äntsam</i> ‘which’; ^B <i>mäksu</i> ‘which’; ^B <i>makte</i> ^A <i>mättak</i> ‘self’; ^B <i>allek</i> ^A <i>alak</i> ‘other’
NUMBER-CASE	^B <i>ñäs</i> ‘I’; ^B <i>tuwe</i> , ^A <i>tu</i> ‘you’; ^A <i>kus</i> ‘which’
CASE	^B <i>ksa</i> ‘some’; ^B <i>intsu</i> ‘which’; ^B <i>k_use</i> ‘which’

Since the main focus of this work is on the gender system, it follows that only those pronouns that display gender distinctions will be the topic of my investigation.

From a comparative perspective, it is quite surprising that the Tocharian A pronoun of first person distinguishes a feminine form (TchA *ñuk*, see SSS §266-270), since no other ancient Indo-European language displays gender differentiation in the personal

³⁰⁵ On the evolution of the interrogative pronouns TchB *intsu*, A *äntsam*, see recently Peyrot (2018b).

pronouns.³⁰⁶ As a matter of fact, the overall development of the first-person pronoun, in general, and the source of the gender-distinction, in particular, are still a matter of debate. Nonetheless, scholars agree in attributing the origin of the feminine form to a Tocharian A innovation (Jasanoff 1989a; Pinault 2008: 534). It will not therefore constitute a topic of my analysis.

Feminine inflected forms of the interrogative pronoun TchA *äntsam* ‘which’ are only attested in the oblique singular *äntām* (cf. A4 a5 *äntām tkanā* “in which land/where on earth” and A70 a2 *äntām kälymeyam* “in which direction”). This pronoun can be traced back to PTch **ən-sæ-nə* (m.), **ən-sa-nə* (f.), where **-sæ-*, **-sa-* are the reconstructed outcomes of the PIE demonstrative **só*, **séh₂* (see Peyrot 2018b, with references). In fact, the great majority of the Tocharian gender-differentiated pronouns follow the inflection of the demonstratives, since the demonstratives form the base from which these pronouns derive. For this reason, in the following paragraphs we will mainly deal with the evolution of the demonstrative pronouns in Tocharian.

4.2.2. AIM AND STRUCTURE OF THE SECTION

The general aim of this section is to discuss some problematic endings and forms of the Tocharian pronominal inflection. The feminine paradigm of the demonstratives and that of the pronominal adjective TchB *allek* ‘other’ will be the core issue of my investigation. The final goal is to demonstrate that both masculine and feminine paradigms are to be interpreted as the regular outcome of their Proto-Indo-European ancestors, with some minor and motivated analogical changes.

4.2.3. EVOLUTION OF THE TOCHARIAN DEMONSTRATIVE PRONOUNS

Cross-linguistically, pronouns play a pivotal role in the emergence of gender markers and in their subsequent evolution.³⁰⁷ In particular, the demonstratives have a special function in the rise, the further development, and the possible decline of gender values (Corbett 1991: 310–11; Claudi 1997; Luraghi 2011). However, despite their importance, in recent works on the diachronic evolution of the Tocharian gender system, the demonstratives have never been a central matter of discussion (e.g. in Hartmann 2013, where the pronouns are not discussed). Nevertheless, the history of the demonstratives constitutes a fascinating topic within the study of Tocharian nominal morphology, because we still have to account for some peculiarities in both their inflection and historical evolution. A case in point is

³⁰⁶ Actually, one should notice that the Tocharian A paradigm is even more noteworthy from a typological perspective. For instance, Aikhenvald (2000: 252–3) argues that: “If gender oppositions are found in 2nd person, they will normally also be there in 3rd, and if they are found in 1st, which is rare, they will normally also be there in 2nd and 3rd. In addition, the gender distinction in the Tocharian A first person pronoun violates Greenberg’s Universal 44: “If a language has gender distinctions in the first person, it always has gender distinctions in the second or third or in both”.

³⁰⁷ Parts of this section appeared in: Del Tomba (2018).

the plural paradigm of the feminine, where, as I will argue, an essential issue has been overlooked.

In the first part (§4.2.3.1), I will briefly introduce the synchronic paradigms of the Tocharian demonstratives, from both a functional and a derivational perspective. Then, in the second, central part (§4.2.3.2, §4.2.3.3), I will outline the synchronic distribution and the diachronic evolution of both the singular and the plural inflection. Some important issues concerning the distribution of the plural forms and the reconstruction of cases of homophony within the paradigms will come to light. Finally, in the third part (§4.2.3.4), I will summarise the evolution of the demonstratives, identifying the most significant modifications and subdividing them into chronological stages. Further remarks and suggestions will conclude the discussion (§4.2.3.5).

4.2.3.1. Introduction to the Tocharian demonstratives

Tocharian shows a wide range of demonstrative pronouns, which can be classified according to both functional – i.e. spatial deixis – and formal patterns. However, form and function of Tocharian A do not pair with the respective form and function of Tocharian B. For instance, we find four different paradigms in Tocharian B and only three in Tocharian A. In the table below, the demonstratives are presented according to their match in function (Stumpf 1971; Kümmel 2015: 109f.).³⁰⁸

Table IV.2. Tocharian B and Tocharian A demonstrative pronouns

FUNCTION	TOCHARIAN B		TOCHARIAN A	MEANING
Anaphoric	<i>su, sã_u, tu</i>	≈	<i>sãm, sãm, tãm</i>	‘he, she, the’
Proximal	<i>se, sã, te</i>	≈	<i>sãs, sãs, tãş</i>	‘this’
Remote	<i>samp, somp, tamp</i>	≈	<i>saṃ, sãṃ, taṃ</i>	‘that’
Medial (?)	<i>seṃ, sãṃ, teṃ</i>			‘± this’

Formally, the Tocharian demonstratives differ chiefly in their derivation and in the suffixes employed in the two languages. The basic stem is the descendant of the PIE pronoun **só* (masc.), **sé_h* (fem.), **tód* (nt.), which can unambiguously be compared with Ved. *sá ~ sáh, sã, tá_d*, Av. *hã ~ hõ, hã, ta_t*, Gk. *ó, ý, τό*, etc. Taking as examples the nominative singular masculine form, we can identify five fusional elements and outline the following six derivations (Pinault 1989: 115-16):

³⁰⁸ Regarding the origin of the Tocharian system of demonstratives, Kümmel (2015: 114) notes that some Middle Iranian languages – like Sogdian, Khotanese, and Tumshuqese – and Gāndhārī show a similar ternary system, classified according to deixis as neutral, near, and remote (Sims-Williams 1994; Emmerick 1989: 387-88). Kümmel consequently proposes that the new Tocharian system is the outcome of a contact-induced change with these Middle Iranian and Middle Indian languages.

- (1) TchB *se* < PTch **sæ* < PIE **só*;
- (2) TchB *su* < Pre-TchB **sə-w* (cf. Skt. *asau* ‘that’, Gk. *οὗτος* ‘this’);
- (3) TchB *samp* < Pre-TchB **sə-mpə* (cf. TchB *ompe* ~ *omp* ‘there’);³⁰⁹
- (4) TchB *seṃ*, TchA *saṃ* < PTch **sæ-nə* (cf. perhaps TchB -*ṃ*, 3sg.pr.act.);³¹⁰
- (5) TchA *säs* < Pre-TchA **sə-ṣə* (cf. perhaps TchA -*ṣ*, 3sg.pr.act.);
- (6) TchA *säm* < Pre-TchA **sə-mə* (cf. perhaps Skt. *ayám* ‘this’).

As can be seen, the three Tocharian A demonstratives resulted from the addition of various particles to the original basis PTch **sæ*-, **sə*-, which itself represents the descendant of the PIE demonstrative pronoun. Although these kinds of evolutions are generally well identified and explained (see recently Pinault 2009), some inflectional patterns of the Tocharian demonstratives remain matter of debate. In the following paragraph, I will focus on the singular paradigm and then I will move on to the plural paradigm.³¹¹

4.2.3.2. Paradigm of the singular

Considering the Tocharian B pronoun of proximal deixis and the basic shape of the demonstratives in Tocharian A, we can outline the following paradigm of the singular:

³⁰⁹ According to Pinault (2009), the Tocharian B graphic cluster *mp* corresponds phonologically to [βə].

³¹⁰ The status of TchB *seṃ* and its Tocharian A functional correspondent is debated. A few decades ago, Stumpf (1971: 100-133 and 1976) maintained that TchB *seṃ* was functionally equivalent to TchB *se*, while Winter (1975) argued that it had a 2nd person deictic function. Similar considerations were put forward by Peyrot (2008: 122-24), who followed Winter (1975) in attributing an intermediate deictic function to it, but Pinault (2009: 226-29) concluded that it had an endophoric function. Finally, Kümmel (2015) has now demonstrated that TchB *seṃ* was used primarily in cases of medial deixis in the historical period, with dominant recognitional use. However, in Proto-Tocharian, **sæ-nə* had distal function, as in Tocharian A, and it subsequently acquired a medial deictic function in Tocharian B, when its original value was taken over by the new TchB *samp* (cf. TchB *ompe* ~ *ompe* ‘there’), which is more marked compared to TchA *saṃ*.

³¹¹ In both Tocharian A and Tocharian B, the demonstrative pronouns show sporadically some dual forms in the masculine inflection. Given the fact that these are not relevant to our discussion, I do not consider the pronominal dual here. See Hilmarsson (1989: 36ff.), Pinault (2008: 542), and Kim (2018: 61-3, 69, 85-7).

Table IV.3. Tocharian B and Tocharian A paradigm of singular

	MASCULINE		FEMININE		NEUTER	
	TchB	TchA	TchB	TchA	TchB	TchA
NOM. SG.	<i>se</i>	<i>sa- sä-</i>	<i>sā</i>	<i>sā-</i>	<i>te</i>	<i>ta- tä-</i>
OBL. SG.	<i>ce</i>	<i>ca- cā-</i>	<i>tā</i>	<i>tā-</i>	<i>te</i>	<i>ta- tä-</i>

As is clear from the above, not only endings, but also the changes of the stem mark the inflection. Both masculine and feminine, in fact, distinguish the nominative and the oblique by means of different stems, with *s-* for the former and *c-(m.)|t-(f.)* for the latter. Furthermore, through the palatalisation of **t-* into *c-*, the masculine and the neuter are disambiguated. The origin of this palatalised allomorph *c-*, which is also peculiar of the masculine plural, is debated. Cowgill (2006) and Pinault (2008: 541ff.) argue that it represents the regular outcome of PIE **te-*, through a conflation of the *o*-grade, characteristic of the strong cases, and the *e*-grade, characteristic of the weak cases.³¹² Another possibility is that the *c*-forms originated from a mixture with the pronoun **h₁e* (Skt. *ayám*, Lat. *is*, etc.), but precise explanations on how this development would have worked are still missing.³¹³ Be that as it may, there is no doubt that the palatalisation must first have arisen here before it spread as a morphological pattern in the adjectival inflection (see §4.3.1, §4.3.3.1).

As we have already suggested (see §2.3.2), a further peculiarity of the demonstratives is the preservation of some “crystallised” forms, which are formal remnants of the PIE neuter gender: e.g. TchB *te*, A *ta-* < PIE **tód* (Skr. *tát*, Gk. *τό*, etc.). They are limited to the singular inflection. As thoroughly demonstrated by Stumpf (1971: 47f.), these forms must be explained as archaisms: actually, they can be used only with pronominal function and never attributively. Strictly speaking, it means that in a noun phrase the neuter demonstrative cannot be used as a modifier of a noun, i.e. with adjectival function (see the examples in §2.3.2). Moreover, the distribution of the genitive singular markers between the masculine and the neuter is significant: the former ends in TchAB *-i*, while the latter ends in TchB *-ntse*, A *-is*. Whereas TchAB *-i* may go back directly to a PIE ending (most likely, the dative singular **-ei*, Pinault 2014: 275-7; *contra* Klingenschmitt 1994: 365-9), the endings TchB *-ntse*, TchA *-is* are a Tocharian innovation: they go back to PTch **-nsæ*, which originally was the genitive singular of the nasal stems and subsequently spread to some

³¹² In particular, Pinault (2008: 541) reconstructs the *c*-stem from the genitive singular TchB *cpi/cwi*, which in turn derives from an archaic dative singular **te-smōy* > **cəzβu* > **cəβə* > TchB *cp-i/cw-i* with further addition of the ending *-i* (cf. the genitive singular *-e-pi* characteristic of the adjectival inflection). In the feminine paradigm, the gen. sg. *tāy* consists of a basis *tā-* and the same genitive singular marker *-y* that we descriptively find in the three substantives of the *šana*-type with nom. sg. *-a*, obl. sg. *-o*, gen. sg. *-oy*.

³¹³ For yet another proposal, see Winter (1980: 551f.).

other inflectional types.³¹⁴ The spread of this ending to the pronominal neuter inflection must therefore be a late phenomenon.³¹⁵ This inflectional evidence is further proof of the non-adjectival use of the neuter demonstratives, since the gen.sg. TchB *-ntse*, A *-s* can only be found as a marker of nouns in Tocharian.

A phonological problem that needs to be mentioned is the doublet forms in the masculine singular, cf. TchB *se*, A *sa-* vs. TchB *sə-* (in *samp* < **səmp* and *su* < **sə-u*), A **sä* (in *säs* and *säm*) and in the neuter TchB *te*, A *ta-* vs. TchB *tə-*, A *tä-*. The development of PIE **o* to **ə* is unexpected, but it is not without parallels, cf. TchB *mäksu* ‘which’ < PTch **mə-kʷə-sə-u*, virtually from PIE **mo-kʷi-so-u* (Peyrot 2018b), and further TchB *ompe* ~ *omp* ‘there’ (Pinault 2009), TchB *kete* ~ *ket* ‘whose’, TchB *ate* ~ *at* ‘away’, TchB *pest* ~ *päst* etc. If all these forms must be regarded as attesting the same development, then one has to agree with Peyrot (2008: 164-5, 2018b) that an irregular sound law **-æ* > **-ə* was caused by the weak accentuation of these words (cf. the non-accented article in Ancient Greek).

Otherwise, one may also wonder whether the doublet **sə* ~ **sæ* resulted from two different competitive protoforms: the former would have been the descendant of PIE **só*, while the latter would have been the outcome of a recharacterised form **só-s*. A similar *s*-variant can be seen in e.g. Skt. *sáh*, OAv. *hā*, YAv. *hō*, alongside Skt. *sá*, Av. *hā*.³¹⁶

As far as the feminine inflection is concerned, the nom.sg. TchB *sā* /*sá*/, A *sā-* has clear comparable cognates in other Indo-European languages, like Skt. *sā́*, Gk. *ῆ* etc. However, such a straightforward origin is problematic, since the regular outcome of PIE **-eh₂* > **-ā* should have been PTch **-ā* > TchB *-o* (see §4.3.4.4).

As a matter of fact, the condition of **séh₂* is quite peculiar, since it is an accented monosyllable. To my knowledge, four different explanations have been outlined in order to account for the nominative singular TchAB *sā*:

- (1) shortening of the original **ā* in accented monosyllables, thus PIE **séh₂* > **sā* > **sǎ* > PTch **sa* > TchAB *sā* (as per Ringe 1996: 94-96);
- (2) loss of the laryngeal in *pausa* (Kuiper’s law), thus PIE **séh₂* > **sǎ(h₂)* > PTch **sa* > TchAB *sā* (as per Pinault 2008: 542; Fellner 2014: 13);
- (3) final PTch **-ā* has been replaced by **-a* through analogy with the athematic inflection (as per Fellner 2014: 13, but with hesitation);
- (4) lowering of PTch **-ā* > **-a* in monosyllabic *Auslaut* position (as per Kümmel 2009: 172-73).

³¹⁴ For an in-depth analysis of this ending, see Pinault (2008: 489-90) and Jasanoff (2019). For the evolution of the cluster PTch **-ns(-)*, see §4.3.4.1.

³¹⁵ The fact that Tocharian maintained some neuter forms in the demonstratives is typologically significant. Indeed, when gender distinctions are lost, their traces are frequently preserved in the demonstrative pronouns, if anywhere in the language (Corbett 1991:310f.).

³¹⁶ See Pinault (2009: 232f.) for yet another hypothesis.

Explanation (1) seems quite improbable to me, since a long vowel is expected to be maintained in accented position. The analogical replacement of $*-\tilde{a}$ to $*-a$ – explanation (3) – is difficult, since in the adjectival inflection we find nom.sg. $\text{ṣ}a$ and not $-a$ (cf. nom.sg.f. TchB *astarya*, A *āṣtri* ‘pure’; see further §4.3.3.1, §4.3.4.5). I found neither evidence in favour, nor counterevidence against hypothesis (4), i.e. lowering of PTch $*\tilde{a}$. Kümmel (2009: 173) adduces PIE $*méh_1$ ‘not (neg.)’ > $*mē$ > $*mæ$ > TchB *ma* (for expected TchB $**me$) as a comparable item. However, the assumption of loss of the laryngeal in *pausa* (hypothesis 2) is still a serious possibility to explain the Tocharian forms (Pinault 2009: 231), although the exact syntactic context where the reduction took place is unclear. A last option would involve the reconstruction of PIE $*sih_2$ (cf. possibly Goth. *si*, OIr. *sí*, Skt. *sī-m*, OAv. *hi*) as the antecedent of TchAB *sā*, at the cost of taking the non-palatal $*s-$ as analogical after the masculine and recurring to some restructuring of the inherited paradigms.³¹⁷

Moving now to the oblique singular, TchB *tā* shows phonological problems closely related to those seen for the nominative singular. Indeed, an outcome TchB $**to$ from PTch $*tā(m)$ < PIE $*téh_2-m$ should be expected, since in internal position $*-eh_2-$ should have yielded PTch $*-\tilde{a}-$ > TchB $-o-$.³¹⁸ Considering that a shortening of the original $*\tilde{a}$ in an accented monosyllable is quite improbable, TchB *tā* must be the result of an analogical replacement of $*tā$ after the new nominative singular $*sa$ (Pinault 2008: 542). The reason why this analogical replacement took place involves the diachronic development of the plural paradigm of the feminine and the neuter. On these and other problems we will focus in the following paragraph.

4.2.3.3. Paradigm of the plural

In the plural, Tocharian A shows a rigid system with clear formal markers (SSS §287):

³¹⁷ For the reconstruction of PIE $*sih_2$, see Sihler (1995: 389), Kloekhorst (2008: 750f.), Kortlandt (2017: 100-1). According to Fellner (2014: 14), the reconstruction of PIE $*sih_2$ is phonologically (but not comparatively) possible, given the fact that he does not accept that the suffix $*ih_2$ could have palatalised the preceding consonant. See also de Vann (2019), who, however, explains Goth. *si* and OIr. *sí* ‘she’ as recent remakes of the PIE anaphoric pronoun nom.sg.f. $*ih_2$ plus $*s-$.

³¹⁸ For the outcome TchB $-o$ from PIE $*-eh_2-m$ compare the TchB *še* ‘1’ with its obl.sg.f. *somo*, which is from PTch $*sēmā$ < PIE $*someh_2-m$. The plural TchB *somona*, A *ṣomaṇ* ‘some’, obviously less frequent than the singular, goes back to the same Proto-Indo-European stem. See Pinault (2006: 89) for an in-depth discussion of the paradigm of both masculine and feminine inflections of the Tocharian numeral for ‘1’. See also Adams (DTB: 722) and Winter (1992: 98ff.) for further suggestions.

Table IV.4. Tocharian A plural paradigms

DEIXIS		MASCULINE	FEMININE
Anaphoric	nom.	<i>cem</i>	<i>tom</i>
<i>säm</i>	obl.	<i>cesäm</i>	<i>tosäm</i>
Proximal	nom.	<i>ceş</i>	<i>toş</i>
<i>säs</i>	obl.	<i>cesäs</i>	<i>tosäs</i>
Remote	nom.	<i>ceṃ</i>	<i>toṃ*</i>
<i>saṃ</i>	obl.	<i>cesäṃ</i>	<i>tosäṃ</i>

From a synchronic point of view, these paradigms are easy to describe. All enclitic elements (*-m*, *-ş/-s*, *-ṃ*) are added directly to the basic shape of the pronoun, which attests the *c*-allomorph in the inflection of the masculine, and the *t*-allomorph in the inflection of the feminine. In all the oblique plural forms, we note *ä*-epenthesis between the ending TchA *-s* and the enclitic. In the pronoun of proximal deixis, Pinault (2008: 540) suggests that the final sibilant undergoes morphological palatalisation in the nominative plural. However, a different explanation is also possible: the original enclitic element was the palatalised sibilant **-ş*, which was depalatalised through assimilation in all the allomorphs with initial or internal *(-)*s- (as per Pedersen 1941: 116 and Kortlandt 1983: 320–21, cf. also the numeral TchA *sas* ‘one’ < Pre-TchA **şas* [B *şe*]). Although the nom.pl.f. of the pronoun of remote deixis is not attested, it can easily be determined as TchA *toṃ** on the model of the other paradigms.

In Tocharian B the situation is more complex, because three out of the four demonstratives that are differentiated in the singular have just one paradigm in the plural. Indeed, the only pronoun that features a formally distinct paradigm is TchB *sam(p)*:

Table IV.5. Plural paradigm of TchB *sam(p)*

DEIXIS		MASCULINE	FEMININE
Remote	nom.	<i>caim(p)</i> - <i>ceym</i>	<i>toym*</i>
<i>samp</i>	obl.	<i>cemp*</i>	<i>toym</i>

Compared with the other demonstratives, the paradigm of TchB *sam(p)* is the least frequent. This is true especially for the plural inflection. For the masculine, I have found only eight nominative plural occurrences: two in the London collection (*caim* in IT248 b4 [class.], IT899 b2 [class.]), one in the Paris collection (*caim* in AS17K a4 [class.]), and five in the Berlin collection (*caimp* in B83 6 [class.], B85a3 [class.~late], B88 a5 [class.], *ceym* in B107 b2 [late], *caim* in THT2381.e b2 [frgm.]).³⁴⁹ The nominative plural *ceym* has only one

³⁴⁹ As pointed out by Stumpff (1971: 133f.), the great majority of the attested forms of TchB *samp* are from the *Araṇemi-jātaka*. Perhaps, we could add TchB *cem* (AS16.7 b5), which, according to the above analysis, should be an oblique plural, but the context requires a nominative plural instead:

occurrence in a late document (B107 b2), so it represents a late variant of *caim(p)*. Furthermore, no oblique plural forms are attested: we have only one genitive plural in B85 a2 *mā ñiś cempaṃts rakṣatsents aiṣṣām* “he must not give me to those rākṣasas!” (Schmidt 2001: 313). This form allows us to reconstruct with greater certainty the oblique plural of the masculine inflection: according to Krause & Thomas (TEB §269) it might have been *ceympa** (?), but, looking at the genitive plural *cempaṃts* /cempánts/, which must have been built on the oblique form, it was probably *cemp**, from **cen-mp*.

The feminine plural paradigm is even more difficult to determine, since I have found only one plural form, the oblique *toym* in B19 a1 *toym läklenta lkātsi* “to see those sufferings”. No genitive plural forms or secondary cases are attested.

Now, if we look at the plural forms of the other Tocharian B demonstratives, several difficulties come to light. In the following, I will summarise and compare two different hypotheses on this topic. Afterwards, I will put forward new considerations in support of one of them.

According to the classical view of Krause & Thomas (TEB §266-69), the three Tocharian B demonstrative pronouns of anaphoric, proximal, and remote deixis would have three different sets of paradigms in the plural. See the table below:

Table IV.6. Tocharian B plural paradigms (TEB §§266-268)

		MASCULINE	FEMININE
Anaphoric	nom.	<i>cai, cey</i>	<i>toṃ</i>
	obl.	<i>ceṃ</i>	<i>toṃ</i>
Proximal	nom.	<i>cai, cey</i>	<i>toy</i>
	obl.	<i>ceṃ</i>	<i>toy</i>
Remote	nom.	<i>cai, cey</i>	<i>toyna</i>
	obl.	<i>ceyna, cenām</i>	<i>toyna</i>

A similar description of the paradigms can also be found in more recent literature and handbooks on Tocharian (e.g. in Pinault 2008). As one can see, the paradigm of the masculine is the same in the three sets, with nominative and oblique differentiated. The only exception concerns the oblique plural of the pronoun of remote deixis *seṃ*, which is TchB *ceyna* ~ *cenām*.³²⁰ On the other hand, the paradigm of the feminine plural is quite peculiar: it never distinguishes the nominative from the oblique, but it shows different forms in the various pronominal inflections.

cem wa nraine tsäksenträ “nevertheless, those burn in hell”. Therefore, TchB *cem* may be a late variant from *caimp*.

³²⁰ The obl.pl. *cenām* is only sporadically attested (in AS19.21 a5 [class.], THT2291 b2 [frgm.], and NS355 b4 [class.; but cf. *ceṃ* in the parallel text B85 b4]). This form can be interpreted as either a recharacterised obl.pl.m. or as a real occasional attestation of a *m*-form plural of the regular TchB *ceṃ*.

However, a closer inspection of the linguistic stage of the documents where the various forms are attested allows for a different analysis. On various occasions, Stumpf (1971, 1974, 1976, 1990) dealt with the Tocharian demonstratives, providing innovative insights both on their forms and functions. In a pioneering article (Stumpf 1974), he claimed that Tocharian B did not have any differences between *se*, *sem*, and *su* in the plural. As a consequence, Tocharian A and B would differ significantly in the formation of the plural inflection of their respective demonstratives, since Tocharian B would not display any formal diversification in the plural paradigm of the pronominal sets. This analysis obviously stands against the traditional one of Krause and Thomas.

Stumpf (1974) explained the different forms of the plural within the framework of a restructuring process from archaic to late Tocharian B. In recent years, this hypothesis has been closely evaluated and further confirmed by Peyrot (2008: 124f.). In the masculine paradigm, the archaic form is TchB *cai*, given that it occurs with greater frequency in archaic texts and almost never in late and colloquial texts (I have found only one occurrence of *cai* in a late text, i.e. B330 a3). Since the archaic stage (e.g. in B255), sporadic forms of TchB *cey* begin to appear and they become more frequent in classical and late texts (e.g. in B331 a5, B347 b1, B375 b5). The oblique plural TchB *cem* is attested in archaic, classical, and late texts, while TchB *ceyna* is only attested in classical, late, and colloquial texts (e.g. in B108 b3-b6, B325 b1, B375 b4-b5). The text distribution of the forms allows us to determine that TchB *cai* is the archaic variant and that it must be the regular outcome of PIE **tói* (Ringe 1996: 86, cf. Skt. *té*, Gk. *οἱ*); TchB *cem* is from PIE **tóns* (cf. Skr. *tán*, Gk. *τοῦς*). The palatalised allomorph *c-* is a Tocharian innovation. Going back to Tocharian A, the nominative plural *ce-* shows regular monophthongisation of the PIE diphthong **-oi* > TchA *-e*, while the oblique plural continues PIE **tons* >> Ptoch **cæns* (with morphological palatalisation) > Pre-TchA **cæs* >> TchA *ces-*.

In view of the larger number of variants, it is not surprising that the distribution of the feminine plural is more difficult to outline. Following Stumpf (1974; 1990), Peyrot (2008: 126-7) convincingly suggests that TchB *tom* is the old plural form (both in the nominative and in the oblique), since it mostly occurs in archaic and classical texts. I have found the following attestations of TchB *tom* in archaic documents:

tom: AS7N b5; B117 a7, B117 b3; B123 b5; B127 a2; B128 a4; B133 a3; B133 a5; B137 a7; B274 a1; B275 a3; B284 a5; B338 b3; B338 b4; B341 b5; IT22 a7 (?); IT80 a2; IT157 a2; Or8212.163 b5^{bis}; Or8212.163 b6; THT1254 a4; THT1450.a b5 (?); THT1535.a a6; THT2247 a3; THT2247 b4; THT2371.g b2; THT3597 a2; **to(m):** B240 b1; **tomn:** B274 a3; **ton:** U23 a4; B291.a a1; B365 a2; **tomtsā:** B563 b6; **tonmem:** B274 a4; **tontsa:** B135 a4; **tonts:** B274 a1.

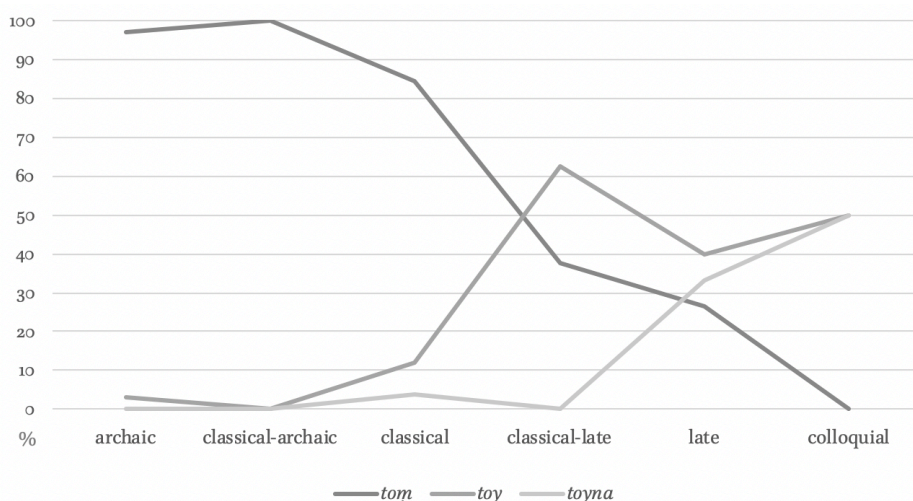
On the other hand, the nom.pl. *toy* and the obl.pl. *toyna* are both new formations. The former might be attested only once in a fragmentary archaic document (IT853 a2, cf. the spelling *tränko* at line a3), but it became the standard nominative form in classical-late texts. Finally, on the model of *toy*, a new nom.obl.pl. *toyna* was created, which is the common form in late texts. One can also compare the similar distribution of the feminine

plural variants of the interrogative and relative pronoun TchB *mäksu*, which is formed by TchB *su*:

mäktom: Or8212.163 b5 [arch.]; NS54 a3 [class.], THT2386.j and.s a5 [class.]; IT174a6 [class.] (*mäkt(o)m*); IT733a3 [class.], THT1603.a b2 [class.] (*(mä)ktom*); NS76b5 [class.] (*mä(kt)om*); ***mäktoynas***: B199b1 [late].

Indeed, in the history of Tocharian B, the ending *-na* has become the ubiquitous marker of the feminine plural in the adjectival inflection, and in some inflectional types of nouns referring to female entities (the so-called *šana*- and *ašiya*-types, see §3.5). A general scheme of the distribution of the variants is offered in the graph below:³²¹

Graph IV.1. Distribution of the feminine plural variants in the history of Tocharian B



4.2.3.4. Origin of the feminine plural

At this point, a central question that needs to be answered is where the archaic form TchB *tom* and the Tocharian A feminine plural paradigm (nom.pl. *to-*, obl.pl. *tos-*) come from. Their origin and historical evolution have never been precisely investigated, although they certainly constitute a problematic issue within the development of the demonstratives and the analysis of the system of gender in Tocharian. In this section I will therefore put forward new considerations aimed to fill this gap.

³²¹ The graph shows the number of attestations of the feminine plural variants in the Tocharian B texts. The y-axis refers to the percentage of fragments attesting a given form. If, in the same text, more than one occurrence of the same variant is attested, it has not been reported in the graph. The x-axis refers to the linguistic stage of the fragments (Peyrot 2008).

Let us start our discussion with Tocharian B. In view of the variant TchB *tonak*, a first hypothesis in order to explain the archaic form *tom* might be that it is a phonetic development of an original **tona*, where **to-* would be the “regular” PIE outcome, recharacterised by the ending *-na*. As we have seen, this ending is indeed the most productive plural marker in the adjectives. However, the sequence *tona-* is not attested elsewhere, and TchB *tonak* can be analysed as /tonákə/ < **tonákə*, which is from **ton* + the emphatic particle **-kə* (with *ä*-epenthesis), rather than /tónak/ (Thomas 1984: 224; Peyrot 2008: 126). Furthermore, if *tom* derived from **tona*, we should postulate an ad hoc apocope, since the sequence *-na* in Tocharian B is always maintained in the nominal inflection, and final *-a* is not apocopated anywhere else. For all these reasons, this hypothesis is to be rejected.

As other Inner-Tocharian explanations are doubtful, I think that it is preferable to postulate an Indo-European source for these forms. In my opinion, the final nasal in TchB *to-m* is in fact the regular outcome of the Indo-European accusative plural **-ns*. Tocharian A confirms this hypothesis, since the obl.pl.f. TchA *tos-* (cf. *tos-äm*, *tos-äs*, *tos-äm*) can go back to the same protoform: both TchA *tos-* and TchB *tom* allow us to reconstruct an ancestor PIE **téh₂-ns* > **tāns*.³²² The outcome of the PIE accusative plural **-ns* (> TchB *-m*, A *-s*) is clearly attested in the nominal inflection, where the historical interpretation is widely accepted. Alternatively, one might want to explain TchB *tom*, A *tos-* as the result of an analogical development on the basis of the masculine obl.pl. TchB *cem*, A *ces-*. However, analogy is in my view unnecessary. Since in the masculine **-ns* developed into TchB *-m* /-n/, A *-s*, we would expect the same correspondence for the feminine (but see also §4.3.4.4).

The vowel match in TchB *tom* : TchA *tos-* could be a problem, since it is generally assumed that PTch **ā* yielded *a* in Tocharian A. However, the correspondence TchB *o* : A *o* is characteristic of a well-known group of words, where the vowel match between Tocharian B and Tocharian A partially violates the generally assumed evolution of PIE **-eh₂-* > PTch **-ā-* > TchB *-o-*, TchA *-a-* (e.g. PIE **b^hréh₂tēr* > TchB *procer*, A *pracar* ‘brother’). Even though they do not refer to the demonstratives, Burlak & Itkin (2003) have highlighted the fact that TchB *o* matches TchA *o* mostly when this vowel appears in initial syllables in Tocharian A. This is particularly evident in monosyllables, as in TchB *kos* : A *kos* ‘how much’; cf. also TchB *moko* : A *mok* ‘old’, TchB *pont-*, A *pont-* ‘all’ (Burlak & Itkin 2003: 28; Burlak 2000: 137-40). To this list, we can add without any difficulty the feminine plural of the demonstratives TchB *to-* : A *to-*. This further confirms that PTch **ā* regularly yielded (or it has been maintained as) TchA *o* in monosyllables.

Nonetheless, one problem still needs to be solved. The fact that Tocharian B, since the archaic stage, attests a nom.pl. *tom* formally identical to the oblique does not match the Tocharian A counterpart, where we find nom.pl. TchA *to-* as the regular outcome of

³²² I do not believe that the expected outcome of PTch **tāns* is TchA **tes*, through intermediate **tā's* (see §4.3.4.1). In any case, the *o*-vocalism could have been taken over from the nominative.

**téh₂-es* > **tās*.³²³ The same outcome **to* should be expected also in Tocharian B. In other words, we do not have any Tocharian B formal descendant of the reconstructed Indo-European nominative plural feminine. The nom.pl.f. *tom* must therefore be a secondary Tocharian B innovation. In my view, the only plausible explanation is to reconstruct an analogical development, according to which the historical obl.pl. *tom* spread to the nominative plural in a Pre-Tocharian B stage. Indeed, various reasons for this analogical development can be envisaged.

To begin with, it is to be expected that certain forms of the feminine pronominal paradigm became homophonous in the prehistory of Tocharian. Most importantly, the oblique singular and the nominative plural feminine should have become identical after the loss of final **-m* and **-s*. In order to resolve these coalescences, analogical replacements took place in unattested phases of Tocharian B, perhaps beginning already in Proto-Tocharian, aimed to both disambiguate the forms of the paradigm and to favour formal isomorphism of the stem. From a hypothetical PTch **tā* (< PIE **téh₂-m*), parallel to PTch **allā-* (< PIE **h₂el₂eh₂-m*), a new oblique singular TchB *tā* /tá/ was created, by analogical levelling from the nominative singular TchB *sā* /sá/ (Pinault 2008: 542).³²⁴ The expected neuter plural PTch **tā* < PIE **téh₂* was apparently lost, since we have only the singular of the neuter preserved. If the neuter plural survived into Pre-Tocharian B, this additional homophony may further have favoured the creation of the new nominative plural *tom*. Be that as it may, this new feminine plural paradigm follows a general Tocharian B trend of development, according to which the plural inflection of the feminine shows no difference between nominative and oblique in both adjectival and pronominal declensions. As we will see, a closer look at the feminine paradigm of TchB *allek* confirms the evolution outlined above (see §4.2.4).

4.2.3.5. Evolution of the Tocharian demonstratives

In the following, conclusive section, I will summarise the diachronic evolution of the inflection of the Tocharian demonstratives, subdividing the analysis into four parts:

- (1) from Proto-Indo-European to Pre-Proto-Tocharian;
- (2) from Pre-Proto-Tocharian to Proto-Tocharian;
- (3) from Proto-Tocharian to Tocharian A;
- (4) from Proto-Tocharian to Tocharian B.

I use a distinction between Pre-Proto-Tocharian and Proto-Tocharian here, in order to distinguish evolutions that presumably took place in different non-attested chronological

³²³ An example of nom.pl.f. TchB *tom* in an archaic document is *tom läklenta tne cmelants šärmtsa mäskenträ* “these sufferings are here because of the rebirths” (B284 a5).

³²⁴ Actually, the comparison of TchA *tā-* and TchB *tā* suggests that the supposed evolution **tā* >> **ta* had taken place already in Proto-Tocharian. However, it cannot be excluded that the same development occurred independently in the two Tocharian languages.

stages. In a very similar way, I also refer to Pre-TchA and Pre-TchB to reconstruct transitional phases.

Table IV.7. From Proto-Indo-European to Pre-Proto-Tocharian

		MASCULINE		FEMININE		NEUTER	
		PIE	PRE-PTCH	PIE	PRE-PTCH	PIE	PRE-PTCH
sg.	nom.	<i>*só</i>	> <i>*sæ</i>	<i>*sé_h₂</i>	> <i>*sǎ</i> or <i>*sa</i>	<i>*tód</i>	> <i>*tæT</i>
	acc.	<i>*tóm</i>	> <i>*tæm</i>	<i>*té_h₂m</i>	> <i>*tām</i>	<i>*tód</i>	> <i>*tæT</i>
pl.	nom.	<i>*tóǵ</i>	> <i>*tæy</i>	<i>*té_h₂s</i>	> <i>*tās</i>	<i>*té_h₂</i>	> <i>*tā</i>
	acc.	<i>*tóns</i>	> <i>*tæns</i>	<i>*té_h₂ns</i>	> <i>*tāns</i>	<i>*té_h₂</i>	> <i>*tā</i>

Before the split of the two languages from Proto-Tocharian, most of the characteristic phonological developments of the vowel system had been completed. In this phase, we can reconstruct: (1) general loss of the quantitative system; (2) PIE **o* > PTch **æ*; (3) PIE **eh₂* > PTch **ǎ* (4); merger of the PIE series of stops into a single voiceless series (here, PIE **d* > PTch **t*).³²⁵ The different outcome of PIE **sé_h₂* depends on the two possible interpretations of TchAB *sā* /*sǎ*/: either it is the outcome of the loss of the laryngeal through Kuiper's law, or it first became **sǎ* and then **sa* by lowering in final word position. If we accept the second hypothesis, then an outcome **sǎ* is expected for Proto-Tocharian.

Table IV.8. From Pre-Proto-Tocharian to Proto-Tocharian

		MASCULINE		FEMININE		NEUTER	
		PRE-PTCH	PTCH	PRE-PTCH	PTCH	PRE-PTCH	PTCH
sg.	nom.	<i>*sæ</i>	> <i>*sæ</i>	<i>*sǎ</i> or <i>*sa</i>	> <i>*sa</i>	<i>*tæT</i>	> <i>*tæ</i>
	acc.	<i>*tæm</i>	→ <i>*cæ</i>	<i>*tām</i>	> <i>*tā</i>	<i>*tæT</i>	> <i>*tæ</i>
pl.	nom.	<i>*tæy</i>	→ <i>*cæy</i>	<i>*tās</i>	> <i>*tā</i>	<i>*tā</i>	> –
	acc.	<i>*tæns</i>	→ <i>*cæns</i>	<i>*tāns</i>	> <i>*tāns</i>	<i>*tā</i>	> –

In this phase, two important modifications took place: (1) generalisation of the palatalised stem *c°* in all the *t*-cases of the masculine inflection; (2) gradual loss of the neuter plural, which started in a Proto-Tocharian phase. If I am correct in saying that TchB *tom* and TchA *tos-* go back directly to PTch **tāns*, it is impossible that the neuter plural became homophonous with the entire paradigm of the feminine plural. Instead, the neuter plural

³²⁵ The diachronic evolution of PIE **d* in Tocharian is particularly difficult (see Winter 1962a). In a non-palatalising context, the regular outcome was PTch **ts* (e.g. PIE **der-* ‘to split’ > PTch **tsər-* > TchB *tsər-*, A *tsär-* ‘to be separate’). Other outcomes may be: (1) PTch **-Ø* in some consonant clusters (e.g. PIE **dyoh-* ‘two’ > **dwū* > PTch **wu* > TchA *wu*); (2) PTch **-t* in some other consonant clusters (e.g. PIE **neud-* ‘to push’ > **næt-* + *-sk-* > PTch **natk-* > TchB *natk-* ‘to thrust away’). See also Ringe (1996: 64f. and 146f.).

PTch *tā* became homophonous with the oblique singular and with the nominative plural of the feminine inflection and subsequently lost its function.³²⁶

Table IV.9. From Proto-Tocharian to Tocharian A

		MASCULINE			FEMININE			NEUTER		
		PTCH		TCHA	PTCH		TCHA	PTCH		TCHA
sg.	nom.	<i>*sæ</i>	>	<i>sa-</i>	<i>*sa</i>	>	<i>sā-</i>	<i>*tæ(T)</i>	>	<i>ta-</i>
	obl.	<i>*cæ</i>	>	<i>ca-</i>	<i>*tā</i>	→	<i>tā-</i>	<i>*tæ(T)</i>	>	<i>ta-</i>
pl.	nom.	<i>*cæy</i>	>	<i>ce-</i>	<i>*tā</i>	>	<i>to-</i>	–	>	–
	obl.	<i>*cæns</i>	→	<i>ces-</i>	<i>*tāns</i>	>	<i>tos-</i>	–	>	–

As we have already seen, Tocharian A recharacterised the basic outcome of the demonstrative by adding the enclitic suffixes **-mā* (anaphoric), **-ṣā ~ *-sā* (proximal) and, perhaps, *-nā* (remote). As far as the phonological evolution is concerned, we note regular monophthongisation of the Proto-Tocharian diphthong **æy* > TChA *e* in the nom.pl.m., and regular outcome of PTch **æ* > TChA *a* (e.g. PIE **ǵombʰo-* ‘tooth’ > PTch **kæmæ* > TChA *kam*). Both masculine and feminine oblique plural forms continue the ending PIE **-ns* by sound-law **-ns* > *-s*.

Table IV.10. From Proto-Tocharian to Archaic Tocharian B

		MASCULINE			FEMININE			NEUTER		
		PTCH		TCHB	PTCH		TCHB	PTCH		TCHB
sg.	nom.	<i>*sæ</i>	>	<i>se</i>	<i>*sa</i>	>	<i>sā</i>	<i>*tæ</i>	>	<i>te</i>
	obl.	<i>*cæ</i>	>	<i>ce</i>	<i>*tā</i>	→	<i>tā</i>	<i>*tæ</i>	>	<i>te</i>
pl.	nom.	<i>*cæy</i>	>	<i>cai</i>	<i>*tā</i>	→	<i>toṃ</i>	–	>	–
	obl.	<i>*cæns</i>	>	<i>ceṃ</i>	<i>*tāns</i>	>	<i>toṃ</i>	–	>	–

In Tocharian B, the situation is more difficult than in Tocharian A. Several analogical replacements took place, aimed to both diversify the paradigm and favour formal isomorphism. In the table above, I outline the evolution from Proto-Tocharian to archaic Tocharian B. The singular paradigm does not show any substantial modifications over the course of the evolution of the language. In the feminine, PTch **sa* regularly evolved into

³²⁶ With regard to the other demonstratives, it is possible that the Tocharian A demonstrative of remote deixis *sām* and the Tocharian B demonstrative of medial deixis *seṃ* were created before the split of the two languages from Proto-Tocharian: the original value of **sæ-nā* was remote deixis, which was maintained in Tocharian A and further reinterpreted as medial deixis in Tocharian B. Probably, a real chain shift took place when the new demonstrative TChB *sam* was created and caused the reanalysis of TChB *seṃ*.

TchB *sā* /sá/, while a new oblique singular *tā* /tá/ was created in place of the regular ***to* < **tā*, by analogical levelling from the nominative singular. This evolution was probably favoured by the homophony of the oblique singular with both the nominative plural and the neuter plural.

With regard to the plural paradigm, we have to take into account its evolution from archaic Tocharian B to late Tocharian B. A general scheme of this development is offered in Table IV.11 (adapted from Peyrot 2008: 127).

Table IV.11. Evolution of Tocharian B plural paradigm

STAGE	NOM. PL. M.	OBL. PL. M.	NOM. PL. F.	OBL. PL. F.	LING. PHASE
I	<i>*cæi</i>	<i>*cæns</i>	<i>*tā</i>	<i>*tāns</i>	PTch
II	<i>*cai</i>	<i>*cen</i>	<i>*to</i>	<i>*ton</i>	Pre-TchB
III	<i>cai</i>	<i>ceṃ</i>	<i>toṃ</i>	<i>toṃ</i>	Archaic TchB
IV	<i>cey</i>	<i>ceṃ</i>	<i>toṃ</i>	<i>toṃ</i>	↓
V	<i>cey</i>	<i>ceṃ</i>	<i>to-y</i>	<i>toṃ</i>	
VI	<i>cey</i>	<i>ceṃ</i>	<i>toy</i>	<i>toy-na</i>	
VII	<i>cey</i>	<i>cey-na</i>	<i>toy</i>	<i>toyna</i>	
					Late TchB

In the masculine inflection, we see the preservation of the diphthong **cæi* > *cai* in the nominative plural (stage I-III). The oblique plural of the feminine TchB *toṃ* is the regular outcome of PTch **tāns* < PIE **téh₂ns* (stage I-IV). However, the homophonous nominative plural form TchB *toṃ* cannot go back directly to PIE **téh₂-es*: the regular outcome should have been TchB ***to* (stage III). The original oblique plural was generalised to the nominative plural when the nominative was not well characterised and possibly homophonous with both the oblique singular and the neuter plural (stage IV).

In the historical development of Tocharian B, new inflected forms were created. First of all, a new nominative TchB *cey* began to appear sporadically in archaic Tocharian B, but became even more productive in classical, late, and colloquial texts (stage IV-VII). The fact that TchB *cai* never occurs in late and colloquial texts clearly shows that it is the older form. This change is phonetically motivated, since it also occurs in morphologically unrelated forms (e.g. *šai* ‘was’ > *šey*, Stumpff 1990: 107). The new nominative plural masculine TchB *cey* was then subject to reanalysis: -y was reanalysed as a nominative plural marker and spread to the feminine plural. As a result, a new nominative plural feminine *toy* was created (stage V).³²⁷ Finally, in classical and late Tocharian B, a new oblique *toyna* was formed by the addition of -na, the plural marker of the adjectival feminine inflection, to a basis *toy-* (stage VI-VII). This element -na was further reanalysed

³²⁷ According to Peyrot (2008: 126), of a sample of 33 attestations, 19 are nominative, and only one (in B504a4) is an oblique, probably a mistake (the other 13 attestations come from fragmentary documents where the case is unclear).

as the oblique plural marker in the pronominal inflection, and it spread to the oblique plural of the masculine, too (stage VII).

In addition, I think that also TchB *sam(p)* points to this evolution. Indeed, next to the nominative plural *caim(p)*, one occurrence of the late variant *ceym* is attested in B107 b2, a well-preserved document drafted in late Tocharian B. No oblique plural is directly attested, but we can reconstruct it as *camp**, on the basis of the genitive plural *cempaṃts* (§4.2.3.3). With respect to the feminine, in my opinion we would expect a form *tomp* as the *mp*-variant of *tom*, through assimilation of the dental nasal before the labial nasal. This reconstruction is confirmed by the oblique of the masculine *camp** < *cen-* + *-mp*. I have checked all the attestations of *tom(p)* and *toym(p)* in order to evaluate whether they may be plural variants, and I have found only three attestations: *tom* in B42 a4, which is undoubtedly an oblique singular, because it agrees with abl.sg.f. *arṣāklaimem*; *tomp* in AS17K b5, which is used with pronominal function in a context that seems to require a singular; and, finally, the aforementioned *toym* in B19a1.³²⁸ It seems to me that the plural paradigm of *samp* was thus affected by the same modifications that we have seen for the other demonstratives: an original nom.pl.m. *caim(p)* evolved into *ceym(p)*, while an original nom.pl. *tom(p)*, reconstructed at least for phonological reasons, evolved into *toym(p)*. This analysis highlights the fact that the plural paradigm of TchB *sam(p)* differs from the others solely by the presence of the enclitic particle *-m(p)*: the inflection and the evolution of the various endings are the same as those of the other demonstratives.

4.2.4. EVOLUTION OF THE PRONOMINAL ADJECTIVE TCH B *allek*, A *ālak* ‘OTHER’

The paradigm of TchB *allek*, A *ālak* ‘other’ reveals some peculiarities, since it seems to be halfway between the inflection of the demonstratives and that of the thematic adjectives. The aim of this section is to clarify how the inflection of this pronominal adjective evolved from Proto-Indo-European to Tocharian. As will become clear, the historical evolution of TchB *allek*, A *ālak* ‘other’ has much in common with that of the demonstratives, especially as regards their feminine inflection.

The etymological connection of TchB *allek*, A *ālak* ‘other’ with Gk. ἄλλος, Lat. *alius*, OIr. *aile*, Arm. *ayl*, Goth. *aljis*, etc. is an acquisition of the very first insights into Tocharian (cf. the equation “*ālyek* = *alius*” in Sieg & Siegling 1908: 927). All these cognate formations can be traced back to PIE **h₂elios* (cf. perhaps also Ved. *anyá-* ‘other, different, alien’, Av. *aniia-*,

³²⁸ One may point out that an obl.pl.f. *toym* (< **toymp*) is somewhat peculiar, since TchB *toy* usually serves as a nominative plural. In my view, this difficult form can be interpreted in two ways: (1) the expected obl.pl. ***tomp* < **tonmp* was replaced by *toym(p)* at an early stage, because it would have been homophonous with the attested obl.sg. *tomp*; or, (2) if the obl.pl. *toy* in B504a4 is to be taken seriously, then the obl.pl. form *toym(p)* could be interpreted as the “regular” pre-form of a later *toynamp**. These two proposals are not mutually exclusive. Admittedly, the analysis of this pronominal set is specifically tricky because we have only one attestation of the feminine plural paradigm, and in general too few forms are attested to establish the evolution of the paradigm from archaic to late Tocharian B.

if *n* instead of *l* can be a secondary replacement, as per Mayrhofer EWAIA: I, 80).³²⁹ The singular and the plural paradigms run as shown in the following table (Winter 1992: 151f; Peyrot 2008: 127):

Table IV.12. Paradigm of TchB *allek*, A *alak*

		MASCULINE		FEMININE	
		TCHB	TCHA	TCHB	TCHA
SG.	NOM.	<i>allek</i>	<i>alak</i>	<i>alyāk</i>	<i>alyāk</i>
	OBL.	<i>alyek</i>	<i>ālyakām</i>	<i>allok</i>	<i>ālyäkyām</i>
PL.	NOM.	<i>alyaik</i>	<i>ālyek</i>	<i>alloñk(na)</i>	<i>ālkont</i>
	OBL.	<i>alyenikām</i>	<i>ālykes</i>	<i>alloñkna</i>	<i>ālkont</i>

The reconstruction of the Proto-Tocharian paradigm is quite difficult, since Tocharian A and B do not match in more than one case form, particularly in the feminine inflection.

There exist a number of variant and misspelled forms in Tocharian B. Let us start with the paradigm of the masculine.

According to Krause & Thomas (TEB §282), Pinault (2008: 548), and Fellner (2017: 156 fn.33), the nom.sg.m. *allek* would have had a variant *alyek*, but I was not able to find any evidence for this form. Even if some occurrences of a nom.sg.m. *alyek* really existed, they would not have been sufficient in number for claiming that *alyek* was a real variant of the regular *allek*. As far as the obl.sg.m. is concerned, Peyrot (2008: 127-8) points out that alongside the regular *alyek* we find one example of *alyenik*, attested in B346 a6 (late). He argues that the nasal may have been taken from the obl.pl.m. Otherwise, one may also think that it has been analogically introduced after some thematic adjectives, which has obl.sg.m. TchB *-eñ /-en/*.³³⁰ Still, in the plural, an isolated nom.pl. *alyaiñk* is found in B580 b1 (late frgm.), which may have acquired the nasal from the rest of the plural paradigm, cf. obl.pl.m *alyenikām* and pl.f. *alyenik(-)*.

The singular paradigm of the feminine does not display any relevant variant. An obl.sg.f. *alyok* is sometimes mentioned (cf. e.g. TEB §282; Pinault 2008: 516). Winter (1992: 151) hesitantly gives this variant as attested in B244 a1 (class.), *(a)lyok weś(e)ñ(āi)sa brahmasvar* “with another brahmasvara-sounding voice”, but the initial part of the lacuna is probably to be restored as *(uppā)l-yok weś(e)ñ(āi)sa brahmasvar* “with [his] brahmasvara-sounding lotus-voice” (as suggested by Georges-Jean Pinault apud CETOM: s. B244). As a consequence, variants may only be found in the feminine plural paradigm.

³²⁹ Pace Adams (DTB: 31), there is no need to reconstruct PIE **h₂el-no-* ‘that, yonder’ as the ancestor of the Tocharian forms. He further compares Tocharian with Lat. *ollus* ‘that’, OIr. *ol* ‘beyond’, OCS *lani* ‘in the past year’, but this connection is far-fetched for both semantic and comparative reasons (all these forms clearly point to an *o*-grade **(h₂)ol-no-*).

³³⁰ The forms *alleksa* in B42b4 (*wnolm=alleksa*) and IT24b1 (*nanw alleksa*) are not to be interpreted as perl.sg. but as sandhi variants of *allek ksa* (cf. IT137 a2: *///(a)llek ksa käryorttau lyakā-ne istak ///* “a certain merchant saw her. Suddenly...” (cf. Ogihara 2009: 403).

Peyrot (2008: 127-8) claims that *alloñk* (with the graphic variant *alloñṛk* in B173 a5) is only attested as a nominative, *alloñkna* (frequently written *alloñna*; cf. also *āalloñkna* in B45 a2) only as an oblique, while the morphological hapax *alloykna* in B200 a1, though unclear in the case, can successfully be compared with the late oblique plural *toyna ~ māktoyna*. In essence I agree with Peyrot's paradigm. However, we must also remark that the attestations of the nom.pl.f. are just a few and that they are by no means conclusive (three certain attestations in total, *āllōñ[kna]* in B133 a5, *alloñk* in B379 b2, and *alloñṛk* in B173 a5). There is further one additional form that Broomhead (1962: I, 24) read *alloñna*, in a context that clearly requires a nominative:

IT195 a6				
///yerkwantalañ	mewīyañ	alloñna	lwāsa	św(ātsi)
leopard(?): NOM.PL	tiger: NOM.PL	other:NOM.PL.F	animal:PL.A	food:INF
"Leopards, tigers, and other animals [crave?] food".				

On the contrary, Peyrot (l.c.) reads *alloñtā* in this line, which he interprets as a mistake either for *alloñna* or for *alloñkā*. However, there is not sufficient evidence for arguing that a nom.pl.f. *alloñkna* did not exist.

Turning back to the historical evolution of the paradigm, a peculiarity of this pronominal adjective is that in a Proto-Tocharian phase the emphatic particle **-kə* was added to the base **allæ-*. This particle is often suffixed to pronominal and other deictic words (cf. TchB *ykāk* 'still', TchB *šek* 'always', TchA *okāk* 'until'). As Winter (1992: 151f.) pointed out, it was initially inflected before the particle and, subsequently, after it as well (cf. gen.sg.m. *alyekēpi*). What we see before *-k* should therefore be the expected outcome. This is particularly evident in the case of Tocharian B but less so in the case of Tocharian A. Indeed, Tocharian A has largely reshaped the inherited paradigm of *alak*, following a general tendency to eliminate the ending before *-k* and move it to after the enclitic, with subsequent generalisation of the nominative form as the basic stem (Winter 1992: 153). All Tocharian A variant forms can be explained in light of this development. Thus, we have: obl.sg.m. *alakām* (cf. nom.sg.m. *alak*) vs. *ālyakām* (for expected **ālyak*); obl.sg.f. *ālyäkyām* (< **ālyäkyām*, cf. nom.sg.f. *ālyäk*); obl.pl.m. *ālyekäs* (cf. nom.pl.m. *ālyek*) vs. *ālykes* (for expected **ālyes*), etc. The plural paradigm of the feminine has been totally remade by the addition of *-ont* to the stem *āl-* (< **alak-*). A similar recharacterisation affected also the f.pl. TchA *mätkont* vs. B *mäktōna* *from TchA *mättak*, B *makte* 'himself (= Lat. *ipse*)' and probably originated after the f.pl. TchA *pont* (B *ponta*) from TchA *puk* 'whole, all' (Pinault 2008: 549). In light of all these replacements, Tocharian B is the best candidate for reconstructing the Proto-Tocharian paradigm of this pronominal adjective.

An important fact is that TchB *allek*, A *alak* displays allomorphy TchB *all-* ~ *aly-*, A *āl-* ~ *āly-* throughout the paradigm. In Tocharian B, the allomorph *all-* is found in the nom.sg.m. and in the entire inflection of the feminine, with the exception of the nom.sg. The contrast *-ll-* vs. *-ly-* has been the topic of controversial interpretations. Pinault (2008: 419-20 and 548f.) suggests that they are graphic variants of the palatalised lateral /l̥/. A different

analysis is provided by Malzahn (2010: 5). She argues that PIE **li* became **ll̥* and later it could have two different outcomes: (1) it has become palatalised *-ly-* /*l̥i*/ or (2) it has been depalatalised into *-ll-*. This assumption has to cope with some theoretical problems, given the fact that the twofold outcome of PTch **ll̥* would not have been conditioned by any phonetic context. Following in embryo an idea by Winter (1992: 152), Peyrot (2013: 223ff.) proposes another explanation for the alternation between *all-* and *aly-*. He suggests that PIE **li* became PTch **ll*, which underwent regular degemination in Tocharian A. It follows that the stem-allomorph TchB *all-* preserves the archaic state of affairs, while the stem-allomorph *aly-* is a secondary innovation. Similar considerations have been recently provided by Fellner (2017: 156 fn.156), who has however attempted to question the evolution PIE **li* > PTch **-ll-*. Indeed, he claims that the expected outcome of PIE **li* must have been PTch **-l-* (continued as such in Tocharian A) and that the other forms of the paradigm showing the allomorph TchAB *-ly-* and the geminated TchB *-ll-* could be motivated through analogy after the gerundives in TchB *-lle*, A *-l* (see §4.3.3.1). Analogy from the gerundives is, in my view, not very convincing, and Fellner's sound law PIE **li* > PTch **-l-* is difficult to be tested. I found the following attestations of the degeminated stem TchB *al-*:

archaic: *aleksa* (B284 b7); classical-archaic: *alekk* (B207 b2), *ālēk* (B221 a3); classical: *ale(k)* (THT1109 b1), *aloñkna* (THT1115 a1); classical-late: *alekā* (B289 b3); late: *alekā* (B197 b1), *alekak* 'in addition' (OT12.1 a5), *aloñkna* (B189 b5).

As is clear, the distribution of the variants is difficult. Indeed, the stem *al-* can be found since the archaic period but it is only rarely attested. However, rather than considering the stem *al-* as an archaism that occasionally surfaces in sporadic forms, one could attribute it either to scribal mistakes or to prior examples of the reduction *ll* > *l* that characterises late and colloquial texts in particular (Peyrot 2008: 66; Fellner 2017: 151).³³¹

³³¹ There are problems in some derived forms, like TchB *aletstse* 'foreign, unrelated' (= Skt. *ajñāti-*), TchB *alokālymi* 'leaving all other things aside' (= Skt. *ekānta*), and TchB *ālām* 'elsewhere', since they all show single *-l-*. It is generally assumed that some kind of degemination in preaccentual position took place (so Hilmarsson 1996:16; Winter 1992:154f., which also dismiss a direct relation of *ālām* with PIE **aljo-*). In the case of TchB *alokālymi*, we also find the variant *ālokālymi* in the archaic fragment B125 a1 and *all(o)kā kālymisa* in THT1520 a1 (arc.), which might be used as an argument that an original phrase *allok kālymi* (obl.sg.f.) was univerbated in **allokākālymi* > **allokālymi* > **alokālymi* in the archaic phase of Tocharian B. Otherwise, one has to assume that the original form was *alo-*, which is indeed the lectio difficilior, and that the variants with *allo-* were influenced by *allok* (see now Hackstein, Habata & Bross 2019: 181-2). As far as TchB *aletstse* is concerned, the obl.sg.f. *alletst(s)ai* in THT1544.b a2 and the derived abstract *alletsñe* '± foreignness' in B327 a4 are of no value, since they are from fragments drafted in late Tocharian B. Even though one is tempted to explained all these forms as directly derived from *allek*, it is also possible to trace the form TchB *ale-* in some of these forms back to a different morphological formation (Pinault 2008: 549), namely

Turning back to the historical evolution of *allek*, it is now possible to assume that the regular outcome of this paradigm would have displayed **all-* as the basic stem. In a second stage, a new stem **all̥-* has analogically been introduced, through morphological palatalisation, after the paradigm of the demonstratives, which has the same distribution between palatalised and non-palatalised stem (Winter 1992). After analogy has taken place, the paradigm would have displayed non-palatalised nom.sg. vs. palatalised stem in the rest of the paradigm of the masculine.

On the other hand, if we look at the inflection of the feminine, we notice that the distribution is the other way around: a form *aly-* is attested in the nominative singular only, while a stem *al-* is attested in all other cases. As a consequence, we should admit that the nom.sg.f. *alyāk* has been created at a later stage. This reconstruction is rejected by Malzahn (2011: 97), who suggests that PIE **-eh₂* yielded TchB *-a* and assumes that TchB *alyāk* is the regular outcome of PIE **h₂el̥eh₂*. If so, however, a non-palatalised form **allāk* should have expected. As a consequence, I believe that the form TchB *alyāk* has been secondly recharacterised after the feminine inflection of the adjectives that always displays the pattern *-^[+pal.]a* (see §4.3.4.5). The reason behind this replacement is that the expected outcome of PIE **h₂el̥eh₂* would have merged morpho-phonologically with that of PIE **h₂el̥eh₂-m*, both resulting in **allā-*.

In the feminine plural, the stem TchB *allon̥k-* is common to both nominative and oblique. Winter (1992: 153) and Hilmarsson (1996: 18) analysed it as a reduced form of a pre-existing **allonakə*, which lost the **-a-* before the enclitic. This reconstruction is totally ad hoc.³³² In my view, the form *allon̥k* must be explained just as much as the feminine plural paradigm of the demonstratives: TchB *allon-* is the regular outcome of the obl.pl. PTch **allāns*, which in turn is the direct continuant of the acc.pl. PIE **h₂el̥eh₂-ns*. The nom.pl. *allon̥k* obviously cannot go back to PIE **h₂el̥eh₂-es* > **al̥iās*, given that it should have evolved into PTch **allā-* > TchB ***allo-*. Since this nom.pl. has an obvious parallel in the demonstratives, we could assume that also in the paradigm of *allek* the inherited oblique has been extended to the nominative. A distinction between nominative and oblique was then reintroduced by the addition of *-na* to the oblique form, which resulted in the attested *allon̥k-na* (cf. also the late obl.pl.f. TchB *toy-na*).

Summing up, it becomes clear that the historical evolutions of both the pronominal adjective TchB *allek* and the demonstratives have much in common, especially as regards their feminine inflection. The general development of TchB *allek* is recounted below:

PIE **h₂el-o-*, which is found, for example, in Germanic, where a form **ala°* still occurs in compounds (Goth. *ala-*, OHG *ala-*, Kroonen 2013: 23).

³³² Even more improbable is Van Windekens (1979: 267 and 273) and Adams' (DTB: 31) nom.pl. **allo-ñ-kə*.

Table IV.13. Evolution of TchB *allek*

		PIE	PRE-PTCH	PTCH	PRE-TCHB	TCHB
MASC.	N.SG.	* <i>h₂eljos</i>	> * <i>allæ</i>	> * <i>allæ-kə</i>	> * <i>alle-kə</i>	> <i>allek</i>
	A.SG.	* <i>h₂eljom</i>	> * <i>allæ</i>	>> * <i>al(ʎ)æ-kə</i>	> * <i>al(ʎ)e-kə</i>	> <i>alyek</i>
	N.PL.	* <i>h₂eljoj</i>	> * <i>allæy</i>	>> * <i>al(ʎ)æy-kə</i>	> * <i>al(ʎ)ay-kə</i>	> <i>alyaik</i>
	A.PL.	* <i>h₂eljons</i>	> * <i>allæns</i>	>> * <i>al(ʎ)æns-kə</i>	> * <i>al(ʎ)en-kə</i>	>> <i>alyenk-äm</i>
FEM.	N.SG.	* <i>h₂elje_{h₂}</i>	> * <i>allâ</i>	>> * <i>al(ʎ)a-kə</i>	> * <i>al(ʎ)a-kə</i>	> <i>alyāk</i>
	A.SG.	* <i>h₂elje_{h₂}</i> m	> * <i>allâ</i>	> * <i>allâ-kə</i>	> * <i>allo-kə</i>	> <i>allok</i>
	N.PL.	* <i>h₂elje_{h₂}</i> es	> * <i>allâ</i>	> * <i>allâ-kə</i>	>> * <i>allon-kə</i>	> <i>allonk</i>
	A.PL.	* <i>h₂elje_{h₂}</i> ns	> * <i>allâns</i>	> * <i>allâns-kə</i>	> * <i>allon-kə</i>	>> <i>allonkna</i>

PIE.	Reconstructed PIE paradigm of * <i>h₂el-jo-</i> ;
PRE-PTCH.	Regular outcome of the paradigm, where the sequence PIE * <i>lj</i> regularly evolved into * <i>ll</i> ;
PTCH	Two important modifications took place, which reshaped the whole paradigm: (1) morphological palatalisation of the masculine paradigm, analogically extended after the demonstratives; and (2) palatalisation of the nom.sg.f. after the pattern of the thematic adjectives. These developments solved cases of homophony in the paradigm, especially between nominative and oblique in the singular inflection of both the masculine and the feminine;
PRE-TCHB.	Extension of the regular outcome of the obl.pl. to the nom.pl., which must have become homophonous with the obl.sg.f.;
TCHB.	Finally, a new distinction between nominative and oblique was reintroduced in the feminine, since the latter took the ubiquitous marker of the feminine plural TchB <i>-na</i> . Perhaps, on the model of this new case form, the obl.pl.m. was remarked by <i>-äm</i> /-ən/, according to the following diachronic proportion: obl.pl.f. <i>allonk-na</i> :: obl.pl.m. <i>alyenk</i> >> obl.pl.f. <i>allonkna</i> :: obl.pl.m. <i>alyenk-äm</i> .

4.2.5. SUMMARY AND CONCLUSION

This section has focused on the diachronic evolution of the pronominal inflection in Tocharian. Although a large number of endings and forms have been discussed, my results are not difficult to summarise. The main goal was to demonstrate that the great majority of the endings of both Tocharian demonstratives and the pronominal adjective TchB *allek*, A *alak* ‘other’ can be directly traced back to Proto-Indo-European. Furthermore, I have adduced new evidence in support of the scenario provided by Stumpff (1974 and 1990) for the evolution of the plural inflection in Tocharian B. The main part of my analysis has involved the paradigm of the feminine. In particular, I have argued that the nominative plural PIE **téh₂-es* > **tās* evolved regularly into Tocharian A *to-*, while the accusative plural PIE **téh₂-ns* > **tāns* yielded Tocharian A *tos-*. The archaic Tocharian B plural form *tom* was

explained as the regular outcome of the accusative plural PIE **téh₂-ns* > **tāns*, while its secondary spread to the nominative plural was motivated on paradigmatic grounds. The feminine paradigm of TchB *allek* can be analysed under the same light.

At this point, one important issue remains: if the oblique plural was morphophonologically maintained, this may complicate the traditional view on the hypothesised Proto-Tocharian merger of the PIE feminine plural with the PIE neuter plural, which should therefore be further investigated. On this and other issues, I will concentrate in the following section.

4.3. GENDER IN THE ADJECTIVAL INFLECTION

4.3.1. OVERVIEW OF THE TOCHARIAN ADJECTIVAL SYSTEM

Tocharian adjectives agree in number, gender, and, with certain limitations, in case with their target. Indeed, when the head-noun is inflected in the nominative, the oblique, or, often, in the genitive, the adjective consistently agrees with it; when the head-noun is inflected in one of the secondary cases or, sometimes, in the genitive, the adjective is in the oblique. See the following examples from Tocharian B:

B350 a4

<i>ipreräntse</i>	^T <i>ānte</i>	<i>snai</i>	<i>tärkarwa</i>	^C <i>astare</i>	<i>klautka</i>
sky:GEN.SG	surface:NOM.SG	without	cloud:OBL.PL.A	pure:NOM.SG.M	become:3SG.PRT.ACT

“The surface of the sky became pure without clouds”. (cf. Thomas 1957: 93)

AS5A a2

^T (<i>pe</i>) <i>laiknetse</i>	^C <i>kreñcepi</i>	^C <i>stamalñeşşe</i>	^T <i>akalksa</i>
Law:GEN.SG.A	good:GEN.SG.M	prtng to establishment:OBL.SG.M	wish:PERL.SG.A

“[...] through the wish for the establishment of the good Law”.

AS7J b1

<i>lwāke</i>	<i>tatākau</i>	<i>mā(sketār)</i>	(<i>s</i>) <i>u</i>
pot:NOM.SG	be:PRT.PART.NOM.SG	be:3SG.PRS.MID	this:NOM.SG.M
<i>cm(e)lane</i>	^C <i>kreñt</i>	^T (<i>pe</i>) <i>laiknetse</i>	
birth:LOC.PL.A	good:OBL.SG.M	Law:GEN.SG.A	

“This one becomes a pot of the good Law in the rebirths”. (cf. Pinault, Malzahn & Peyrot apud CETOM)

From a derivational point of view, Tocharian adjectives can be derived from nominal (e.g. TchB *käşşīññe* ‘related to a teacher’ from *käşşi* ‘teacher, master’), and verbal bases (e.g. gerundives and preterite participles), rarely from adverbs (e.g. TchB *späntaitstse* ‘having faith’ from *spantai* ‘trustingly’), and pre- and postpositions (e.g. TchB *eñşketstse* ‘lasting, permanent’ from *eñške* ‘up to’). From an inflectional point of view, they are traditionally grouped into four classes. This classification has been established by the authors of the *Elementarbuch* (TEB §213-247), who selected the masculine plural paradigm of Tocharian B as the standard criterion, as shown in the following table (corresponding forms in Tocharian A are put in square brackets):

Table IV.14. TEB adjectival classes

CLASS	NOM. PL.	OBL. PL.	EXAMPLE
I.	TchB <i>-i</i> [A <i>-e</i>]	TchB <i>-em</i> [A <i>-es</i>]	TchB <i>astari</i> <i>-em</i> 'pure' [A <i>āstre</i> <i>-es</i> 'id.']
II.	TchB <i>-ñ</i> [A <i>-š</i>]	TchB <i>-(nā)ñ</i> [A <i>-ñcäs</i>]	TchB <i>klyomōñ</i> <i>-om</i> 'noble' [A <i>klyomäs</i> <i>-āñcäs</i> 'id.']
III.	TchB <i>-ñc</i> [A <i>-mś, -š</i>]	B <i>-ntām</i> [A <i>-ñcäs</i>]	TchB <i>perneñc</i> <i>-entām</i> 'worthy' [A <i>parnoš</i> <i>-oñcäs</i> 'id.']
IV.	TchB <i>-š</i> [A <i>-š</i>]	TchB <i>-šām</i> [A <i>-ñcäs</i>]	TchB <i>yāmoš</i> <i>-ošām</i> 'having done' [A <i>yāmuš</i> <i>-uñcäs</i> 'id.']

Each class can in turn be divided into subclasses, on the basis of minor differences in their inflection. Historically, the first class continues the PIE thematic inflection, while the other classes go back to the PIE athematic inflection.

Class II is divided into five subclasses, which are usually traced back to different types of PIE nasal stems. Tocharian A and B often diverge in the respective inflection of this class. A good example in this sense is provided by the common adjectives in TchB *-mo*, A *-m* of Class II.5, where, in the paradigm of the masculine, Tocharian A has taken over some endings from the *nt*-declension (Class III) in the oblique singular and plural, and from the declension of the preterite participle (Class IV) in the nominative plural (cf. TchB obl.sg.m. *klyomom* vs. TchA *klyomānt*; obl.pl.m. TchB *klyomom* vs. TchA *klyomāñcäs*, see Peyrot 2010; nom.pl.m. TchB *klyomōñ* vs. TchA *klyomäs*, all from TchB *klyomo*, A *klyom* 'noble'). Another important mismatch between Tocharian A and B can be found in Class II.4, where, in the paradigm of the masculine, Tocharian B *n*-forms are matched by the regular continuants of the thematic inflection in Tocharian A (cf. nom.pl.m. TchB *täpreñ* /*təpréñ(ə)* / < **-æñā* < **-on-es* vs. A *täpre* < **-æy* < **-oĭ* from TchB *tapre* /*təpre*/, A *tär* < **dʰub-ró-* 'deep', see below §4.3.3.1).

As far as Class III is concerned, in some (isolated) cases, the comparison between Tocharian A and B is straightforward, e.g. obl.sg.m. TchB *krent*, A *krant* 'beautiful' < PTch **krænt* (but cf. also the Tocharian A variant *krañcām*, which has taken over palatalisation from the nom.pl.), or nom.pl.m. TchB *poñc*, A *poñś* 'all' < PTch **pāñcā*. A productive section of this class can be traced back to the PIE possessive formations in **-ŷent-*, where in Tocharian A the expected nom.pl.m. **-ñś* < **-ñc* has been remade in *-š* after the preterite participle.

Class IV corresponds to the Tocharian preterite participles, which continue the PIE perfect participles in **-uos-*.

This quick overview makes clear that a grammatical sketch of the Tocharian A and B adjectival systems taken together can only be provided with some difficulty, since a number of analogical processes have independently occurred in both languages. These have sometimes blurred the derivations of some adjectival types from the common antecedent. As a consequence, the classification of the TEB has given rise to criticism.

Among the problematic aspects is the fact that it is entirely based on Tocharian B, even though the endings of Tocharian A do not very often match those of Tocharian B, both synchronically and diachronically. However, since TEB's classification is the only standard so far, and the aim of this chapter is to discuss the inflections diachronically, it will be taken as a starting point.

4.3.2. AIM AND STRUCTURE OF THE SECTION

The two pivotal questions that this section addresses are: (1) what type of gender system Tocharian inherited from the proto-language, and (2) how it evolved in the adjectival system. These two questions lead to a number of sub-issues, which revolve around the status of the feminine gender and its evolution in the thematic declension. In fact, this topic has become one of the most controversial sections of the Tocharian historical morphology. Further pivotal issues concern the evolution of the neuter gender and its functional loss as a category of target gender.

In order to solve these problems, I will first focus on the reconstruction of the Proto-Tocharian paradigms of those adjectival declensions that have played a relevant role in the evolution of the gender system. The reconstruction is based on a systematic comparison between Tocharian A and B. Subsequently, I will compare the obtained Proto-Tocharian adjectival system with that reconstructed for Proto-Indo-European, in order to understand the relevant modifications that have occurred and to comprehend which types of morpho-phonological mergers between the three inherited genders have taken place.

4.3.3. RECONSTRUCTION OF THE PROTO-TOCHARIAN ADJECTIVAL PARADIGMS

In what follows, I will discuss the outcome of thematic and athematic types in the Tocharian adjectival system. The aim of this paragraph is twofold: (1) providing a more detailed overview of the synchronic inflectional patterns that define the classes, and (2) understanding how these classes must be reconstructed for Proto-Tocharian. In the first part, I will deal with the thematic type, in the second part I will discuss some athematic types, and in the third part I will summarise the achieved results, providing a general overview of the reconstructed adjectival system of Proto-Tocharian.

4.3.3.1. The thematic type (Class I)

By far, Class I is the most productive. It consists of both primary and secondary adjectives, which are derived by means of a relatively large number of suffixes. The fact that these formations can ultimately be traced back to the PIE thematic type is made evident by the masculine inflection: cf. nom.obl.sg. TchB *-e*, A *-Ø* < PTch **-æ* < nom.sg. PIE **-o-s*, acc.sg. PIE **-o-m*; nom.pl. TchB *-i*, A *-e* < PTch **-æy* < PIE nom.pl. **-oḡ*; obl.pl. TchB *-em*, A *-es* <

PTch *-*æns* < acc.pl. PIE *-*o-n̥s* (see §4.3.4.1 for further remarks). The suffixes employed and the adjectives derived are the following:³³³

- (1) *re/r*-adjectives (e.g. TchB *astare*, A *āštār* ‘pure’);
- (2) *lle/l*-adjectives, i.e. the gerundives (e.g. TchB *pralle*, A *prāl* ‘to be carried’);
- (3) *tte/t*-adjectives, i.e. the privatives (e.g. TchB *etānkätte*, A *atānkāt* ‘not obstructed’);
- (4) *te/t*-adjectives, i.e. the ordinals (e.g. TchB *trite*, A *trit* ‘third’);
- (5) *iye/i*-adjectives (e.g. TchB *ñakc(i)ye*, A *ñākci* ‘divine’);
- (6) *šše/ši*-adjectives (e.g. TchB *orašše*, A *orši* ‘wooden’);
- (7) *ññe/ṃ*-adjectives (e.g. TchB *lwāññe*, A *lwem* ‘pertaining to an animal’);
- (8) *tstse/ts*-adjectives (e.g. TchB *kramartstse*, A *krāmārts* ‘heavy’);
- (9) *ñci*-adjectives (only in Tocharian A, e.g. TchA *k_uleñci* ‘female’).

Krause & Thomas (TEB §213-229) grouped these thematic suffixes under various subclasses, on the basis of two parameters that pertain to Tocharian B. These parameters are: (1) the feminine plural form TchB *-ona* vs. *-ana*; (2) the paradigmatic alternation between palatalised and non-palatalised stem-final consonant in the masculine inflection. The intersection of these criteria leads to the creation of four different subclasses: (1) adjectives with no palatalisation alternation and f.pl. *-ana* (*šše-*, *ññe-*, *(i)ye*-adjectives); (2) adjectives with palatalisation alternation and f.pl. *-ana* (*tstse*-adjectives); (3) adjectives with no palatalisation alternation and f.pl. *-ona* (*re*-adjectives and *lle*-adjectives); (4) adjectives with palatalisation alternation and f.pl. *-ona* (*tte*-adjectives and *te*-adjectives).

Some criticism can be aimed at this classification, which, once more, implies that Tocharian A should be adapted to it. Before proceeding further, however, I think we must go deeper into the second parameter, commenting on the role of palatalisation in Tocharian. Indeed, one has to distinguish carefully between “phonological/etymological” and “morphological/analogical” palatalisation. The first type is the “regular” palatalisation, i.e. the assimilation of a consonant in front of etymological high (semi-)vowels, which results in a palatal (or palatalised) consonant. On the other hand, palatalisation is also a morphological phenomenon in Tocharian: “it is not a palatal feature added to a consonant, but it is a system of morphological alternations of non-palatal and palatal consonants” (Peyrot 2013a: 223). It is “morphological” because (1) it is no longer caused by sound law, but has an analogical mechanism behind it, and (2) it has morphological functions, since

³³³ In addition, Krause & Thomas (TEB §220 and 232) list a handful of adjectives in TchB *-ke*, A *-k*, whose inflection is shifting between Class I and Class II.5 (nom.pl.m. TchB *-añ*). These formations are almost exclusively found in loanwords, and they are mostly used as substantives (e.g. TchB *ašanike*, A *āšānik* ‘worthy, arhat [epithet of the Buddha]’ from TchB *ašāṃ*, A *āšāṃ* ‘worthy’ ← Khot. *āṣaṇa* ‘id.’; TchB *eynāke* ~ *aināke*, A *enāk* ‘vulgar’ derived from an Iranian source related to Christian Sogd. *yn’qwč* / *ēnākūč* ‘blasphemer’, MP *ēnāk* ‘ill’, Isebaert 1980: 115).

the contrast palatalised vs. non-palatalised consonant marks different grammatical forms (Peyrot 2013: 69-70).

We can now turn to TEB's subgrouping. If we consider only the phonological/etymological palatalisation and not the analogical one, adjectives from Class I can be grouped into two subclasses, which account synchronically for several mismatching forms in the plural of *both* Tocharian A and B. Indeed, based on this parameter the paradigm can be predicted: (1) those adjectives without a palatalised suffix throughout the paradigm (i.e. without phonological/etymological palatalisation) take the f.pl. TchB *-ona*, A *-aṃ*, while (2) those adjectives with a palatalised suffix throughout the entire paradigm (i.e. with phonological/etymological palatalisation) take f.pl. TchB *-ana*, TchA nom.pl.f. *-āñ*, obl.pl.f. *-ās*. Morphological/analogical palatalisation is found in the first type only.

In this regard, a special problem is posed by the derivatives in TchB *-tstse*, A *-ts*, since they belong to different subgroups in the two Tocharian languages. Indeed, in Tocharian B they have morphological palatalisation and nom.obl.pl.f. *-ana* (Subclass I.2), while in Tocharian A they have no palatalisation and nom.obl.pl.f. *-aṃ* (Subclass I.1). Although this mismatch is certainly fuzzy, I will argue that this synchronic incoherent distribution of the *tstse/ts*-derivatives can be explained diachronically: in Proto-Tocharian, the *tstse/ts*-adjectives inflected just like the *re/r*-adjectives (Subclass I.1) and Tocharian A has preserved the archaic state of affairs (see below). A general scheme of the two subclasses is given below:

Table IV.15. Class I

CLASS	ADJECTIVES		PALATALISATION		PLURAL PARADIGM	
	TCHB	TCHA	PHONOLOGICAL	MORPHOLOGICAL	MASCULINE	FEMININE
I.1	<i>-re</i>	<i>-r</i>	NO	NO	nom. TchB <i>-i</i> , A <i>-e</i> obl. TchB <i>-eṃ</i> , A <i>-es</i>	nom. TchB <i>-ona</i> , A <i>-aṃ</i> obl. TchB <i>-ona</i> , A <i>-aṃ</i>
	<i>-</i>	<i>-ts</i>	NO	NO		
	<i>-lle</i>	<i>-l</i>	NO	YES		
	<i>-tte</i>	<i>-t</i>	NO	YES		
	<i>-te</i>	<i>-t</i>	NO	YES		
I.2	<i>-ññe</i>	<i>-Vṃ</i>	YES	NO	nom. TchB <i>-i</i> , A <i>-ñi</i> obl. TchB <i>-eṃ</i> , A <i>-näs</i>	nom. TchB <i>-ana</i> , A <i>-āñ</i> obl. TchB <i>-ana</i> , A <i>-ās</i>
	<i>-ṣṣe</i>	<i>-ṣṣi</i>	YES	NO		
	<i>-iye</i>	<i>-i</i>	YES	NO		
	<i>-tstse</i>	<i>-</i>	YES	NO		
	<i>-ñci</i>	<i>-</i>	YES	NO		

The subgrouping outlined above does not only predict the plural paradigm of the feminine, but that of the masculine too. Since these two subclasses show independent diachronic problems, they will be treated separately in the following paragraphs.

Subclass I.1

Mostly, adjectives in TchB *-re*, A *-r* are primary in Tocharian. They are built with the PIE thematic suffix **-ro-*, which is well attested in adjectives describing “property concepts” and has a prominent role in the Caland system. See the following examples: TchB *ratre*, A *rtār* ‘red’ < PIE **h₁rud^h-ró-* (cf. Gk. ἑρυθρός, Lat. *ruber*, etc.), TchB *swāre*, A *swār* ‘sweet’ < PIE **suh₂d-ró-* (cf. Gk. ἡδύς, Skt. *svādú-*, etc.), TchB *pärkare*, A *pärkär* ‘long’ < PIE **b^hṛǵh-ró-* (cf. Arm *barjr* ‘high’, Hitt. *parkuš* ‘id.’, Skt. *brhánt-* ‘id.’, etc.). Isolated *re/r*-adjectives derived from verbal bases can seldom be found (e.g. TchB *kätkare* ‘deep, far’, possibly from *kätk-* ‘to put down (?)’³³⁴, if the root is to be set up with this form and meaning; TchB *cäñcare* ~ *cüñcare*, A *cüñcär* ‘charming, pleasant’ from TchB *cänk-* ‘to please’, DTB: 272).

As pointed out by Hilmarsson (1991: 14f.), the so-called privatives in TchB *-tte*, A *-t* continue a common Indo-European derivational construction of the type Ved. *amṛta-* ‘immortal’, Gk. ἄμβροτος ‘id.’; Ved. *ákṣita-* ‘imperishable’, Gk. ἀφθίτος ‘id.’; Lat. *invictus* ‘invincible’ (Pinault 2015c: 162). The general construction is as follows: **n-*[verbal base]-*to-* ‘one who is not *x*’. In Tocharian, these formations are synchronically based on the subjunctive stem. See the following examples: TchB *ekamätte* ‘future’ (cf. *käm-* ‘to come’) < **æ(n)-k^wámā-tæ* ‘not (yet) come’ < **n-g^wñ-tó-*; TchB *etänkätte*, A *atänkät* ‘unhindered’ (cf. TchB *tänk-*, A *tänk-* ‘to stop’) < **æ(n)-tänkā-tæ* ‘not stopped’ < **ñ-tñg^h-tó-*. They are very productive in Tocharian B, while in Tocharian A they are marginally attested (TEB §228). The gemination in the Tocharian B suffix is not well explained but must be secondary.

The source of the *te/t*-ordinals is obvious. They can unambiguously be compared with several reflexes of PIE **-to-* of the type Gk. πέμπτος, Lat. *quintus*, TchB *piñkte*, A *pänt*, all from **penk^w-to-* ‘fifth’ (Winter 1992: 129f.).

The adjectives in TchB *-tstse*, A *-ts* form possessive derivatives (e.g. TchB *oktatsē*, A *oktats* ‘having eight parts, eightfold’ from TchAB *okt* ‘eight’). Some of them can be synchronically interpreted as Tocharian primary adjectives, like TchB *wartse*, A *wärts* ‘broad, wide’ and TchB *orotstse* ~ *wrotstse* ‘great, big’. See Fellner (2014c) for a recent account of these formations.

Finally, both Tocharian languages have two types of gerundives (Fellner 2017: 150): the first derives from the present stem (e.g. TchB *kärsanalle*, A *kärsnāl* ‘to be known’ from the prs. TchB |*kärsána-*|, A |*kärsnā-*|); the second derives from the subjunctive stem (e.g. TchB *karsalle*,³³⁵ A *kärsāl* ‘knowable’ from the subj. TchB |*kärsa-*| ~ |*kārsa-*|, TchA |*krasā-*| ~ |*krāsā-*|). The former expresses necessity, the latter possibility and mostly refers to future events (Peyrot 2013: 24; Thomas 1952). The exact origin and PIE derivation of this suffix is

³³⁴ Cf. DTB: 169. See also Peyrot (2013: 730) and Malzahn (2010: 567-8) for the problems involved with this verbal root.

³³⁵ The gerundive II of TchB *kärsa-* is attested once as *kärsälle* in archaic THT₁₃₄ a4, but cf. the verbal abstract *karsalñe* /*kārsalñe*/ and the infinitive *karsatsi* /*kārsatsi*/.

debated. Since this issue is tightly connected to the inflection of the gerundives, I will address it in the following paragraph.

Inflectional patterns and related problems of Subclass I.1.

The standard inflection of Subclass I.1 can be exemplified by the adjectives in TchB *-re*, A *-r*:

Table IV.16. Inflection of the *re/r*-adjectives

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	<i>-re</i>	<i>-r</i>	<i>-rya</i>	<i>-ri</i>
OBL. SG.	<i>-re(ṃ)</i>	<i>-rām</i>	<i>-ryai</i>	<i>-ryām</i>
NOM. PL.	<i>-ri</i>	<i>-re</i>	<i>-rona</i>	<i>-ram</i>
OBL. PL.	<i>-reṃ</i>	<i>-res</i>	<i>-rona</i>	<i>-ram</i>

As we can see, palatalisation affects neither the paradigm of the masculine, nor that of the feminine, but in the feminine singular we find the cluster *-ry-*.³³⁶ This is at odds with the other derivatives of Class I.1, which show paradigmatic palatalisation in all the cases but the nominative singular and the feminine plural. This is particularly evident for the privatives in TchB *-tte*, A *-t* and the ordinals in TchB *-te*, A *-t*. Their inflection is as follows:

Table IV.17. Inflection of the privatives and ordinals

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	<i>-(t)te</i>	<i>-t</i>	<i>-(c)ca</i>	<i>-ci</i>
OBL. SG.	<i>-(c)ce</i>	<i>-cām</i>	<i>-(c)ai</i>	<i>-cām</i>
NOM. PL.	<i>-(c)ci</i>	<i>-ce</i>	<i>-(t)tona</i>	<i>*-tam</i>
OBL. PL.	<i>-(c)ceṃ</i>	<i>-ces</i>	<i>-(t)tona</i>	<i>*-tam</i>

Since, on the one hand, no etymologically expected palatalisation can be reconstructed for these derivatives and, on the other hand, the opposition between non-palatalised nom.sg.m. vs. palatalised suffix in the rest of the paradigm is fairly common in Tocharian, we have to assume morphological, i.e. analogical, palatalisation to explain their inflection. It follows that the non-palatalised forms are the older ones, while the palatalised forms are secondary (just like the paradigm of TchB *allek*, A *ālak* ‘other’, on which see §4.2.4). The

³³⁶ That *-ry-* is not a palatalised consonant, but a consonant cluster, is shown by e.g. the comparison between the obl.sg.f. TchA *ešlyām* vs. TchA *rtäryām*, from *ešäl* ‘to be given’ and *rtär* ‘red’. In the former, the cluster *-šly-* is formed by biconsonantal /-šl-/, while, in the latter, the cluster *-try-* is formed by triconsonantal /-try-/, otherwise we would have had ***rätryām*.

origin of this morphological palatalisation is relatively easy to envision: it originated after the demonstratives, where we find the same correspondence between non-palatalised nom.sg.m. TchB *se*, A *sa-* and palatalised stem *ce(-)*, *ca(-)* in the rest of the paradigm (Winter 1992: 131; cf. §4.2.3.2).

In this context, the gerundives in TchB *-lle*, A *-l* present a special problem, which is also connected to the origin of these formations. According to Krause & Thomas (TEB §225), the gerundives would not display any clear alternation of the stem-final consonant throughout the paradigm. They give the following inflection:

Table IV.18 Inflection of the gerundives (TEB §225)

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	<i>-lye</i> , <i>-(l)le</i>	<i>-l</i>	<i>-lya</i>	<i>-lyi</i>
OBL. SG.	<i>-lye</i> , <i>-(l)le</i>	<i>-läm</i>	<i>-lyai</i>	<i>-lyām</i>
NOM. PL.	<i>-lyi</i>	<i>-lye</i>	<i>-(l)lona</i> , <i>-lyana</i>	<i>-lam</i>
OBL. PL.	<i>-lyem</i>	<i>-lyes</i>	<i>-(l)lona</i> , <i>-lyana</i>	<i>-lam</i>

The inflectional problems involved can be summarised as follows (Fellner 2017: 149-50): (1) variant case-forms in the m.sg. and in the f.pl. of Tocharian B (cf. m.sg. *-lle* ~ *-le* ~ *-lye*; f.pl. *-llona* ~ *-lona* ~ *-lyana*); (2) (apparent) discrepancies between Tocharian A and B in some case-forms of the masculine singular.

The distribution of the variants *-ll-* ~ *-l-* has been explained by Schmidt (1986a: 641) and confirmed by Peyrot (2008: 66) as due to a phonetic development: they demonstrated that in late and colloquial texts the geminate *-ll-* is frequently simplified in *-l-*.

Fellner (2017) has recently dealt with the other variants and with the origin of the suffix. His reconstruction is recounted below.

Confirming the paradigm as given by Krause and Thomas, he claims that TchB *-lle* and *-lye* were two variants of the nominative singular. Fellner aims to explain the matching pairs TchB *-ll-* : A *-l-* and TchB *-ly-* : A *-ly-* as the outcomes of two different inherited suffixes that merged morphologically in the prehistory of Tocharian. The former would go back to the neuter abstract nouns in PIE **-lom*, and the latter to the “animate” adjectives in PIE **-lijo-*.³³⁷ Accordingly, the masculine plural paradigm of both Tocharian languages would have continued the formations in **-lijo-*. On the other hand, the singular paradigm would have been independently remade in the two Tocharian languages: nom.obl.sg. TchB *-lye* < nom.sg. **-lijos*, acc.sg. *-lijom* (masculine), while the nom.sg. TchB *-lle* and the nom.sg. TchA *-l*, obl.sg. *-(l)ām* < nom.acc.sg. **-lom* (neuter). The gemination of PTch **-l-* > TchB *-ll-* is

³³⁷ The different origin of TchB *-ll-*, A *-l-*, on the one hand, and TchAB *-ly-*, on the other hand, has been already proposed by other scholars, like Couvreur (1947a), Krause (1952: 203), and Van Windekens (1979: 81-2). This analysis cannot be further supported. See the remarks by Thomas (1985: 59) and the main text above.

explained by Fellner as a secondary development on the model of *-ly-*, which he interprets as a geminate */-ll-/*. The fact that these two different PIE formations coalesced in Proto-Tocharian in a single paradigm would be due to the fact that the masculine and the neuter singular merge morpho-phonologically in other thematic formations.

I believe there are some flaws in these explanations. First, Fellner's reconstruction implies that the Proto-Tocharian paradigm of the gerundives would have had an impressive number of variant forms, because the alleged merger between the formations in **-lom* and those in **-lijo-* would have been a very scattered development, which started in Proto-Tocharian but ended independently in the two Tocharian languages, i.e. after the breakup of Proto-Tocharian. In addition, I do not see any place where the Proto-Tocharian outcome of **-lom* and **-lijo-* could have coalesced, because the former would allegedly have formed abstract substantives, and the latter verbal adjectives. Second, Fellner explains the gemination of TchB *-ll-* analogically after the geminated *-ly-*. Although I agree with him that *-ly-* may stand for */-ll-/*, the claim that an original sequence Pre-TchB **-le* < PTch **-læ* < PIE **-lom* would have been firstly levelled in *-lle* and then turned to be *-le* in late and colloquial texts sounds circular to me. Third, I believe that the distribution between non-palatalised nom.sg.m. *-lle* vs. palatalised obl. sg. m. *-lye* is well established in archaic Tocharian B.

Indeed, I found that the nom.sg.m. is consistently spelled as *-lle* in archaic texts, while a nom.sg.m. *-lye* is only sporadically attested (e.g. IT7 a2 *ma wär tärkalye ikene*, 'not at the place where the water is to be sprinkled', Ogihara 2009: 93 and 333-4; cf. also Adams' translation 'in a place not accessible to water', 2015: 132).³³⁸ As a consequence, the variant *-lye* for the nominative singular started to appear only in classical texts and it does not become the standard variant even in late texts, where the original sequence *-lle* has regularly been reduced to *-le*. This is consistent with Thomas' findings (1967), who concludes that the distinction between nom.sg.m. *-lle* and obl.sg.m. *-lye* was disappearing (but never actually disappeared) only in classical and late Tocharian B (Peyrot 2008: 118-9). I therefore agree with Winter (1962b; 1992: 152) and Pinault (1989: 102-3; 2008: 458) that the gerundives in TchB *-lle*, A *-l* are to be derived from a single PIE ancestor, which can indeed be reconstructed as **-lijo-* (cf. Arm. *-(e)li*, Olsen 1999: 395-8). As already outlined above (§4.2.4), Peyrot (2013a; cf. already Winter 1992) has recently proposed that the expected development of the PIE sequence **-li-* was PTch **-ll-*, which evolved regularly in TchB *-ll-* and TchA *-l-* (cf. Gk. ἄλλος 'other' < PIE **aljos*). If that is correct, it follows that, in the paradigm of the gerundives, all forms with palatalised *-ly-* must be explained as secondary and that the non-palatalised forms should be considered in particular for

³³⁸ For instance, I found the spelling *-(l)le* in the following archaic texts: IT47 b2 *aille*; IT80 a2 *smille*; IT106 a4 *yamäšälle*; IT122 a3 (*yama*)*ššälle*; IT157 b2 *yamäšälle*; IT234 b3 *pralle*; IT268 a2 *tselle*; AS7N a4 *sarkäššälle*; AS9A b8 *sonopälle*; AS12C a2 *yänmälle*; AS12D b4 *yätalle*; B123 b2 *källälle*, b7 *||ššälle*; B134 a5 *prekšälle*; B135 b7 *aišälle*; B139 a5 *srukälle*, b6 *tsänkäll(e)*; B140 b3 *kly(e_u)ššälle*; B118 b4 *srukalle*; B127 a4 *yätalle*; B132 a4 *weššälle*, etc.; B240 b1 *slänkäll(e)*; B251 a3 *klyelle*; B279 b4 *šmälle*; B291.a b6 (*kata*)*lle*; B336 a5 *šwale*; THT1193 b5 *yätalle(?)*; THT1536.a *källalle*; THT1540.i *källälle*; THT1184 a2 *paššälle*; THT1535.d a1 *yamäšälle*.

historical considerations and reconstructions of the paradigm of the gerundives. In both Tocharian A and B, we have seen that the *ly*-forms are found in all the paradigm but the nominative singular masculine and the feminine plural. This type of paradigm strongly resembles that of the privatives, the ordinals, and the pronominal adjective TchB *allek*, A *ālak*. This analysis was firstly proposed by Winter (1962: 1068-9 fn. 2), and it is further supported by both the distributions of the variants in Tocharian B texts and a closer look at the Tocharian A paradigm.³³⁹

The status of the spelling <ly> is ambiguous, but Fellner is probably right in saying it could stand for /ǎ/. Indeed, evidence for a palatalised geminate /ǎ/ can be found in the occasional attestations of the spelling <lly> in archaic, classical, but even in late Tocharian B texts, as in *tärkänallya* (IT7 a6 [arch.]), *paššallyi* (B67 b5 [class.]), *lkaššällye* (THT3599.a b3 [arch. ~ class. (?)]), *triwäšällya* (W39 b1 [class.]), *naššallyanasa* (B324 a5 [late]), — *ššäll(y)i* (B133 b8 [arch.]), *///-llyi* (IT289 a2 [class.]) and in the paradigm of TchB *allek* ‘other’, e.g. *allye(ñkamtso)* (B137 a7 [arch.]), *(a)lly(e)kämpa* (B144 b3 [arch.]), *ällyaik* (B273 a1 [arch.]), and *allyenkä* (THT1860 a4 [arch.]). One has to note that the spellings with geminate *-lly-* /ǎ/ occur specifically in the inflection of both gerundives and TchB *allek* ‘other’. This may indicate that *-lly-* /ǎ/ is a secondary palatalisation of geminate **-ll-* /-ll-/ only. On the contrary, in the inflection of e.g. the *ekšalye*-type (nom.sg. *-lye* /-ǎe/, obl.sg. *-ly* /-ǎ/), nom.pl. *-lyi* /ǎy/, obl.pl. *-lyäm* /ǎn/) we never found spellings with *-lly-*, but always *-ly-*, as was pointed out to me by Michaël Peyrot (p.c.).

In Tocharian A, the obl.sg. *-l-äm* instead of the expected **-ly-äm* can easily be explained diachronically: PTch **-lyæ* > Pre-TchA **-ly* (apocope) > **-l* (depalatalisation in word-final position, cf. PTch **-ññæ* > TchA *-m* /-n/) >> TchA *-läm* (regular recharacterisation of the inherited oblique, cf. obl.sg.m. *-rā-m* << PTch **-ræ*; see §4.3.4.1).

Finally, we have to deal with the adjectives in TchB *-tstse*, A *-ts*. Their paradigm is as follows (TEB §222; SSS §251):

Table IV.19. Inflection of the *tstse/ts*-adjectives

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	<i>-tstse</i>	<i>-ts</i>	<i>-ttsa</i>	<i>-tsi</i>
OBL. SG.	<i>-cce</i>	<i>-tsäm</i>	<i>-ttsai</i>	<i>-tsäm</i>
NOM. PL.	<i>-cci</i>	<i>-tse</i>	<i>-ttsana</i>	<i>-tsam</i>
OBL. PL.	<i>-ccem</i>	<i>-tses</i>	<i>-ttsana</i>	<i>-tsam</i>

³³⁹ The same clear distribution between palatalised vs. non-palatalised stem can also be found in the isolated adjective TchB *empele* ‘terrible, horrible’ (from PTch **æñ-pæle*, lit. ‘without law’, cf. TchB *pele* ‘law, way’), which has non-palatalised nom.sg.m. *empele* (e.g. B254 a4), pl.f. *empelona* (B42 b4) vs. palatalised obl.sg.m. *empelye* (e.g. B4 a6), nom.pl.m. *empelyi* (e.g. THT1254 b3), obl.pl.m. *empelyem* (e.g. AS7A a2), nom.sg.f. *empelya* (e.g. IT145 b4), obl.sg.f. *empelyai* (B88 b3).

As correctly pointed out by Fellner (2014c), these adjectives pose two difficulties: (1) the variation between non-geminated and geminated suffix in Tocharian B; (2) (morphological) palatalisation in Tocharian B vs. lack of it in Tocharian A. To these, I shall add: (3) contrast between pl.f. TchB *-ana* (< PTch **-ana*) and TchA *-aṃ* (< PTch **-āna*).³⁴⁰ With regard to the first two problems, I agree with Fellner that the gemination of the suffix and the morphological palatalisation in Tocharian B must be regarded as innovations, which have analogically been extended after other adjectives of Class I: on the one hand, the gemination is taken from the adjectives in *-šše* and *-ññe*, and, on the other hand, the palatalised consonant *-c-*, i.e. *-cc-*, from the privatives, the ordinals, and the pronouns.³⁴¹ This conclusion is informed by Tocharian historical phonology. Indeed, PTch **ts* was not a palatalised consonant in the Proto-Tocharian sound system: it can go back to PIE **d* (through **dz*, as per Ringe 1996: 147f.) or to inherited sequences of Pre-PTch **t + y* (as in this case), through assibilation. In some verbal formations, the palatalised variant of TchB *ts* appears to be *-tsy-* (cf. the preterite causative *tsyara-* from *tsəra-*), while in some others it remains *-ts-* (cf. the *e*-presents *|tʰenke-* from *tsənka-* ‘to rise’ vs. TchB *|ñewe-* from *nəwa-* ‘to roar’).³⁴² This may lead to the conclusion that PTch **ts* < Pre-PTch **t + y* has no palatalised counterpart in Proto-Tocharian and for considering the *tstse/ts*-adjectives as parallel to *re/r*-adjectives.³⁴³ The contrast between TchB *-ana* : TchA *-aṃ* can be seen under the same light. Indeed, if I am right to see the palatalisation **-ts-* > *-c-* as secondary, then the original feminine plural was **-āna* for Proto-Tocharian, which regularly yielded TchA *-aṃ*. Then, in the prehistory of Tocharian B, the sequence **-tsəna* (and not the

³⁴⁰ The contrast invoked by Fellner (2014c: 50 fn.3) between pl.f. TchA *-tsām* and *-tsam* is illusory. Tocharian A rather attests a differentiated plural set nom.f. *-āñ*, obl.f. *-ās* (cf. *knānmmune pñintu* [...] *palketsāñ* ‘wisdom [and] virtue are bright’ in A17 b5-6; *palketsāñ tom* ‘these [are] bright’ A148 a2-a3; *wārtsāñ* [...] *śanwem* ‘the jaws [are] broad’ in A292 a6; *||lkātsāñ* in A158a2; *śonkātsāñ* THT1136 b3; *tsopktsāñ* in A398 a3 and THT1145 b3; *||ktsās* THT1378.a a8). However, only a few cases of agreement environments are attested with this plural set, so we cannot exclude it may also refer to masculine head-nouns. This plural paradigm is better explained as secondary (perhaps through analogy after the inflection of the *nomina agentis* of the *āknats*-type ‘fool, ignorant’ [TchB *aknātsa*] or after the feminine paradigm of other adjectives of Class I.2).

³⁴¹ That the paradigm of the *tstse*-adjectives was analogically reshaped after that of the demonstratives can be also seen in the dual: cf. non-palatalised du. TchB *tai*, TchA *tīm* ‘the two; these, those two’ and non-palatalised du. TchB *cakkartsane* ‘wheeled’, *aletsi* ‘foreign’, etc. (Kim 2018: 83).

³⁴² See Peyrot (2013: 69-88) for an in-depth discussion on the palatalisation in the Tocharian verbal system.

³⁴³ Furthermore, Pre-PTch **dz* (> PTch **ts*) might in turn undergo palatalisation, resulting in **ś*, as the following isolated example seems to confirm: PIE **dékʷn* ‘ten’ > **dʰəkə* > PTch **śəkə* > TchB *śak*, A *śäk* (Pinault 1989: 49-50; Ringe 1996: 146-8). The contrast *ts* vs. *ś* have probably been extended in the Tocharian A verbal system. Examples include: the present stem TchA *|śalpa-*, B *|tʰəlpə-* < PTch **|tʰəlpə-/e-* from TchA *tsālpā-*, B *tsālpā-* ‘pass away; be redeemed’, see Peyrot (2013: 846); reduplicated preterite [class 2] *|śāsāmā-* from TchA *tsām-* ‘to promote’; the imperfect stem *|śākā-* from TchA *tsākā-* ‘to pull out’, on which see Peyrot (2012a).

expected ***ccana*) was analogically adapted to *-ññana* and *-şşana* with subsequent generalisation of the *a*-vocalism. To recapitulate, three arguments lead us to think that the *tstse/ts*-adjectives originally belonged to Class I.1 in Proto-Tocharian: (1) **ts* had no reconstructable palatalised counterpart in Proto-Tocharian; (2) Tocharian A has pl.f. *-tsam*, which clearly point to *-tsâna*; (3) Tocharian B does not have a pl.f. **ccana*, with analogical palatalisation (cf. the paradigm of the singular, which has *-cc-*, while in Tocharian A we find *-ts-* throughout).

In light of the above, I think that the original paradigm of Class I.1 was *mutatis mutandis* that of the *re/r*-adjectives and that of the Tocharian A *ts*-adjectives.

However, before the breakup of Proto-Tocharian, analogical palatalisation affected those derivatives whose formant suffix could undergo palatalisation. Through this process, a new differentiation between the nominative and the oblique was reintroduced in the singular paradigm of the masculine (*-lle* vs. *-lye*; *-tte* vs. *-cce*; *-te* vs. *-ce*; *-tstse* vs. *-cce*). On the other hand, the *re*-adjectives, which did not have any palatalised counterpart, took the obl.sg. marker *-m*, which was not a mandatory ending in Proto-Tocharian (§4.3.4.1).

The evolution of the masculine paradigm can be summarised as follows:

Table IV.20. Evolution of the masculine paradigm

	TCHB	TCHA		PTCH
NOM. SG.	<i>-e</i>	<i>-Ø</i>	<	<i>*æ</i>
OBL. SG.	<i>-e(m)</i>	<i>-ä-m</i>	<<	<i>*æ(m)</i>
NOM. PL.	<i>-i</i>	<i>-e</i>	<	<i>*æy</i>
OBL. PL.	<i>-em</i>	<i>-es</i>	<	<i>*æns</i>

On the other hand, the Proto-Tocharian feminine paradigm poses a special problem, which involves the oblique singular. Indeed, the correspondence TchB *ʸai* : A *ʸām* does not allow us to reconstruct the Proto-Tocharian state of affairs with confidence. Several scholars dealt with this problem, trying to trace these two endings back to a single Proto-Tocharian antecedent (see §3.7.2.5). However, I failed to see any phonological reality for such a development. As a consequence, I follow the reconstruction recently defended by Peyrot (2012), according to which the obl.sg.f. TchB *ʸai* is to be compared with the gen.(-dat.) sg. TchA *ʸe*.³⁴⁴ As a matter of fact, Tocharian B does not synchronically display any gen.sg.f. form, which may be an indication of the functional reanalysis of this ending as an oblique marker (see further §3.5.2, §3.7.2). Furthermore, the generalisation of the oblique marker TchA **-n* to the paradigm of the feminine can easily be explained as an innovation: on the one hand, if Proto-Tocharian had obl.sg.f. **ʸan*, there is no reason why it should not have been maintained in Tocharian B; on the other hand, TchA **-n* is the

³⁴⁴ Pace Kim (2018: 84) there is no evidence that **ʸay* already served as an oblique in Proto-Tocharian.

ubiquitous oblique ending in Tocharian A. It follows that the Proto-Tocharian obl.sg.f. cannot be reconstructed as either **-ai* or **-an*, but as an unmarked ending **-a* (see Peyrot 2012: 203-4 and the evidence from the TchA (§)i-adjectives below). The Proto-Tocharian paradigm of the feminine would have been as follows:

Table IV.21. Proto-Tocharian feminine paradigm of Subclass I.1.

	TCHB	TCHA		PTCH
NOM. SG.	<i>-a</i>	<i>-i</i>	<	<i>*-a</i>
OBL. SG.	<i>-ai</i>	<i>-ām</i>	<<	<i>*-a</i>
GEN. SG.	—	<i>-e</i>	<	<i>*-ay</i>
NOM. PL.	<i>-ona</i>	<i>-am</i>	<	<i>*-āna</i>
OBL. PL.	<i>-ona</i>	<i>-am</i>	<	<i>*-āna</i>

Subclass I.2

All adjectives that can be ranged under this subclass show etymological palatalisation throughout the entire paradigm of both the singular and the plural. There are, however, several mismatches between the inflection of Tocharian A and that of Tocharian B, which have given rise to strong disagreement as far as the reconstruction of the Proto-Tocharian paradigm is concerned. In the following, I will first deal with the derivational patterns of the suffixes and, then, I will move on to the inflectional problems.³⁴⁵

The suffix TchB *-(i)ye*, A *-i* comes from PIE **-iō-*, used for the formation of adjectives of appurtenance (cf. PIE **medʰ-iō-* ‘middle’ > Ved. *mādhyā-*, Gk. μέ(σ)σος, Lat. *medius*, etc., cf. Meillet 1937: 261f.). A good comparable example is TchB *patarye* ‘paternal’, Skt. *pítrya-* ~ *pítriya-*, Gk. πατρίος, Lat. *patrius*, etc. Among the suffixes from Subclass I.2, it is not very productive, and it is only employed to derive adjectives from nominal bases.

On the other hand, TchB *-sse*, A *-ssi* is by far the most productive adjectival suffix in both Tocharian languages. It has genitival semantics and denotes appurtenance in a broad sense (i.e. also material, origin, designation, etc.). In addition, derived adjectives in *-sse/ssi* are frequently used instead of a noun inflected in the genitive (Zimmer 1982; Meunier 2015), and they translate the determiner (i.e. the first term) of Sanskrit karmadhāraya-compounds (Meunier 2015a). A derivational peculiarity of this suffix is that it can form denominal adjectives from singular, dual, and plural stems when these stems are different, i.e. only with number suffix (e.g. sg. TchB *läklešše* ‘sorrowful’ [ləklé-šše], pl. TchB *läklentašše* [ləklénta-šše] ‘pertaining the pains, painful’; sg. TchB *paiyyešše* [payyé-šše] ‘pertaining to the foot’, du. *painešše** [payné-šše] ‘pertaining to the feet’, Hajnal 2004) and can be attached to nouns, pronouns, and adverbs. Its origin has always been in question. Some scholars have traced it back to **-s(i)ō-* (cf. Lat. *-ārius* and the Anatolian adjectives

³⁴⁵ For an overview of the meanings of the suffixes, see Adams (2009), Fellner (2013), and Meunier (2015: 199-217).

in *-ssa/i-, see Ringe 1996: 117; Pinault 2008: 515; Adams 2009: 308), while some others derive it from *-sk(i)io- (cf. Arm. -c^ci, see Pedersen 1941: 95; Couvreur 1947a: 141; Fellner 2013: 63f.).

The development of the adjectives in TchB *-ññe* is problematic, since it is generally assumed they have two formal equivalents in Tocharian A: adjectives in *-ññi* and adjectives in *-(e)m*. In Tocharian B, this suffix is quite productive and forms adjectives of appurtenance with genitival semantics. An important derivational mechanism involved is that the *ññe*-adjectives are mostly derived from substantives referring to living beings (animals, humans, demons, deities, etc.) or from personal pronouns (TchB *ñiññe* ‘my, pertaining to me’ from the genitive of *ñās* ‘I’; TchB *taññe* ‘your’ from the genitive of *tuwe* ‘you’; TchB *šaññe* ‘own; nature, essence’ from *šañ* ‘id.’). Additionally, they can rarely be derived from terms for body parts (TchB *paññe* ‘related to the foot’ from *pañ* ‘foot’; TchB *špālñe* ‘related to the head’ from **špal* ‘head’ (vel sim.), cf. TchA *špāl* ‘id.’ and TchB *špālmem* ‘superior, excellent’, originally an ablative of **špāl*) and inanimate concrete nouns (TchB *pyapyaññe* ‘related to flowers’ from *pyāpyo* ‘flower’).³⁴⁶ Furthermore, the feminine *-ñña* has been grammaticalised as a suffix of feminine oppositional nouns (e.g. *ñakte* ‘god’ : *ñakteñña* ‘goddess’, see Malzahn 2013: 115-6 and §3.5.2). The reasons for this grammaticalisation are easy to envision: (1) on a comparative level, oppositional feminine nouns are typologically very often formed through denominal adjectives denoting appurtenance; (2) among the Tocharian suffixes denoting appurtenance, only TchB *-ññe* displays such a clear derivational animacy-based feature, which makes it the best candidate to express gender-marking, i.e. a motion suffix.

Returning to the origin of the suffix and to its Tocharian A counterparts, scholars have long debated about the fuzzy match between TchA *-(e)m*, *-ññi* and TchB *-ññe*. These suffixes have traditionally been traced back to PIE **-n(i)io-*. Hilmarsson (1987a, followed by Pinault 2011a) dealt with the history and the distribution of the suffixal alternations **-i/ī-* and he argued that Tocharian developed two variants of this suffix, i.e. **-niio-* and **-njo-*, which were originally conditioned by Sievers’ Law. According to him, PIE **-niio-* and **-njo-* yielded PTch **-ñayæ* and **-ñæ* respectively. Later, they merged in Tocharian B *-ññe*,

³⁴⁶ One can notice that the Khotanese suffix *-ñña* has suspicious similarities with TchB *-ññe*, A *-(e)m*. Konow (1932: 62) argued that Khot. *-ñña* forms denominal adjectives from substantives. Degener (1989: 129f.) clarified that it is only used with nouns denoting living beings. It is not productive and mostly used with borrowed items, although important examples with inherited nouns are attested (cf. Khot. *dahñña* ‘belonging to a man’ from *daha-* ‘man’; Khot. *kaviñña* ‘belonging to a fish’ from *kavā-* ‘fish’). See Degener (1989: 130) for a doubtful etymological attempt. It goes without saying that the Khotanese and the Tocharian suffix share a core semantic feature. However, Khot. *-ñña* is limited to a handful of derivatives, while TchB *-ññe*, A *-(e)m* is very productive. As a consequence, one wonders whether Khotanese borrowed this suffix from Tocharian and inserted it to a quite productive class of adjectival derivatives that have *-ī-* before the nasal. See further the following correspondences: TchA *nāgem* ‘snakelike, related to the Nāga-’ : Khot. *nāgñña-* ‘id’; TchA *kinnarñña-* ‘(female) Kinnara-’ (probably from TchB *kinnarññe*) : Khot. *kindarñña-* ‘id.’.

while Tocharian A maintained them distinguished, i.e. **-ñayæ* evolved TchA *-ññi* and **-ñæ* yielded TchA *-(e)ṃ*.

Recently, Fellner (2013) has questioned this reconstruction. He claims that TchA *-(e)ṃ* cannot correspond to TchB *-ññe*, because the inherited PIE sequence **-n̥-* never palatalised the nasal in Tocharian. Accordingly, Tocharian would have inherited only **-ni̯o-*, which evolved TchB *-ññe*, A *-ñi*. He based this reconstruction on the non-palatalised nom.sg.f. TchB *sana*, A *sām* ‘1’, which he traced back to PIE **smih₂* (cf. Gk. *μία*, Arm. *mi*) > **smya* > PTch **sanya-* (see also Fellner 2017: 154 fn. 17). However, there exist several counterexamples to Fellner’s hypothesis. See the following clear correspondences, where, in the same context, a palatalised nasal of Tocharian B is matched by an non-palatalised nasal of Tocharian A: (1) the isolated adjective TchB *arkwañña* : A *ārkiṃ* ‘white’; (2) the adjectival type TchB *klyomña* : A *klyomiṃ* ‘noble’ (Class II.5); (3) the noun TchB *śamñā-ṃ-śka* : A *somiṃ* ‘girl’; (4) the noun type TchB *weśeñña* : A *waśeṃ* ‘voice’; (5) the adjectives TchB *pokaiññe* ‘related to the arm’ : *pokeṃ* ‘bracelet’, etc. Fellner comments on (some of) these counterexamples and he consistently resorts to either analogical changes in order to explain the palatalisation of the nasal in Tocharian B or to accidental attestation of the suffix *-eṃ* in the matching forms of Tocharian A. However, in light of all the examples outlined above, it is more likely to reconstruct analogy only for the nom.sg.f. TchB *sana*, A *sām* ‘1’, where, in fact, the dental nasal cannot be the regular outcome of the sequence **-my-*.³⁴⁷

Nonetheless, if one compares formally TchB *-ññe* and TchA *-eṃ*, another problem comes immediately to light: how to explain the vowel *-e-* in Tocharian A? Winter (1977), Hilmarsson (1987a), and Pinault (2008: 458-9) dealt with this problem and convincingly suggested the following change: PTch **-VññV* > Pre-TchA **-VññV* (raising of anaptyctic **i*) > **-Vñā* (apocope), and then **-ñ* > *-n* (noted *-ṃ*) with monophthongisation of the new diphthong. This phonetic development explains several (apparently) irregular mismatches between Tocharian A and B: (1) TchB *-əñ-* :: A *-in-*, e.g. TchB *ostaññe* /ostāññe/ ‘related to the house’ vs. TchA *waṣtiṃ* < Pre-TchA **wastāññā* < PTch **wastāññæ*,³⁴⁸ (2) TchB *-añ-* :: A *-en*, TchB *hwāññe* /lwāññe/ ‘related to an animal’ vs. TchA *lweṃ* < Pre-TchA **hwāññā*

³⁴⁷ Despite the fact that an evolution PIE **-m-* > **-n-* in front of the semivowel **-i-* is sometimes attested in other Indo-European languages (cf. Gk. *βαίνω*, Lat. *veniō* < PIE **g^wṃ-je/o-*), Fellner’s path PIE **smih₂* > **smya* > PTch **sanya-* is without parallels in Tocharian. On the possible origin of TchB *sana*, A *sām*, see further fn. 388.

³⁴⁸ Perhaps, one may also add TchB *warñe**, A *wriṃ** ‘aquatic’ < PTch **wəraññæ*, which is used in both Tocharian languages as a modifier of the word for ‘animal’, thus ‘aquatic animal(s)’, cf. B588 a4 *wārñi lwasā*; A154 a4 *wriñāñ lwā*; A394 a2 *wriñās lwā*. As one can see, in B588 the adjective *wārñi* is inflected as a nom.pl.m., but it agrees with the alternating noun *lwasā* ‘animals’. This is unexpected, since *warñe** should have been inflected as a feminine plural. As already pointed out by Claus-Peter Schmidt (1972; cf. also Hartmann 2013: 109, 534-5), however, in Tocharian B metrical passages alternating nouns sometimes agree with a masculine modifier in the plural, replacing the usual feminine concord. This is a poetic device aimed to adjust the syllable count in poetry (cf. also Peyrot 2008: 116 on the plural variants *palskalñi*, m. ~ *palskalñenta*, alt.).

< PTch **twaññæ*; (3) TchB *-eñ-* :: A *-en*, TchB *weśeñña* ‘voice’ vs. TchA *waśeṃ* < Pre-TchA **waśa’ñā* < PTch **wæśæññæ*; TchB *weñ-* ‘to say’ vs. TchA *weñ-* < Pre-TchA **wa’ñā* < PTch **wæññ-* (Winter 1977; Peyrot 2013: 469–70).³⁴⁹

On the other hand, Fellner (2013) would dismiss this development, claiming that one would expect to find vowel raising also before the nom.pl. *-ñ*. I think this is not relevant parallel, because this phonetic change is not expected to occur in word-final position, and even if it effectively occurred, it could have been removed very easily by analogy (cf. the similar development in the outcome of the PIE cluster **-ns-*, which developed anaptyctic **i* only word-internally, see §4.3.4.1). Furthermore, as already pointed out by Winter (1977: 149–50), only Proto-Tocharian geminated sequences of the type **-VññV* are affected by this Tocharian A sound law. Lastly, the claim by Fellner that the suffix TchA *-eṃ* can be either inherited from PIE **-no-* (as per Couvreur 1947a) or borrowed from Skt. *-na-* seems difficult, and it does not explain how TchA *-e-* has come about. As argued above, TchB *-ññe* and TchA *-(e)ṃ* can be found in several comparable pairs of words, which also share the same animacy distribution of the base from which they derived (cf. *inter alia* TchB *aśiyaññe* : TchA *aśseṃ* [*< *āśya’ñā < *āśya’ññæ*] ‘pertaining to a nun’ from TchB *aśiya*, A *aśi* ‘nun’). It is therefore evident that TchB *-ññe* and TchA *-(e)ṃ* must be traced back to the same reconstructed suffix, which can be reconstructed as PIE **-ni(i)o-*.

As far as TchA *-ñi* is concerned, it is very sporadically attested, since it is limited to three adjectives only: TchA *oñi* ‘human’, TchA *yokañi* ‘thirsty’, and TchA *praskañi* ‘fearful’. TchA *praskañi* is a hapax legomenon attested in A111 b4, while *yokañi* is attested twice in construction with *kaśši* (*kaśši yokañi* ‘hungry and thirsty’, in A13 a1 and A105 b5; cf. also *||ime kälpo yokañ(i)||* in THT1143 a3). The only adjective that displays the expected semantics of the base from which it is derived is TchA *oñi* ‘human’. It is attested only once as a free word (A51 a2), since it normally figures in compounding with *cmol* ‘birth’ (cf. also the derived adjective TchA *oñi-cmolši* ‘pertaining to the human birth’). It is generally assumed that this adjective is the counterpart of TchB *eñkwaññe* ‘human’ (Van Windekens 1979: 119; Hilmarsson 1987a: 85; Pinault 2011a: 454). Winter (1961: 277) questioned this equation, claiming that the paucity of the attestations of the suffix TchA *-ñi* (vs. the productivity of its supposed counterpart TchB *-ññe*) may be an indication of its late creation. As a matter of fact, the stem from which *praskañi* (vs. *praski* ‘fear’) and *yokañi* (vs. *yoke* ‘thirst’) derived is not clear. If the adjectives were derived from the nouns, a different form might have expected, i.e. ***praskiñi* and ***yokeñi* (cf. *ypeši* ‘pertaining to the land’ from *ype* ‘land’; *pekeši* ‘pertaining to the drawing’ from *peke* ‘drawing’).³⁵⁰

³⁴⁹ Cf. further TchB *oñkolmaiññe*, A *oñkalmeṃ* ‘of the elephant’ and TchB *ršākaññe* : A *riṣakeṃ* ‘propre à un sage’.

³⁵⁰ Similar considerations have been put forward by Sieg, Siegling & Schulze (SSS §29), who claim that *praskañi* and *yokañi* are derived from the respective verbal roots and not from the nouns, since “[d]ie alleinnachweisbaren Substantivformen [...] lassen sich lautlich mit den Adjektiven nicht gut vermitteln”. As far as TchA *oñi* is concerned, Winter proposes a formation in TchA *-i*, thus **oñk-i* > **oñši* > *oñi*, although the reduction **-ñś-* > *-ñ-* is, to my knowledge, unattested (cf. also 3sg.opt. *nśitār* from TchA *näk-* ‘to perish, disappear’).

Nonetheless, precisely the fact that these adjectives are derivationally and semantically obscure may be an indication for their early creation. Furthermore, the relation between TchB *eñkwaññe* and TchA *oñi* < **onk-ñi* cannot be questioned (the loss of **k* is parallel to TchB *epiñkte* : A *opänt*, TchB *piñkte* : A *pänt*, see Peyrot 2013: 538f.; cf. also TchA *āñcām* vs. *āñm-*, with *ñcm* > *ñm*). An additional fact is that these adjectives seem to be uninflected, and they mostly occurred in fixed expressions and derivatives. This may be used to claim that they continue crystallised forms of the adjectival paradigm, without renewed case endings. However, precise explanations about how the suffix TchA *-ñi* originated are missing. One possibility is that in TchA *oñi* a different development of PTch *-ññæ* took place, due to the fact that **-ññæ* was reduced to **-ñæ* in consonant clusters, i.e. **ænkññæ* > **onkñæ* > **onñi* > *oñi*. But this explanation is very tentative.

Finally, there is the suffix *-ñci*, which is a peculiarity of Tocharian A. It is limited to a handful of adjectives. The most prominent members are *k_uleñci* ‘womanly, female’ from *k_uli* ‘woman’ (obl. sg. *k_ule*) and *ātläñci* ‘manly, masculine’ from *ātäl* ‘man’. These formations are sometimes matched in Tocharian B by the *ññe*-adjectives, as in TchA *atroñci* ‘of a hero’ : TchB *etre_uññe** ‘id.’. In fact, TchA *-ñci* and TchB *-ññe* share the same semantic distribution. Furthermore, ordinals based on decades are also formed with TchA *-ñci*, like *taryākiñci* ‘thirtieth’ from *taryāk* ‘30’. Pinault (2017: 1343) traced it back to a palatalised doublet of **-ntæ* < PIE **-nto-* (of the type TchB *şuktante*, A *şäptänt* ‘seventh’, TchB *oktante*, A *oktänt** ‘eighth’, etc.; see also Van Windekens 1979: 123f.). Indeed, I think that he is right. More specifically, I see in this suffix a conglomerate of **-nt-* + **-yæ*.

Inflectional patterns and related problems

In Tocharian B, the derivatives in *-(i)ye*, *-şşe*, and *-ññe* inflected according to the following paradigm:

Table IV.22. Inflection of the adjectives from class I.2. in Tocharian B

	MASCULINE	FEMININE
NOM. SG.	-(⁶) <i>Ĉe</i>	-(⁶) <i>Ĉa</i>
OBL. SG.	-(⁶) <i>Ĉe</i>	-(⁶) <i>Ĉai</i>
NOM. PL.	-(⁶) <i>Ĉi</i>	-(⁶) <i>Ĉana</i>
OBL. PL.	-(⁶) <i>Ĉem</i>	-(⁶) <i>Ĉana</i>

If compared with adjectives of Subclass I.1., it can easily be recognised that the two most relevant differences are exactly those which define the distinction between the two subclasses: (1) phonological palatalisation throughout the paradigm; (2) feminine plural *-ana*. A related question is therefore what the relation between the plurals *-ana* and *-ona* has been. We will return to this issue in the following paragraphs.

In Tocharian A, we find a different situation. Indeed, a heavy restructuring process affected the paradigm of these derivatives. This process resulted in an incredible number

of synchronic variant forms, especially in the case of the adjectives in TchA *-i* and *-ši* (SSS §110-2). In the following, I will first outline the synchronic paradigms of these derivatives, and then I will discuss them diachronically.

The paradigm of the masculine is as follows (TEB §215):

Table IV.23. Masculine paradigm of the *i*- and *ši*-adjectives in Tocharian A

	MASCULINE	
	SINGULAR	PLURAL
NOM.	-(<i>š</i>) <i>i</i>	-(<i>š</i>) <i>iñi</i> [-(<i>š</i>) <i>iñ</i>]
OBL.	-(<i>š</i>) <i>i</i> -(<i>š</i>) <i>iñ</i> -(<i>š</i>) <i>iñäm</i>	-(<i>š</i>) <i>iñäs</i> [-(<i>š</i>) <i>is</i>]

The obl.sg. *-(š)i* is common and coexists with the nasal variants (SSS §111-2). Examples from the *i*-adjectives include: *ñäki* ‘divine’ (A13 b3) ~ *lāñciñ* (A17 b1, b5), *ñäkiñ* (A145 b6; A257 b3) ~ *lāñcinäm* (A56 a2; A57 a1). The case of obl.sg. *lāñci* ‘royal’ (A1 b4; A16 a4, b1; A276 a7; A394 a2; A403 a1) is less certain, since it consistently occurs before *wašt* ‘palace’, so it cannot be excluded it is in compounding with the noun (cf. also *lāñci waštantu* ‘royal palaces’ in A319 b5). In the plural, the variants nom.pl. *-(š)iñ*, obl.pl. *-(š)is* are not frequent, and they are mostly used with substantivised adjectives (cf. A1 b6 *māski kākālām ktänkeñc tsrašiñ sāmuddrā*, ‘the energetic ones cross the ocean that is hard to traverse’, cf. Thomas 1952: 34, but cf. also A447 b5 (*šñi*)*kek nu cem tsrašiñ šeñc*, ‘...hingegen waren sie energisch’, Knoll 1996: 17). I found the following examples: nom.pl. *-šiñ* (*tsrašiñ* A1 a3, b6; A447 b5, from *tsraši* ‘energetic’), *-iñ* (*kaśšiñ* A341 a4; A340 a4 (?), from *kaśši* ‘hungry’, cf. TchB *keščiye*), obl.pl. *-šis* (all.pl. *tsrašis-ac* A1 a3; perl.pl. *tsrašis-ā* A354 b3), *-is* (instr.pl. *kärpiš-yo* SHT4438 [= instr.pl. Skt. *anāryaiḥ* ‘vulgar, inferior’], from *kärpi* ‘common, vulgar’, cf. TchB *kärpiye**).

In the feminine paradigm we find even more variants:³⁵¹

³⁵¹ Sieg, Siegling & Schulze (SSS §110a and 111) gave two attestations of forms ending in *-eñ* and *-i* used as feminine plurals. The former is attested in A378.1 *wsāsy-ople{ñ}* *tsäkkiñ* ‘tsäkkis of golden lotuses’ (see Peyrot 2014 fn.46 for the correct reading and translation), where the anusvāra has to be restored and we cannot exclude that *wsāsy-opleñ* was an uninflected adjectival compound. The second is *lāñci waštantu* ‘the royal palaces’, which is better explained as a compound (Bernhard 1958: 158).

Table IV.24. Feminine paradigm of the *i*- and *ṣi*-adjectives in Tocharian A

	FEMININE	
	SINGULAR	PLURAL
NOM.	-(ṣ) <i>i</i> -(ṣ) <i>im</i>	- <i>yāñ</i> , - <i>ṣṣāñ</i> -(ṣ) <i>ināñ</i>
OBL.	-(ṣ) <i>i</i> -(ṣ) <i>im</i> -(ṣ) <i>inām</i> -(ṣ) <i>yām</i> , - <i>ṣṣām</i>	- <i>yās</i> , - <i>ṣṣās</i> -(ṣ) <i>inās</i>

In the nominative singular, -(ṣ)*i* alternates frequently with -(ṣ)*im*, which is, however, less attested. On the other hand, TChA -(ṣ)*i* used as an obl.sg. has a very limited productivity. See the following attestations (SSS §110-1; Peyrot 2012: 201-3): (1) *lāñci k_uleyac* “to the royal woman” in A6 b5; (2) *ñ(ä)kci nawemsi(n)e* “of divine and human...” in A410 b4; (3) *kn(ām)muneṣi kapṣiññis* “of the body of wisdom” in A244 b2 (from *knānmuneṣi* ‘related to knowledge’); (4) *opp{a}lṣi pārenā* “on the lotus throne” in A316 b5.³⁵² The obl.sg.f. -(ṣ)*im* is more frequently attested but it is not the standard variant (SSS §112 counted 9 attestations in total), because -(ṣ)*inām* represents the most productive obl.sg.f. For the last variant, I found the following attestations: *ñākcyām* A35 b1, A63 a6, A208 a3, THT3020a2; */-ṣām* A5 b1 (?); *puttiṣparṣām* A257 a3, A313 a2, A338 a2, THT2399 a6, YQII.12 a8 (from *puttiṣparṣi* ‘relating to Buddhahood’); *añcwāṣṣām* A340 a7 (from *añcwāṣi* ‘related to iron’); *wsāṣṣām* A378 5 (from *wsāṣi* ‘golden’); *oñi-cmolṣām* A379 a3 (from *oñi-cmolṣi* ‘related to the human birth’), *ñemiṣyām* A227-228 a1 (from *ñemiṣi* ‘pertaining to joy’).

The distribution of the variants in the plural paradigm is more intricate. As far as I know, among the *i*-derivatives only two adjectives attest a feminine plural inflection: TChA *ñākci* ‘divine’ and TChA *lāñci* ‘royal’. The former consistently has a nom.pl. *ñākcyāñ* (e.g. in A25 b2, A59 a1, A187 a6, A189 a2, A249 a1, A257 b4, A268 a1, A269-290 b1, A272 b4, etc.), and an obl.pl. *ñākcyās* (e.g. in A73 a6, A77 a2, A144 b2, YQII.14 a6, etc.), while the latter always has a nom.pl. *lāñcināñ* (A64 b1, A76-83 a4), and an obl.pl. *lāñcinās* (A76-83a3). In the *ṣi*-adjectives, the plural set -*ṣināñ* | -*ṣinās* constitutes the standard variant, but the second set is equally attested: *waśirṣṣāñ* A264 a2 (from *waśirṣi* ‘pertaining to a diamond’); *añcwāṣṣāñ* A295 a3, YQN.3 a7; obl.pl. *saṃsārṣṣās* A69 a2 (from *saṃsārṣi* ‘related to the saṃsāra’); *cmolwāṣṣās* A152 a6 (from *cmolwāṣi* ‘related to the birth’); *puttiṣparṣṣās* ~ *puttiṣparṣās* A25 b4, YQII.12 a6; *parnoreṣṣās* YQII.12 a6 (from *parnoreṣi* ‘of splendor’); *arkāmnāṣṣās* A375 b5 (from *arkāmnāṣi* ‘of the place of the dead’); *ñemiṣṣās* YQN.4 a6;

³⁵² I am not convinced by the interpretation of TChA *waṣti* ‘related to the house’ in A102 a2 */(wa)ṣti ñākteññānac* as an obl.sg. of an *i*-adjective in agreement with *ñākteññānac* ‘to the goddess’, as Peyrot (2012: 202) does. Indeed, if an *i*-adjective, I would expect palatalisation of the cluster **waṣt-i* > **waśśi* (cf. *lāñci* ‘royal’ from the obl.sg. *lānt* ‘king’). Furthermore, TChA *waṣti* is a hapax legomenon that appears to be at the beginning of a broken line so that the reading is effectively only *///ṣti*.

kapśimñās A7 b5-6 (from *kapśimñāsi* ‘related to the body’); *napemñās* YQI.2 a4, YQIII.6 a3 (from *napemsi* ‘of a human being’); *wlaluneşşās* A454 b3 (from *wlaluneşi* ‘belonging to death’).

From both a synchronic and a diachronic point of view, all these variants can be divided into two parallel paradigms: one is based on the historically regular form of the suffix *-(š)i-*, and the other on an extended nasal variant *-(š)in-*. The problems involved are various. They relate to both the diachrony of Tocharian A and the comparison with the Tocharian B matching paradigms. The first issue certainly concerns the origin of the nasal stem and how the variant forms are to be interpreted diachronically. On the other hand, if we look at the Tocharian B counterparts, two further questions arise: (1) what is the relation between nom.pl.f. TchA *-āñ*, obl.pl.f. *-ās* vs. pl.f. TchB *-ana* (nom. = obl.)? (2) what was the Proto-Tocharian paradigm of these adjectives?

Let us start with the first problem. If we compare the two-layer system of Tocharian A with the much simpler one of Tocharian B, the *n*-paradigm of Tocharian A appears to be an innovation. It follows that the shorter forms are to be interpreted as the archaic ones (Peyrot 2012: 201). The precise origin of the *n*-paradigm is not entirely clear, since it may have had multiples sources. As a matter of fact, the influence of the nasal inflection in the Tocharian adjectival system has been notably profound, and it has affected both Tocharian A and B also after the dissolution of Proto-Tocharian.

A good point of comparison may be the case of the *re*-adjectives in Tocharian B. Indeed, we find two types of *re*-adjectives in this language (Pinault 2008: 513-4): (1) the first is the regular outcome of the PIE thematic formations, which are ranged under Class I.1 (the so-called *astare*-type, cf. TchB *astare* ‘pure’, nom.pl.m. *astari*, obl.pl.m. *astarem*); (2) the second differs from the first in having developed a nasal inflection that is limited to the paradigm of the masculine (Class II.4, the so-called *tapre*-type, cf. TchB *tapre* ‘deep’, nom.pl.m. *täpreñ*, obl.pl.m. *täprenäm*).³⁵³ In addition, these two types of *re*-adjectives are differentiated by the number of syllables (disyllabic for the nasal type, polysyllabic for the thematic type), the subsequent position of the stress (synchronically on the ending in the nasal type, but on the root in the thematic type), and the formation of the verbal abstracts (the suffix is *-auñe* for the nasal type, but *-(əñ)ñe* for the thematic type). Tocharian A does not have this division of the thematic adjectives and there is no evidence it would ever know such a binary system. Therefore, one may wonder whether a similar recharacterisation of some “thematic” adjectives took place in the Tocharian A derivatives in *-(š)i-*.

Again, another possibility is that Tocharian A has generalised the singular form as the basic stem of the plural in all adjectival paradigms of Class I.2. A clear example in this sense is provided by the TchA *(e)m*-adjectives, whose paradigm is as follows (SSS §253):

³⁵³ A similar contrast can be also noticed in the dual inflection (cf. *i*-duals TchB *āstry* ‘pure’, *kätkri* ‘deep’ vs. *ne*-duals TchB *tparyane* ‘high’, *prakaryane* ‘firm’).

Table IV.25. Inflection of the adjectives in *-(e)ṃ* in Tocharian A

	MASCULINE	FEMININE
NOM. SG.	<i>-(e)ṃ</i>	-
OBL. SG.	<i>-(e)ṃ</i> <i>-(e)nāṃ</i>	<i>-(e)nāṃ</i>
NOM. PL.	<i>-(e)ñi</i>	<i>-(e)nāñ</i>
OBL. PL.	<i>-(e)näs</i>	<i>-(e)näs</i>

As can be seen, in an unattested phase of Tocharian A, the singular stem *-(e)ṃ* (the regular outcome of PTch **(V)ññæ*) was generalised and the endings were reattached to this new stem. Indeed, if we look, for instance, at the paradigm of the masculine, we notice that the nom.pl. *-eñi*, obl.pl. *-enäs* cannot be the expected outcomes of nom.pl. PTch **-ññæy*, obl.pl. PTch **-ññæns*, since the diphthong *-æy* was expected to yield TchA *-e* and we have no continuant of either the thematic vowel PIE **-o-* > PTch **-æ-*, or the cluster PTch **-ññ-*, which is expected to yield TchA *-ñ-* in non-final position.

I believe that the same kind of recharacterisation should be reconstructed for the derivatives in TchA *-i*, *-ši*, where a new stem **(s)in-* was created, probably based on a recharacterised oblique singular **(s)in*. The masculine paradigm nom.pl. *-(s)iñi*, obl.pl. *-(s)inäs* can indeed be descriptively interpreted as the oblique singular *-(s)in-* plus the palatalising nom.pl. *-i* on the one hand (< PTch **-äyə*) and plus the “athematic” obl.pl. *-äs* on the other hand (< PTch **-əns* < PIE *-ns*). The generalisation of the oblique singular **-n* may have been favoured by the productivity of the nasal stems in Tocharian. This restructuring development produced the contrast between nasal and nasalless stems. The latter is to be interpreted as the regular outcome (Peyrot 2012: 201):

nom.obl.sg. TchA *-ši*, *-i* : B *-šše*, *-iye* (< **-šš^yæ*, **-(ə)^yæ*)

nom.obl.sg. TchA *-(e)ṃ* : B *-ññe* (< **-(V)ññæ*)

The fact that the nasal recharacterisation is a secondary development is also confirmed by the paradigm of the feminine, which shows a clear contrast between nasal and nasalless stems in the plural. As a matter of fact, the feminine is the place where we find more variants. If we isolate the *n*-forms, we are left with the following paradigm: nom.sg.f. *-i*; obl.sg.f. *-i*, *-yāṃ*, *-šyāṃ* (> *-ššāṃ*);³⁵⁴ nom.pl.f. *-yāñ*, *-ššāñ*, obl.pl.f. *-yās*, *-ššās*.

This brings us to discuss the relation between the plural TchA *-āñ* | *-ās* vs. TchB *-ana*.³⁵⁵ This problem can be turned into the following question: which of the two languages preserves the older state of affairs? Some scholars, like Kim (2009: 74) and Fellner (2013; 2014: 19 fn. 35), claimed that neither Tocharian A nor Tocharian B have continued the

³⁵⁴ The evolution TchA *-šyā-* > *-ššā-* is an inner-Tocharian A gemination, cf. perl. sg. *poššā* from *poši* ‘wall, side’, nom.pl. *āšyañ* ~ *āššāñ* from *āsi* ‘nun’.

³⁵⁵ Pace Fellner (2014: 8), there is no nom.obl.pl. *†-yāṃ* in Tocharian A.

Proto-Tocharian ending. That is to say, in the Proto-Tocharian continuant of the PIE thematic type, there existed a single feminine plural ending, which is reconstructed as **-āna* (= Subclass I.1). I cannot agree with this reconstruction. Indeed, the precise synchronic subdivision of Class I, as exemplified above, largely speaks in favour of the split of the two subclasses already at a Proto-Tocharian stage (cf. TchB *-ona*, A *-aṇ* vs. TchB *-ana* vs. *-āñ* | *-ās*). Again, I believe that Tocharian B has preserved the original situation. Indeed, I cannot envision any reason why a plural paradigm with nom. PTch **-aṇə* (cf. TchA *-āñ*), obl. **-ans* (cf. TchA *-ās*) should not have been maintained in Tocharian B, nor why these endings would have come about in Proto-Tocharian in the first place. On the other hand, if we reconstruct pl.f. **-ana* (nom.=obl.) for Proto-Tocharian, we can envisage a plausible diachronic development thanks to which this ending has been eliminated in Tocharian A.

Let us start with the reconstructed Proto-Tocharian paradigm of the feminine as Tocharian B allows us to reconstruct:

Table IV.26. Proto-Tocharian feminine paradigm of Subclass I.2.

	SINGULAR	PLURAL
NOM.	<i>*-(^(C)Ĉ^ya</i>	<i>*-(^(C)Ĉ^yana</i>
OBL.	<i>*-(^(C)Ĉ^ya</i>	<i>*-(^(C)Ĉ^yana</i>
GEN.(-DAT.)	<i>*-(^(C)Ĉ^yay</i>	—

This paradigm was continued without relevant modifications in Tocharian B (for the replacement of obl.sg. PTch **-a* with the gen.sg. **-ay*, see §3.7.2.5). Before the vocalic apocope of Tocharian A, a distinction between nominative and oblique was reintroduced in the singular: as is regular in Tocharian A, a nasal ending **-n* was added to the inherited oblique singular, which led to a contrast between nom.sg. **-ā*, obl.sg. **-ān*. Then, vowel apocope took place and the new obl.sg.f. became homophonous with the apocopated plural **-ān* < PTch **-ana*. Such a homophony of obl.sg., nom.pl. as well as obl.pl. in the paradigm could not be maintained for long. As a consequence, a new distinction between nominative and oblique plural has been reintroduced: the nom.pl. **-ān* was palatalised into **-āñ*, and the obl.pl. **-ān* was levelled with the ubiquitous oblique plural marker *-s*, thus **-ās*. A similar development can be inferred looking at the paradigm of some athematic declensions, as I will discuss in the following paragraph. The diachronic evolution of the Tocharian A paradigm can be exemplified as follows:

Table IV.27. Evolution of the feminine paradigm from Proto-Tocharian to Tocharian A

	PTCH	PRE-TCHA I	PRE-TCHA II	TCHA
NOM.SG.	*-Ċ ^y <i>a</i>	> *-Ċ ^y <i>ā</i>	> *-Ċ ^y <i>i</i>	> -Ċ ^y <i>i</i>
OBL.SG.	*-Ċ ^y <i>a</i>	>> *-Ċ ^y <i>ān</i>	> *-Ċ ^y <i>ān</i>	> -Ċ ^y <i>ān</i>
GEN.SG.	*-Ċ ^y <i>ay</i>	> *-Ċ ^y <i>ay</i>	> *-Ċ ^y <i>e</i>	> -Ċ ^y <i>e</i>
NOM.PL.	*-Ċ ^y <i>ana</i>	> *-Ċ ^y <i>āna</i>	> *-Ċ ^y <i>ān</i>	>> -Ċ ^y <i>ān</i>
OBL.PL.	*-Ċ ^y <i>ana</i>	> *-Ċ ^y <i>āna</i>	> *-Ċ ^y <i>ān</i>	>> -Ċ ^y <i>ās</i>

4.3.3.2. The athematic type (Class II, III, and IV)

In this section, I will deal with the remaining adjectival classes of Tocharian, in order to clarify which adjectival types are relevant to the development of the gender system and to reconstruct their Proto-Tocharian paradigms. Since the inflection of the Tocharian preterite participle (Class IV) has been heavily remodelled in both Tocharian languages, it will not constitute a central topic of my discussion.³⁵⁶

According to Krause & Thomas (TEB §230-39), Class II is very heterogeneous. It is divided into five subclasses on the basis of the inflected form of the Tocharian B nominative plural masculine: (II.1) *-iñ*; (II.2) *-aiñ*; (II.3) *-añ*; (II.4) *-eñ*; (II.5) *-oñ*. Given the fact that each of these subclasses presents individual problems and different degrees of productivity, I will introduce them separately to understand which subclasses can be used to reconstruct the Proto-Tocharian state of affairs.

Class II.2 is practically non-existent, since the plural *-aiñ* is just limited to the paradigm of TchB *yolo* ‘bad, evil’, which has an isolated and peculiar paradigm (cf. also the alternating stem *yolo-* ~ *yolai-* ~ *yoloy-* ~ *yoly-*). Peyrot (2016) dealt with the inflectional problems and the etymology of this adjective, supporting its foreign origin (from Khot. *yola-* ‘falsehood’) and clarifying that this nominal was first borrowed as a noun, which subsequently developed adjectival use (Hilmarsson 1987: 36).

The derivatives with plural *-iñ* (Class II.1) and *-añ* (Class II.3) have been the topic of controversial interpretations. The latter plural is characteristic of a number of agent formations that are both morphologically and semantically connected. They are built on different verbal stems by means of the following suffixes: (1) TchB *-tsa*, A *-ts* (TchB *aknātsa*, A *āknats* ‘foolish’); (2) TchB *-ntsa* (TchB *wapāntsa* ‘weaver’); (3) TchB *-nta*, A *-nt* (TchB *kaṣenta*, A *koṣant* ‘killer, killing’); (4) TchB *-uca* (TchB *kārstaUCA* ‘cutting’); (5) second members of verbal governing compounds in TchB *-a* (TchB *yolo-rita* ‘seeking evil’). In recent years, these formations have become one of the most debated topics within the Tocharian nominal morphology. The problems involved are various, but they revolved around (1) the class of speech to which they belong and (2) the origin of their inflection.

³⁵⁶ See Saito (2006), Pinault (2008), and Peyrot (2010) for a recent discussion on the evolution of their paradigm.

See recently Malzahn (2010: 481-491), Pinault (2012), Hackstein (2012), and Fellner (2014b and 2017a). I basically agree with Peyrot (2013a; 2017) in arguing that they are to be analysed as *nomina agentis*, i.e. as substantives, including the so-called *nt*-participles (Malzahn 2010: 480-1). Indeed, they do not have some of the characteristics that allow us to set up the Tocharian adjectives as an independent class of speech. We can say that a prototypical adjective shares the following peculiarities in Tocharian:³⁵⁷

- (1) inflectional peculiarities, i.e. special case markers, like the gen.sg.m. TchB *-(e)pi*, A *-āp*;
- (2) syntactic peculiarities, i.e. semi-rigid position with respect to the head-noun (inversion is sometimes attested in metrical texts or even in prose as a stylistic device);
- (3) paradigmatic peculiarities, i.e. different forms with respect to number, gender, and case;
- (4) morphosyntactic peculiarities, i.e. agreement with the head-noun in number, gender, and case.

In fact, these formations are lacking any differentiation according to gender, some of their endings are characteristic of the noun inflection (cf. gen.sg. TchB *-ntse*, A *-es*), they are used to translate Sanskrit agent nouns in *-in-* (Peyrot 2017), and they are only sporadically employed to modify a noun (where they may be interpreted as being in apposition, rather than as attributive adjectives; but there exist counterarguments, on which see Fellner 2017a: 73-84).

The peculiarities of Class II.3 are, in my opinion, also shared by the derivatives of Class II.1. This subclass is mostly represented by verbal governing compounds that in the singular end in TchB *-i*, A *-e* (see recently Malzahn 2012b and Fellner 2018). Examples include: TchB *°ākṣi* ‘announcing, proclaiming’ (from *aks-* ‘to announce’); TchB *°aiśi* ‘knowing’ (from *ayk-* ‘to know’); TchB *°yāmi* ‘doer, doing’ (from *yam-* ‘to do’); TchB *°plaṇṣi* ‘seller, selling’ (from *plānk-* ‘to sell’); TchB *°nakṣi* ‘destroyer, destroying’ (from *nək-* ‘to destroy’); TchB *°pilṣi* ‘listening’ (from *pəyl-* ‘to listen’); TchA *°kāṃṣe* ‘occurring’ (from *kān-* ‘to occur’); TchA *°pāṣe* ‘protecting’ (from *pās-* ‘to protect’). These formations are mostly used as nouns, rather than as adjectives. Even when they are used to modify a noun, they can be interpreted as appositions without any difficulty (e.g. B229 b4 [arch.] *läkle-nākṣi säkw-aiṣṣeñcai käṣṣi* ‘Oh master, destroyer of suffering, giver of fortune’). From an inflectional point of view, they are inflected as nouns, since they have the characteristic gen.sg. TchB *-ntse* (e.g. IT159 a5 /// (*wā*)*ki po-aiśintse snay allaiknesa* ‘the superiority of the all-knowing in no other way’ Broomhead 1962: I, 229; cf. also *°yamintse* in B251 a4 and B304 b3). Furthermore, some of them develop a different plural marker, like TchB *po-aiśi* ~ *poyśi* ‘all-knowing, the omniscient one’ (calque from Skt. *sarva-jña-*, Pinault 2008: 561), which

³⁵⁷ Tocharian has also a number of uninflected adjectives, which often blurs the boundary between adjectives and adverbs (Carling 2017: 1352).

has a plural *poyśinta*, taken after *kāṣṣinta* ‘masters’ (plural of TchB *kaṣṣi*), both frequently used as epitheta of the Buddha (Pinault 2003a: 338).

An argument against the above interpretation lies in the fact that these formations are supposed to have paradigmatic gender-differentiation (TEB §230). Indeed, some formations ending in TchB *-iñña* are usually interpreted as the paradigmatic feminine counterparts of these *nomina agentis*. The formations in question that I was able to find are just the following: (1) *poyśiñña* ‘all-knowing’; (2) *pkānte-yamiñña* ‘hindering’; (3) *kāryor-plāñsiñña* ‘selling (?)’; woman seller (?). The latter is a hapax legomenon attested in IT129 b5, without context. It is therefore impossible to determine if it is used to (1) modify a noun or (2) not. Ogihara (2009: 351) and Malzahn (2013: 111) favour the second hypothesis. Malzahn interprets the suffix *-ñña* as the Tocharian marker of feminine motion (see §4.3.3.1 above), thus ‘female seller’. The other two formations are consistently attested as modifiers of a head-noun: TchB *pkānte-yamiñña* is only found in agreement with *wāntarwa* ‘things’, thus *pkānte-yamiññana wāntarwa* ‘hindering things’ (in IT27 b4; AS19.8 b1; THT111 a4; THT113 b5); TchB *poyśiñña* is found several times without context (nom.sg. *poyśiñña* AS17B a5; obl.sg. *poyśiññai* THT1247 b5, THT1260 b4; pl. *poyśiññana* IT272 a2), but in all other attestations it modifies a head-noun (*poyśiññai ekṣalymṣa* ‘with the feast of the all-knowing’ IT2 a2; *poyśiññana rekauna* ‘the words of the all-knowing’ IT144 b5; *poyśiññana ekṣalyänmeṇi* ‘from the feasts of the all-knowing’ IT271 b2; *poyśiññana krentauna* ‘the virtue(s) of the all-knowing’ B205 a1). This fact clearly is at odds with that of the respective masculine forms and it may invalidate our analysis. However, I believe that these formations in *-ñña* are not to be interpreted as the paradigmatic feminine counterpart of the verbal governing compounds in TchB *-i*, but rather as feminine inflected forms of derived *ññe*-adjectives. Clear evidence in support of this analysis is that the adjective TchB *poyśiññe* ‘pertaining to the all-knowing’ (from *poyśi* ‘all-knowing’, cf. also *poyśiññeṣṣe* ‘id.’) is attested in the same morphosyntactic context as the feminine *poyśiñña*.

To sum up, I believe that the Tocharian formations of subclasses II.1 (TchB *-i*, A *-e*), and II.3 (TchB *-a*, A *-Ø*) are to be interpreted as (agent) nouns. They may sporadically modify a head-noun in apposition, since there is no strong morphosyntactic (inflected like nouns; no rigid position; seldom agreement with a head-nouns) and/or paradigmatic evidence (no feminine paradigm) to claim that they can be labelled as “adjectives” (but see recently Fellner 2017b). Therefore, their inflection will not be considered in the present chapter.

On the other hand, there exists an isolated nominal that is formally ranged under Class II.1, although it is not derived from any verbal root and its adjectival use is beyond dispute. It is the adjective for ‘white’, which seems to belong to an original nasal inflection in Tocharian B. Its paradigm is as follows (Hilmarsson 1996: 40):

Table IV.28. Paradigm of TchB *ārkwi* ‘white’

	MASCULINE		FEMININE	
	SG.	PL.	SG.	PL.
NOM.	<i>ārkwi</i>	<i>arkwiñ*</i>	<i>arkwañña</i>	<i>arkwīna</i>
OBL.	<i>arkwiñ</i> ³⁵⁸ (?)	<i>arkwinām</i>	<i>arkwaññai</i>	<i>arkwīna</i>

In Tocharian A, this adjective shifts to the *nt*-inflection in the plural (class III), cf. nom.pl.m. *ārkyamś*, nom.obl.pl.f. *ārkyant*, possibly taken over after TchA *arkant*-* ‘black’, B *erkent*- < PIE **h₂ǵ^w-ont-* (Carling 2009: 15–6; DTB: 101). The identification of TchB *ārkwi*, A *ārki* with Gk. ἀργός, Skt. *ārjuna*-, etc. goes back to the first years of Tocharian studies (Meillet 1911: 149). All these cognate forms are the descendant from PIE **h₂erǵ-* ‘shining, white’. However, the exact derivational mechanism involved is still a matter of debate. Indeed, the Tocharian adjective seems to have been variously suffixed. Hilmarsson (1996: 41) argues that a reconstructed PIE **h₂erǵu-* ‘white’ (Caland adjective) has been extended with an individualising *n*-suffix **-ion-/ien-* in Tocharian. As a matter of fact, the PIE root **h₂erǵ-* has been heavily suffixed in the Indo-European languages, sometimes with **-i-* or **-i-n-* (cf. Hitt. *harki-*; Gk. ἀργι- in compounds and further ἀργιλλος ~ ἀργιλλα ‘herbe à chèvres’, ἀργιυόεις ‘whitish, shining’ [Hom.; Plut.], ἀργαίνω ‘to be white’, Chantraine 1933: 249), sometimes with **-u-n-* or **-u-r-* (Skt. *ārjuna* ‘white’, Gk. ἀργυρος ‘white, silver’, ἀργυρος ‘silver-shining’, cf. also Lat. *argentum* ‘silver’). Be that as it may, the fact that TchB *ārkwi*, A *ārki* goes back to an *n*-stem adjective is assured by its inflection, cf. obl.pl.m. *arkwinām* (acc.pl. < **-n-ns*) and nom.sg.f. TchB *arkwañña* /ark^wañña/, A *ārkiñ*, which can be interpreted as the direct cognate of Ved. *ārjunī-*, outcome of PIE **h₂erǵu-n-ih₂*. The lack of palatalisation in the nom.obl.pl.f. TchB *arkwīna* is unexpected. This evidence is at odds with the paradigm of TchB *tsem* ‘blue’, a loanword from MChin. *tsheng* > *cāng* 蒼 (Lubotsky & Starostin 2003: 265), which shows palatalisation of the nasal throughout the paradigm (f.nom.sg. *tseñña*, obl.sg. *tseññai* and the nom.obl.pl. *tseññana*). It goes without saying that the plural *arkwīna* cannot therefore be historically analysed as an original feminine inflected form, i.e. it is not the outcome of a reconstructed form containing the athematic feminine suffix **ih₂*. More specifically, we can say that it does not attest palatalisation because it is the regular outcome of the old neuter plural form. We will turn back to the paradigm of TchB *ārkwi* in the following section.

Adjectives with nom.pl.m. TchB *-eñ* (II.4) are mostly those thematic *re*-formations that developed a nasal inflection (of the *tapre*-type). It seems that this pattern has also been extended to other original thematic adjectives, which are all disyllabic, like TchB *tute* ‘yellow’, obl.sg. *tucem*, obl. pl. *tucenām* (DTB: 318), and some *we*-adjectives, like *maiwe*

³⁵⁸ The obl.sg.m. is allegedly attested in IT170 a2 *saiwaisa arkwiñ tseñcem* ‘on the right, white and blue (?)’ in a difficult context, because no head-noun is attested which *arkwiñ* may be in agreement with and *tseñcem* ‘blue’ is a hapax legomenon based on the stem of *tsem* ‘id.’. As a matter of fact, this *arkwiñ* may also be a late variant of nom.pl.m. *arkwiñ* (see Hilmarsson 1996: 40).

‘young’ and *raiwe* ‘slow’, etc. Since the birth of this subclass is agreed to be a Tocharian B innovation, it will not be used for the reconstruct of Proto-Tocharian (Pinault 2008: 513-5).

The last group to be commented on is Subclass II.5. It is the only inherited adjectival class of the nasal type that is quite productive in both Tocharian B and A. It consists of adjectives in TchB *-mo*, A *-m*. The most prominent member is TchB *klyomo*, A *klyom* (< PTch **kləwmā* < PIE **kleumōn*, cf. Av. *sraoman-* ‘hearing’, Skt. *śromata-* ‘reputation’, OHG *hlīumunt* ‘id.’), which was inflected as follows (TEB §238):

Table IV.29. Paradigm of the *klyomo*-type

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	<i>klyomo</i>	<i>klyom</i>	<i>klyomñā</i>	<i>klyomīṃ</i>
OBL. SG.	<i>klyomom</i>	<i>klyomānt</i>	<i>klyomñai</i>	<i>klyomināṃ</i>
NOM. PL.	<i>klyomōñ</i>	<i>klyomās</i>	<i>klyomñāna</i>	<i>klyomināñ</i>
OBL. PL.	<i>klyomom</i>	<i>klyomāñcās</i>	<i>klyomñāna</i>	<i>klyominās</i>

These formations go back to the PIE type in **-mon-/mn-*. As pointed out by Hilmarsson (1996: 156) and Pinault (2008: 520), the nom.sg.m. **-mōn* regularly yielded TchB *-mo*, A *-m*; the rest of the masculine paradigm has been remodeled after this case-form in both Tocharian languages. Thus, we have nom.pl.m. TchB *-moñ* for expected ***-mañ* > **-mōn-es* or ***-meñ* > **-mon-es*. We have already noticed that in Tocharian A the masculine paradigm has been heavily influenced by the *nt*-stems (cf. also the late variant obl.sg.m. TchB *klyomont*, on which see Peyrot 2008: 119).

As far as the feminine is concerned, we can see that both the singular and the plural paradigm of the *klyomo*-type closely mirror those of the thematic type of Subclass I.2. The basic stem can be traced back to the zero grade **-mūih₂-* > PTch **-māññ'a-*. Subsequently, Tocharian B has degeminated the palatal nasal **klyomāññā-* > **klyomññā-* > *klyomñā-*, while Tocharian A underwent the following development: **klyomāññā* > **klyomāññā* (raising) > **klyomāñ* > *klyomīṃ* (depalatalisation).³⁵⁹ This form has been generalised to the rest of the feminine paradigm through paradigmatic levelling. The contrast in the plural TchB *klyomñāna* : A *klyomināñ* | *-ās* is to be interpreted as that of Subclass I.2 (see §4.3.3.1). We can therefore reconstruct the following Proto-Tocharian feminine paradigm:

³⁵⁹ The reduction of PTch **-māññ-* to TchB *-mñ-* is testified by several other formations, like the abstract nouns TchB *cāmpamñe* ‘ability, power’ < PTch **cāmpamāññā*, TchB *aśamñe* ‘wisdom’ < **aśśamāññā*, TchB *orkamñe* ‘darkness’ < **orkamāññā* (Pinault 2011: 454; vs. TchB *arkwañña* /ark^wāñña/ ‘white’, TchB *eñkwaññe* /enk^wāññe/, TchB *tāñkwaññe* /tānk^wāññe/ ‘pleasing, lovely’). The same reduction can be seen in the type TchB *cāñcarñe* ‘love’ from *cāñcare* ‘lovely, agreeable’ and in the *ññe*-adjectives, cf. TchB *gautamñe* ‘pertaining to Gautama’ from *gautame* ‘Gautama’, TchB *eṣerñe* ‘related as a sister’ from *ṣer* ‘sister’ vs. TchB *ostaññe* ‘domestic’ from *ost* ‘house’, TchB *yākweññe* ‘related to horse’ from *yakwe* ‘horse’ (Kim 2007).

Table IV.30. Proto-Tocharian feminine paradigm of the *klyomo*-type

	SINGULAR	PLURAL
NOM.	*- <i>mǎñña</i>	*- <i>mǎññaana</i>
OBL.	*- <i>mǎñña</i>	*- <i>mǎññaana</i>
GEN.(-DAT.)	*- <i>mǎññay</i>	—

Moving on to Class III, it can be divided into two groups. The first group is made of two isolated adjectives, which share some peculiarities in their inflection and are synchronically characterised by suppletion in their paradigm: TchB *po*, A *puk* ‘all, each’ and TchB *kartse* A *kāsu* ‘great, good’.

The former adjective has *pont-* as the basic stem in both Tocharian languages and it has been connected with Gk. *πᾶς, πᾶσα, πᾶν*, as if from PIE **peh₂-nt-* (Lévi 1933: 38). Pinault (2008: 522-4) and Kim (2019b) have recently discussed some problematic forms and the origin of this adjective. A relevant issue is that in Tocharian B it does not show gender and case distinction between nominative and oblique in the singular.³⁶⁰ In Tocharian A, *puk* marks the nom.sg. of both masculine and feminine, but the oblique is usually differentiated, i.e. obl.sg.m. *poñcām*, obl.sg.f. *pontsām*. One can assume, at an older stage of Proto-Tocharian, this adjective was inflected for gender and case, and that the gradual loss of this distinction in the singular started in a later stage of Proto-Tocharian.³⁶¹ Another thing to be noticed is that the feminine plural TchB *ponta*, A *pont* does not show any assibilation of the stem final consonant, neither in Tocharian B nor in A (cf. the obl.sg.f. *pontsām* and the singular feminine paradigm of the *nt*-adjectives, nom. TchB *-ntsa*, A *-nts*, obl. TchB *-ntsai*, A *-ntsām*).

This applies also to the feminine plural of the second adjective, TchB *kartse* (fem. *kartsa*), TchA *kāsu* (fem. *kräts*), which builds the majority of the forms from the stem TchB *krent(-)*, A *krant(-)*. Though synchronically suppletive, there is general agreement that these stems are diachronically related (with the exception of nom.sg.m. TchA *kāsu*; see Pinault 2008: 521-2 and Kim 2019b). In the feminine we find a clear contrast between the singular and the plural: indeed, the singular is built on an assibilated stem, TchB *kartsa*, A *kräts*, while in the plural we have no assibilation, TchB *krenta*, A *krant*.³⁶²

The same pattern can be found in the second subclass of Class III, which is formed by a productive group of derived adjectives, which go back to the PIE suffix **-uent-*. This suffix has undergone various modifications, depending on the stem final vowel on which it has been attached (cf. TchB *perne*, A *parno* ‘worthy’ from the ancestor of TchB *perne*, A *parām* ‘glory’; TchB *tallāw*, A *tālo* ‘miserable’ from the Proto-Tocharian present stem of TchB

³⁶⁰ The uninflected form TchB *po*, A *puk* occasionally occurs also in agreement with plural forms, as well as when it is used as a pronoun. Thomas (1997) recognised that uninflected forms are more common in poetic texts, probably for metrical reasons.

³⁶¹ According to Pinault (2008: 523), this development has been triggered by the uninflected TchB *māka*, A *māk* ‘much, many’.

³⁶² For a discussion of TchA *kräntso* ~ *kräntso* ‘beautiful, pretty’, see Kim (2019b).

tall- ‘to bear’). Again, a feminine singular TchB *-ntsa*, A *-nts* (with assibilation) is matched in the plural by the non-assibilated *-nta*, A *-nt*.

At this point, it is clear that the singular and the plural feminine paradigms cannot go back to the same Proto-Tocharian stem. As for the case of TchB *ārkwī* ‘white’, the singular continues the feminine singular **-ntyā-* < **-ntih₂-*, while the plural goes back to the neuter plural **-nta* < **-nth₂*.

All things considered, the Proto-Tocharian paradigm of the feminine can be reconstructed as follows:

Table IV.31. Proto-Tocharian feminine paradigm of Class III

	SINGULAR	PLURAL
NOM.	<i>*-ntsa</i>	<i>*-nta</i>
OBL.	<i>*-ntsa</i>	<i>*-nta</i>
GEN.(-DAT.)	<i>*-ntsay</i>	–

4.3.3.3. Summary of the Proto-Tocharian adjectival system

Before commenting on the ultimate evolution of the adjectival system from Proto-Indo-European to Tocharian, let us summarise the Proto-Tocharian paradigms as they have been outlined in the previous sections.

We have seen that Class I, which continues the thematic type, can be synchronically divided into two subclasses in both Tocharian A and B. We have also seen that there exist good reasons for claiming that such a binary system must be traced back to Proto-Tocharian as well. Their respective paradigms are reconstructed as follows:

Table IV.32. Proto-Tocharian Class I.1

	MASCULINE		FEMININE	
	SG.	PL.	SG.	PL.
NOM.	<i>*-æ</i>	<i>*-æy</i>	<i>*-ya</i>	<i>*-āna</i>
OBL.	<i>*-æ(m)</i>	<i>*-æns</i>	<i>*-ya</i>	<i>*-āna</i>

Table IV.33. Proto-Tocharian Class I.2

	MASCULINE		FEMININE	
	SG.	PL.	SG.	PL.
NOM.	<i>*-æ</i>	<i>*-æy</i>	<i>*-a</i>	<i>*-ana</i>
OBL.	<i>*-æ</i>	<i>*-æns</i>	<i>*-a</i>	<i>*-ana</i>

The remaining classes continue the athematic inflection. We have seen that Tocharian A has mostly remade the inherited paradigms, since they mutually influenced each other and sometimes merged. For this reason, Tocharian B constitutes our main source for

reconstructing the Proto-Tocharian state of affairs. As far as the masculine inflection is concerned, a contrast between nominative and oblique singular can be reconstructed: as opposite to the nominative, the oblique was marked by the pure stem in Proto-Tocharian, which, in the case of the *n*-stems, was **-n*, and, in the case of the *nt*-stems, was **-nt*. Also in the plural, we have the residue of the original stem in the nominative, which undergoes palatalisation in front of the PIE athematic ending nom.pl. **-es*. As far as the feminine is concerned, the paradigm of the singular matched that of Class I, while the nominative and oblique plural ended in **-a*. The general paradigm is as follows (*C* indicates a consonant or a consonant cluster; *Ć* indicates a palatalised or an assibilated consonant or consonant cluster):

Table IV.34. Athematic adjectival paradigm of Proto-Tocharian

	MASCULINE		FEMININE	
	SG.	PL.	SG.	PL.
NOM.	<i>*-Ø</i>	<i>*Ća</i>	<i>*-Cʷa</i>	<i>*-Ca</i>
OBL.	<i>*-Cə</i>	<i>*-Cəns</i>	<i>*-Cʷa</i>	<i>*Ca</i>

The *klyomo*-type (Clas II.5) deviates from the paradigm outlined in the feminine plural, where we can reconstruct an ending **-a-na* preceded by palatalisation of the stem-final consonant, thus PTch **-mäññana*.

Now, if we have a new look at these reconstructed paradigms from an Indo-European comparative perspective, a number of diachronic issues would come to light. These problems are addressed in the following paragraph, where I deal with the ultimate evolution of the gender system from Proto-Indo-European to Tocharian.

4.3.4. EVOLUTION OF THE GENDER SYSTEM IN THE ADJECTIVAL INFLECTION: FROM PROTO-INDO-EUROPEAN TO TOCHARIAN

The ultimate goal of this paragraph is to trace the Proto-Indo-European origin of the Tocharian gender system in the adjectival inflection. The problems revolve around the evolution of the feminine, its merger with the neuter, and the functional loss of the neuter as a category of target gender. In order to understand how these genders evolved in Tocharian, I will recount the most important theories on their evolution, discussing the morpho-phonological convergences that led to the attested situation. I will first deal with the masculine inflection, and afterwards I will move on to the feminine, which will constitute the core of my discussion. Particular attention is devoted to the thematic inflection, which is the place where most of the mergers between the three inherited genders occurred.

4.3.4.1. Evolution of the masculine and the neuter singular

From a formal point of view, the singular inflection of the masculine evolved without relevant modifications from Proto-Indo-European to the two Tocharian languages. The inherited distinction between nom.sg. **-o-s*, acc.sg. **-o-m* has been blurred due to the process of consonant erosion that affected Proto-Tocharian in word-final position. Apocope affected also the neuter inflection, which became homophonous with the masculine in the singular:

Table IV.35. Formal merger of the masculine and the neuter in the singular

	PIE			PTCH
	MASC.	NT.		
NOM. SG.	<i>*-o-s</i>	<i>*-o-m</i>	>	<i>*-æ</i>
ACC. SG.	<i>*-o-m</i>	<i>*-o-m</i>	>	<i>*-æ</i>

Before the dissolution of Proto-Tocharian, a new distinction between nominative and oblique started to be reintroduced through the addition of the oblique marker **-n*, taken from the nasal stems (Pinault 2008: 476f.). This ending became mandatory only in Tocharian A, while in Tocharian B it has a limited distribution (TEB §142), since it only appears in those paradigms where analogical palatalisation did not differentiate the nominative from the oblique.³⁶³ The origin of the oblique marker **-n* must certainly be sought in a Pre-Proto-Tocharian stage, where, however, it may not have been grammaticalised as a fixed inflectional marker yet. One may therefore wonder whether the regular obl.sg. PTch **-æ* had **-æn* as a variant form, which originally marked only a direct object characterised as [+human] (like in the substantives, cf. obl.sg.m. *šamāne-m* ‘monk’ vs. obl.sg.m. *yakwe* ‘horse’).³⁶⁴ This reconstruction would also explain the lack of any continuant of **-æn* > ***-am* in Tocharian A adjectives, where we find instead *-ām* (e.g. obl.sg. *āstrām* ‘pure’ vs. *-am* in the noun, e.g. *onkam* ‘man’). In other words, since the obl.sg. **-n* was not a mandatory *adjectival* ending in Proto-Tocharian, it could not protect the original obl.sg. **-æ* from the regular apocope of final vowels in Tocharian A.

As far as the plural inflection is concerned, the inherited nominative plural PIE **-ōs* < (virtually) **-o-es* (preserved in Ved. *-āḥ*, Goth. *-os*, Osc. *-ús*, etc.) has been replaced by the

³⁶³ Rarely, a nasal oblique singular seems to alternate with the nasalless form, cf. *(a)s(t)are šaul š(a)ye(ñc)ai* ‘one who lives a pure life’ (IT579 b4) and *se laiko yetse as(tar)e yamašām* ‘this lotion makes the skin pure’ (W11 b1) vs. *šilne stmošo astareṃ* ‘remaining in the pure moral behaviour’ (NS55 b4) and *(šila)šš=āstreṃ weresa* ‘with the pure smell of the moral behaviour’ (B313 a3=AS5b a2-3).

³⁶⁴ According to Sims-Williams (1990) and Pinault (2002), the marking of a direct object characterised as [+human] and [+definite] with specific forms is a peculiarity that Tocharian shares with some Eastern Middle Iranian languages. Cf. the similar use of the Bactrian accusative preposition *αβο*.

pronominal PIE **-oi*, as has happened in e.g. Gk. *-oi*, Lat. *-i*, OCS *-i*, etc. This regularly yields PTch **-æy* > TchB *-i*, A *-e*.

On the contrary, Kim (2018: 64-5) and Ringe (1996: 81-2) believe that PIE **-oi* monophthongised very early in the pre-history of Tocharian, resulting in a front vowel PTch **-e* (in their notation) before palatalisation ceased to operate. According to them, proof of this early monophthongisation of PIE **-oi* is seen in relic nouns, whose nom.pl. form has palatalisation before the ending TchB *-i*. Indeed, in all other nouns that regularly continue PIE **-oi*, the palatalised nom.pl. would have been eliminated through levelling from the rest of the paradigm. Kim (2018: 64) adduces the following three relics (cf. also TEB §181):³⁶⁵ (1) nom.pl. TchB *kokalyi* /kokáləy/ ‘chariots’ vs. obl.pl. *kokalem** /kokálen/ ~ *koklem*; (2) nom.pl. TchB *ker(c)i* /kérc(c)əy/ ‘swords’ vs. obl.pl. *kert(t)em* /kért(t)en/; (3) nom.pl. TchB *trici* /tróycəy/, A *trice* ‘third (pl.)’ vs. nom.sg. TchB *trite* /tráyte/, A *trit*.

The palatalisation in the plural paradigm of TchB *trite*, A *trit* is of no value, because ordinals in *-te* show morphological (i.e. analogical) palatalisation in *all* case forms of the masculine (with the exception of the nom.sg.). Therefore, there is no contrast between e.g. palatalised nom.pl. vs. non-palatalised obl.pl (cf. nom.pl. *trici*, obl.pl. *tricem* or nom.pl. *waci*, obl.pl. *wacem*, from TchB *wate* ‘second’).

TchB *kercci* ~ *kerci* is usually considered to be the nom.pl. of *kertte* ~ *kerte* ‘sword’. This case form is attested twice: IT89 b1 (= B73 b4) *sūryakāṃṭṣi kercci ram no läktsecci* ‘like bright *sūryakānta*-swords’ (Thomas 1968: 211; Couvreur 1954: 103; Adams 2012: 28); AS17D az *ylaiñäkti ñi kercci ra aiskem traike lkālñesa* ‘The Indra gods provide confusion to me through their appearance, like swords [do]’ (unpublished fragment; edition and translation follow Georges-Jean Pinault apud CETOM). Since TchB *kercci* is homophonous and homographic with TchB *kercci* ‘palace’ (< **ker(c)əyi*, cf. obl.pl. *ker(c)iyem*), a plurale tantum, one may wonder whether all these *kercci*-forms actually belong to the paradigm of ‘palace’ rather than to that of ‘sword’.

We do remain with *kokalyi*. Here the contrast between palatalised nom.pl. *kokalyi* and non-palatalised obl.pl. *koklem* is clearly attested.³⁶⁶ However, also in this case the palatalisation of the nom.pl. may have been analogical after the inflection of the adjectives

³⁶⁵ I have omitted TchB *recci* (attested once in B423 b6), obl. *recceṃ* (cf. *reccenmpa* B307 b7), probably the plural forms of a derived *tstse*-adjective. Indeed, Chams Bernard (p.c.) has pointed out to me that these forms actually belong to the paradigm of another word, and they are not inflected forms of TchB *retke* ‘army’ (cf. already DTB: 585).

³⁶⁶ If derived from the nominative plural *kokalyi* ‘wagons’, the noun TchB *kokalyiske** ‘little wagon’, attested once in B352 a2, would be very irregular, because Tocharian derivatives based on plural stems select nouns with suffixed plurals (with nom. = obl., like *saswaśkañ* ~ *sasuśkañ* ‘dear sons’ from *sasuwa*, pl. of *soy* ‘son’). Furthermore, the nominative form is not used as the stem of a noun. One may therefore wonder whether this *kokalyi* is actually the dual of *kokale* ‘wagon’, with regular nom. = obl.

(i.e. the gerundives) in *-lle* (Hilmarsson 1996: 163-4), or it can reflect a secondary palatalisation of TchB *-li* /-ləy/ > *-lyi* /l̥əy/.³⁶⁷

Additional evidence against the sound law PIE **-oi* > PTch **-e* is that palatalisation never occurs in those nouns that continue PIE **oi*-stems, like TchB *reki*, A *rake* ‘word’, TchB *leki*, A *lake* ‘bed, couch’, TchB *telki*, A *talke* ‘sacrifice’, etc. In these cases, one cannot invoke paradigmatic levellings intended to eliminate the palatalised allomorph, because the diphthong **-oi* > (as if) **-e* must have been maintained throughout the entire paradigm. I am therefore skeptical to accept an early monophthongisation of **-oi* > **-e*, in general, and to reconstruct a palatalising value for this alleged monophthongised new vowel, in particular.³⁶⁸

On the other hand, the history of the accusative plural is slightly more complicated, especially from the point of view of Tocharian A. Indeed, while the obl.pl. TchB *-em* unambiguously continues PTch **-æns* < PIE **-ons*, the obl.pl. TchA *-es* is historically less clear. If we consider the equation TchB *-em* : A *-es* in the adjectives, one would be tempted to include the obl.pl. TchA *-es* among the list of environments where vowel raising before the inherited cluster **ns* has occurred. This view is shared by e.g. van Brock (1971), Adams (1988: 116), Hilmarsson (1987b: 69f.; cf. also 1986: 342), Kim (2012), but there may exist direct and indirect evidence that puts this into question.

First of all, among the phonological developments of Tocharian, the evolution of the inherited cluster **ns* is a peculiar one (Winter 1961). Indeed, the unconditioned outcome is TchB *-nts-*, A *-s-* as corroborated by unambiguous examples: TchB *āntse*, A *es* (< Pre-TchA **a'sæ*) ‘shoulder’ < PTch **ansæ* < PIE **ōmso-* (?) (cf. Gk. ὤμος, GEW: II, 1148); gen.sg. e.g. TchB *-entse*, A *-es* (< Pre-TchA **-æ'sæ*) < PTch **-ænsæ*; TchB *klāntsa-*, A *klāysā-* (< Pre-TchA **klā'sa-*) ‘to sleep’ < PTch **klānsa-* < PIE **klej-* ‘to rely on’ (Malzahn 2010: 625); cf. also TchA *wlāys-*, B *lans-* ‘carry out’ (cf. also the noun TchA *wles*, B *lāms* ‘work, service’),³⁶⁹ TchA *ešāk*, B *eṃṣke* ‘while’, and the perl.pl. TchB *-ntsa* < Pre-TchB **-n-sa*.

This outcome is more clearly attested in word-internal position, since there is no evidence that PTch **-ns* yielded TchB *-nts-*, A *-s-* word-finally. Indeed, one has to note that the equation obl.pl. TchB *-em* : A *-es* is never found in the inflection of the noun, where

³⁶⁷ Oscillations between *-li* /ləy/ and *-lyi* /l̥əy/ are frequently attested: TchB *lyipār* ‘remainder, residue’ (e.g. B119 b3; B99 b2, IT187 a5) vs. *lipār* (AS15C a1; B44 b6; THT1579 a3); *añcālī* ‘gesture of palms together’ (← Skt. *añjali-*) (e.g. B134 a4 vs.) vs. *añcālyi* (AS13J b1; B602.b b4); *meli* ‘nose, nostrils’ (B527 a5; IT491 a2) vs. *melyi* (IT306 a2); loc.sg. *āline* ‘in the palm of the hand’ (IT803 b2; AS19.6 b4; THT1107 b4) vs. *ālyine* (AS16.2 b4; B567 a1 and a2); loc.sg. *śoline* ‘in the hearth’ (e.g. IT4 b4; B153 a2; AS19.3 b3) vs. *śolyine* (IT4 b3).

³⁶⁸ Cf. also the nom.pl.m. TchB *alyaik* ‘others’, where, according to Ringe, the addition of the emphatic particle PTch **-kə* must have been added after the supposed sound change **-oi* > **-e*. It is more convenient to say that PIE **h₂elī-oi* regularly evolved into Pre-PTch **allæy* (or **allæy*, with analogical palatalisation) and then the diphthong PTch **æy* yields TchB *ai* because it was protected by the newly added PTch **-kə*.

³⁶⁹ For the spelling of TchB *lāms*, see Mazahn (2010: 749 and 833).

TchB *-em* is consistently matched by TchA *-as*.³⁷⁰ Another important piece of paradigmatic evidence is that we find the obl.pl. TchA *-es* only in those (adjectival) paradigms that have nom.pl. *-e* < PTch **-æy* < PIE **-oi*, while we find obl.pl. TchA *-as* only in those (noun) paradigms that have nom.pl. *-añ* (old PIE **o*-stems, e.g. nom.pl. *yukañ*, obl.pl. *yukas* from TchA *yuk* ‘horse’ < PIE **h₂ékʷo-*). It goes without saying that analogical levellings have taken place in one of the two plural sets.

If vowel raising of PTch **ns* > Pre-TchA **is* was only found in internal position, we should assume that the unconditioned development of PTch **-æns* (< PIE **-ons*) was TchA *-as* (Pinault 2008: 458), and that the vocalism of TchA *-es* has been taken over from the nominative plural. A further piece of evidence in favour of this reconstruction is that the continuants of the PIE athematic type have an obl.pl. TchA *-äs* < Pre-TchA **-əns* (cf. TchA *mañäs*, B *meñäm* ‘moons’ < PTch **mæñəns*; TchA *konäs*, B *kaunäm* ‘suns’ < PTch **kawnəns*; TchA *lāñcäs*, B *lāntäm* ‘kings’ < PTch **lantəns*; TchA *poñcäs*, B *pontäm* ‘all’ < PTch **pāntəns*; TchA *tos*, B *tom* ‘these (f.)’ < PTch **tāns*, etc.) and not the **-is* < Pre-TchA **-əns* we would expect if raising took place (cf. TchA *waštīm* ‘related to the house’ : TchB *ostaññe*; gen.sg. TchA *-is* : TchB *-äntse* /-əntse/, *-antse* /-əntse/; TchA *kläysä-* ‘to sleep’ : TchB *kläntsä-*).

Possible counterexamples could be the gen.pl. TchB *-m̐ts*, A *-is* and TchB *wem̐ts*, A *wes* ‘excrement, urine’. However, the former had a final shwa in Proto-Tocharian, as the spelling *-m̐tsä* and *-m̐tso* (with *o*-mobile) in poetic and/or archaic passages of Tocharian B clearly show (cf. e.g. *krentäm̐tsä* in B15 b4 and *krentäm̐tso* in B416 a3; *onolmēm̐tsä* Or 8212.163 b6 and *onolmēm̐tso* in IT183 b1, see Malzahn 2012a: 64ff.). As far as TchB *wem̐ts* and TchA *wes* are concerned, both words are only rarely attested: in Tocharian A, we find nom.sg. *wes* in A124b4 and gen.sg. *wesis* (< Pre-TchA **wa’sə’sæ* ?) in A150 b6; in Tocharian B, nom.obl.sg. *wem̐ts* is always found together with its derivative *wem̐šiye* ‘excrement, urine’ (B42 b6; B522 a4; B524 a8; THT4122 b4), while the perl.sg. *wem̐tsa* is attested three times (AS3A b4; B497 b4; W2 a5). Its etymology is unknown, but Adams (DTB: 662) traces it back to PTch **wæn(ə)sä*. Be that as it may, I think that TchB *wem̐ts*, A *wes* is not a strong example for claiming that PTch **-ns* yields TchB *-nts*, A *-is* also word-finally.

Therefore, in the adjectival paradigm of Tocharian A the following developments can be outlined: PTch nom.pl. **-æy*, obl.pl. **-æns* > Pre-TchA nom.pl. **-e*, obl.pl. **-as* >> TchA nom.pl. *-e*, obl.pl. *-es*.

A related problem may be why Tocharian A does not show any continuant of the nom.pl. **-æy* in the noun inflection (apart from TchA nom.pl. *pracre*, obl.pl. *pracres*, where the nom.pl. *-e* is unexpected). I see two possibilities to explain this state of affairs. The first implies that Tocharian A replaced the nom.pl. **-e* with the productive nasal plural *-a-ñ* because TchA **-e* came to be homophonous with a relatively large and heterogeneous group of nouns (SSS §82; TEB §88, 102, and 105), which has TchA *-e* as a singular marker (nom. = obl.). Otherwise, one may wonder whether Tocharian A has maintained a more archaic state of affairs, and the spread of the nom.pl. **-oi* has developed as follows:

³⁷⁰ The only exception is the obl.pl. *pracres* of TchA *pracar* ‘brother’, where the “thematic” plural paradigm *-e* | *-es* cannot be original (Peyrot 2008: 114).

pronouns → adjectival pronouns → thematic adjectives → thematic nouns. If so, in Proto-Tocharian, this development had not yet reached the nouns, but only the adjectives, and Tocharian A would attest the older distribution. After the breakup of Proto-Tocharian, the Tocharian B continuant of the PIE thematic nouns did replace the inherited nominative plural with *-i* < PTch **-ǵy*, while Tocharian A developed *-añ*, adding the productive nom.pl. *-ñ* to the stem final vowel *-a* < PTch **-ǵ*. Unfortunately, there is no proof in support of one of these theories. From a comparative point of view, the former is probably to be preferred, because several Indo-European languages have replaced the original nom.pl. **-o-es* > **-ōs* with the pronominal **-oi* since their prehistoric phase, and, to my knowledge, we have no continuant of a nom.pl. **-ōs* in Tocharian.

To sum up, the evolution of the masculine plural paradigm in the adjectival thematic inflection can be schematised as follows:

Table iv.36. Evolution of the adjectival masculine plural from PIE to Tocharian

	PIE		PTCH	TCH B	TCH A
NOM. SG.	<i>*-ōs</i>	>> <i>*-oi</i>	> <i>*-ǵy</i>	> <i>-i</i>	> <i>-e</i>
ACC. SG.	<i>*-ons</i>	> <i>*-ons</i>	> <i>*-ǵens</i>	> <i>eṃ</i>	> <i>*-as</i> >> <i>-es</i>

4.3.4.2. Evolution of the feminine and the neuter plural

The historical analysis of the Tocharian feminine poses several problems. Some of these problems may be relevant for the reconstruction of the PIE gender system, since they revolve around the status of Tocharian with respect to the branching of the Indo-European tree and the evolution of the gender markers within Proto-Indo-European.

As outlined above, the Tocharian singular paradigm of the feminine is peculiar, since it shows palatalisation or assibilation of the stem-final consonant in the outcomes of both thematic and athematic adjectival types. This is unexpected from a comparative perspective. Indeed, the ancient Indo-European languages, especially Greek and Indo-Iranian, indicate that the potentially palatalising suffix **-ih₂/i_heh₂* of the *devi*-type was originally specialised in athematic adjectives, like *nt*-stems, *s*-stems, *u*-stems, etc. On the other hand, the feminine-marking suffix **-eh₂* > **-ā* was confined to the thematic type.

The following table shows the contrast between Tocharian and some other Indo-European languages in the outcomes of the nom.sg. of the PIE adjectives in **-ro-* (Fellner 2014a: 65):

Table iv.37. Evolution of thematic adjectives in some Indo-European languages

NOM.SG.	PIE		POST-PIE		GK.	SKT.	LAT.	PTCH
masc.	<i>*-ros</i>	>	<i>*-ros</i>	>	-ρος	-rah	-rus	<i>*-ræ</i>
fem.	<i>*-reh₂</i>	>	<i>*-rā</i>	>	-ῥᾱ	-rā	-ra	<i>*-r^ya</i>

As one can see, while Greek, Latin, and Sanskrit have the regular outcome of **-reh₂*, no continuant of the same ending can be reconstructed for Proto-Tocharian, since this would be expected to have yielded PTch **-rā* > TchB *** -ro*, A *** -r*, without *-y-* (see §4.3.3.1).

This mismatch between Tocharian and the other Indo-European languages has given rise to a fierce debate. As was summarised by Fellner (2014a: 67), two mutually exclusive recent theories can be identified, both aiming to explain the evolution of the feminine:³⁷¹

- (1) Tocharian inherited the *deví*-suffix as the only standardised feminine marker in the adjectival inflection;
- (2) Tocharian analogically extended the outcome of the *deví*-suffix from the athematic to the thematic type.

The first theory indirectly aims at revisiting the development of the feminine gender within Proto-Indo-European. It implies that Tocharian preserves a more archaic status than the other Indo-European languages (with the exception of the Anatolian branch), according to which **-eh₂* was not completely grammaticalised as a feminine marker when Tocharian was separated from the proto-language. It follows that the gender system might provide new evidence on the phylogenetic position of Tocharian as the second branch that split off from Proto-Indo-European, after the earlier departure of Anatolian. Kim (2009; 2014) has been the first to propose this theory, which received some scholarly consensus (cf. Hackstein 2012, Kortlandt 2017, both differing on several details; cf. also Loporcaro & Paciaroni 2011).³⁷²

On the other hand, the second theory implies that, like the other non-Anatolian Indo-European languages, Tocharian has inherited **ih₂/ieh₂* (of the *deví*-type) as a feminine athematic suffix and its spread to the thematic type must be regarded as a secondary development (Pinault 2008, 2012; Fellner 2014, 2014a).

In what follows, I will argue that the first theory has shortcomings and that the second theory is the correct one.

³⁷¹ As pointed out in §1.2, Hartmann (2013) does not deal with this central problem of the Tocharian gender system. According to him, the peculiar distribution of the outcomes of **-ih₂* and **-eh₂* deserves an explanation (p.35-8), “[o]b die angenommene Zweitausgliederung des Tocharischen von ihren Vertretern nun ausreichend begründet ist oder nicht, sei dahingestellt” (p.530). See further Pinault (2015a: 189-92).

³⁷² Cf. Hackstein (2012: 167): “In contrast to other branches of Indo-European, [...] Tocharian is peculiar in preserving a second stage, which precedes the functional extension of the collective-abstract to denote natural and grammatical feminine gender. At this intermediate stage, we observe the incipient association with male and female referents of those collective-abstract formants that are firmly associated with feminine grammatical gender in most other Indo-European branches, namely **-ih₂* and **-eh₂*”.

4.3.4.3. Theories on the origin of the feminine in Tocharian

Let us introduce Kim's theory in more detail, highlighting the results of his investigation and outlining the consequences from a comparative perspective. Kim developed his idea in two separate and recent articles, which have been published five years apart (Kim 2009 and 2014).³⁷³ Considering that the first article presents the theory in an embryonic way, while the second article covers more extensively the matter and reviews a few shortcomings, they will be jointly presented.

Kim's central idea is based on the assumption that the element **ŷa* in the feminine inflection of the thematic adjectives is to be taken as an archaism in Tocharian. In support of this claim, he offers a brief revision of the gender system of Anatolian, concluding that the **eh₂*-stems were continued as an inflectional class only and that the PIE suffixes **ih₂* and **(e)h₂* had no feminine value in Anatolian (Kim 2009: 70-2). It follows that, at an older stage of Proto-Indo-European, they did not serve as gender-marking suffixes, but they had other functional values. According to Kim, the former had an original "possessive-instantive" function (i.e. referring to an instance of an action or state), while the latter was mostly employed to mark collective formations, individual and abstract nouns, and had an endocentric function. The feminine value of these suffixes must have been a secondary development that took place in the proto-language only after the departure of the Anatolian branch (Rieken 2005; Melchert 2014). Kim's proposal is that the relative chronology of this development would imply that **ih₂* had been grammaticalised earlier than **(e)h₂* as a feminine motion suffix and that the strongest evidence for this reconstruction would come precisely from Tocharian. Accordingly, the fact that the continuants of the thematic adjectives are marked in the feminine by **ŷa* < **-ih₂* and that "the reflex of PIE *eh₂*-stems had no particular association with feminine referents, but were simply another [Tocharian] inflectional class" (Kim 2009: 81) would be a strong indication for this internal development. As a consequence, the common ancestor of both Tocharian and the so-called "Brugmannian languages" would have grammaticalised **ih₂* as the feminine marker of both nouns and adjectives.³⁷⁴ However, this suffix could not be attached to the demonstratives and to primary adjectives, because they are not derived from nouns and "made use of the suffix **-h₂* in its endocentric sense" (Kim 2014: 127). Therefore, an important difference between the "Brugmannian languages" and Tocharian would be a differentiation in the marking of the feminine gender between primary and secondary adjectives: the former took **(e)h₂* and the latter took **ih₂*. Only after the split of Tocharian, the so-called "Inner Indo-European" languages would have grammaticalised the opposition between **eh₂* and **ih₂* as the one between thematic and athematic type.

³⁷³ An overview is also in Kim (2018: 83-5).

³⁷⁴ Recently, similar considerations have been put forward by Kortlandt (2017), who suggests that "the split between Tocharian and the other Indo-European languages preceded the creation of the feminine paradigm of thematic adjectives" and that "[...] the generalization of **iH₂* as a distinct feminine marker was more logical than the introduction of the predicative ending **H₂*, which was also found as a neuter plural ending and would render the agreement rules more complex" (p.100).

This new contrast would have been favoured by the demonstrative pronouns, which regularly took $^{*}(e)h_2$ (thus $^{*}séh_2$).³⁷⁵

Though this theory is fascinating and innovative, I believe there are flaws in it on the phonological, morphological, and comparative levels.

First of all, it is not falsifiable. On the one hand, there is no evidence in favour of any previous grammaticalisation of $^{*}ih_2$ in Anatolian, nor is there any against it. On the other hand, all other Indo-European languages attest a well-established opposition between thematic $^{*}eh_2$ vs. athematic $^{*}ih_2$. Only Tocharian serves as proof for this reconstruction, which cannot be supported comparatively.

There are also some phonological difficulties. If, on the one hand, the feminine continuants of the PIE $^{*}ro$ -adjectives may formally go back to $^{*}rih_2 > \text{PTch } ^{*}rya$ (in the singular), the reconstruction of a feminine suffix $^{*}ih_2$ could not account for the feminine form of some other adjectival derivatives. Let us consider, for instance, the case of the ordinals in $^{*}to-$, whose nominative singular feminine ends in TchB $-ca$, A $-ci$. This form cannot be historically analysed as the outcome of $^{*}tih_2 > ^{*}tǎ$, since this would be expected to yield TchB $^{*}tsa$, i.e. with assibilation of the dental stop rather than with palatalisation. Similar considerations can be put forward for the tte/t -adjectives, nom.sg.f. TchB $-cca$, A $-ci < \text{PTch } ^{*}cca$ (not $^{*}tsa$), and the lle/l -gerundives, nom.sg.f. TchB $-lya$, A $-lyi$ (not $^{*}lla$).³⁷⁶ This evidence strongly speaks in favour of a secondary generalisation of the pattern $^{*}_{[+pal.]}a$, which has been abstracted from the outcome of the athematic feminine, rather than a direct preservation of $^{*}ih_2$ as an inherited suffix in the thematic inflection (see §4.3.4.4, §4.3.4.5).³⁷⁷

Morphologically, the claim that the primary adjectives took $^{*}eh_2$, while the secondary adjectives took $^{*}ih_2$ can be questioned. Indeed, some scholars agree that adjectives did not constitute an independent derivational category in Proto-Indo-European. For instance, in Vedic only a handful of non-derived adjectives can be recognised, but it cannot be excluded that these synchronically primary adjectives are derived from non-attested verbal roots (Alfieri 2009, 2016, 2018). In any case, whenever we reconstruct adjectival roots for Proto-Indo-European, they would have been just too limited in number to favour the generalisation of $^{*}eh_2$ in the thematic type.

³⁷⁵ According to Kortlandt (2017: 101), a feminine $^{*}sih_2$ was created before the rise of $^{*}séh_2$. On the centrality of the demonstrative pronoun in the rise of the feminine gender, see Meillet (1931) and Martinet (1956). See also Luraghi (2011) and Pinault (2011b) for a recent overview of the deictic origin of the feminine.

³⁷⁶ See Peyrot (2013a: 223f.) for the outcomes of the PIE sequences $^{*}li$, $^{*}li$, and $^{*}le$.

³⁷⁷ The status of the tse/ts -adjectives is a bit more complicated, since no palatalisation can be reconstructed in the paradigm of the feminine. As a matter of fact, no clear paradigmatic alternation between palatalised and non-palatalised $-ts-$ is synchronically attested, especially not in Tocharian B. If such a contrast really existed, it was therefore levelled out already in Proto-Tocharian. Another possibility is that the feminine of the tse/ts -adjectives was created on the model of the assibilated feminine PTch $^{*}ntsa < \text{PIE } ^{*}ntih_2$ (Class III).

Furthermore, there exist some inherited adjectival forms in Tocharian that unambiguously show the expected outcome of the PIE **eh₂*-inflection. Out of the demonstratives, we find some relics in the obl.sg. *allok* ‘other’, pl. *allonik-* (see §4.2.4), in the obl.sg. *somo* ‘one’, pl. *somo-*, and perhaps in the adverb TchB *wato* ‘again’, which may be a frozen feminine form of *wate* ‘second’ (cf. Skt. *dvitā* ‘twofold’, DTB: 626; Fellner 2014a: 68 fn.9). As far as the Tocharian continuants of PIE **h₂el̥iō-* ‘other’ and **duītó-* ‘second’ are concerned, Kim’s opinion is not altogether clear. On the one hand, he advocates the reconstruction of a feminine paradigm with **ih₂/ieh₂* for **h₂el̥iō-* ‘other’, which, according to him, would have produced TchB *allok* in the oblique and TchB *alyāk* in the nominative (Kim 2009: 78-9, 2014: 122 fn.18; see also Fellner 2014: 13 fn.20 and cf. §4.2.4). On the other hand, he states that the aforementioned PIE **h₂el̥iō-* ‘other’ and **duītó-* ‘second’ could have maintained **-eh₂* in the feminine inflection of primary adjectives as “possible relics” (Kim 2014: 127). Of these two analyses, only the latter can be accepted, because the stem allomorph *alyā-* is clearly secondary (see §4.2.4), and a reconstructed acc.sg. **h₂eli-ieh₂-m* (with the full grade of the suffix taken from the weak cases, Kim 2009: 79) would probably not have yielded obl.sg. TchB *allo-*.

Another weakness of Kim’s theory concerns the evolution of the feminine plural paradigm and the morpho-phonological mergers between the feminine and the neuter in Tocharian. In his earlier article, he modifies his previous view according to which “[...] in all clear cases *without exception*, feminine thematic adjectives also exhibit a suffix which can only continue PIE **-ih₂!*” (Kim 2009: 76, emphasis by the author). This was criticised by Pinault (2012: 190-1). Indeed, in Subclass I.1. we find the plural TchB *-o-na*, A *-a-m* (without palatalisation of the preceding consonant), where the correspondence TchB *-o-*, A *-a-* can only be the outcome of a reconstructed form that must have contained PIE **-eh₂-* > PTch **-ā-*. In order to account for this problem, Kim (2014: 122) traced the vowel **-ā-* back to the PIE neuter plural **-h₂* in his later article (cf. also Winter 1962: 126-7; Marggraf 1975: 200-1; Hackstein 2017).³⁷⁸ Although this reconstruction poses no problems from a formal point of view, there are some issues related to the diachrony of the merger between the feminine and the neuter. Indeed, if the neuter plural was **-eh₂* in the thematic inflection and **-h₂* in the athematic inflection, while the feminine was only marked by the suffix **-ih₂* in both inflectional types, there would not have been any formal context where the feminine and the neuter could have merged morpho-phonologically, either in the

³⁷⁸ Kim’s opinion about the Tocharian outcome of PIE **-eh₂* in word-final position is not clear (cf. also Kim 2018: 105f.). If TchB *-o-*, A *-a-* in TchB *-ona*, A *-am* is from the thematic neuter plural, then PIE **-eh₂* must have yielded PTch **-ā*, because the spread of the ending **-na* must have occurred after most of the Proto-Tocharian vowel modifications having taken place. Nonetheless, in the same article (2014: 122 fn.16; cf. also 2009: 80), he seems to sympathise for an outcome PTch **-a*, since “[...] the evidence for the treatment of PIE **-eh₂* is effectively reduced to **seh₂* (> PT **sa*) and the neuter plural”. With “neuter plural”, he is not referring to TchB *-ona*, A *-am*, but to those plural markers ending in *-a*, which are characteristic of some (athematic) adjectival classes and alternating nouns, where, according to Kim, the final vowel can reflect either **-h₂* or **-eh₂* (cf. also Ringe 1996: 94-7; *contra* Pinault 2008: 491-497). On the outcome of word-final **-eh₂*, see the next paragraph below.

singular, or in the plural. Therefore, the reanalysis of the neuter **-o-na* as a feminine marker would have had no basis.³⁷⁹

For the reasons given above, Kim's distribution of **-ih₂* in the Tocharian thematic type as an inherited feature is to be rejected. We should rather follow the second view, according to which Tocharian inherited a classical Indo-European three-gender system, where the feminine was marked by **-eh₂* in the thematic adjectives. In accordance with previous theories on this topic, I will show that the drastic modifications in the adjectival feminine inflection of Tocharian are innovations. This does not say anything about the alleged early split off of Tocharian: basically, the evolution of the feminine gender in the adjectival system cannot serve as proof of the so-called "Indo-Tocharian" hypothesis, because the spread of **ih₂* in Tocharian is an innovation.

Nonetheless, the second hypothesis is not without problems, either. Each of these problems can be framed as independent working questions, which have led me through my investigation of the evolution of the Tocharian feminine. They can be summarised as follows: (1) how did the non-ablauting **eh₂*-type evolve in Tocharian?; (2) how and why was the outcome of the **ih₂*-type generalised in the thematic inflection?; (3) why did the feminine plural continue the neuter plural in the athematic inflection?; (4) why is there a contrast between palatalised singular vs. non-palatalised plural in Subclass I.1, and how did Subclasses I.1 and I.2 become differentiated in Proto-Tocharian? We will deal with these problems in this order below.

4.3.4.4. Evolution of the non-ablauting **eh₂*-inflection in the adjectives

In the previous sections and chapters, we have randomly dealt with phonological and morphological problems related to the Tocharian outcome of the PIE **eh₂*-inflection, mentioning that its evolution has given rise to major disagreement. Once having considered evidence from the nominal and the pronominal inflection, it is now time to discuss more extensively how the non-ablauting **eh₂*-inflection has evolved in Tocharian.

Van Windekens (1976: 24-5) and Adams (1988: 20-1; 1998: 615-6) maintained that the unconditioned outcome of PIE **eh₂* was PTch **a*. However, the majority of the scholars currently agree on modifying the explanation of this phonological development, suggesting PTch **ā* > TchB *o*, *A o*, *a*.³⁸⁰ Nonetheless, the development of **-eh₂* in word-final

³⁷⁹ One might wonder whether the merger of the feminine with the neuter originated in the athematic inflection, where the distinction between feminine (**ih₂* > **y^a*) and neuter plural (**h₂* > **a*) consisted only in the palatalisation/assibilation of the stem in the feminine. However, I believe that this reconstructed quasi-homophony is too meagre to justify the merger. In Kim (2018: 83-4), he reconstructed a mixed paradigm for Pre-Proto-Tocharian: the singular and the dual would have continued PIE **-ih₂*/*-ieh₂*- (of the *devī*-type), while the plural would have continued PIE **-eh₂*-. I cannot agree with this reconstruction, which is ad hoc.

³⁸⁰ Adams (DTB) is virtually alone in still adhering to a sound change **eh₂* > PTch **a*. On the other hand, Winter (1981: 935-941) was the first to suggest a development PIE **eh₂* > PTch **ā*. A

position is still a debated issue: (1) on the one hand, some scholars (e.g. Peters 1990; Ringe 1996: 94f., partially followed by Kim 2009, 2014; Malzahn 2011) suggest PIE $*-eh_2 > \text{PTch } *-a > \text{TchB } -a$;³⁸¹ (2) on the other hand, some other scholars (e.g. Hilmarsson 1986; Pinault 2008: 421f.; Fellner 2014, 2014a) maintain PIE $*-eh_2 > \text{PTch } *-ā > \text{TchB } -o$. With regard to the $*eh_2$ -inflection, it goes without saying that the main point of debate is the outcome of the nominative singular, which is the only case-form where we can reconstruct word-final $*-eh_2$.

I side with those scholars who claim that the regular development of $*eh_2 > *ā$ was PTch $*ā$ in *all* positions. Indeed, the adduced forms where $*-eh_2$ allegedly yielded PTch $*-a$ by sound law are not probative, since most of them have been misinterpreted or require other explanations. The relevant forms are:

- (1) feminine thematic adjectives with nom.sg. ending TchB $-a$, like $-ñña$, $-ssa$, etc. (Ringe 1996: 94; Hajnal 2005; Malzahn 2011: 89);
- (2) the *Motionsfemininum* TchB $-a$ in e.g. *oñkolma* ‘she-elephant’ or *mañiya* ‘maid-servant’ (Ringe 1996: 94);
- (3) the productive alternating plural TchB $-a$ (Adams 1988: 32; Ringe 1996: 31; Kim 2014: 122 fn.16);
- (4) the pronominal nom.sg.f. TchB $sā$, A $sā-$ < PIE $*séh_2$ (Ringe 1996: 94; Jay Jasanoff apud Ringe 1996: 96-7 n. 1);
- (5) substantives with nom.sg. in TchB $-a$ of the *wertsīya*-type (Adams DTB s.v.; Malzahn 2011: 89);
- (6) the nom.sg.f. *alyā-k* from *allek* ‘other’ (Malzahn 2011: 97);
- (7) the nom.sg.f. TchB *ñuwa* ‘new’ (Hackstein 2012; Fellner 2014: 14; Kim 2014).

Starting with the data from the noun, we have already explained the substantives of the *wertsīya*-type (5) as reflecting formations of either the *devī*-type or the *ṛkī*-type (§3.7.3). In these nouns, the final sequence $-a$ is to be interpreted as reflecting $*-ih_2$. On the other hand, the regular outcome of a nom.sg. $*-eh_2 > \text{PTch } *-ā > \text{TchB } -o$ in the noun inflection can be found in several other types, like the *kantwo-*, *okso-*, *arṣāklo-*, and *oko-* types (see the relevant sections in §3.7.1, §3.7.2, §3.8.2.1). There is no need to reconstruct a sigmatic nom.sg. $*-ās$ to explain TchB $-o$ (pace Kim 2009: 80; similarly, Peters 1990: 243 and Malzahn 2011; see §3.7.1.2): in my view, both $*-ās$ and $*-ā$ would have evolved into PTch $*-ā$ in any case. Also, there is no evidence for claiming that the feminine suffix TchB $-a$ (2) of the *oñkolma*-type (cf. *oñkolma* ‘she-elephant’ vs. *oñkolmo* ‘elephant’ et sim.) is the outcome of

counterexample that is sometimes adduced is TchB *mācer* /*mācer*/ ‘mother’ > PIE $*meh_2tēr$, instead of the expected $**mocer$ (cf. Skt. *mātār*, Av. *mātar*, Gk. *μήτηρ*, Lat. *māter*), but an analogical *a* from TchB *pācer* /*pācer*/ ‘father’ can be assumed in order to explain the unexpected vowel in *mācer* (Marggraf 1975). On the twofold outcomes of Tocharian A, see Burlak & Itkin (2003).

³⁸¹ Cf. Ringe (1996: 96): “If post-PIE word-final $*ā$ developed into PT *a* by regular sound changes alone, the crucial change was probably a shortening of $*ā$ to $*a$, since inherited short $*a$ underwent no changes before the PT period”.

PIE $*eh_2$, since TchB *-a* could have been abstracted from the adjectival inflection at any stage of Tocharian B. Indeed, these feminine nouns follow the inflection of the *aśiya*-type, which took the paradigm from the adjectives (see §3.5.2, cf. the plural *mañ(i)yana* from *mañiya* ‘maid-servant’ ← *mañiye* ‘male servant’). As far as the alternating plural ending TchB *-a* is concerned (3), there is no comparative evidence to trace it back to the thematic nt.pl. $*eh_2$. Indeed, in the noun inflection it is consistently found as the outcome of athematic neuter formations, whose nt.pl. is reconstructed as PIE $*-h_2 > *-ǎ$ (see Pinault 2008: 491-497).

Turning now to the adjectival inflection, Malzahn (2011: 89) hints at “a large number of feminines to thematic adjectives [...] that one would want to derive from non-ablauting PIE $*eh_2$ -stems, which show a nom.sg. ending in TB *-a* and not in TB *-o*”. Even though she does not mention what these formations are, she is in all likelihood referring to those adjectival derivatives from Class I.2 that show phonological palatalisation as a structural characteristic of the suffix, i.e. m. *-ññe* | f. *-ñña*, m. *-şşe* | f. *-şşa*, etc (1). In my view, this explanation is too rash, and it is invalidated by other outcomes of thematic derivatives that display palatalisation only in the feminine (e.g. m. *-re* | f. *-rya*, m. *-lle* | f. *-lya*, m. *-tte* | f. *-cca* etc.). That is to say, the feminine singular forms of these thematic formations are all formed through a secondary addition of the pattern $*_{[-pal.]}a$, which applied variously to the adjectival derivatives, depending on the basic structure of the suffix: those adjectival suffixes that were not already palatalised took “explicit”, i.e. visible, palatalisation in the feminine, while those adjectival suffixes that were already palatalised took “implicit”, i.e. invisible, palatalisation (because the suffix could not be further palatalised). Similar considerations can be made to account for the mismatching stem in nom.sg.f. *alyāk* vs. obl.sg.f. *allok* (6), where the contrast *-ly-* vs. *-ll-* speaks in favour of a secondary palatalisation of the former form (§4.2.4). On the other hand, the pattern $*_{[-pal.]}a$ surfaced as $*-ya$ when the consonant preceding the suffix does not have a palatalised counterpart (cf. nom.sg.f. TchB *-rya*, A *-ri* of the *re/r*-adjectives).

Hackstein (2012) adduces one further instance where PIE final $*eh_2$ allegedly yielded PTch $*-a$, i.e. TchB *ñuwa**, A *ñwi** ‘new’ (7) (cf. Kim 2014: 32; also Fellner 2014: 14 points to this form, albeit with some hesitation).³⁸² The problem here is the lack of palatalisation, because, according to Fellner, an analogical nom.sg.f. TchB $**ñuwya$ or $**ñuyya$ would have been expected (cf. also Kim 2009, which starts, however, from Pre-PTch $*newyǎ < *neuih_2$). But I do not think that is a problem. Indeed, TchA *w* cannot be palatalised and in Tocharian B synchronic alternations between *w* and *y* are limited to the causatives. In all other cases, alternations between *y* and *w* were levelled, and *y* was no longer felt as the palatalised counterpart of the *w*-allomorph (cf. with levelling of the *y*-allomorph e.g. TchB *śay-* ‘to live’ < $*śay-$ ~ $*śaw-$; cf. also Kim 2018: 66).

³⁸² Fellner’s nom.sg.f. TchA $†ñwa$ (2014: 13) is not attested and it is phonologically impossible, because final *-a* does not occur in Tocharian A. But even a more regular TchA $†ñwā$ is not supposed to be the morphological correspondent form of TchB *ñuwa**, since a form TchA $*ñwi$ would rather be expected (cf. Michaël Peyrot apud Kortlandt 2017: 100 fn.4).

We are now left with the pronominal nom.sg.f. TchAB *sā* < PIE **séh₂* (4), where the isolated outcome TchAB *-a* of PIE **-eh₂* may have had multiple sources (see §4.2.3.2).

Finally, there exists another cogent grammatical argument that may indirectly prove the evolution PIE **-eh₂* > PTch **-ǎ*. As recently pointed out again and explained further by Fellner (2014), this evolution must be postulated for the prehistory of Tocharian. Indeed, the source of the Tocharian alternating gender and the neuter origin of some Tocharian feminine plural endings and forms can only be due to some kind of morpho-phonological mergers of the feminine with the neuter plural (see below). If PIE **-eh₂* yielded PTch **-a*, no cases of homophony between feminine and neuter should be reconstructed, since the thematic neuter plural would phonologically have merged only with the nominative singular of the feminine. It would not have been sufficient to account for the formal merger of the two genders. I therefore agree with Pinault (2008) and Fellner (2014) that the evolution of the singular feminine and the plural neuter in the thematic inflection has been as follows:

Table IV.38. Evolution of the feminine singular and the neuter plural in the thematic inflection

<i>*eh₂</i> -DECLENSION		PIE	PTCH
	nom. sg.	<i>*-eh₂</i>	> <i>*-ǎ</i>
	acc. sg.	<i>*-eh₂-m</i>	> <i>*-ǎ</i>
THEMATIC NEUTER		PIE	PTCH
	nom. pl.	<i>*-eh₂</i>	> <i>*-ǎ</i>
	acc. pl.	<i>*-eh₂</i>	> <i>*-ǎ</i>

As can be seen, mergers of the neuter plural with (at least) the feminine singular can be reconstructed.

This situation strongly resembles the historical evolution of the gender system from Latin to Romance. In fact, a typological comparison between Tocharian and Romance languages (particularly Romanian) has often been made (see, for instance, Ringe 1996: 97; Igartua 2006; Kim 2009: 73-4; Fellner 2014: 15-6). As a matter of fact, systems with a third gender value that combines alternating agreement traits of the masculine and the feminine between the singular and the plural are cross-linguistically uncommon, especially in the Indo-European domain. Within this typological comparison, however, an important diachronic fact has been overlooked so far. Although it is true that the masculine and the neuter must have merged in the singular, the rise of the Romanian *genus alternans* is not due to a merger of the neuter and the feminine in the plural! Such a merger cannot have occurred, because the nt.pl. ended in **-a* (< Lat. *-a*), while the f.pl. ended in **-e* (< Lat. nom. *-ae* or acc. *-ās*, if it developed through **-ay* as per Faraoni 2016: 392). In fact, the Romanian *genus alternans* originated in a more gradual way. See the following schema from Loporcaro (2018: 223; see further pp. 219-239 and Loporcaro 2016):

found in Olander (2015: 246f.). In the following, I will briefly review the Indo-European data:

- (1) Ved. *-āḥ* and OAv. *-ā* point to Ilr. **-ās* (*contra* e.g. Kuryłowicz 1927: 222-3);
- (2) Attic-Ionic Gk. *-ās* is ambiguous (cf. also Lesbian *-αῖς*), but Cretan Gk. *-αῖς* clearly speaks for **-āns* (with Osthoff's Law);
- (3) Lat. *-ās* is ambiguous, since it may go back either to **-āns* (with loss of the nasal, cf. *-ās* < **-ons*, see Ernout 1945: 25) or **-ās* (Weiss 2009: 235-6);
- (4) Umbr. *-ass*, Osc. *-af* may directly result from **-āns*, with the change of word-final **-ns* > Umbr. *-ss*, Osc. *-f* (Pisani 1964: 12);
- (5) Goth. *-os* speaks for PGerm. *-ōz* < **-ās*, but, according to Boutkan (1995: 141-2), it may also reflect PGerm. *-ōns* < **-āns* (cf. the doublets nom.acc.pl. OE *-e* ~ *-a* and see further Guus Kroonen apud Olander 2015: 248);
- (6) the evidence from Balto-Slavic is notoriously difficult: in Baltic, Litv. def. adj. *-ąsias*, and Old Prussian *-ans* point to **-āns*, while Latv. *-as*, and Lith. *-as* point to *-ās*; in Slavic, OCS *-y*, *-je* is from **-(i)āns* (see Vaillant 1958: 83-4, Olander 2015: 248, Kortlandt 2016, and Kim 2019 with references therein).

As one can see, the Indo-European comparative evidence is quite tricky, because some languages point to **-ās*, while some others point to **-āns*. That is to say, was **-eh₂ns* reduced to **-eh₂-s* still in the proto-language (i.e. IE languages pointing to **-n-* restored the nasal) or was **-eh₂ns* maintained (i.e. IE languages without **-n-* have independently lost the nasal)? The reconstruction is further complicated by the effect of the so-called “extended” Stang’s Law, i.e. a PIE sequence of a vowel, followed by a semivowel (or a laryngeal) and a nasal is word-finally simplified with loss of the semivowel (or the laryngeal) with compensatory lengthening of the preceding vowel, thus **-VHN* > **-VN* (Stang 1965). Stang’s Law has given rise to debate, especially with regard to the **eh₂-inflection*.³⁸⁴

The Tocharian data are equally ambiguous. In the adjectival inflection we cannot find any clear continuant of a nasal variant **-eh₂ns*, but we have seen that in the pronominal inflection the match obl.pl.f. TchB *tom* : A *tos* < PTch **tāns* clearly speaks for the reconstruction of **-eh₂ns* (cf. also TchB *alloñk* < **allāns*(-); Hackstein 2017: 1313). Various explanations for these inconsistencies are conceivable. These largely depend on which different reconstruction of the accusative plural of the **eh₂-stem* one favours.

The first hypothesis is the least probable: the reconstruction of different accusative plural forms of the thematic **eh₂-stems* in adjectives and pronouns. On the one hand, pronouns should have taken **-eh₂-ns*, while, on the other hand, adjectives should have taken **-eh₂-s*. This hypothesis would be linked to the late creation of the feminine gender within the proto-language: when the new feminine agreement environment started to be

³⁸⁴ The bibliography on Stang’s Law is abundant. See e.g. Vaux (2002), De Decker (2011), Pronk (2016), and Kortlandt (2017), with references.

created in late Proto-Indo-European, the feminine adjectival inflection was marked in the plural (nom. = acc.) by **-eh₂-* (originally the neuter plural) + the plural marker **-s*. This hypothesis is totally ad hoc.

The second hypothesis requires the more likely reconstruction of a uniform plural paradigm for both pronouns and adjectives. The paradigm was nom.pl. **-eh₂-es* and acc.pl. **-eh₂-ns* (< ***eh₂-ms*)³⁸⁵ in the older stages of PIE. Then, the accusative plural underwent Stang's Law, yielding **-āns* and then **-ās* still in the proto-language (as per AIGR, but also Rix 1986; Weiss 2009; De Decker 2011). As a consequence, those Indo-European languages that point to the nasal would have reintroduced it analogically after other stems, where the nasal was retained (as per e.g. Kim 2019). As far as Tocharian is concerned, this implies that the pronominal obl.pl.f. forms TchB *toṃ*, A *tos* and TchB *allonk(-)* would have reintroduced the nasal (perhaps after the masculine) at a later stage. I am personally reluctant to support this hypothesis, since I believe that the pronominal form of the obl.pl.f. is better explained as an inherited archaism (see §4.2.3.4).

The third hypothesis does not need Stang's Law in the **eh₂-* inflection: the acc.pl. **-eh₂-ns* may or may not have resulted in **-āns* already in the proto-language, but it retained the nasal in both cases (as per Beekes 2011: 200). It follows that those Indo-European languages that do not point to the nasal have independently lost it.³⁸⁶ Then, there are two different working hypotheses for Tocharian: the outcome of **-āns* has been continued in Pre-Proto-Tocharian or it has developed into **-ās* at an older stage. If the former was the case, then the expected Proto-Tocharian outcome would have been **-āns* (just as PIE **-ons* > PTch **-æns*). The reason why this ending has disappeared in favour of PTch **-ā-na* is not immediately clear, but one can toy with the idea that it has been replaced morphologically. Indeed, at a Pre-Proto-Tocharian stage the feminine paradigm of the thematic inflection should have been marked by **-ā*, with the only exception of the accusative plural. This has of course caused the merger between the feminine and the neuter (nt.pl. PIE **-eh₂-* > PTch **-ā*). After the formal merger of the two genders, the new remarked neuter ending **-ā-na* has been generalised to the feminine. Though in a different framework, this hypothesis has been supported by Kim (2014) and Hackstein (2017), who both take TchB **-āna* as **-ā-* (collective) with additional plural marker **-na*. Similar considerations have been put forward by Winter (1962: 26-7) and Marggraf (1975: 200).

On the other hand, if **-āns* yielded **-ās* before Proto-Tocharian, one might say that the nasal was lost phonologically. In particular, it may be tentatively suggested that the inherited sequence **-Vns* had undergone two different changes depending on the prosodic environment: in non-accented position **-Vns* > **-V̄ns* > **-V̄s*; in accented position **-Vns* >

³⁸⁵ Hittite persuasively speaks for the reconstruction of an older acc.pl. **-ms*, cf. Hitt. *-uš* < **-ms* and **-oms* (Meier-Brügger 2003: 163; Kloekhorst 2008: 928-9; Beekes 2011: 188; Kim 2012).

³⁸⁶ Cf. also Martínez & de Vaan (2014: 58): "One thinks of different dialectal (or already IE?) treatments of **-eh₂-ns*: in one group, the nasal was lost in this sequence, while in the other group, it was maintained (or restored?)."

*- \check{V}^ns > *- $\check{V}ns$.³⁸⁷ This would explain why in the pronominal inflection the cluster *-ns* was maintained in the acc.pl. * $\acute{t}\acute{a}ns$ > PTch * $\acute{t}\acute{a}ns$ > TchB *toṃ*, A *tos*, while it has been lost in the adjectives. Although this explanation poses no relevant problems from a phonetic perspective, it is equally difficult to test. Indeed, it is hard to find other inherited sequences of *- $\check{V}ns$ in word-final position that may prove the genuineness of this sound law.³⁸⁸

Since I take the reconstructable obl.pl.f. *- $\acute{a}ns$ in the pronominal inflection as an archaism, I believe that Tocharian inherited the acc.pl. of the * eh_2 -stems as *- $\acute{a}ns$, and that this ending was lost in the adjectival inflection either morphologically (replaced by the neuter *- $\acute{a}na$) or phonologically (reduction of *- $\acute{a}ns$ > *- $\acute{a}s$ in non-accented syllable), but it survives in the pronominal inflection.

As a consequence, for a Pre-Proto-Tocharian stage, the neuter can be reconstructed as having no distinct singular marker, since it merged with the masculine singular, and the feminine did not have either a transparent singular, or a transparent plural: on the one hand, the singular merged with the neuter plural; on the other hand, the plural (partially?) merged with its own singular and with the neuter plural. As a consequence, neither feminine nor neuter had unambiguous paradigms in either the singular or the plural. At this stage, function could have played a role in the reassignment of both case and gender markers. The development which led to the reassignment of the gender values in Tocharian must have begun under mergers in the forms, but, after the merger of the gender markers, function may have favoured the spread of endings and forms of the historical neuter to the feminine plural. This led to a new paradigmatic differentiation between the singular and the plural within the paradigm of the feminine.

³⁸⁷ If so, one may wonder whether the nasal was retained as nasalisation of the preceding long vowel in a transitional stage. See Hilmarsson (1991: 197f.) for this possibility.

³⁸⁸ Hilmarsson (1984) claims that the nom.sg.m. of the numeral for '1', TchB *še*, A *sas*, continues PIE * $\acute{s}\acute{e}ms$ > * $\acute{s}\acute{e}ns$. However, I agree with Pinault (2006) that Gk. $\epsilon\acute{\iota}\varsigma$ '1' does not point to such a protoform: the long vowel of the Greek form is best explained starting with an original nom.sg.m. * $\acute{s}em-s$ > * $\acute{s}ens$, which lost the nasal in Greek, with compensatory lengthening of the vowel (cf. Gort. $\epsilon\nu[\delta]$ δ - from $\acute{\epsilon}\nu\varsigma$ δ -, see GEW: I, 471; Beekes 2010: 394). The vocalism of the Tocharian forms cannot therefore mirror *- \acute{e} -, but rather originated by analogical leveling with the rest of the paradigm, which is built on the thematic stem * $\acute{s}æmæ$ - < * $\acute{s}omo$ - (Ved. *samá*-, OP *hama*-, Gk. $\acute{o}\mu\acute{o}\varsigma$, Goth. *sama*, etc.). The feminine form TchB *sana*, A *sän* testifies that the nasal in the masculine survived for a while. Indeed, it cannot directly mirror PIE * $\acute{s}mih_2$ (cf. nom.sg.f. Gk. $\mu\acute{\iota}\alpha$), because the internal *n* must have been introduced from the nom.sg.m. The expected palatalisation caused by *- ih_2 may have been lost when the palatalised * \acute{m} was replaced by the non-palatalised * n . To my knowledge, there is no evidence for Fellner's evolution * $\acute{s}mih_2$ > * $\acute{s}m\eta$ > * $\acute{s}anya$ (2014a: 66 fn.6). On the other hand, a possible section of Tocharian historical morphology that may support the reconstruction of *- $\check{V}ns$ > *- $\check{V}s$ is the development of the sequences acc.pl. *- $\acute{o}n-ns$ vs. *- $on-ns$ in the nasal inflection. Indeed, the former sequence evolved *- $\acute{o}ns$ > TchB *-aṃ*, and the latter *- $on-ns$ > TchB *-enäṃ* (e.g. in the nouns of the *saswe*-type, if not of recent origin [see Pinault 2008: 477f.], and in the adjectives of the *tapre*-type). Cf. also obl.pl. *śrānäm* 'elders' as if from PTch * $\acute{s}aranans$ < * $\acute{k}er\acute{a}n-ns$ < PIE * $\acute{g}erh_2-n-ns$ (Georges-Jean Pinault apud Carling 2003: 93 fn.47).

Of the research questions listed at the beginning of this section, I have discussed the phonological evolution of the *eh₂*-inflection (1). We can now move on with the secondary spread of **-ih₂* in the Proto-Tocharian continuant of the feminine thematic paradigm (2).

4.3.4.5. Evolution of the ablauting **ih₂*-inflection in the adjectives and its spread to the feminine thematic type

Now that it has become clear that the generalisation of the *devī*-type in the (singular) thematic inflection must be regarded as a Tocharian innovation, we have to clarify how it evolved in Tocharian and what type of internal change caused its spread.

Fellner (2014; 2014a) has recently dealt with the latter topic. He resorted to non-proportional analogy in order to explain the spread of **ih₂*. According to him, this analogical development was favoured by a derivational mechanism that is quite common in Indo-Aryan, where the suffix was often used to form the feminine of secondary thematic adjectives, including *vṛddhi* formations. The starting point of this evolution would have been the opposition between PIE **deǵu-o-* ‘god’ (Lat. *deus* ‘god, deity’, *dīvus* ‘godlike’, Ved. *devá-*, Av. *daēuua-*, etc.) and **deǵu-ih₂* ‘goddess’ (Ved. *devī-*, Gk. *θεῖα*), both independently derived from PIE **dǵeu-* / **dǵu-* ‘sky, heaven’. According to Fellner, “Pre-Proto-Tocharian speakers” reworked the relation between these two isolated words and generalised the pattern of **deǵu-o-* : **deǵu-ih₂* to the whole adjectival system, abstracting the element **-ih₂*. This analogical change would first have affected other *vṛddhi* formations and, then, it would have spread throughout the entire thematic inflection, in so far that: “the extension of the pattern to thematic adjectives in Pre-Proto-Tocharian finally eliminated almost all traces of old **-eh₂* feminine adjectives, thus giving rise to the attested situation” (Fellner 2014: 11).

Though I agree with Fellner in the basic assumption that Tocharian did not inherit a different gender-marking system than the one of the other Indo-European languages, his explanation is, in my opinion, not totally convincing. Despite the fact that a similar phenomenon took place in Indo-Iranian, where the *devī*-type with *vṛddhi* became the model of several derivatives, which often built the feminine with the outcome of **-ih₂*, I do not see any evidence for claiming that the same development took place in Tocharian.³⁸⁹ The core of this analogical development would have been based on the hypothetical opposition between **deǵu-o* and **deǵu-ih₂*, but this reconstruction is doubtful because, in my opinion, it would be too meagre a basis to explain the spread of **ih₂*. Furthermore, the

³⁸⁹ In this regard, see also Lazzeroni (1997a: 93f.). Comparing Vedic Sanskrit with Classical Sanskrit data, he noted that the feminine substantives in *-i* and *-u* gradually adhered to the *ī-* and *ū-* inflection respectively, while the masculine substantives in *-ī* and *-ū* became *i-* and *u-* stems. As a consequence, in the history of Old Indian, the vowel quantity became a morphological marker of gender opposition: the masculine took short vowels, and the feminine long vowels. This development would have started from the opposition between the masculine stem in *-a* (< PIE **-o*) and the feminine in *-ā* (< PIE **-eh₂*). The same principle has been applied to the other vocalic sounds, through a process that Lazzeroni calls “synergetic drift”.

continuants of these two Indo-European words are not attested in Tocharian (as Fellner acknowledges), where *vrddhi* formations are, moreover, not productive. One must therefore agree with Kim (2014: 123) that “they would not [...] amount to a sufficient basis for generalization of **-ih₂-* as the feminine suffix”.

Another way to account for the spread of **ih₂* must therefore be investigated. I essentially agree with Pinault (2008: 516f.) that the generalisation of the *deví*-type to the thematic declension has been a very scattered development that has been caused and favoured by the interplay of both phonological and morphological factors. Parallels from Romance languages suggest that this development may well have proceeded in a gradual manner. The basic principle is that sound changes have caused irregularities, i.e. mergers and intransparencies, and that analogical developments have taken place to solve them. Therefore, I believe that the generalisation of **ih₂* has been caused by two types of analogical development: (1) analogical levelling favouring the isomorphism of endings; (2) non-proportional analogy solving opaque morphological markers.

Let us first try to understand how the athematic type in **-ih₂* evolved in Proto-Tocharian. Comparative evidence allows us to reconstruct the *deví*-type as characterised by paradigmatic ablaut: the allomorph **-ih₂-* was characteristic of the strong stem, and **-ieh₂-* of the weak stem. Nonetheless, no direct continuant of the allomorph **-ieh₂-* > **-yā-* can be reconstructed on the basis of the Tocharian data. It may be continued in the plural, where, however, it was mostly replaced by neuter forms (see e.g. Class III pl.f. TchB *ponta*, A *pont* and TchB *krenta*, A *krant* < **-nt-h₂*, and Class II.1 f.pl. TchB *arkwina* < **-n-h₂*).³⁹⁰ A different replacement occurs in the *klyomo*-type (Class II.5), where the f.pl. TchB *klyomñana* (cf. TchA *klyominā-*) consists of the singular stem (PTch **klyomāñña-* < **kleymn-ih₂-*), which has been recharacterised by the nasal neuter plural **-na*. The generalisation of historical neuter plural forms has been caused by the morpho-phonological merger of the neuter and the feminine in the thematic inflection (on which see the previous paragraph above). The exact relative chronology of these replacements is very difficult to be fixed, but indirect evidence that the allomorph **-yā-* (< **-ieh₂-*) might have survived for a certain period in the plural can be adduced.

We first turn to the spread of **ih₂* in the thematic inflection. Although, on the one hand, Kim (2009: 77) is essentially right in saying that the athematic adjectives are less productive than the thematic ones, so that analogical developments from the athematic type would have been implausible, on the other hand, among the thematic adjectives, the

³⁹⁰ One has to note that historical forms of the neuter plural are mostly preserved when the feminine is assimilated (i.e. in old **nt*-stems). Peyrot (2010: 76ff.) proposes that the feminine of the *nt*-stem **ntsa* may have been reanalysed as **nt-sa* in late Proto-Tocharian. If so, one may assume that, in the plural, this **nt-sa* was homophonous with the f.sg., and that the isolated plural marker **-sa* was replaced by **-a*, giving the attested **nt-a* as a result. Otherwise, if we reconstruct a recharacterised f.pl. **ntsa-nta* (parallel to **ñña-na* of the *n*-stems), it may have been reduced to **nta* by haplology. A third possibility is that the singular paradigm of the feminine became homophonous with its own plural, both resulting in **ntsa*, and that the plural was marked by the original nt.pl. **nta* in order to resolve these mergers.

so-called “secondary derivatives” are more common and productive in Tocharian, i.e. thematic adjectives with etymological palatalisation of the suffix (formed with PIE $*-i\bar{i}o-/-i\bar{o}-$). These adjectives synchronically correspond to Class I.2. In my opinion, the generalisation of the athematic feminine $*-ih_2$ has been favoured by a progressive convergence of the feminine inflection of these thematic derivatives with that of the athematic type, thanks to the common palatalisation of the stem-final consonant. Similar considerations have been put forward by Pinault (2008: 516-7): “Il est vraisemblable aussi que l’extension du féminin de type *deví-* fut favorisée par le fait que la plupart des suffixes d’adjectifs thématiques comportaient déjà l’élément yod au masculin, d’où résultait ensuite la palatalisation”.

This development took place when, in the athematic inflection, a contrast between $*-^{\acute{c}}a-$ (< $*-C-ih_2-$), in the singular, and $*-^{\acute{c}}\bar{a}-$ (< $*-C-i\bar{e}h_2-$), in the plural, still existed. As a matter of fact, the formal difference between thematic derivatives of Class I.2 and athematic adjectives was only found in the singular paradigm, which was marked by $*-^{\acute{c}}\bar{a}-$ (< $*-C-i\bar{e}h_2-$) in the thematic type, and $*-^{\acute{c}}a-$ (< $*-C-ih_2-$) in the athematic type. As a consequence, the inherited opposition between thematic and athematic feminines has been gradually blurred, in so far that the thematic derivatives of Class I.2 started to replace the thematic $*-^{\acute{c}}\bar{a}-$ with the athematic $*-^{\acute{c}}a-$ in the singular. The feminine has therefore evolved according to the following analogical proportion:

$$\begin{array}{ccc} \text{ATHEMATIC} & & \text{THEMATIC} \\ \text{sg. } *-^{\acute{c}}a- : \text{pl. } *-^{\acute{c}}\bar{a}- & = & \text{sg. } *-^{\acute{c}}x- : \text{pl. } *-^{\acute{c}}\bar{a}- \\ & & x = *a < *^{\acute{c}}\bar{a} \end{array}$$

Taking the continuants of the thematic formations in $*-n(i)\bar{i}o-$ and the athematic formations in $*-men-$ as examples, the following evolution can be outlined: nom.sg. PIE $*-mni\bar{h}_2 > *-mni\bar{a} > \text{PTch } *-m\bar{n}\bar{n}i\bar{a} :: \text{nom.sg. PIE } *-n(i)\bar{i}eh_2 > *-n\bar{i}\bar{a} > *-n\bar{n}\bar{i}\bar{a} >> \text{PTch } *-n\bar{n}\bar{i}\bar{a}$. This development had an important morphological advantage, since it disambiguated the feminine singular from the plural inflection of the feminine and the neuter.

Once the result of this analogical process had been fixed, the pattern $*-_{[+pal.]}a$ was reanalysed, abstracted, and then generalised to the remaining thematic adjectives, which synchronically belong to Class I.1 (e.g. nom.sg.f. *rtar-ya*, but nom.sg.m. *ratre* ‘red’ < PIE $*h_1rud^hro-$). Then, the plural paradigm has been replaced by the neuter plural of nasal stems PTch $*-na$. This recharacterisation affected the plural paradigm of the adjectives of the entire Class I and the adjectives of Class II (old *n*-stems, cf. TchB *klyomñana*).

4.3.4.6. Origin of the split of Class I

The last point that needs to be discussed is how the differentiation within Class I originated in Proto-Tocharian. After all the phonological and morphological

modifications outlined above, the feminine paradigm of the thematic adjectives should have had the following endings:

Table iv.41. Feminine paradigm in Proto-Tocharian Class I.1

	SINGULAR	PLURAL
NOM.	* _[+pal.] <i>a</i>	* _[+pal.] <i>āna</i>
OBL.	* _[+pal.] <i>a</i>	* _[+pal.] <i>āna</i>

This reconstructed paradigm evolved without relevant modifications in Subclass I.1, which retains a contrast between palatalised singular with vowel TchB *-a-*, A *-ā-* < PTch **-a-* vs. non-palatalised plural with vowel TchB *-o-*, A *-a-* < PTch **-ā-*. Yet, those adjectives with etymological palatalisation of the suffix, which had a palatalised stem even before the plural ending, started to align the singular pattern **_[+pal.]a-* of the singular also in the plural, which led to the creation of a different subclass:

Table iv.42. Evolution of the feminine paradigm in Proto-Tocharian Class I.2

	SINGULAR	PLURAL
NOM.	* _[+pal.] <i>a</i>	* _[+pal.] <i>āna</i> >> <i>*_[+pal.]ana</i>
OBL.	* _[+pal.] <i>a</i>	* _[+pal.] <i>āna</i> >> <i>*_[+pal.]ana</i>

To sum up, we can divide the Proto-Tocharian continuants of the Proto-Indo-European thematic adjectives into two groups: (1) PTch adjectives with no etymological palatalisation of the suffix; (2) PTch adjectives with etymological palatalisation of the suffix. These two groups differed in the paradigm of the feminine plural: both had pl. **-na* (nom. = obl.), but in the former this ending was preceded by **-ā-* and no palatalisation of the suffix (thus **-āna*), while in the latter it was preceded by **-a-* with palatalisation of the suffix (thus **_[+pal.]ana*). I therefore think that palatalisation must have played a central role in the split of the two classes. In essence, my idea is that the original plural ending was **-āna*. This marker was already accompanied by etymological palatalisation in the second group of derivatives (continuing the PIE type in **-(i)io-*). When the ending **_[+pal.]a* was generalised in the feminine paradigm of the singular, the vowel **-a-* was levelled to the plural paradigm of the adjectives from the second group. In this way, **_[+pal.]ana* replaced **_[+pal.]āna* (Class I.2), while, in the first group, **-āna* was retained.³⁹¹

³⁹¹ An indirect confirmation of this change may come from the gerundives in TchB *-lle*. We have seen that the feminine plural attests a transitional stage: the original non-palatalised plural *-llona* was replaced by the palatalised TchB *-lyana* in late texts (Pinault 2008: 519; cf. Peyrot 2008: 118: “it is striking that the new pl.f. *-ana* was introduced together with palatalisation”). We have also seen that the morphological contrast between palatalised vs. non-palatalised case endings was being lost in the historical development of the gerundives in Tocharian B, since they started to shift from Class I.1 to Class I.2. Within this diachronic drift, the hypothetical plural ***_[+pal.]ona* must have been felt

4.3.4.7. Summary of the evolution of the gender system in the adjectives

After having recounted the most important theories on the origin of the Tocharian gender system and their importance from a comparative perspective, I have discussed the relevant modifications that the gender system has undergone. It has been seen that the comparison between Tocharian and Romance languages suggests that the evolution of the gender system may have been a gradual development, in the course of which the masculine, the feminine, and the neuter mutually influenced each other morphologically, before being fixed in the attested agreement system. While the masculine evolved without relevant modifications from Proto-Indo-European to Tocharian, the feminine underwent a number of characteristic changes, since it has generalised the outcome of the *devi*-type in the singular, and it has developed endings and inflectional forms from the neuter in the plural.

The principle of this heterogeneous set of developments is recounted below.

Regular phonological change caused cases of homophony within the paradigm of the feminine and formal mergers with the neuter plural. Indeed, in the continuant of the PIE non-ablauting **eh₂*-inflection, the feminine was not marked either in the singular, or in the plural: on the one hand, the singular merged with the neuter plural; on the other hand, the plural partially merged with its own singular and with the neuter plural. In order to remark a distinction between the singular and the plural, the feminine started to take over plural ending from the neuter inflection, while the singular was influenced by the thematic inflection of the *devi*-type. Among the continuants of the PIE thematic type, those adjectives with etymological palatalisation of the suffix substituted **ya* (< PIE **(i)jeh₂-*) with **ya* (< PIE **ih₂-*). This process has been caused by two complementary developments: levellings of case and gender markers, and non-proportional analogy to solve opaque morphological markers.

Once this process was completed, the pattern **_{+[pal.]}a-* was abstracted as a morphological marker of the feminine singular and it could spread to the rest of the thematic type. It mostly surfaced as **-ya* when the consonant preceding the suffix does not have a palatalised counterpart. This new opposition between singular stem **_{+[pal.]}a-* and old plural stem **_[-pal.]a-* has been retained in those derived adjectives whose suffix was not etymologically palatalising; on the other hand, those derivatives with etymological palatalisation of the suffix generalised the vowel **-a-* also in the plural. The late Proto-Tocharian paradigm of the feminine in Class I can be schematised as follows: Class I.1: f.sg. **_{+[pal.]}a-* vs. f.pl. **_[-pal.]a-na*; Class I.2: f.sg. **_{+[pal.]}a-* vs. f.pl. **_[-pal.]a-na*. After the break-up of Proto-Tocharian, the two Tocharian languages independently remarked the oblique singular. The Proto-Tocharian gen.sg. **-ay* was reanalysed as the new oblique in Tocharian B, while, in Tocharian A, it continued to serve as a genitive. As a general tendency of

to be ungrammatical, because the plural *-ona* always occurs with non-palatalised stems. Thus, a new plural **_{+[pal.]}ana* (not **_[-pal.]ona*) has been analogically introduced.

Tocharian A, the obl.sg. marker **-n* was generalised in the feminine before Tocharian A apocope of final vowels took place, and the obl.sg.f. became Pre-TchA **-ān*. Then, vowel apocope took place and in Class I.2. some markers became homophonous again: indeed, the f.pl. **-ana* was apocopated to **-ān* and it coalesced with the new obl.sg. In an attempt to solve these mergers, a new distinction between nominative and oblique plural has been introduced, and the ubiquitous endings nom.pl. *-ñ*, obl.pl. *-s* were added.

To conclude, all the peculiarities of the Tocharian feminine in the adjectival inflection are best explained as the outcome of internal developments that took place within the evolution of this language.